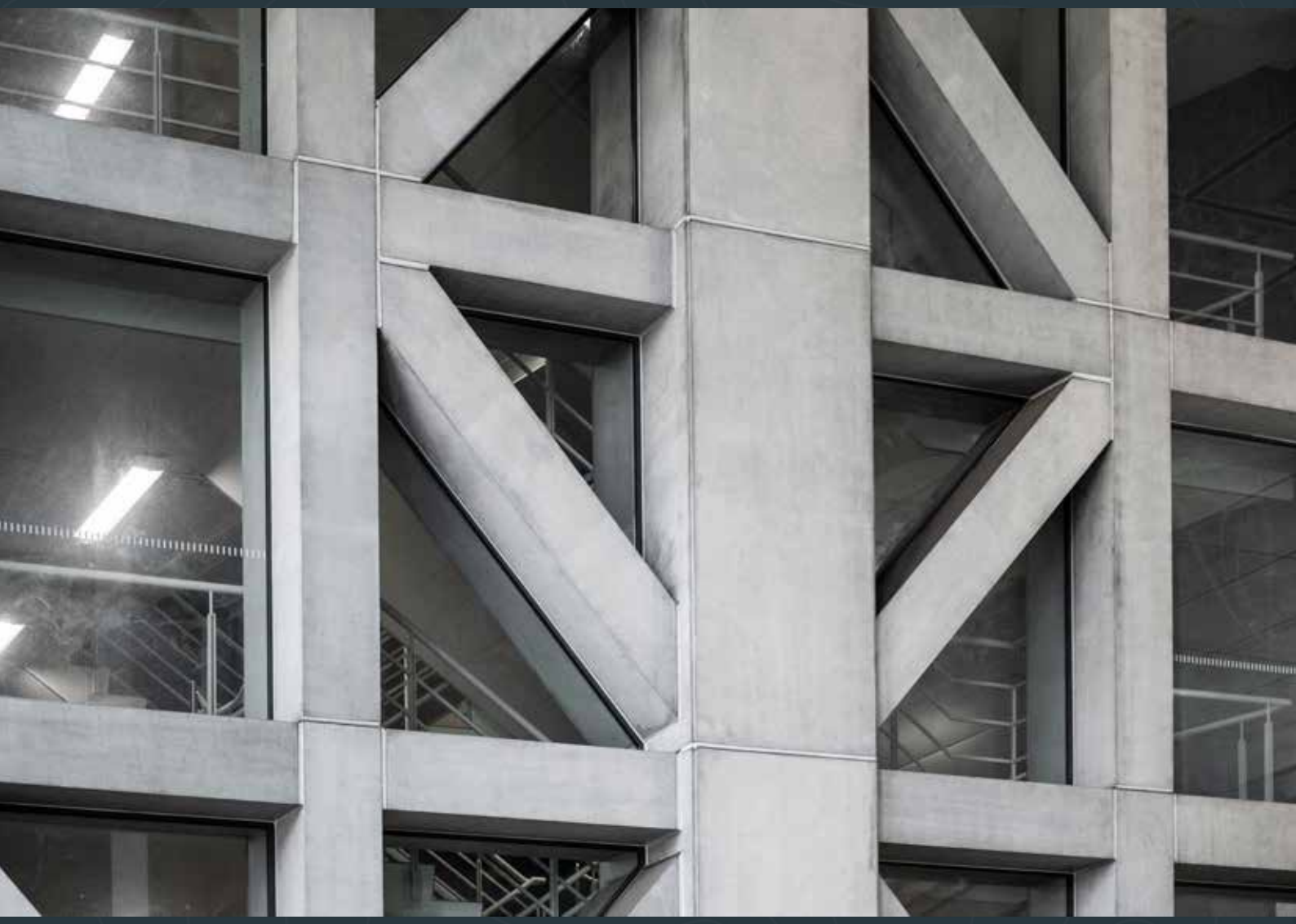
KTI



ARCHITECT THE FUTURE: BUILDING TOMORROW TODAY

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KLIMATOP®
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MODERN ARCHITECTURE IS MORE THAN EVER SITUATED IN A FIELD OF TENSION BETWEEN ECOLOGICAL, TECHNICAL, LEGAL, AND SOCIAL CHALLENGES.



New Construction



Building Renovation

Architecture must meet essential criteria of sustainability and economic efficiency. In its position paper “The House of the Earth,” the BDA clearly outlines these key issues.

- Developing sustainable visions for building renovation and new construction under the guiding principle: “Today we build the future!”
- Influencing all stakeholders in the construction industry to create and maintain a sustainable building stock
- Demonstrating that forward-thinking and sustainable action benefits everyone
- Embedding the concept of “embodied energy” in the minds of decision-makers, while promoting a culture of care and durability – without compromising innovation or comfort
- Combining modern technologies with the “intelligence of simplicity,” while leveraging the potential of traditional construction methods
- Top priority: CO_2-neutral energy supply
- Creating a “city of short distances” while supporting human mobility
- Strengthening small and medium-sized towns as attractive places to live and work
- Promoting the social compatibility of architecture so that disadvantaged groups can also benefit

We don’t just offer a way out – we walk the “holistic path” together with you. In doing so, we connect buildings in a grid-friendly and cross-sectoral manner to form an integrated solution, without creating new problems.

THE HOLISTIC WAY FORWARD

Networks for Tomorrow

Conventional solutions are no longer sufficient to meet the complex architectural challenges of our time. What’s needed is interdisciplinary, out-of-the-box thinking.

That’s why we maintain close partnerships with innovative companies across various sectors. We develop holistic, sustainable, and technologically advanced, yet grounded concepts. These solutions are proven and have demonstrated their value in practice over many years.

KT-Ingenieure GmbH provides essential solutions for the architecture of tomorrow through a cooperative network. Over the years, we have built a flexible network of forward-thinkers and practitioners that you can access as needed. KT-Ingenieure GmbH identifies the optimal combination for your project – tailored to its function, location, structure, and surroundings.

But!
Rapid and widespread implementation of renovation and new construction projects can only succeed if the CO_2-neutral, sustainable concept is defended during the tendering process and remains intact throughout the planning phase. This is where “The Holistic Path” comes into play. KT-Ingenieure GmbH offers architects a solution equipped with a solid foundation of information, calculations, and expertise, enabling them to take control of the planning process and optimize the tendering procedure from the very beginning.

KT-Ingenieure GmbH

KT-Ingenieure GmbH develops customized energy concepts that open the door to next-level autonomy (over 90% self-sufficiency and CO_2-free operation) in new construction and renovation projects. These solutions offer long-term economic efficiency and outstanding value retention.

Our building simulations are conducted in cooperation with the University of Applied Sciences in Winterthur, using certified, high-precision software (ZSPS*). This significantly simplifies and accelerates planning processes. In addition, we offer a ten-year warranty through a renowned Swiss insurer. This not only provides added protection, but can also be a decisive success factor when it comes to financing.







*Certified simulation and planning software



STEP 1

EVERY JOURNEY BEGINS WITH THE FIRST STEP

Assessment of the potential for energy optimization and cost estimation

Even before the planning is finalized on paper or all decisions regarding renovation or new construction have been made, we use various key figures and our ZSPS* to develop a concept for you. The more data is available or provided during the “pre-project” phase, the more accurate the cost and energy demand forecast will be.

In the first step, please provide us with the following data, if available:

- Planned building volume (cubature)
- Building structure
- Floor slabs, solid walls, basement, foundation slab, etc.
- Building standard, U-value, etc.
- Heated area
- Living space, office space, usable area, etc.
- Building envelope
- Opaque components
- Window areas by cardinal direction
- Number of people in the building
- Building location
- Possibility for PV or solar thermal systems
- Waste heat from surrounding facilities
- Type of use, e.g. industrial/residential, etc.
- Cooling demand in the immediate vicinity, e.g. pharmacy
- Special features, e.g. hospitals/schools, etc.

Based on statistical averages, our ZSPS* provides reliable insights into costs and self-sufficiency, as well as – within the scope of target value calculations – information on required system sizes (heat pump, PV, ventilation, etc.). Unknown parameters are filled in using realistic assumptions that have been coordinated with you.

Upon request, long-term climatic developments and their effects – such as cooling demand – can also be forecasted through simulation.

The standard deviation of the cost and energy self-sufficiency estimate, including CO_2 emissions, is less than 7% in 90% of cases, and only rarely exceeds 10%.

* Certified simulation and planning software

STEP 2

NEW PATH

Concept Development – HOAI* Phases 1–2

While the potential analysis from “STEP 1” provides a qualified overview of requirements, possibilities, and costs, the following steps expand on the standard HOAI phases with additional services, systematically process them, and initiate the planning phase.

Start of Services:

- Commissioning for concept development according to the offer (Step 1)
- Provision of detailed plans and component data

Our Services:

- On-site analysis
- Heating/cooling load calculation according to DIN/VOB
- Building simulation as a basic method for determining and optimizing the energy system
- Detailed HVAC concept
- Consideration of building automation (MSR)
- Detailed cost estimation
- GEG compliance verification
- Blower door test (as needed)



* German Fee Structure for Architects and Engineers



STEP 3

SAFE PATH

Conceptual HVAC Planning – HOAI Phase 3

Development of the conceptual HVAC plan and preparation for tendering.

Start of Services:

- Commissioning for conceptual planning according to the offer (Step 1)

Our Services:

- Design of HVAC components
- Conceptual P&ID diagram
- Execution planning

Discover how sustainable construction is already possible today.

Get direct access to our tenders on SIRADOS as well as to innovative solutions and products on bauhersteller.de (German site).

SIRADOS

bauhersteller.de

STEP 4

FAMILIAR PATH

Permit planning by architects – HOAI Phase 4

STEP 5

JOINT PATH

Detailed design – HOAI phase 5

Client decision:

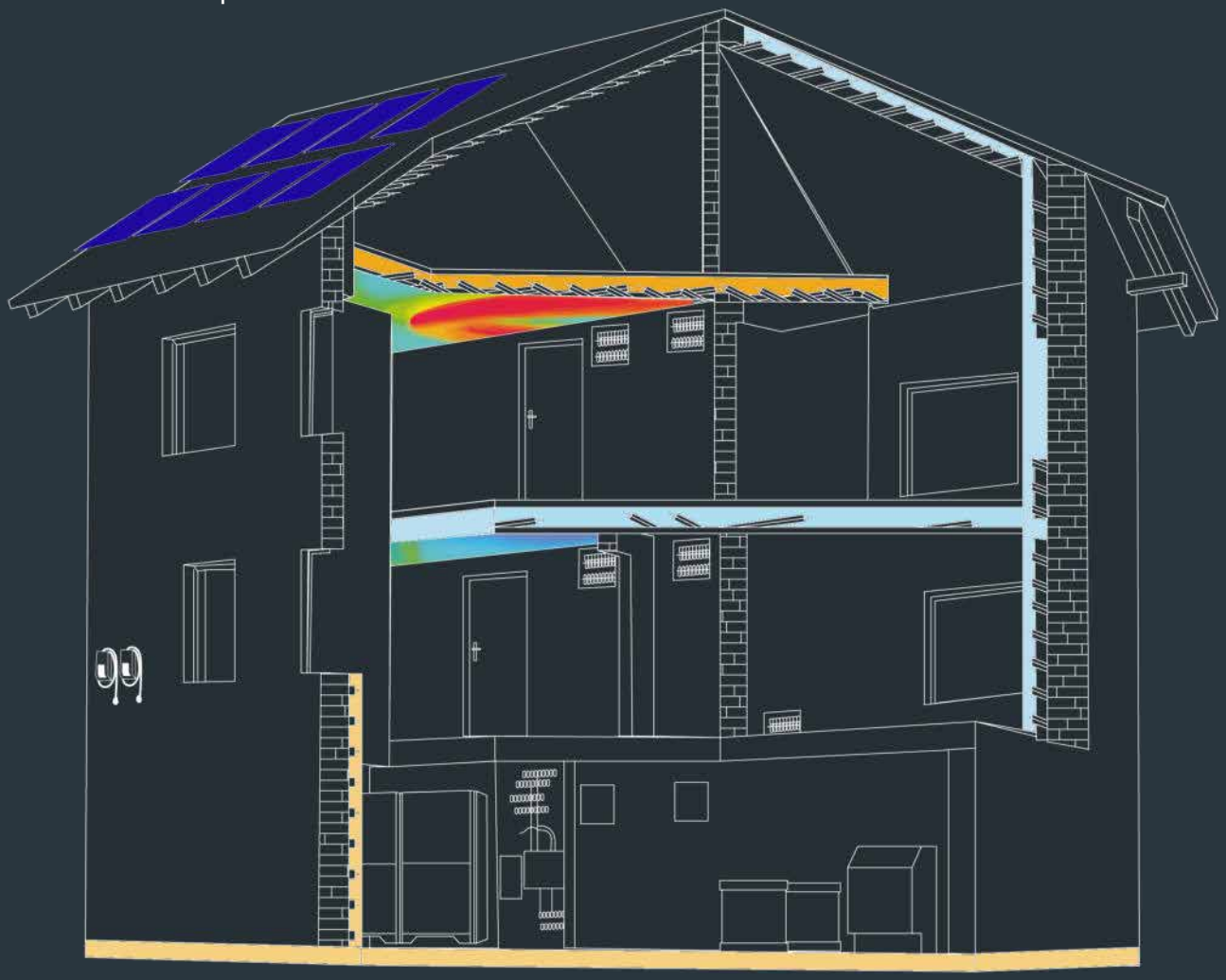
- Continue detailed design with KT-Ingenieure GmbH or commission an external office

Our services:

- Preliminary planning (also suitable for handover to external providers)
- Detailed execution plans, specifications for HVAC + building automation
- Support with tendering and awarding
- Coordination and handover (in case of external commissioning)

RAUM-K BUILDING ENERGY CONCEPT

Your way to minimal operating costs
and maximum independence!



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