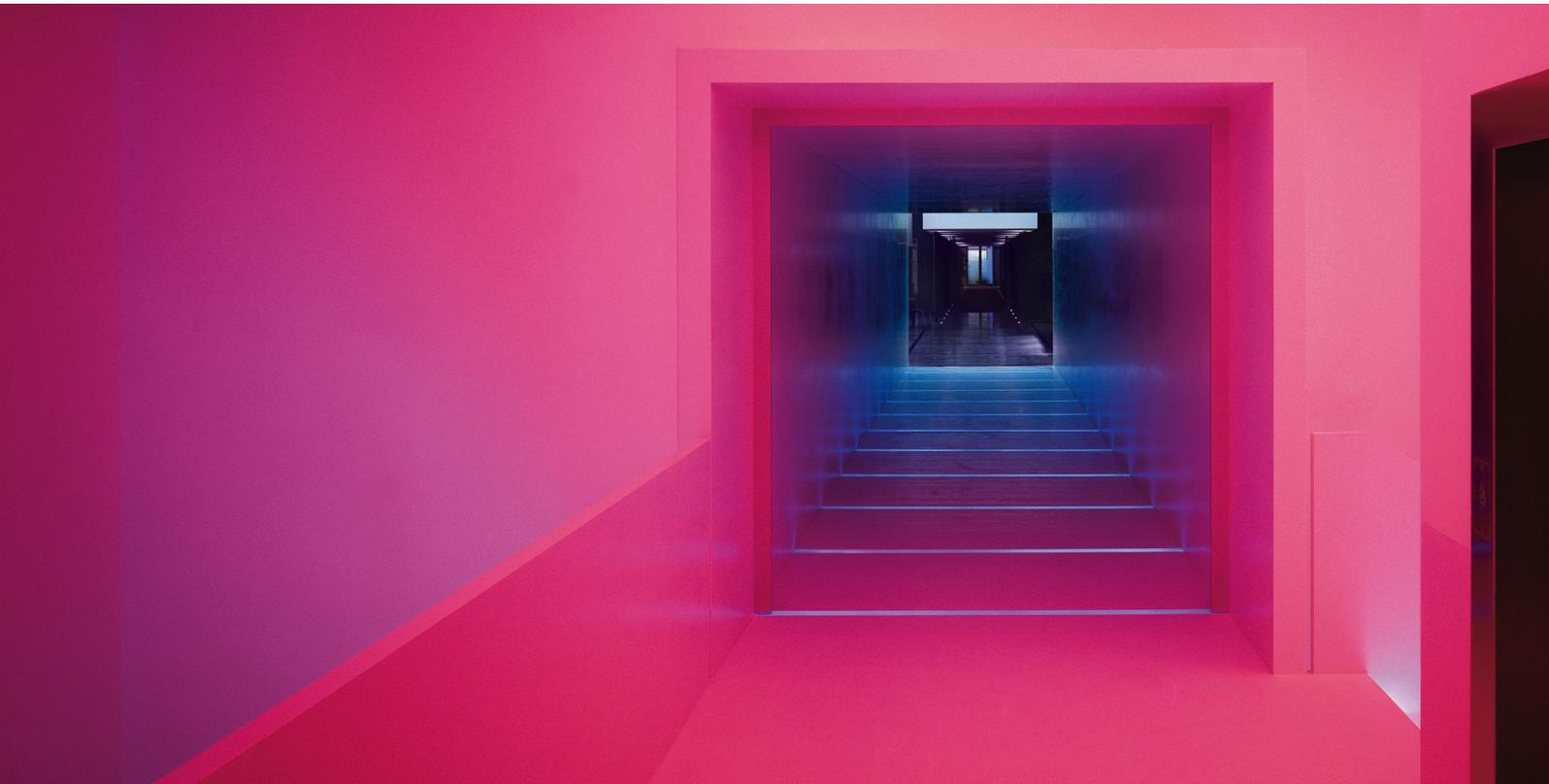*Energy Data Management according to ISO 50001*

Enlightened energy efficiency at Zumtobel with zenon

The Zumtobel Group, a leading international supplier of innovative lighting solutions for professional indoor and outdoor applications, uses the HMI/SCADA software zenon as a flow measurement solution to improve energy efficiency. The cooperation between the industrial automation software specialist COPA-DATA and the Zumbotel Group has a long history. Back in 2008, zenon became one of Zumtobel's trusted automation solutions because of its flexibility in user interface design and the ease it brings to managing production facilities.

For more than 50 years, the Zumtobel Group has been developing innovative custom lighting solutions for professional lighting applications in offices, hotels, spas, cultural spaces, and industrial and engineering environments. Solutions have to meet exact requirements in terms of ergonomics, efficiency and environmental compatibility while also delivering aesthetic value.
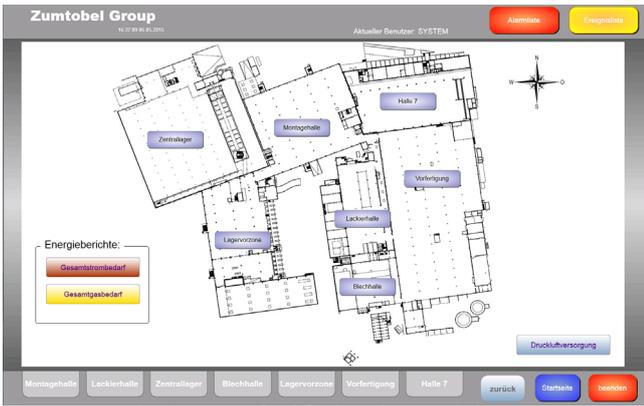
ON THE ROAD TO ENERGY EFFICIENCY

Several years ago, Zumtobel started a new measurement project. The aim of this project was to profit financially through a sustained program of energy efficiency while simultaneously protecting the environment which was finally achieved by zenon from COPA-DATA. In addition, the project made a valuable contribution to the ISO 50001 certification.

Zumtobel was looking for a clear visualization solution well-suited to facility management. The aim was to measure not only energy data on electric meters, but to collect and save data from the whole facility for later analysis.

The existing electric meters had originally been put in place only to convey current information. Martin Kronabitter, control engineer and one of the key engineers involved in the

Zumtobel site overview as rendered in the zenon system, including offices, production areas and warehouse.

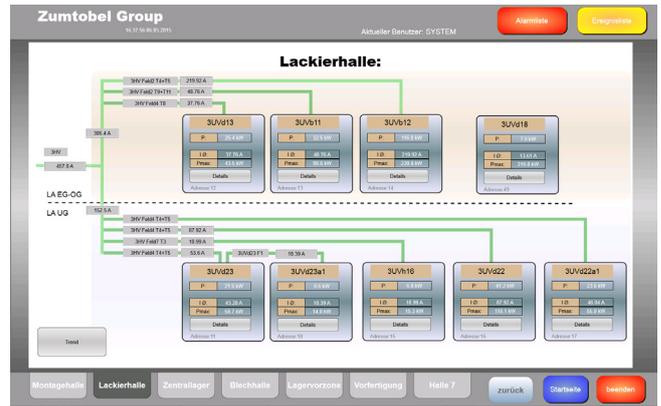*ISO 50001 measurement concept. The production hall overview.*

zenon integration project, explains: "In the beginning, those electric meters were not meant to save the energy data for later processing. This was simply not required back then."

Using electric meters to monitor energy flow was ahead of its time back when the meters were installed. There was no expectation of saving all the collected energy data in one place for later analysis.

The company had set up electric meters across the site in order to aid the calculation of energy consumption. Staff read out data on demand only from those devices on which it was necessary in order to make calculations. The electric meters were connected to each other. "It was a huge system of connections inside the building, like a network system," explains Barbara Mihatsch, the project leader at Zumtobel. "The primary monitoring task was to collect data. A facility worker went round the building and read out the energy consumption data displayed on each device. Another person manually wrote down all the figures, which were later transferred to an Excel sheet. Each month, the collected data was reviewed."

RELIABLE AND EFFICIENT MANAGEMENT OF ENERGY DATA WITH ZENON

Before long, it became increasingly important for production facilities to have in-house energy consumption meters which could save all the readings. Barbara Mihatsch and her team decided to implement zenon to make this possible in the Zumtobel facilities. Here, she tells us what it is that, for her, makes zenon so unique: "We are impressed by such a versatile, extensive software solution. We can run individual reports very simply and with 100 % reliability. zenon can perfectly support you when displaying different types of data and for automatically generating reports. We wanted to have everything done automatically. zenon does this for us. Even SAP data is perfectly accessible in zenon. It gives us visualization at our fingertips. We can access it anytime and everywhere.

In addition, the technical support during our training process was well managed."

ENERGY DATA MANAGEMENT ACCORDING TO ISO 50001

After several internal briefings at Zumtobel to assess solution providers that could create a measuring solution, Barbara Mihatsch finally achieved her ambition: an ISO 50001 measurement solution.

She explains her main reasons for having chosen zenon over the other solutions: "zenon has an amazing graphical environment. It is so easy to create a project with zenon. Each element is added using a 'drag and drop' function which makes our work very efficient." The other reasons for having chosen zenon over other providers were: simplicity, performance, flexibility and the fact that zenon is an Austrian product.

The days when a person walked around the building and collected energy data on a sheet of paper and then manually entered it into the computer are over. Mihatsch says: "There was no one collecting energy consumption data at certain times; for example, on Fridays at 4pm, during holidays or emergency situations. There was no talk about 100 % accuracy, because it was impossible. Even if it was possible for the data to be collected on time, it was impossible to be in two or three different places in a building at the same time."

Mihatsch continues: "Now with zenon, the gathered data is 100 % exact. We save a lot of time not doing calculations manually." In addition, by 2014, zenon had played a decisive role in helping Zumtobel attain ISO 50001 certification.

ZENON AS THE FOUNDATION OF AN ENERGY MANAGEMENT SYSTEM

The zenon Product Family has proven itself in practice as the centerpiece of an energy management system. Zumtobel profits from its ability to easily integrate with existing systems.

> *We are impressed by such a versatile, extensive software solution.*

BARBARA MIHATSCH, ZUMTOBEL

zenon offers more than 300 communication protocols. Without the need for programming, data can be collected from various sensors, control systems, machinery and entire facilities.

zenon supports Zumtobel with the automated collection and evaluation of any energy data it requires for decision-making in energy management. "Energy consumption data from various sources is pulled together centrally by zenon. Data is clearly displayed. Now we have access to all our energy management reports and performance indicators, as well as historical energy data, in real time."
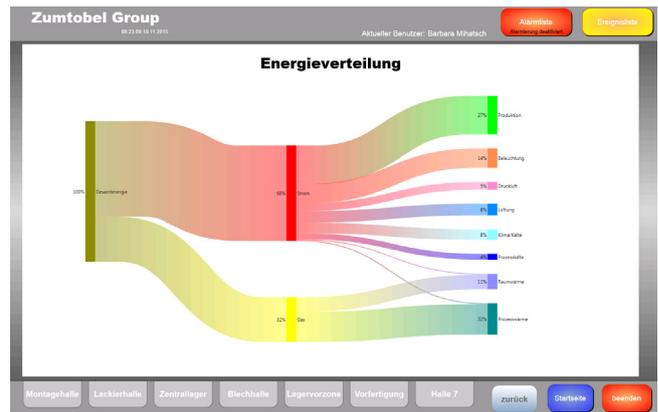
The fundamental principles of the ISO 50001:2011 standard clearly show that a functioning energy management policy must consistently measure, collect, process and analyze consumption and production data. The core instrument for this is an Energy Data Management System (EDMS) which manages everything, from energy consumption meters, right up to significant software reports.

Protecting the environment and cutting costs are often seen as contradictory goals. This needn't be the case. With its zenon-based Energy Data Management System, Zumtobel keeps an eye on its resources and energy consumption. In this way, it both protects the environment and cuts costs, while optimizing its productivity.

**BROADENING PROJECT SCOPE:
ZENON ANALYZER IN USE**

By 2013, following the measurement project, Zumtobel started to reach an optimization of its resources. Martin Kronabitter explains that, "as a result of the zenon integration, his team is even more motivated because of their great satisfaction with zenon. The combination of zenon Supervisor and the later addition of zenon Analyzer 'makes magic'!" he says. With zenon Analyzer, Zumtobel can be sure that the data it bases its decisions on is correct. The core of each report is high-quality data from the process combined with valid meta data.

zenon Supervisor captures data from the measurement device and saves it. zenon Analyzer can process and analyze various types of information in real time and display it in any

The Sankey Diagram clearly displays the energy consumption of Zumtobel's painting hall.

way required. Calculations and reports are achieved in just a few clicks.

Mihatsch sums up the project: "When we began, we were reading out data once a month manually which required a huge effort in terms of human resources. Now data is collected accurately and automatically and we can view reports based on our data whenever we want. We see our energy optimization improvements every day in our work. This is a great motivational force for our team."

**ZENON AS AN EDMS
ACCORDING TO ISO 50001**

▸ Simple, rapid and flexible project engineering
▸ Out-of-the-box modules
▸ Flexibility in user interface design
▸ Clear display of energy consumption data
▸ Certified direct connection to SAP ERP
▸ Dynamic, reliable and easy-to-use reports
▸ ISO 50001 compliance