Metropolitan Solutions – Guide
Exhibition · Beacon projects · Forum program

GET NEW TECHNOLOGY FIRST
4–8 April 2011 · Hannover · Germany

Metropolitan Solutions: The place to experience innovations for urban infrastructures.
Every second person worldwide lives in a town or city. In Europe the figure is over 70 per cent. Urban centres around the world are responsible for 75 per cent of global energy consumption. The increasing demand for energy and resources poses many challenges for infrastructures.

More efficient transport systems reduce traffic in city centres. Traffic management systems regulate high traffic volumes. Lightweight engineering makes underground systems more environment-friendly. Intelligent building automation systems with monitoring, control, management and optimization devices increase the energy efficiency of buildings.

Visitors at the HANNOVER MESSE exhibition halls in recent years had the opportunity to explore industry innovations and ideas from research institutes relating to automation, lightweight technologies and energy. So far these topics have seldom been showcased as solutions to the issues facing mega-cities.

At HANNOVER MESSE 2011, the exhibition Metropolitan Solutions will now bundle a wealth of ideas and visions. Leading companies will present their models of the future and flagship projects in Hall 8, while experts will be on hand to answer any questions you may have.

I am especially looking forward to lively discussion during a forum in which you can also participate. Here, experts from all over the world will debate problematical issues and possible solutions. Keynote speeches, specialist talks and panel discussions are an integral part of Metropolitan Solutions. The agenda embraces technologies, planning and one extremely important topic: project financing. Protagonists from a breadth of backgrounds will have plenty of opportunities for dialogue and the exchange of expertise.

Dr. Wolfram v. Fritsch
Chairman of the Managing Board
Deutsche Messe
METROPOLITAN SOLUTIONS – URBAN DEVELOPMENT IN PRACTICE

Globalization, climate change and increasing urbanization are presenting new challenges for cities and conurbations worldwide. The key to resolving these issues lies in the expansion and modernization of infrastructures. The areas requiring the most urgent attention are energy, water/sewerage and mobility infrastructures as well as climate protection.

Answers to global challenges
The new display category in Hall 8 highlights concrete answers to issues relating to these four core areas and to other topics. For the first time, complete solutions for infrastructures in towns and cities will be presented in cooperation with international partners.

Best-practice case studies and solutions for the future
Use your visit to find out more about visionary urban development schemes and pioneering applications implemented in conjunction with beacon projects. Explore the exhibition in Hall 8, which presents best-practice case studies employing the latest technologies, and discuss the individual projects with the relevant experts.

High-calibre forum program consolidates expert know-how
The Forum in Hall 8 is optimally integrated into the exhibition concept. Every day high-calibre speakers will deliver keynote speeches, give talks on urban trends and chair panel discussions. Here you can attend lectures on cutting-edge issues of relevance to urban development as well as discuss specific questions with the experts themselves.

Networking at an international level
Take advantage of this inaugural event at HANNOVER MESSE 2011 as a meeting place for the exchange of expertise at an international level and an outstanding platform for expanding your worldwide network. A unique concept, Metropolitan Solutions will bring you into contact with new international partners and offer excellent opportunities for making new contacts.

CORE TOPICS OF THE EXHIBITION

Metropolitan Solutions focuses on the main challenges facing cities and conurbations, presenting them as core topics:

→ Energy infrastructure
  • Intelligent urban grids
  • Decentralized energy concepts
  • Energy storage and distribution in cities
  • Energy generation on the basis of solid waste, wastewater, etc.

→ Water/sewerage, waste management
  • Drinking water production methods
  • Supply of drinking water and process water
  • Water infrastructure and risk management
  • Renaturation of water infrastructures, etc.

→ Mobility and logistics
  • Charging infrastructures for electromobility applications
  • Intermodal mobility concepts
  • Goods distribution structures close to the consumer
  • Traffic management, etc.

→ Building infrastructures
  • Energy-efficient building technologies/concepts
  • Green building technologies
  • Modern buildings as “energy producers”
  • Networking and integration of previously separate building systems, etc.
INTERDISCIPLINARY FOCAL POINT OF HANNOVER MESSE 2011

Apart from the main exhibition area in Hall 8, the Metropolitan Solutions theme will feature throughout the Exhibition Grounds as an interdisciplinary focal point of HANNOVER MESSE. More than 200 exhibitors will be showcasing their innovative technologies for urban infrastructures. Below is a list of selected exhibitors:

- ABB
- Bosch Rexroth
- Danfoss
- DB Kommunikationstechnik
- DB Mobility Logistics
- DB Services
- DB Systel
- German Research Centre for Artificial Intelligence (DFKI)
- E.ON
- Eaton Industries
- Emscher Genossenschaft
- EnBW
- Endress+Hauser Messtechnik
- E-Plus Mobilfunk
- Fraunhofer-Institut für Fabrikbetrieb und -automatisierung IFF
- GE Consumer & Industrial
- Hans Turck
- HARTING Technology Group
- Helmut Mauell
- Hewlett-Packard
- ifm electronic
- Imtech Deutschland
- juwi Holding
- Krohne Messtechnik
- Pepperl+Fuchs
- Phoenix Contact
- Pilz
- PSI
- PTV
- Rittal
- RWE
- Saia-Burgess
- SBA
- Schenker Deutschland
- Schneider Electric
- SEW-EURODRIVE
- Siemens
- SRU Solar
- TÜV Nord
- TÜV Rheinland Group
- Universität Duisburg-Essen
- WAGO Kontakttechnik
- Würz Energy
EXPLORE BEACON PROJECTS AT CLOSE HAND IN THE EXHIBITION AREA

At the heart of the exhibition area in Hall 8, directly opposite the Forum, you can find out about visionary urban development schemes and pioneering applications by exploring beacon projects that are either already in place or at the planning stage. Examples include mobility and energy supply in London, water and energy supply in Singapore, energy supply in Moscow and the Dallas Smart Grid. This fascinating exhibition will present holistic solutions and technological sub-systems for the towns and cities of tomorrow.

The London Mobility project is a real-life example of how intelligent networking – in this case London’s city centre and Greater London – results in reduced traffic volumes. This in turn leads to less congestion and better air quality. On show will be innovative solutions for roads and railways such as the Desiro regional trains, the city-centre congestion charge and the use of hybrid buses.

FORUM WITH A CONGRESS AMBIENCE

Keynote speeches, specialist talks and panel discussions are an integral part of the new exhibition. The forum program, with its line-up of high-calibre speakers, combines technology, planning and financial expertise, and brings together international players.

Here you can also get to grips with the challenges and solutions for urban infrastructures and discuss topics of interest with experts. The talks and platform discussions will be held in German and English. Simultaneous translation will be offered for visitors from abroad. The following pages contain an overview of the event program.
MONDAY, 4 APRIL 2011

9.30 – 10.00  Opening of the participants’ “Get together” topic zone

11.30 – 12.30  Political opening event
Welcoming address:
- Dr. Wolfram V. Fritsch, Chairman of the Managing Board, Deutsche Messe
- Jochen Homann, State Secretary, Federal Ministry of Economics and Technology
- Johannes Hahn, EU Commissioner, DG Regional Development: Keynote speech
- Zoubida Allaoua, Director of the World Bank: “Setting the stage”

13.30 – 14.45  Platform discussion
Sustainable and innovative urban solutions; The challenges for industry, research, urban planners, financial institutions and public authorities
Impetus talk:
- Prof. Dr. Schmidt, Institute of Urban Planning, University of Duisburg-Essen
Participants:
- MinDir. Dr. Huthmacher, Federal Ministry of Education and Research
- Dr. Peter Mösle, Member of the Board of Directors, German Sustainable Building Council
- Dr. Siegfried Behrendt, Institute of Future Technologies (IZT), Berlin
- Dr. Dirk Heinrichs, German Aerospace Center (DLR), Berlin, Institute of Transport Research
- Brian Field, European Investment Bank

15.00 – 16.15  Driving the future – energy efficiency
- Jan C. Ebert, Imtech GmbH & Co. KG, Hamburg
Sustainable energy supply for the cities of tomorrow
- Dr. Michael Weinhold, Siemens AG

Electromobility
A key to the liveable city of tomorrow
- Carolin Reichert, RWE Effizienz GmbH
With M2M to greater energy efficiency
- Enno Borchers, M2M Competence Center, Deutsche Telekom AG

16.30 – 17.45  Platform discussion
Metropolises as the pace-setters for energy efficiency
Moderation:
- Dr. Joachim Richter, Project Finance International
- Timon Wehnert, Institute of Future Technologies (IZT), Berlin
Impetus talk:
- Prof. Dr. Jochen Kreusel, ABB AG
Participants:
- Hans-Jürgen Beerfeltz, State Secretary, Federal Ministry for Economic Cooperation and Development
- Friedhelm Loh, President, German Central Association of the Electrical and Electronics Industry (ZVEI)
- Friedrich Hecker, Chairman of the Managing Board, TÜV Rheinland Group
- Dr. Michael Weinhold, Siemens AG, Energy Technology and Innovation
- Peter Eilers, Imtech GmbH & Co.KG, Member of the Managing Board

17.45 – 18.00  Plenary discussion with the Forum audience

TUESDAY, 5 APRIL 2011

10.00 – 11.00  Mega-trend: Water supply in mega-cities, “The ZVEI roadmap”
- Dr. S. Behrendt, IZT, Berlin
An innovative inspection system for sewerage canals
- Dr. Norbert Elkmann, Fraunhofer IFF, Magdeburg
- Heiko Althoff, Emschergenossenschaft
Safety research for the protection of strategic infrastructure; Opportunities for technological solutions
- Dr. Marcel Riegel, Water Technology Centre, Karlsruhe

11.30 – 12.30  Platform discussion
Sector focus: Water and waste management
Participants:
- Dr. S. Behrendt, Institute of Future Technologies (IZT), Berlin
- Peter Kronenburg, Imtech GmbH & Co. KG, Hamburg
- Dr. Marcel Riegel, Water Technology Centre, Karlsruhe

13.45 – 15.00  The green solution in waste management
- Dr. Jaroslaw Turek, Imtech GmbH & Co. KG, Hamburg
Learning from Singapore Water
- Siemens AG
Long Distance Water Supply for Megacities
- Prof. Dr. Hans Mehlhorn, Director Bodenseewasserversorgung

15.15 – 16.15  The energy-autarkic sewerage plant – The challenges for automation technology
- Dr. Uwe Sollfrank, Holinger AG
Lifecycle costs in the public tendering system
- Dr. Eckhard Roos, Festo AG
Finance options for German developmental partnerships
- Horst Schwörer, KfW Entwicklungsbank

16.45 – 18.00  Platform discussion
Sector focus: Water and waste management
Future urban structures as laboratories for innovation and global trends
Moderation:
- Prof. Dr. Wolfgang Kühn
Participants:
- Jörg Simon, Berliner Wasserbetriebe, Chairman of the Managing Board
- Jamal Saghir, World Bank, Director, Water Department
- Michael Ziesemer, Endress + Hauser, Member of the Managing Board
- Dr. Uwe Sollfrank, Holinger AG, Liestal, Chairman of the Managing Board
- Dr. Hans-Peter Müssig, KfW Entwicklungsbank

17.45 – 18.00  Plenary discussion with the Forum audience
10.30 – 11.00 Metropolitan Topic Day: Opening speech
· Stefan Dallinger, Spokesman for the European Metropolitan Regions in Germany

European metropolitan regions: Opportunities for industry, science and politics

11.00 – 12.30 Local authorities between Scylla and Charybdis
Service contracts v. financial issues

Impetus talks:
· Bernd Tischler, Mayor of Bottrop
· Prof. Dr. Dieter Puchta, former Chairman of the Managing Board of Investitionsbank Berlin

Platform discussion
Moderation:
· Prof. Dr. Dieter Puchta

Participants:
· Bernd Tischler, Mayor of Bottrop
· Dr. Hermann Janning, Vice-President, Association of Local-Authority Enterprises; Stadtwerke Duisburg, Chairman of the Managing Board (tbc)
· Rainer Timmermann, President Federation of Cities and Municipalities in Lower Saxony
· Franz-Reinhard Habbel, Deutscher Städte- und Gemeindebund
· KfW Bankengruppe

13.00 – 14.15 The electro-mobile city – The city as a catalyst for electromobility
· Florian Rothfuss, Fraunhofer Institute

Intelligent energy distribution by public utilities
Mannheim as a model city
· Dr. Schmitt, MVV Energie AG

Local-authority finance from the KfW Banking Group and the European Investment Bank
· European Investment Bank, KfW Bankengruppe

14.30 – 15.45 “Smart cities”

The energy-efficient model local authority
“Local-authority energy management: Prerequisites for smart cities”

Impetus talks:
· Alfons-Dominik Repnik, EnBW AG
· Ruth Drügemöller, Municipal Environmental Campaign

Platform discussion
Moderation:
· Prof. Dr. Dieter Puchta

Participants:
· Stephan Kohler, Director, German Energy Agency
· Prof. Dr. Kreusel, ABB AG (tbc)
· Michael Oelkers, TÜV Rheinland Industrie Services GmbH
· Alfons-Dominik Repnik, EnBW
· Barbara Mulder-Bahovec, European Investment Bank

16.00 – 18.00 Living, working and mobility in the city of the future

Impetus talk:
· Dr. Wilhelm Bauer, Fraunhofer Institute of Industrial Engineering and Organization, Stuttgart

Platform discussion
Sector focus: Mobility and logistics

Moderation:
· Herbert Zimmermann, ZVEI

Participants:
· Verena Ehrler, DLR, Berlin
· Prof. Dr. Markus Lienkamp, Institute of Vehicle Technology, Munich Technical University
· Dr. Wilhelm Bauer, Fraunhofer Institute of Industrial Engineering and Organization, Stuttgart
· Jan Dietrich Hempel, Garbe Logistik AG, Hamburg
· Dr. Joachim Grollmann, Director, Wirtschaftsförder-gesellschaft Herne mbH

10.15 – 11.30 Platform discussion
City clusters and metropolitan governance
Consequences for technology and planning

Input statement:
· Prof. Dr. Alain Thierstein, University of Munich

Moderator:
· Dirk Engelke, ISOCARP (D)

Panellists:
· Bert Smolders, Arcadis (NL)
· Dr. Michael Denkel, Albert Speer + Partner
· Alain Thierstein, University of Munich
· Brian Field; European Investment Bank

13.30 – 15.00 Knowledge for better cities
· Dr. Dirk Engelke, ISOCARP

Key issues of liveable cities
· Martin Dubbeling, SAB Advies

Metropolitan projects in China
· Bert Smolders, Arcadis

Energy-efficiency control schemes in mega-cities
Hongqiao Low Carbon Business Area
· Dipl.-Ing. Hong Li, Shanghai
· Dipl.-Ing. Bianca Nitsch, Stuttgart

15.30 – 17.30 Platform discussion
Liveable cities – What determines quality of life in cities?

Mobility, infrastructure, security and environment are key factors in the management of urban areas. But is quality of life in urban areas simply the sum of these key factors or does a liveable city require something more?

Keynote statement:
Planning for sustainable growth in Singapore
· Richard Hoo, Director, Singapore Redevelopment Authority

Moderator:
· Martin Dubbeling, SAB Advies (NL)

Panellists:
· Prof. Hubert Klumpner, ETH Zürich, Chair of Architecture and Urban Design
· Kathly Hartley, Philips (NL)
· Dr. Nolte, Institute of Future Technologies (IZT), Berlin (D)
· Richard Hoo, Director, Singapore Redevelopment Authority
· Annette Bähring, Association for International Cooperation (tbc)
10.00 – 10.45  **Platform discussion**

**Mega-trend: Urbanization**

"From trend identification to market success"

**Participants:**
- Dr. Siegfried Behrendt, Institute of Future Technologies (IZT), Berlin
- Matthias Haun, Bosch Software Innovations
- Dr. Hannes Taubenböck, DLR, Oberpfaffenhofen
- Joachim Richter, Project Finance International
- Dr. Oliver Opel, Leuphana University, Lüneburg

11.00 – 11.45  **How does industry implement the trends of the future in research projects and product developments?**

- Dr. Michael von Saldern, Siemens AG

**New technologies and strategies from the aerospace industry – Metropolises in the focus of remote sensing**

- Dr. Hannes Taubenböck, DLR, Oberpfaffenhofen

12.00 – 13.00  **The development of electromobility solutions as a growth path**

- Matthias Haun, Bosch Software Innovations GmbH

**Innovative technological solutions for monitoring operational reliability in the supply of energy and drinking water**

- Oliver Opel, Leuphana University, Lüneburg

14.00 – 15.00  **Closing event**

**Metropolitan Solutions: Looking ahead to HANNOVER MESSE 2012**