



**Kieback&Peter**

**EN:SOLUTIONS**

**DIGITAL INNOVATION FOR**

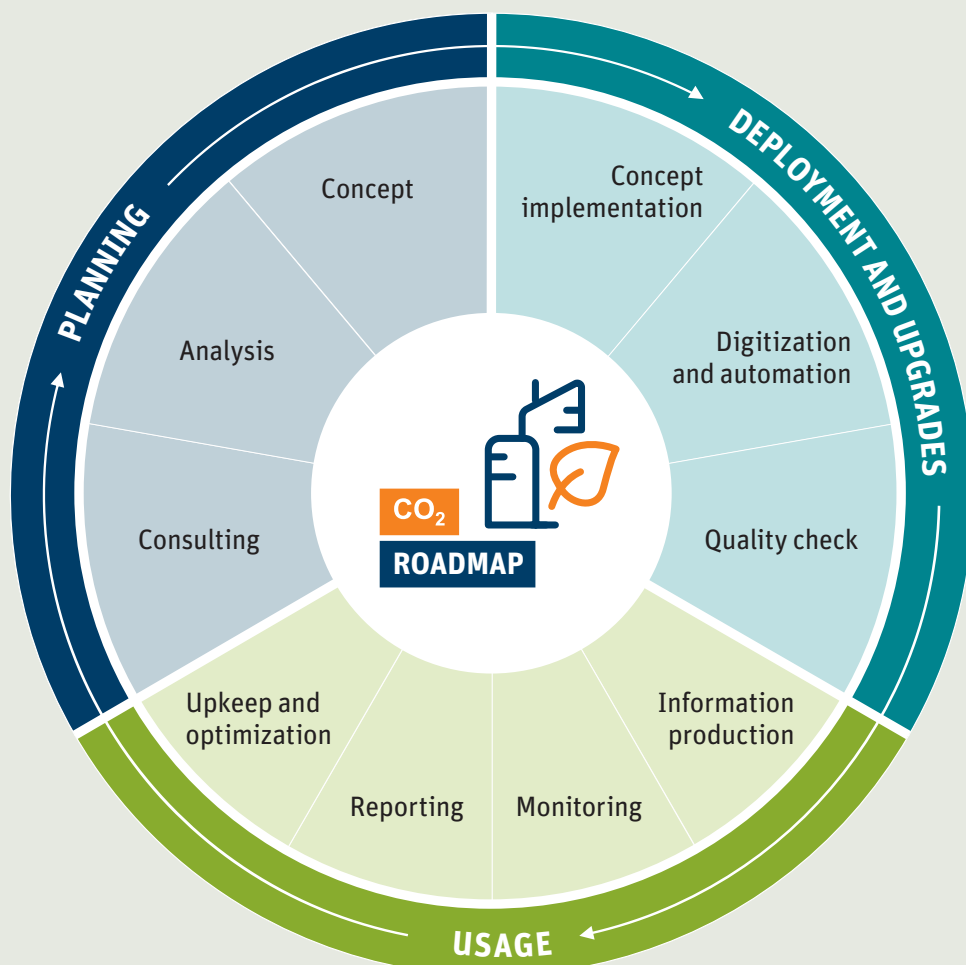
**SUSTAINABLE BUILDING AUTOMATION**

## en:solutions – the flexible range of solutions for better climate and health protection and greater operational safety

The **smart building solutioneer** Kieback&Peter has been connecting buildings and their business processes to form a smart complete system since 1927. This is the key to the **sustainable, safe and economical operation** of future-proof smart buildings.

To this end, the experienced building automation experts integrate **tailor-made digital modules** into their building technology systems. These then automatically ensure continually maximized energy efficiency and optimum health protection with a **minimal carbon footprint**. The main technical modules for doing so are the specialized control tools from **en:solutions** – digital sustainability technology for measurable savings effects.

### The CO<sub>2</sub> roadmap for sustainability in buildings

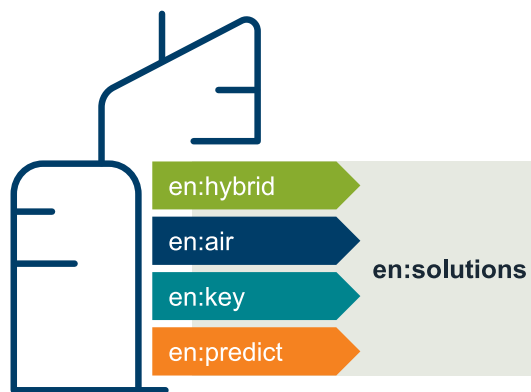


## Reliably achieve sustainability targets with proven solutions.

en:solutions incorporates a range of practical and proven control hardware and software for all types of buildings. Each solution module is optimized for a specific area of application and delivers concrete added value for the energy balance and carbon footprint of a building or entire property portfolio. Kieback&Peter is continually expanding the range

of en:solutions, which currently includes the self-learning individual room control en:key, the smart system orchestration en:hybrid, the predictive building control system en:predict and the demand-based ventilation control system en:air. The “en:” that features in all these names represents the highest level of en:ergy efficiency.

>> **en:solutions is all about achieving maximum energy efficiency in buildings through proven hardware and software solutions.**



## Efficiency gains that pay for themselves in just a short time.

One particular feature of the en:solutions range is that every module can be flexibly integrated into both existing and new building automation systems. This modular principle means that it is also possible to gradually equip a building for the future through targeted improvements in efficiency, comfort and safety and therefore, for example, to achieve predefined savings targets in a

methodical way. Each one of the solution modules has the potential to deliver high savings effects in day-to-day building operation. A further advantage is that it is generally relatively simple and requires only a small investment to integrate any of the en:solutions modules. It is possible for the systems to pay for themselves in less than two years from their integration. This ensures climate protec-

tion makes real sense – including for Controlling. With the unique en:solutions, investors, owners and operators can reliably meet pressing challenges such as climate protection, decarbonization, urbanization, digitalization and sustainability with smart technical measures and thus preserve the value of their properties – and of course minimize costs.

>> **en:solutions offers rapid gains in efficiency that pay off in less than two years and help to both protect the climate and maintain the value of your properties.**

## EN:KEY



### The smart key for greater comfort and efficiency in individual rooms.

Smart buildings are made up of smart rooms, in which en:key independently and permanently ensures optimum energy efficiency and maximum comfort. en:key is an intelligent individual room control system for controlling heating. The self-learning algorithms of the digital system regulate the selected comfort temperature as required. To do so, en:key “learns” the usage patterns independently and after just a short period “knows”, for example, that after the weekend a conference room will not be used until 11 am on Monday at the earliest. en:key can also be used very flexibly, however, and is suitable for all buildings with changing and variable room occupancy.

### The self-learning individual room control is energy self-sufficient and maintenance-free.

en:key learns the user behavior independently and creates digital user profiles as the basis for its control actions. In comfort mode, en:key independently maintains the selected indoor climate. In economy mode, en:key automat-

ically conserves resources and lowers the room temperature when the room is not in use. Additional benefits of en:key include the fact that the smart room controllers do not require any wiring, connection to the power supply or batteries,

as they supply their own energy, thereby minimizing maintenance work. Moreover, the installation takes less than 15 minutes per room, ensuring that productive operation is barely affected.



**en:key is an intelligent individual room control system that autonomously learns usage behavior and optimizes room temperatures for comfort and efficiency. It is energy self-sufficient and maintenance-free.**

## EN:HYBRID



### Providing the impulse for hybrid heating systems.

The flexible and powerful en:hybrid system controller orchestrates the operation of multiple heat or cold generators based on different technologies in a highly efficient manner. Alongside gas- and oil-based heating systems, systems based on renewable energy sources are becoming more and more common – and the heat transition has only intensified this trend even more. en:hybrid makes sure that the different technologies work together to optimum effect, the supply temperatures are always kept in the optimum range and thus that no more energy than is actually required is consumed. en:hybrid can also incorporate external data sources such as weather forecasts into the control strategy. This means, for example, that a storage unit only charges when there is foreseeable demand, such as a forecast change in the weather.

### Measurable savings are the most reliable basis for calculation.

The en:hybrid system controller is manufacturer-neutral and pays for itself in just a short time thanks to low investment costs and operation that is measurably more

efficient. en:hybrid lets you meet the future legal standard of building automation level B in your central heating or cooling systems, which means private individuals, com-

panies, local authorities and non-profit organizations can benefit from a variety of interesting funding opportunities.



**en:hybrid optimizes the operation of various heating and cooling systems, saves energy and fulfils future standards, opening up funding opportunities.**





Reference individual room control system for Humboldt Forum, Berlin:  
Photo credits: Müller-Witte

## EN:PREDICT



### Buildings can now learn how to conserve energy.

en:predict enables building technology to adapt the energy used for heating, ventilation and air conditioning to the anticipated demand, and therefore prevent unnecessarily high consumption and CO<sub>2</sub> emissions. The self-learning software has already been used successfully in all relevant asset classes since 2018 under the name “Model Predictive Control (MPC)”. It “learns” on the basis of individual data sources, such as the heating and cooling behavior of the building, the footfall at different times or regularly changing opening times. Thanks to this continuous learning, it is possible to automatically control the heating, ventilation and air conditioning in such a way that the required temperature or air quality for each zone and each room is maintained precisely without “control dips.”

### en:predict pays off – over 20% energy savings with minimal effort.

En:predict can be integrated quickly and simply into practically any building with a floor space over 10,000 m<sup>2</sup>. The investment costs

usually pay for themselves in under two years, i.e. just a short time after commissioning – thanks to a saving of at least 20% in

primary energy. The actual savings made can be viewed at any time on en:predict’s clear and intuitive dashboard.

» en:predict optimizes energy use in buildings significantly and usually pays for itself in less than two years.



## A pleasant indoor climate can be achieved without unpleasant energy wastage.

Energy consumption, hygiene and comfort are increasingly becoming focal points when operating central ventilation systems. Through needs-based control interventions, the efficient ventilation control system en:air puts a stop to the waste of energy that is common with such systems. At the same time, en:air ensures consistently good air quality.

## Better climate, lower costs, greater comfort.

Unlike conventional ventilation systems with constant flow rates, en:air can use dynamic management to adapt the required air volume to the usage of the rooms, as needed. As a result, the smart control system increases system efficiency and reduces CO<sub>2</sub> emis-

sions and energy costs, since only as much fresh air is supplied as is actually needed. The system controls the flow of supply air and extract air according to requirements as calculated by an algorithm using the measured values for CO<sub>2</sub> content, humidity

and temperature. In addition to conserving electrical and thermal energy, this also ensures a pleasant indoor climate with even temperature control and no stratification or draughts.



**en:air regulates ventilation to meet demand, increases energy efficiency and lowers costs while maintaining good air quality and a pleasant indoor climate.**

“Our solutions are more than just tried and tested; they also have the flexibility to be integrated into both existing and new automation. That lets us achieve gradual and targeted improvements in efficiency, comfort and security in buildings that pay for themselves rapidly.”

**Gregor Molwitz, Energy Efficiency Solutions Market Manager at Kieback&Peter**

## Kieback&Peter

Kieback&Peter has been practicing sustainability since 1927. The family-owned German company is paving the way for a sustainable and sound future by combining smart building technology, data-based services, sustainable excellence and a multitude of synergy effects into evolutionary solutions. This ability to solve problems is based on experience, knowledge

and excellence, and makes Kieback&Peter a smart building solutioneer: It enables us to secure and add to the value of buildings and business models, while also achieving a whole range of **gains in terms of climate protection, quality of life and social engagement.**

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