

New Leading Companies Join Smart City Project to Accelerate Development of Totally Optimized, Next-Generation Cities

The Kokusai Kogyo Group and Mitsui Home Co., Ltd., having joined the Smart City Project in April 2011, will speed up activities aimed at realizing Japanese-style smart cities.

■ Growth of the Smart City Project

The need for smart cities is growing, as protecting our global environment and adapting to the growing urban populations in emerging countries join the list of global challenges. The size of the smart city market is estimated to reach an accumulated 3.1 quadrillion yen over the next two decades.

The various elements that make up a smart city are manifold, and as needs and constraints vary across the world, building such cities is beyond what any company could accomplish alone. Thus, in order to deploy smart city solutions in Japan and around the globe, 15 world-leading companies came together and launched the Smart City Project. Because 15 different companies carrying out urban development on their own could only result in partial optimization, these companies have developed total optimization solutions by focusing on utilizing their comparative strengths and even joining forces when their respective business domains meet.

A number of pioneer activities are already underway in the Kashiwanoha Campus City Project, the Smart City Project's flagship initiative in Kashiwa City, Chiba Prefecture. These include CO₂ reductions through visualization of household energy use and cuts in peak electricity demand using ice thermal storage air-conditioning systems and NaS batteries. These activities are being broadcast to the world through magazines, television, books, and many other forms of media, and as a result, the Smart City Project has received numerous requests for cooperation in the development of cities in Japan and overseas.

On the solutions side, the Kokusai Kogyo Group was contracted by the New Energy and Industrial Technology Development Organization (NEDO) for its "Technology Development for Integration of Energy Storage Systems" program, and has been working on the development of a next-generation building energy management system (BEMS) that enables automated and optimized operation control and energy storage using multiple systems.

Since April 2011, the following companies have joined the Smart City Project as new participating companies:

- Kokusai Kogyo Group
 - Kokusai Kogyo Holdings Co., Ltd.
 - Kokusai Kogyo Co., Ltd.
 - Kokusai Environmental Solutions Co., Ltd.
 - Kokusai Land & Development Co., Ltd.
- Mitsui Home Co., Ltd.

The Kokusai Kogyo Group's spatial information-based solutions and Mitsui Home's technologies and expertise in two-by-four construction and other areas serve to complement the strengths of existing participants and thus fortify the entire package of smart city solutions offered. Currently, many other leading companies are also showing interest in joining.

■ Initiatives by New Participating Companies

Since its founding, **the Kokusai Kogyo Group** has contributed to the construction and management of social infrastructure from a "perspective from the sky" based on aerial photography surveying and mapping and satellite images. The spatial information acquired using advanced measurement technologies vary widely in form and content. The Kokusai Kogyo Group uses geographic information systems capable of advanced analysis to provide services for administration support, land preservation, urban and regional design, disaster prevention, and post-disaster reconstruction. The Kokusai Kogyo Group is also a leader in green infrastructure, which it defines as "environmentally friendly social infrastructure and social capital that utilizes renewable energy." Building on the technologies and expertise it has cultivated over the years in developing social infrastructure in Japan and overseas, and on its experience in deploying renewable energies, the Kokusai Kogyo Group will help meet the emerging need for green cities through its work in developing safe, secure communities and low-carbon societies.

Mitsui Home Co., Ltd., as a leader in ecologically advanced wooden and two-by-four construction, developed its environmental vision and established a basic group environmental philosophy known as the "Wooden Home, Living Design Declaration," to achieve its brand message of "Long Live Home." The company also formulated a medium-term environmental plan called "Eco-Action Plan 2016," under which it is advancing activities to utilize wood resources, create new environmental performance and value, and extend the lifetimes of its homes. Overseeing architecture at the Urban Design Center Kashiwanoha (UDCK), which opened at a new location in September 2010, the company is managing construction and employing proprietary technologies to develop fire-resistant wooden architecture with large internal spaces based on two-by-four construction. Mitsui Home will continue to provide its customers with deeply satisfying homes and styles of living by continuing its group-wide pursuit of corporate activities that are mindful of the global environment.

■ **History of the Smart City Project**

The joint venture company Smart City Planning Inc. was founded In September 2009, and the Smart City Project (<http://www.smartcity-planning.co.jp/english/>) was launched as the inaugural project of the Future Design Center Incorporated Association (<http://www.fdc.or.jp/e/greeting/index.html>).

As of March 2011, the following companies have been official participants in the Project: Itochu Corporation, SAP AG, NTT Communications Corporation, LG CNS, JK Nippon Oil & Energy Corporation, Shimizu Corporation, Sharp Corporation, Nikken Sekkei Ltd., Nippon Telegraph and Telephone Corporation, Hewlett-Packard Japan Ltd., Hitachi, Ltd., Mitsui Fudosan Co., Ltd., Yamatake Corporation, and e-solutions, Inc.

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