

Hannover, Germany

Kronsberg District: scaling up integrated planning with KUKA

“Urban NEXUS” planning in Hannover transformed the City’s vision of the socially inclusive eco-district Kronsberg into a reality. The founding of the multi-stakeholder Kronsberg Environmental Liaison Agency, KUKA, was instrumental in catalyzing the district’s success. The coordinating body ensured intensive coordination, consultation and training between the municipality, Expo-planners and future residents, to guarantee success in each phase of the project.

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Urban NEXUS Case Study

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Abstract

The City of Hannover addressed its metropolitan challenges, including a lack of affordable housing and social inclusion through the creation of the ecological district, Kronsberg. A key factor underlying the District’s success, was the City’s integration of institutions, services, facilities and social behaviors throughout the entirety of the planning, construction and completion of the neighborhood. This was undertaken by founding the Kronsberg Environmental Liaison Agency, KUKA (Kronsberg-Umwelt-Kommunikations-Agentur GmbH). Today, the District of Kronsberg provides a unique example of how scaling up technologies and behavioral changes through consequent integrated planning practices for capacitating communications ensured a highly ecological, economical and socially inclusive community for Hannover’s residents.

Hannover's "Urban NEXUS" approach to housing and social inclusion

When faced with a growing housing shortage in the early 1990s, the City of Hannover responded by using the World Expo 2000 as an opportunity to unveil a pioneering socially inclusive eco-district. In order to realize the ambitious undertaking in a limited time, the City called upon “Urban NEXUS” planning approaches to scale up technologies and communications through intensive cross-sectoral communication and public participation processes. Through the founding of the Kronsberg Environmental Liaison Agency, KUKA (Kronsberg-Umwelt-Kommunikations-Agentur GmbH), the City of Hannover was able to achieve numerous Urban NEXUS advantages through the integration of institutions, services and facilities and social behaviors throughout the entirety of the planning, construction and completion of the neighborhood.



Date	1997-2001
Urban NEXUS Sectors	Housing-Energy-Transport-Water-Waste-Soil
Urban NEXUS	Institutions; Communications and User Behavior, Design and Technology
Scale	District (3,200 households)
Budget	approx. €3.6 million EUR



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Urban NEXUS Definition

The Urban NEXUS is an approach to the design of sustainable urban development solutions. The approach guides stakeholders to identify and pursue possible synergies between sectors, jurisdictions, and technical domains, so as to increase institutional performance, optimize resource management, and service quality.

It counters traditional sectoral thinking, trade-offs, and divided responsibilities that often result in poorly coordinated investments, increased costs, and underutilized infrastructures and facilities. The ultimate goal of the Urban NEXUS approach is to accelerate access to services, and to increase service quality and the quality of life within our planetary boundaries.

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Kronsberg, Hannover, in context

Hannover, Germany is the capital and economic center of the federal state of Lower Saxony. The city is home to 525,875 inhabitants (2012) and continues to grow. In the 1990s, population growth led to an increasing housing shortage, which placed particular strain on lower income and immigrant groups. In order to alleviate Hannover's housing challenges, the City had planned to develop the formerly agricultural, greenfield area of the Kronsberg hill, a 1,200 hectare site South East of the city. However, the decision to host the 2000 World Exposition spurred a revision of the initial 1987 landscape plan. The pilot project was modified to align with the principles of Agenda 21 and the EXPO 2000 World Exposition vision "Humankind-Nature-Technology". Kronsberg's new plan included cutting-edge concepts for ecological optimization including energy, water, waste, soil-management and mobility for a mixed-use, socially inclusive residential and commercial community, from which others could learn.

Pioneering multi-stakeholder planning and development: organizing support groups for integrated action

In 1992, following the decision to proceed with the planning of the Kronsberg district, the City of Hannover was aware that realizing the innovative district in time for the 2000 World EXPO would require a significant amount of simultaneous multi-sectoral organization and exchange between stakeholders – including investors, property developers, civil engineers, architects, construction firms and civil society – from the start and through the completion of the project.

Consequently, the City began determining relevant managerial and coordinating bodies within the City administration. Key stakeholders identified by the City to oversee the project included the City of Hannover's World Exposition Planning Group (within the City Construction Directorate), the Environmental Planning Group (under the Environment Directorate), and the Directorate of Health, Youth and Social Services. Together, the three served as umbrella authorities responsible for the overall planning and implementation of Kronsberg's ecological, economic and social aims. Additionally, the Kronsberg Advisory Council (Kronsberg-Beirat) was enacted as an adviser to communicate recommendations to the City Council.

With Kronsberg's administrative foundation intact, the City of Hannover began setting the course for integrated action. The City was aware that Kronsberg's heavily ambitious ecological standards required intensive support and training in order to succeed. For example, there would be no use designing for energy optimization, if builders were unaware of how to properly construct the district's Low Energy Houses (LEH). Similarly, once built, such homes would be futile, if residents were not aware of how to optimize efficiencies while occupying them.

KUKA: ensuring quality through capacitating communication

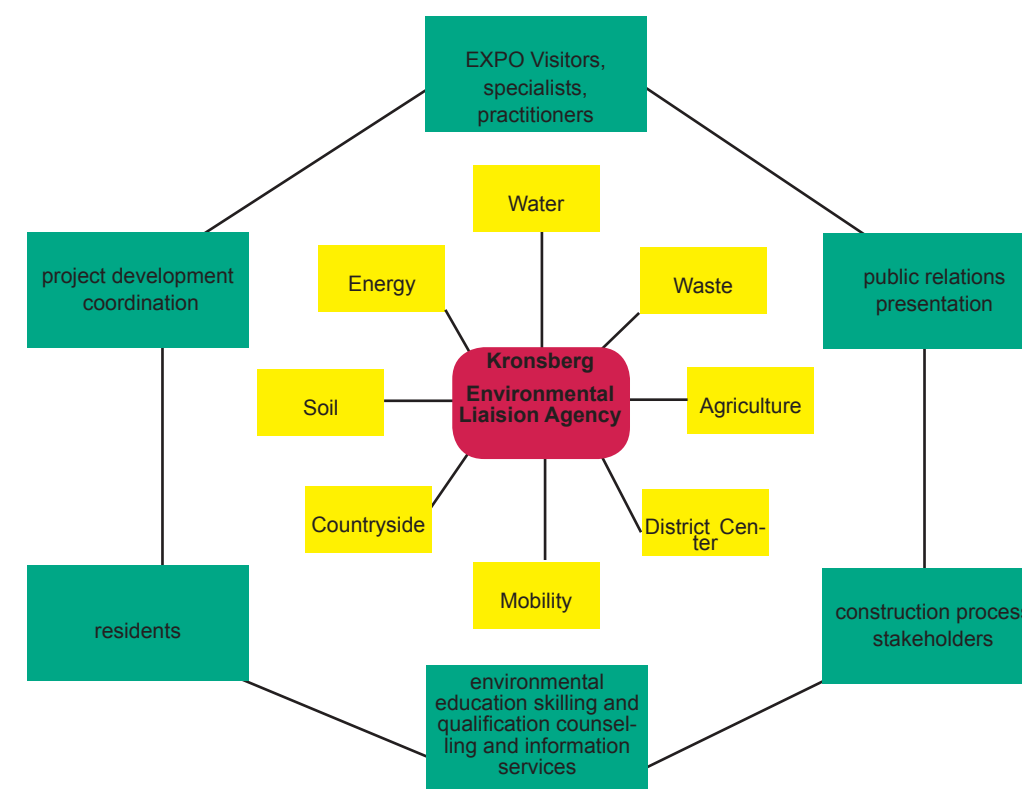
In 1997, realizing the need for onsite interdisciplinary skill-sets to transfer knowledge and awareness and to control the quality of each stage of the district's development and implementation, the City of Hannover commissioned the

Kronsberg Environmental Liaison Agency (KUKA), a unique coordinator and consultant between the municipality, Expo planners and future residents on the site.

KUKA's responsibility was to serve as a locus of knowledge at every phase of the planning and implementation process, for City officials, urban planners, builders, future residents and visitors alike. The majority of KUKA's work consisted of raising awareness to translate the function and goals of Kronsberg's environmental concepts in comprehensible and accessible ways. Thusly, KUKA's primary responsibilities included:

- coordinating and monitoring the quality of the planning and building of the district;
- providing training and consultation services in the areas of waste, nutrition, energy, water, community work, soil, mobility and green area; and
- awareness-raising and communication among future residents, general public and EXPO visitors, media and scientific experts

In order to track and measure the success of their public relations and consultative initiatives, KUKA tested the effectiveness of a range of environmental communication approaches and academic studies through "LernprojektKronsberg" (Learn Project Kronsberg), for future project application.



Results

Outstanding quality control and consultation for builders and developers was realized though KUKA's skilling. Prioritizing energy optimization was key to reaching the City's target of reducing CO2 emissions within the district by 60% from increased efficiencies in heating, hot water and electricity. KUKA ensured the proactive communication of new construction methods through courses and a unique multi-stakeholder cooperation model. To aid the construction process,

KUKA's responsibilities

KUKA GmbH, the Environmental Liaison Agency of Kronsberg, was co-funded by the City of Hannover and the 'Förderverein der KUKA e.V.' trust, a membership organization established for the joint planning of the eco-district. Additional funding came from the German environmental foundation, 'Bundesstiftung Umwelt'.

The graph shows KUKA's target groups and Nexus areas of intervention.

the “Energy Project” along with a LEH standard was developed in coordination with KUKA’s five partners, the Energy and Environment Center (Energie- und Umweltzentrum am Deistere.V, EUZ), the Institute for Construction Research (Institute für Bauforschung.V, IfB), Hannover Chamber of Craft Trades, Lower Saxony Consumer Protection and the Wolfenbüttel Technical Training Centre. Together, KUKA and the support groups offered everything from informational breakfast gatherings at the construction sites for planners, architects and builders to skilling and qualification programs on topics like environmental construction and materials through workshops and excursions.

Awareness-raising and consultation among residents was paramount to Kronsberg’s sustainability. All residents received a “Kronsberg-Binder” upon arrival to the site with guiding tips to ensure sustainable behavior and information concerning energy and water saving programs. Additionally, KUKA regularly published a district magazine to showcase Kronsberg’s latest sustainable activities, from car-sharing schemes to subsidies for efficient appliances.

Integrative planning and development strategy

- foundation of Kronsberg Design committee
- realization of planning aims due to local legally binding plans
- local government support in all planning stages
- citizen participation through a planning ombudsman, public information work and the Kronsberg newsletter
- establishment of KUKU to support the entire project and present it to the public



Layout of the central Kronsberg district

Additionally, KUKA conducted numerous informational events targeting renters, families, immigrant groups and children to inform and engage inhabitants, primarily in the KroKuS (“Kronsberg Kultur und Soziales”), an onsite community cultural info-center. KroKuS served as a base for KUKA to offer information and consulting services, such as energy counseling for residences, schools and institutions.

By 2001, 90% of the Kronsberg community had used KUKA’s services and reported positively on the group’s involvement in the district. The majority of residents experienced working with KUKA through financial support via onsite subsidies (76%) and energy consultations (46%), while others engaged with the group through the informational events (33%) and general coaching for sustainable behavior.

Additionally, the group successfully managed to foster a high level of acceptance of the ecological interventions implemented throughout the district. In 2001, the majority of residents believed they had a strong understanding of the district’s water (83%), energy (82%), waste management (59%) and mobility concepts (58%). Ultimately, 81% of survey respondents would move to Kronsberg again, if asked (Michelsen & Danner, 2003).

Intensive press and communications among EXPO visitors was achieved, due to the KroKuS information point, guided tours of the district and an intensive media campaign. Guided tours were provided in eight languages on the topics of urban planning and ecological optimization. In total, KUKA organized 700 guided tours for roughly 7,200 experts worldwide. Tours of the districts continued following KUKA’s disbandment by City employees and from 2000-2013, 22,400 experts and students visited the site.

Lessons learned and scope for improvement

KUKA’s onsite presence was a key factor in Kronsberg’s success. Due to the fact that KUKA assisted early on in the building process to ensure onsite skilling, quality assurance, and supported residents with facility and systems usage, the coordinating body had a strong and lasting impact on the district from its inception until after its completion.

KUKA’s limited 5-year funding was ultimately perceived as a short-term win. The consulting group had a crucial influence on the building and end-use of the district, however, sustainability is a long-term effort. New residents, who have since moved to the district, receive sustainable information at the KroKuS center from a City representative, though arguably not to the same degree.

KUKA’s efforts were heavily anchored in environmental initiatives which overlapped with social integration, including available subsidies and technologies for onsite housing, however the focus on social integration could have been intensified and expanded through strengthened institutional and grassroots cooperation between relevant stakeholders such as the Directorate of Health, Youth and Social Services.



Kronsberg cogeneration unit

Key Contacts

City of Hannover

Elisabeth Czornyj

Head of Environmental
Department

Landeshauptstadt Hannover
Prinzenstr. 4

30159 Hannover, Germany

Tel.: +49 511 16845028

Mail: [Umweltschutz@](mailto:Umweltschutz@hannover-stadt.de)

hannover-stadt.de

www.hannover.de

ICLEI World Secretariat (WS)

Capacity Center

Kaiser-Friedrich-Str. 7

53113 Bonn, Germany

Tel. +49-228 / 97 62 99-00

Fax +49-228 / 97 62 99-01

Email: urban.research@iclei.org

www.iclei.org/casestudies

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ICLEI, as implementing partner of the Urban NEXUS project, is responsible for the content of this Case Study.

Further Reading:

GIZ and ICLEI, 2014, Operationalizing the Urban NEXUS: towards resource efficient and integrated cities and metropolitan regions. Available at: www.iclei.org/urbanexus

Replication

The creation of a liaison committee such as KUKA is a highly replicable and recommended tool to integrate a broad spectrum of stakeholders into the planning, implementation and end-use phases of any urban development project. Although KUKA's creation and financial support was largely feasible due to the unique circumstances of the Hannover Expo, similar local authority coordination committees have experienced equal success, such as Freiburg's sustainable eco-district coordinating body, Forum Vauban (see ICLEI Case Story 2014-28).

Budget and finances

KUKA was the product of joint funding by the City of Hannover and the German Environment Foundation (Deutsche Bundesstiftung Umwelt, DBU), the Expo Company and the European Union (Fig. 3). However, the DBU, the Expo Company and the European Union provided the majority of the € 3.6 million euro funding. To guarantee sufficient participatory communication and knowledge exchange between actors, the non-profit trust, "Förderverein der Kronsberg-Umwelt-Kommunikations-Agenture.e.V" and City of Hannover remained the primary shareholders responsible for financing its 5-year duration.

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On behalf of:



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