

Urban Voids: Recoding Functionless Areas in a City

German-Korean Cooperation Project Wants to Give Functionless Areas in Karlsruhe and Seoul a New Meaning



Population density in Seoul is more than five times as high as in Hamburg, but still urban voids exist in the city. (Photo: Philipp Dechow / KIT)

Urban voids are all areas in a city, whose functions and designs have not yet been decided upon conclusively. These may be reserve areas, fallow land, distance spaces, vacant buildings, polluted or unused properties. All these areas do not fulfill any concrete function in the urban system. Within the framework of the German-Korean research project “Urban Voids”, KIT scientists now try to find ways to give these urban voids a new meaning. Their search concentrates on two very different places by way of example: Karlsruhe and the megacity of Seoul.

Cities are places of concentrated functions and uses, places filled with sense and purpose. There are areas for living and industry, culture and transport, administration, services, recreation. On a map of a city, there appears to be no place for spaces or voids without any function. Where many people and many requirements meet, the limited space has to be used optimally.

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But urban voids exist. And they may be big. Examples are the old harbor of London or the Tempelhof area in Berlin. They have lost their original function and cover areas comparable to whole districts. In both cases, the urban voids were given a new meaning. In the once dirty docklands in London, people today live in apartments with a view on river Thames. Many cities consider the British capital a model as regards the reuse of fallow harbor areas. The Tempelhof area in Berlin today offers space for recreation, sports, culture, and urban gardening and, thus, meets the citizens' demands for free creative space.

"Since the turn of the millennium, the trend in Germany has been to prevent cities from growing into their surroundings and consuming free area," Kerstin Gothe, Professor of KIT's Department of Architecture and Head of the Institute for Urban and Landscape Design, says. "Instead, planners concentrated on growth to the inside. There was enough space, because many warehouses, factories, military barracks or harbor areas in German cities had been given up or diminished." Most of these large areas have long been converted into new residential, shopping, and cultural districts with an attractive industrial architecture. Now, two questions arise: Can the city further condense inside? And can this happen smoothly and sustainably?

"If cities are not to grow to the outside into the landscape in the future, we will have to find the solution inside," Kerstin Gothe says. Exactly this is the task of the German-Korean project "Urban Voids": Systematic search for smaller functionless areas and development of strategies for using them in a new way and integrating them into the urban structure. This search for free areas is made by German and Korean scientists in two very different cities: Karlsruhe and Seoul.

Urban Voids in Karlsruhe

"In the course of the research project so far, we have found that the voids in Karlsruhe and Seoul basically are different in nature," Kerstin Gothe explains. She manages the project together with Philipp Dechow on the part of KIT. "In Karlsruhe, as in many other German cities, we rather find larger, combined voids. Along many access roads in Karlsruhe, wide grass strips with noise barriers are located. In the past, these areas were considered to be unusable. Having reanalyzed them, many were found suited for various uses, even for smaller residence districts, provided that constructions are set up to reduce noise. In the city of Karlsruhe, scientists therefore concentrate on identifying larger, barely noticed areas that previous-

ly were considered unusable and on presenting options of their use in studies.

Urban Voids in Seoul

“The situation of voids in Seoul is different. Here, unused areas are rather fragmented and small and cannot be used for large combined new purposes. Voids in Seoul are often found in districts having strong deficiencies in terms of quality of life and ecology. Here, the voids might be used as areas for ecological renewal and upgrading of the district,” Kerstin Gothe explains. For example, the voids might be used for greening the district, which would have a positive impact on microclimate, water management, air quality, quality of life, health, and biodiversity. Some voids might play an important role in the energy-oriented refurbishment of buildings. They could accommodate buffers to improve building insulation or heating systems for more than one building to enhance efficiency.

Change of Paradigms in the “City without Memory”

In Seoul, the voids may be an important element for small-scale renewal of districts. More than ever, this renewal is in the focus of South Korean urban planners. “The megacity of Seoul is presently experiencing a change of paradigms in urban renewal,” Philipp Dechow says. He lived and worked as a guest professor in the capital of South Korea for a period of two years. “The conventional way of upgrading urban areas by demolishing entire districts to provide space for new skyscrapers is increasingly found to be no longer up to date and sustainable.”

Funding of this type of urban renewal based on a constant increase in building density now reaches its limits. In Seoul, about ten million people live on an area of the size of Hamburg that has a population of about 1.76 million. In addition, resistance of the population against a renewal policy that destroys existing social and functional structures as well as all historic traces is growing. Meanwhile, some projects to upgrade urban districts have been stopped, other projects suspended. But many existing buildings have energy deficiencies and require renovation.

“The urban government has already launched a new development program to promote a more careful type of renewal with existing structures being preserved,” Philipp Dechow explains. “However, such methods have hardly been tested in Korea. Structures of the urban planning and construction sectors are not adapted to such “small-scale” renewal.”

Living Lab and Building Exhibition

The German-Korean cooperation is therefore aimed at developing new concepts and strategies for Seoul based on the experience gained in Karlsruhe. A particular focus shall be on urban voids. As a milestone of the project, the Seoul Living Lab is planned in April 2016. Experts from Korea and Germany will be invited to develop integrated renewal concepts for a concrete district in Seoul with the support of selected students from both countries and together with the citizens. During the Living Lab, all parties involved will live, sleep, eat, and work in the said district and present, discuss, and display the results.

Finally, the results developed shall be discussed with the urban administration. Within the framework of the Living Lab, possibilities of organizing a big event similar to the International Building Exhibition (IBA) will be analyzed. This instrument was used for the first time in 1901 by the artists' colony in Mathildenhöhe, Darmstadt. In the course of the 20th century, the International Building Exhibitions developed to an experimentation field of urban development and, hence, to a hallmark of planning culture in Germany, which meets with worldwide recognition.

“In the long term, the Living Lab and Building Exhibition are to pave the way for well-performed renovation projects at Seoul,” Kerstin Gothe says. “In this way, models will be created for local population, decision-makers as well as interested persons from all over the world discussing the question of how we want to deal with urban voids in the future!”

The “Urban Voids – Chancen für eine nachhaltige Stadtentwicklung“ (Urban Voids – Opportunities for Sustainable Urban Development) project is executed by KIT in cooperation with SNU Seoul National University, and ISA Internationales Stadtbauatelier Stuttgart/Beijing/Seoul and funded by the BMBF (Federal Ministry of Education and Research) and the Korean Ministry of Education, Science, and Technology.

For more information on the project, click:

<http://www.urbanvoids.org/de/>

KIT possesses extensive scientific competences for research into, development, and integrated planning of the city of the future in all major aspects. Scientists of five KIT Centers – Climate and Environment; Energy; Mobility Systems; Humans and Technology; Informations, Systems, Technologies – work on

studies and the sustainable design of urban spaces from their disciplines' perspective and in an inter- and transdisciplinary manner.

Karlsruhe Institute of Technology (KIT) is a public corporation pursuing the tasks of a Baden-Wuerttemberg state university and of a national research center of the Helmholtz Association. The KIT mission combines the three core tasks of research, higher education, and innovation. With about 9,400 employees and 24,500 students, KIT is one of the big institutions of research and higher education in natural sciences and engineering in Europe.

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