

Press release

KNX offers worldwide systems solutions for sustainable buildings

KNX City – the sustainable city

In Europe, and particularly in Germany, we are facing the so-called energy turnaround. This refers to changes in the energy sector – moving from fossil fuel generation to primarily renewable energy generation. The key challenge of the energy turnaround is to ensure a steady supply of energy in spite of the fluctuating nature of renewable energy sources. Traditionally, energy supply has been adjusted to the demand; in future, it will also be necessary to adjust the demand or load to the fluctuating nature of energy generation. In future, many energy suppliers will offer time variable electricity rates in order to motivate customers to use electricity when cheap, and to not use it in case of peak demands, in order to implement indirect load management. KNX City addresses current challenges related to buildings, mobility, energy generation, infrastructure and communication, and provides appropriate KNX solutions.

KNX, a systems approach in sustainable cities

Energy efficient **buildings** are the basis of a sustainable city. Whether residential buildings or large commercial premises, KNX offers a range of solutions for greater energy efficiency, including load management. Any load management system needs sensors and actuators. Sensors are needed to record e.g. consumption or conditions, which will then trigger the respective actuators for example to open/close electric circuits or to switch on/off equipment such as heat pumps, domestic appliances or other conventional loads. However, what is common to all current solutions is that although they can interact with each other within a building, they cannot do so with the outside world. That is about to change.

Mobility is becoming increasingly important and in future large parts of motorised traffic will be powered by electricity. However, electric vehicles will only be environmentally viable, if charged with renewable electricity. This is not evident, as there is no provision for this in the conventional energy supply systems. Smart grids should change this. Solutions are needed where electric vehicles can be recharged from renewable energy sources, e.g. own photovoltaics (if available), or renewable energy sources from the local power network. KNX provides solutions to ensure that at home or in other buildings, electric vehicles are charged exclusively with renewable energy.

In our growing cities and especially in so-called “mega cities”, large quantities of energy have to be provided within a small area. In Asia in particular, where many of these mega cities are located, it is not possible to ensure a continuous supply of electrical energy. As

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a consequence certain power circuits in buildings are simply switched off. This calls for new **infrastructure** concepts that provide a solution, if necessary based on the interaction between several buildings and the grid. Load management systems should work for several buildings. KNX City includes intelligent building services solutions such as load management, by means of which it is possible to vary a building's load/demand while maintaining the same comfort level in order to deal with the issues at hand.

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KNX city's solutions include methods for making KNX buildings more intelligent and sustainable. You can learn how KNX electricity tariff management is handled and how, thanks to KNX, more renewable energy than fossil fuel based energy can be consumed in case of time variable electricity tariffs (depending on the availability of renewable energy). You can also learn how KNX links domestic appliances, HVAC equipment and electromobility into building automation systems and thus enables unparalleled load management.

KNX Home as part of KNX City demonstrates intelligent living in a metropolis. KNX Home illustrates how smart metering, energy monitoring, electromobility, energy generation and load management / tariff management can be linked up in a residential scenario without loss of comfort.



Picture: KNX offers worldwide systems solutions for sustainable buildings

About KNX

KNX Association is the creator and owner of the **KNX** technology – the worldwide STANDARD for all applications in home and building control, ranging from lighting and shutter control to various security systems, heating, ventilation, air conditioning, monitoring, alarming, water control, energy management, smart metering as well as household appliances, audio/video and lots more. **KNX** is the worldwide standard for home and building control with a single, manufacturer independent design and commissioning tool (ETS), with a complete set of supported communication media (TP, PL, RF and IP) as well as a complete set of supported configuration

modes (system and easy mode). **KNX** is approved as a European (CENELEC EN 50090 and CEN EN 13321-1) and an International standard (ISO/IEC 14543-3). This standard is based upon more than 22 years of experience in the market including its predecessors, EIB, EHS and BatiBUS. Over 265 member companies worldwide from different application domains have almost 7000 **KNX** certified product groups in their catalogues. The **KNX** Association has partnership agreements with more than 30,000 installer companies in more than 100 countries.

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