



The research initiative

Under the auspices of the "URBEM-DK" doctorate course, the Vienna Public Utilities Company and TU Wien sponsor ten doctorate candidates, who, by 2016 will be developing energy and mobility strategies for a Vienna Smart City.

From the winter semester of 2013/14 the young researchers on the URBEM (Urban Energy and Mobility Systems) doctorate course will devise, develop and test sustainable strategies and technologies. In this, they will be mentored by experts from TU Wien and the Vienna Public Utilities Company based on inter-disciplinary and practically-oriented collaboration. The synergies from this networking of the scientific and the practical will benefit the partners and the next scientific generation in equal measure. At the same time, an URBEMDK lecture series will be established that will be open to other students as well as employees of the Vienna Public Utilities Company for further development. It will also enable regular exchanges to take place.

Shaping the future

How will Vienna and its surroundings develop? What strategies and technologies will the sustainable, supply-secure, affordable and liveable city require? The answers to these questions will be provided by the URBEM-DK.

The components and setting the course along the path to a Vienna Smart City will be developed using a holistic, inter-disciplinary approach in the following fields:

- Analysis of energy consumption and mobility behaviour of the population
- Optimised choice of transport in the urban area
- Sustainable methods of renovation of existing stock and construction of new buildings
- Thermal, natural and electrical energy systems throughout buildings
- Planning of ICT structures for control of urban energy supply
- Business and economic analysis and risk management of urban energy and mobility systems
- Involvement of participants in planning and decision processes, etc., using virtual environments.

Smart City Vienna

A smart city guarantees quality of life for all the people of the city. The Vienna Public Utilities Company and TU Wien work together on sustainable Energy and traffic networks.

The welcome prognosis: in 2030, two million people will call Vienna their home. The urban space thrives and changes as a result of population structure, climate change and the use of sources of renewable energy.

According to its tradition, the Vienna Public Utilities Company wish to guarantee the reliable and affordable supply of energy and mobility. Plans for a more costly and expanding infrastructure must be made today; the foundations for viable traffic and energy networks must be laid tomorrow. How much energy will we need in 2050? From which sources and in what form will we produce it? How will we move around the city? These and other questions will be examined by experts from the Vienna Public Utilities Company and TU Wien together with more junior scientists during the URBEM-DK.

The partnership

The Vienna Public Utilities Company and TU Wien will set up a "living lab", in which economic requirements, data collections and client needs of the communal energy and mobility suppliers will be researched realistically.

The Vienna Public Utilities Company shapes urban change and guarantees a high quality standard of supply with its subsidiaries: for energy generation (Wien Energie), energy advice (EnergieComfort), local public transport (Wiener Linien) and network infrastructure (Wiener Netze).

TU Wien has a systems technology and inter-disciplinary focus on energy and the environment. Researchers from the fields of civil engineering, electrical engineering, spatial planning, mechanical engineering, information technology as well as mathematics combine their know-how during the URBEM-DK.

Applied research into urban structures and the reality check by the Vienna Public Utilities Company produce the relevant results and exchanges. Together, the partners sharpen their innovation skills, develop solutions for the city and connect with international research networks.

More information under

<http://urbem.tuwien.ac.at>

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