



Kieback&Peter

ENERGY REVOLUTION

WHAT IS BUILDING

AUTOMATION'S ROLE?

IKZ-ENERGY interview with Christoph Paul Ritzkat

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Christoph Paul Ritzkat joined Kieback&Peter as the new managing director in January 2017. With 1,400 employees worldwide, this tradition-rich family company is one of the leading specialists in building automation and is celebrating its 90th anniversary this year. Ritzkat sees building automation as a smart alternative or supplement to conventional efficiency measures. In his interview with the IKZ editors, he talks about the impact of the “Energiewende” on the industry.



Dipl.-Kfm. Christoph Paul Ritzkat has been the managing director of Kieback&Peter since January 2017. The 51-year-old economist has held positions as managing director, CFO, and controller for various international companies. He has worked in Brazil, Germany and France—including in the automotive and metal industry, as well as in the fields of aviation, ICE and defense technology. Born in Cologne, he is married and has two children.

IKZ-ENERGY: Mr. Ritzkat, many trendy start-ups are currently sprouting up, dealing with the “smart home.” They make the established building automation companies seem rather boring and dusty. Nevertheless, you joined Kieback&Peter as managing director at the beginning of the year—one of the great traditionalists. What attracted you to this job?

Christoph Paul Ritzkat: Fancy apps and designs fascinate most of us. But with many of these supposedly “smart” products, I wonder: Do we really

need this? Does it really make our lives better, or is it just a nice gimmick?

IKZ-ENERGY: A very good question.

Christoph Paul Ritzkat: Right. And that’s exactly what my work is all about: In the building automation sector, we’re not developing fun and fashionable products for rapid consumption. We solve real problems that are economically and socially relevant. Not only are we making buildings smarter, we’re also making them more sustainable—automation ensures greater efficiency, safety and comfort. Ideally this benefits everyone, from building developers and operators to building users.

IKZ-ENERGY: Please explain.

Christoph Paul Ritzkat: In Europe, buildings consume about 40% of the total primary energy. And we spend about 80% of our lives in them. This means that buildings aren’t just central to climate protection and economic policy. They are also the most important social spaces where we live and work. By making them more efficient and livable, we go beyond climate protection. We create real value for society. This gives me the good feeling of doing something meaningful with my work. And that excites me more than any fancy app!

IKZ-ENERGY: But when it comes to building efficiency, most people tend to think of insulation and modern condensing boilers. Hardly anyone talks about building automation. Why? Is it not important for the Energiewende?

Christoph Paul Ritzkat: The Energiewende is primarily a political project. And in politics it’s not always the best solution that gets heard but rather those who shout the loudest. The arenas where these shouters operate are already full to the brim—we don’t need to jump in as well.

IKZ-ENERGY: Even if you do want to stay out of politics, could you give us a few figures that show how important building automation is for the Energiewende?

Christoph Paul Ritzkat: In the age of fake news, we often cling to numbers—they seem more credible than mere claims. But you don't have to be a mathematician to know that every statistic is vulnerable to manipulation. As a controller, I always wanted to know exactly who calculated which key figures and with which method. I've maintained this healthy skepticism of numbers to this day. It would therefore be dubious of me to say that building automation saves 50% of energy across the board.

IKZ-ENERGY: Be that as it may, figures would give us a sense of how relevant building automation is.

Christoph Paul Ritzkat: In theory, standards help us estimate the potential savings from building automation. Our industry follows DIN V 18599-11 and EN 15232. According to these standards, a fully automated office building in "automation class A" saves 30% in heating energy and 13% in electricity compared to a less automated reference building in "automation class C." In practice, though, I consider such blanket statements to be problematic: building automation is a cross-sectional technology that connects heating, ventilation, air conditioning, lighting and other systems. Because there are so many systems in play, there are many levers to pull. There is also the behavior of people, which is often difficult to assess.

IKZ-ENERGY: Are there specific figures from practice in addition to the theoretical calculations?

Christoph Paul Ritzkat: In a two-year practical study, Biberach University of Applied Sciences measured the difference between a class A and a class C building. They determined a total energy savings of 49%.

At Kieback&Peter, we can build on the wealth of experience we have gathered over several decades of customer projects. The following empirical values can be used as a rough rule of thumb: a smart room automation system with occupancy detection saves about 20% in heating energy on average compared to an unregulated heating system. Optimizing

ventilation control saves about 30% on average. But we have also had ventilation projects with 70% savings, such as the Arp Museum in Remagen. There are always outliers in both directions. Such average values should therefore be treated with caution.

IKZ-ENERGY: These are still impressive figures. How much do your customers have to shell out for a smart efficiency solution?

Christoph Paul Ritzkat: It is said that in a new building, about one to two percent of the construction costs are for building automation. That's not much in relative terms, but in absolute numbers it isn't peanuts. However, building operators need to bear in mind that automation will save them significant operating costs every year, so the investment will pay off in just a few years.

IKZ-ENERGY: Many developers sell or rent the building immediately after completion. That means they shouldn't care about the operating costs, right?

Christoph Paul Ritzkat: Are you referring to the "user-investor dilemma"? A lot has happened in the wake of the recent financial and real estate crises: "green" buildings with recognized certifications such as LEED, BREEAM, or DGNB are in great demand on the real estate market because they enjoy a high degree of value stability, even in crises.

IKZ-ENERGY: The idea of a "smart green building" sounds great. But that seems like a long way off. At the moment the greatest potential savings are in existing buildings. What role does your industry play in energy-efficient renovations?

Christoph Paul Ritzkat: If the Energiewende is to be successful, we must tackle our building stock. Nevertheless, visionary projects are important because they show us what is already possible today. To increase the renovation rate, we mustn't promote only certain measures. Rather, we need an intelligent mix of different instruments and technical solutions. And to increase acceptance of the Energiewende, we need to ensure that the costs and benefits are fairly distributed. I see this as one of the great strengths of building automation: it offers various low-investment measures that significantly increase efficiency for little money while improving comfort for the users at the same time.

IKZ-ENERGY: Can you give a specific example of such low-investment measures?

Christoph Paul Ritzkat: The Coburg building authority had a problem with an old school. The heating costs were too high, but insulation would have been too expensive. So they asked us for advice. We simply equipped all classrooms with a smart heating control system. That solved the problem. Energy consumption was cut by almost 40%, and the effort and expense were minimal. That's because our wireless technology is quickly installed, as it works without batteries or cables. The project was even awarded the Bavarian Environmental Prize.

IKZ-ENERGY: That sounds like a pretty clever solution. But quite a few companies now offer smart heating. What is the next innovation at Kieback&Peter? What are you currently working on?

Christoph Paul Ritzkat: I don't want to give too much away, but we are currently working hard on topics such as big data, artificial intelligence, virtualization and IT security...

IKZ-ENERGY: ... A load of buzzwords that could mean everything or nothing. Could you be a little more specific?

Christoph Paul Ritzkat: Well, the possibilities of digitization are far from exhausted. For instance, we are currently working on a predictive control system that not only utilizes the measured values taken at the building but can also use interfaces to incorporate external data such as weather forecasts, visitor flows, or energy prices in their control strategies.

IKZ-ENERGY: But isn't that risky? In times of terrorist and hacker attacks, you can't simply link the technical systems of a football stadium or a power station to the Internet, can you?

Christoph Paul Ritzkat: That's why we are also working hard on IT security. We take a proactive approach and offer our customers a solid security architecture. I warn anyone who will listen not to leave their systems exposed on the Internet with an unprofessional, do-it-yourself solution. We also offer sound solutions for failsafe operation: for example, our building management system can be completely

virtualized and operated with high availability in a modern data center.

IKZ-ENERGY: In all seriousness, though, nothing is 100% secure—no matter the industry.

Christoph Paul Ritzkat: I agree with you. It's always a technological arms race. I got a good piece of advice from my bike dealer once: your bike lock only has to be thicker than your neighbor's lock.

IKZ-ENERGY: That's a nice phrase. So, if sustainability is so important to you, do you cycle to work?

Christoph Paul Ritzkat: No, but I have two good excuses. First, I'm currently testing a plug-in hybrid vehicle. And second, as an active marathon runner I'm probably moving enough, anyway.

IKZ-ENERGY: Mr. Ritzkat, thank you very much for talking with us!

