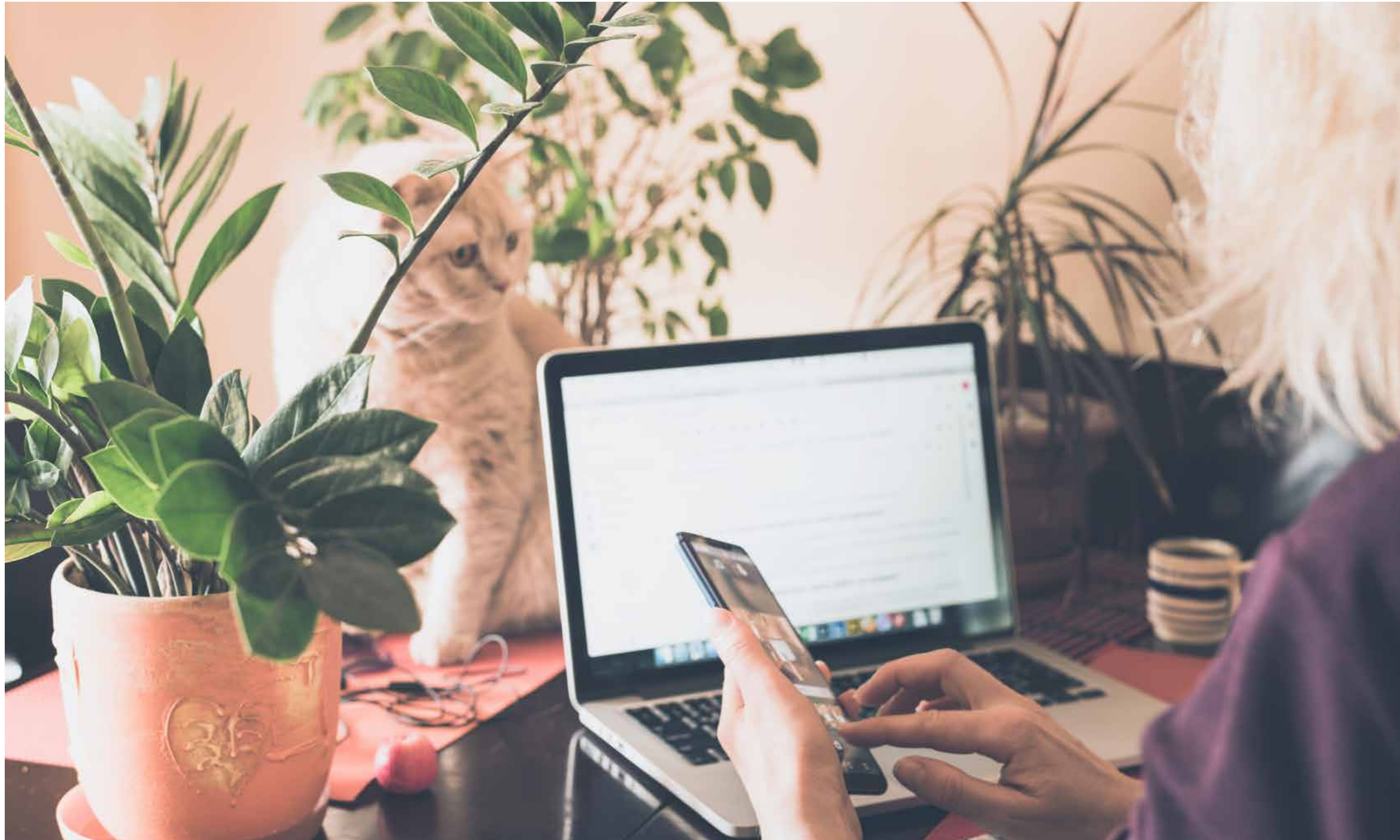




Work and life made simpler,
thanks to digitalization!

Hospital de Emergencias Enfermera Isabel Zendal. Berliner Bäder-Betriebe. Komptech.
NEW AG. I4RD – Redispatch for Industry. VMIS2 goes live. Doppelmayr. Vaillant &
EEBUS. Kellner&Kunz, Glücksteinquartier Mannheim. OTTO's sealants.

New normality ...



Dear readers,

We are still in the grip of the pandemic, even in 2021. In the meantime, we have got used to the “new normality”. We work from both home and from the office; video conferences are now daily events.

Flexibility thanks to digitalization

Thanks to digitalization and the flexibility of our team, and also thanks to the trust placed in us by our customers, we have been able to get through this period. But even so, we are really looking forward to being able to meet you again personally soon.

No evon up2date in 2021

Unfortunately, our customer event, the evon up2date, has again fallen victim to the Corona pandemic. We hope things work out for next year. **Save the date! Wednesday, 22nd June, 2022.**

A glance at what is new

The idea behind this new edition of evon Insight is to provide you with a quick overview of current projects, and, as usual, supplemented with news regarding evon XAMControl.

Best regards,
Andreas Leitner, Roman Ruthofer, Patrick Resch

New Partnerships in Record Time



The Zendal hospital in Madrid demonstrates how a hospital can be built in just 100 days and how this initiated a new partnership.



Claudio Guezuraga
Director Técnico
Ingetec Sistemas



Gerald Hirschmann
Head of Sales
evon XAMControl

The « Hospital de Emergencias Enfermera Isabel Zendal » is a public hospital in Madrid that became operational in December 2020 after a construction time of just 100 days. It is one of the most important hospitals in the metropole of Madrid to help cope with the Corona pandemic with its 960 beds and a 48-bed intensive care wing.

New partnership with REGIN IBERICA/INGETEK

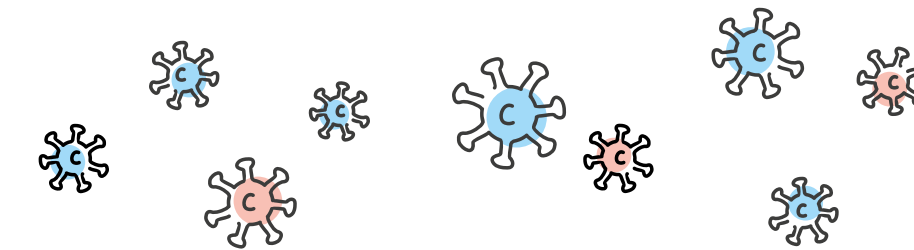
It goes without saying that erecting a hospital during a pandemic posed particular challenges.

We were thus more than pleased that REGIN IBERICA/INGETEK decided to use evon XAMControl and that our first mutual project could be completed with considerable success and efficiency. This was the foundation for the signing of a system integrator contract between evon and REGIN IBERICA/INGETEK for Spain and Portugal.

Three Pavilions, One Hospital

The « Hospital de Emergencias Enfermera Isabel Zendal » was planned according to the experiences made during the first Corona wave in the Spring of 2020. The building complex consists of 40,000 m2 divided into three pavilions that can be operated independently of each other. The hospital fulfils the highest standards regarding medical safety and pandemic management. Patient entrances and exits are separated and the ventilation system ensures virus-free fresh air.

evon XAMControl is a central building management system that visualizes and controls the building climate, lighting and the fire protection system. A redundant server and three operating stations guarantee continuous monitoring and rapid reaction if needs require.



HIGHLIGHTS

- 1 redundant server
- 3 operating workstations
- Communications protocols:
 - MODBUS TCP/IP
 - BACnet IP
 - MODBus
- Monitoring and control of heating, ventilation and climate. Control of lighting, fire protection, electricity supply and drains.

Successful together

A project such as this requires excellent collaboration between all participating companies. We are particularly pleased that REGIN IBERICA/INGETEK decided upon evon XAMControl and that we could complete this project successfully together and thus made a small contribution to the fight against the pandemic.



Summer, Sun, Sunshine ...

How the swimming pool operators, Berliner Bäder-Betriebe, could take a decisive step towards the future thanks to Mestronic and evon XAMControl.

BBB, Berliner Bäder-Betrieb, are the largest operator of swimming pools in Europe. They manage 26 swimming halls, 4 combined pools (hall and summer pools) for public bathing, 7 non-public swimming institutions for schools and clubs, and 26 leisure and summer pools. Every year, more than 6 million people visit these pools.

The pools contained out-of-date systems that were used to control and monitor the heating and ventilation systems and also for important pool-specific process equipment. These systems were installed and commissioned in the mid and late 90s. In the meantime, the building management components have reached the end of their life cycles and endanger smooth and safe operation.

During the renovation work that began in 2014, it was noted that a well-functioning and open solution for building automation to ensure future-proof operation of the buildings and building equipment was more important than ever. This would guarantee the effective financial use of resources and the permanent operation of the growing portfolio of pools in the future.

A partner for the future

For many years, the company Mestronic Steuerungstechnik GmbH has been working with future-proof solutions for building automation within the scope of energy-related building renovation. The engineering team focuses on building management systems for heating, ventilation, sanitary systems and media acquisition (documentation of consumption during live operation) and the optimization of equipment.

As a competent contractual partner to BBB, the company also recommends new solutions and endeavours to build future-proof systems together with BBB that are innovative, simple and low-cost. Thanks to the many years of experience working with automation systems (MSR), the company is an important partner for the migration of the equipment portfolio. At the same time, Mestronic has been evon's partner since 2011.

evon XAMControl as a control system for Berliner Bäder-Betriebe

Since this project is not a greenfield site but involves existing equipment that must be integrated into the building management system, a migration strategy needed to be developed for the systems. Due to the limited budget, the decision was taken to not replace any functioning system components. At the same time, as many control opportunities for the building manage-

Dipl. Ing. (FH) Andreas Schmidt
Managing Director
Mestronic Steuerungstechnik
GmbH



Christian Hofer
Sales Building Management
Germany, Austria,
Switzerland



ment systems as possible were to be realized, such as changing times of use, temperatures, speeds, volume flow adjustments, etc.

The choice for evon XAMControl fell upon a modern and open system for building management equipment. The advantages of the system in this case were the efficient migration path and the variety of existing connections (Siemens). This enabled all equipment to be integrated into the visualizations and a comprehensive data monitoring strategy could be installed. Today, the entire system of decentralized pools can be monitored and supervised in the BBB headquarters at Sachsendamm, thanks to evon XAMControl.

Successful achievement of targets

The costs for media (electricity, heating, water, hygiene) required for the operation of the pools is a major cost factor in BBB's current budget plan. For this reason, the optimization of operating costs was a major goal of the migration plan. Thanks to evon XAMControl, all parameters are acquired and documented in real-time. This provides the basis for cost drivers to be found, analysed and optimized.

Thanks to Mestronic and evon XAMControl, the first pools have been successfully migrated and interruption-free operation ensured for the future. Over and above this, the new system also helps to reduce the load on employees, since disturbances can be found and eliminated quickly.

Exclusive Cooperation with Komptech



Komptech is a technology supplier for waste treatment and has invested in automation, selecting evon XAMControl as an exclusive automation platform.

Automation solutions help companies in the waste sector to cope with the increasing requirements in waste treatment. Digitalization, networking, sensors and machine learning are used to improve the efficiency of waste preparation and increase the quality of manufactured, secondary raw materials. Komptech, a leading international high-tech supplier of machines and systems for mechanical and biological processing of waste, is working together with evon to drive the digital transformation of its portfolio forwards.

During the collaboration, evon XAMControl will be adapted to the specific requirements of the waste industry and will be applied exclusively by Komptech in the recycling industry. The platform gives Komptech the foundation for the digitalization and networking of machines and equipment in the spirit of Industry 4.0.

Optimization through Digitalization

Tailored for use in the waste industry, evon XAMControl is able to permanently monitor and improve the productivity and effectiveness of an entire plant. For example, a set of defined process parameters can be monitored during the separation of defined fractions and the speed of material flows in different parts of the plant can be aligned. A server controls the plant processes and enables the traceability of each step and also alarm management. For example, a quality assurance warning can be triggered if a certain level of impurities is exceeded.

Multiple machines and systems can be networked to a waste processing line using evon XAMControl's standard interfaces. The centrally acquired data forms the basis of reports and assessments for process optimization.

Komptech is a leading international supplier of machines and systems for the mechanical and biological treatment of solid waste and for the preparation of wood biomass as a renewable energy carrier. The product portfolio contains more than 30 different types of machine that cover the significant process steps in modern waste treatment: shredding, separation and biological treatment.



Komptech has agreed an exclusive cooperation with the automation specialist evon for the use of the evon XAMControl automation platform. F.l.t.r. Christian Oberwinkler (CTO Komptech), Heinz Leitner (CEO Komptech), Andreas Leitner (CEO evon), Rene Hirschmugl (Business Unit Manager Industry evon) (Photo: Komptech)



Heading forward ...



Our software development department has their finger on the pulse of current software development trends. If they see something of advantage for the world of automation, then they integrate it into the concept of evon XAMControl. The focus today is on standardization/certification, web technologies and the continuing expansion of a strong community.



On the path to BACnet Advanced Operator Workstation

Ever since BACnet was established as an international standard (EN ISO 16484-5) in 2004, there is a perceptible trend in its increasing popularity worldwide. This trend mainly originated in the US market. This is the reason we have intensified our development work. As early as 2020, the evon XAMControl integration on the control side (BACnet B-BC) has been raised to a new revision of BACnet, in addition, numerous useful functions have been developed and the compatibility with AMEV Testat of AS-B ensured. But these were just intermediate steps. The goal for 2021 is to finalize the already very comprehensive workstation implementation to a BACnet Advanced Operator Workstation. Naturally according to the latest revision 18 and with full compatibility with AMEV MBE-B. For you as our partner, this means that you will have access to an even more homogenous and native integration of BACnet in evon XAMControl in the future and are thus best equipped for future challenges.

Web, Web, Web

Web technologies are gaining in importance in the front-end. The technologies are efficient and offer a whole range of opportunities, also for the visualization in the automation. Following this trend, we can also see a lot of potential, above all as an alternative to the established rich desktop applications in the front-end domain.

The advantages are responsive design, lower installation effort and access via the web. Our development department's roadmap describes a gradual intensification. In the near future, our usual features such as complete alarm system, trending system, ticketing and much more will be available in modern web technologies.

Roman Ruthofer
CTO evon



ACC Store

We can achieve more if we work together and not reinvent the wheel: this is the idea behind the ACC store. This is why we are planning numerous improvements, new app packages and innovation for the ACC store in the future. We also want to animate you to continue the intensive cooperation. We are totally convinced that our mutual community is our greatest strength to ensure the high level of competitiveness for all and to enthuse our customers in the future.



New building, smart employee APP

Office World 4.0: economic, energy-efficient, needs-driven and functionally fit for purpose.



Christopher Steinberger
Application Engineer
Building Automation



Martin Lenzen
Service Electrical, Building and
Energy Management
NEW AG

The communal service company NEW employs approximately 2200 people and provides almost 400,000 customers with electricity, around 150,000 with gas and nearly 100,000 with drinking water. Other business divisions include the disposal of waste water, the management of public baths and local public transport in the region of Niederrhein. The new construction of a visionary office building for NEW Netz GmbH (NEW) in Mönchengladbach with a total area of more than 5000 m² represented a challenge in terms of automation for evon's partner Hepp-Schwam-born GmbH & Co. KG.

Innovative Approach

XAMControl from evon was selected as an innovative and open automation platform with a focus on the connection between IT and building management equipment. The building management system enables the economic, energy-efficient, needs-driven and functionally fit for purpose operation of the building without high and additional effort in terms of time and personnel. Since the system is open and powerful, any extension in the future to other NEW properties will not pose a problem.

Modern LED Lighting Concept

The lighting concept combines modernity with functionality. Thanks to Multi-Space, the focus lies on the improved communication and interaction between co-workers. The 2500 m² of office space and large sections of the general purpose area are equipped with LED profiles. The entire lighting system is DALI dimmable. Presence detectors detect the presence of people and, together with the LED technology, help to save energy.

The XAMControl APP (iOS and Android) from evon is integrated in NEW's employee APP and provides information regarding presence and simplifies the operation of lighting and shading.

Integrated Overall Concept

A weather station acquires temperature, humidity and even the brightness and

incidence angle of sunlight. This information is used to control the building's sun protection elements. The goal is to prevent glare and support the air conditioning system. The ventilation systems are capable of waste heat recovery to help save energy and ensure a comfortable room climate. The temperature is controlled via activation of the concrete core. The employed cooling systems use environmentally compatible cooling media and use the possibility of "free cooling" during night-time hours. The data technology implementation is trend-setting since the workplaces are connected using category 8 Ethernet cabling. The entire building is equipped with Cisco Access Points. The safety systems (fire alarm, intruder alarm and emergency lighting system) work autonomously and are connected via Gateways to the central building management system.

Consistent Communication Concept using evon XAMControl Command Centre

A truly innovative building requires a consistent communication concept for the building management system. Thanks to evon XAMControl, not only is the controller, but also the bus systems KNX, DALI right up to the shade controllers are all implemented in the building management system. Added to this are important functional units such as the fire alarm system, an intruder alarm system and emergency lighting systems that are integrated via Modbus, BACnet, OPC-UA, KNX and M-Bus. All data relating to energy are acquired and visualized centrally in evon XAMControl. This includes the PV system and the meters for energy and heat consumption. The centrally gathered data forms the basis for the analysis and optimization of energy consumption. The redundant and consistent measurement, acquisition and control system is also equipped with an integrated document management and simultaneously central information system for service, maintenance and repair.



i.s.c. (interactive smart control)

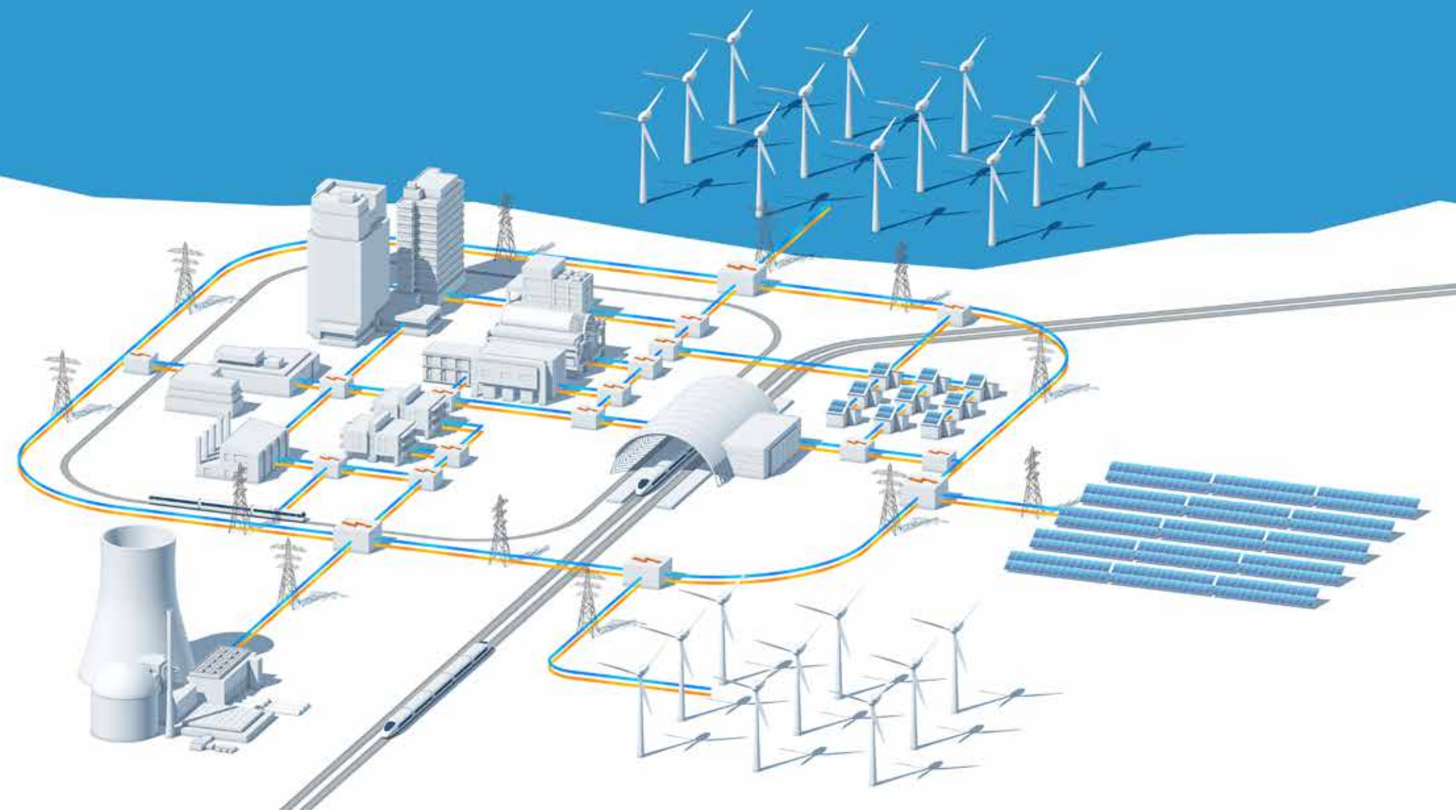
An app for employees has been integrated into evon XAMControl to provide optimum support for the Open Office Space concept. Every workplace has a QR code. A scan is simultaneously a login and allows the lighting and shading of each individual workplace to be controlled.

All workplaces and floors are visualized in evon XAMControl. The allocation is designated via colour schemes: Grey means the workplace is available, green means occupied and yellow means that the workplace is currently available but was occupied at some point during the day. This is helpful for targeted cleaning.

When searching for a colleague, there is an overview of all colleagues currently logged in. If a name is selected, the workplace and the floor is displayed directly in the visualization. A dashboard also provides information on the current level of building occupation. New entrants can watch a video explaining the most important functions in the app.



I4RD – Redispatch For Industry



The I4RD research project within the scope of “NEFI – New Energy for Industry” targets the optimization of energy distribution on all levels and between all stakeholders.

We are used to electricity being practically omnipresent. But few people know that complex processes are at work in the background of electricity supply to align power stations, renewable energy, grid distribution and the power consumption of industry and households.

Up until now, this alignment has only taken place in the superordinate space between large energy providers and the grid operators. However renewable energies will require cooperation over all levels, above all also with regard to the CO2 targets for industry. This is the focus of the NEFI research project “Industry4Redispatch” (I4RD).

Das AIT Center for Energy leitet und initiierte das NEFI-Forschungsprojekt. evon ist in Zusammenarbeit mit der TU Wien, Projektpartner für den Bereich der Softwareentwicklung für die Kontrollstruktur und die Prozess-Automatisierung. I4RD is the first project in Austria that brings all relevant stakeholders together to find an integrated solution. The goal is to establish a coordination process between the grid networks via automation and the optimization of the industry, and to develop a new redispatch module based on standardized requirements. The value of this new approach must also be demonstrated with a proof-of-concept. The AIT Center for Energy initiated and leads the NEFI research project. evon, in a cooperation with the TU Vienna, is a project partner for the area software development for the control structure and process automation.

Dispatch/Redispatch Today

The coordination between energy providers and grid operators today is managed in two steps: After dispatch, all power station operators inform the transmission network operators what amount of electricity they will generate at what time on the following day. This plan depends on a series of factors, such as the expected demand, the price, the price of raw materials and also on the weather in the case of renewable energy. Based on this data and the expected energy consumption, the grid operator calculates the so-called load flow calculation. The result is the load profile for individual transmission line sections. To avoid bottlenecks, the grid operator now instructs the energy provider to postpone (redispatch) the generation of electricity.

Redispatch measures are necessary to ensure grid stability (avoid black-outs). In Austria, the costs in 2020 for this were around 134 million Euros.

Industry4Redispatch

This goal of I4RD is to make the flexibilities in industrial plants useful for re-dispatching and to develop the associated tools for the exchange of technical limitations between the transmission network operator and the distribution network operator. In addition, I4RD will test the integrated redispatch concept using several demonstrations at different industrial plants that are located in the distribution grid. This allows industrial customers with different levels of automation system maturity to be addressed efficiently. This will lay the foundation for the future engagement of different industrial sectors. A cost-benefit analysis will deliver the economic efficiency of each interest group. A scalability analysis for the interaction between transmission and distribution network operator will identify the effects on the distribution network that may be caused by a large-scale demand-and-supply management for redispatch in the transmission network, as well as the required information flows. The project will conclude with a guideline including a step-by-step guide for the transformation of a conventional, existing industrial energy provision system into a more flexible, more decarbonized, and more optimally operated system along with guidelines for the coordination process.



Andreas Leitner
Managing Director
evon



Univ.-Prof. Dr. René Hofmann
Head of Research
Unit Industrial Energy
Systems, Institute of
Energy Systems and
Thermodynamics,
TU Wien



NEFI

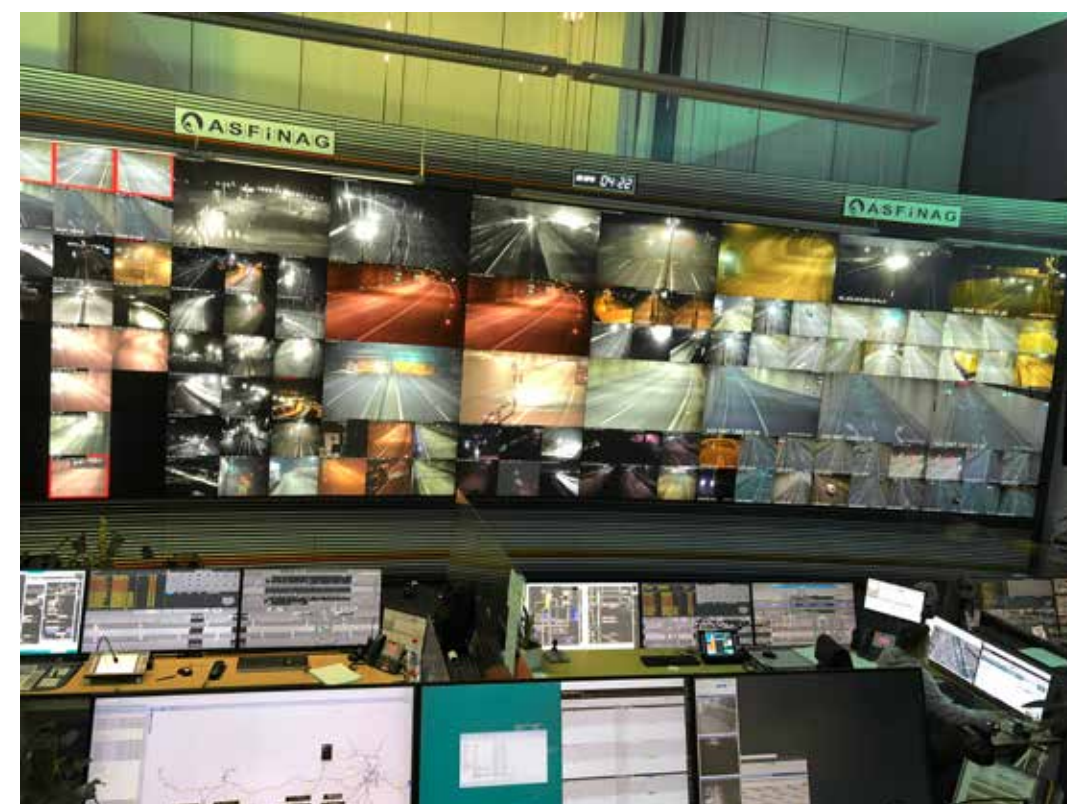
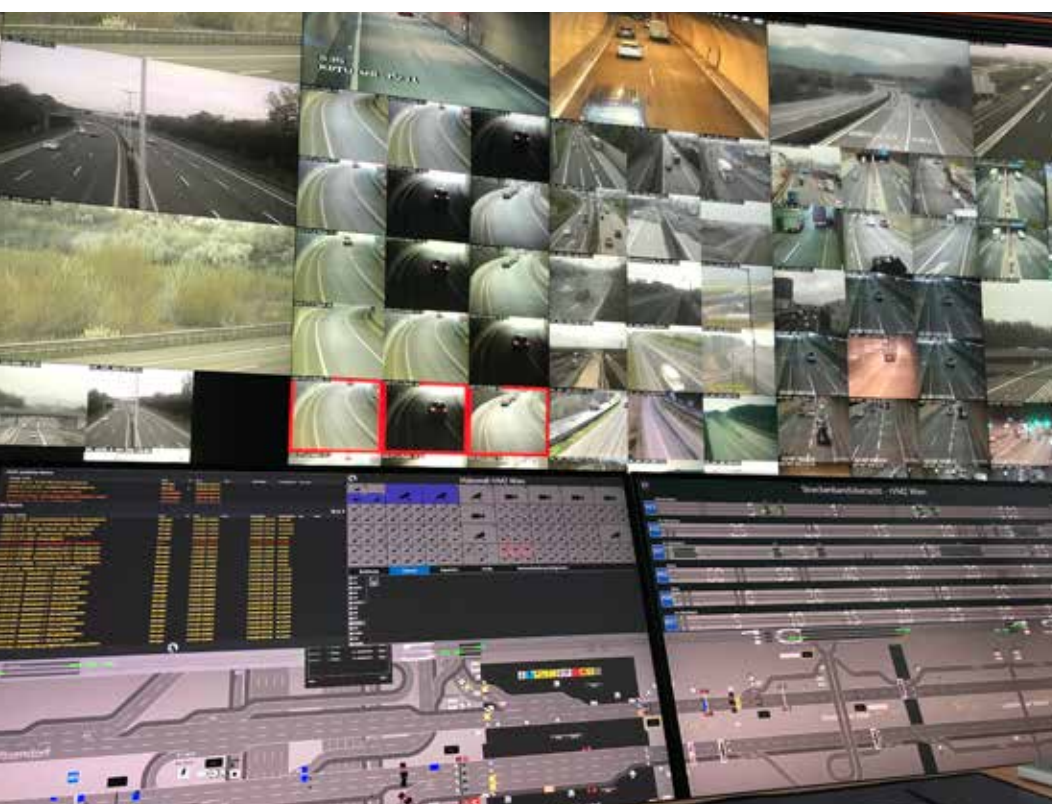
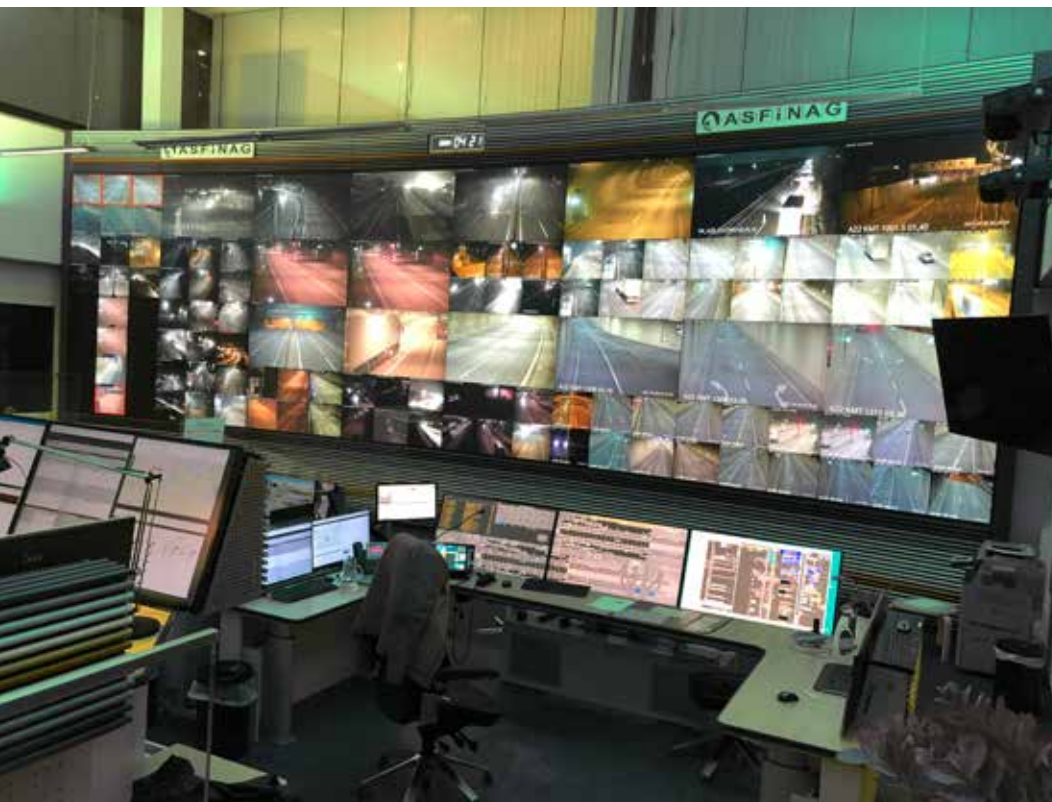
“NEFI - New Energy for Industry” is part of the “Showcase Region Energy” and follows the approach of decarbonization of the industrial energy system with the aid of key technologies “made in Austria”. The NEFI information alliance has formed around a consortium consisting of AIT Austrian Institute of Technology, Leoben University of Mining and Business Upper Austria and bundles the multi-faceted experience in the areas of energy research and application of projects. The climate and energy funds supports the NEFI projects funded by the BMK. www.nefi.at

Project Partner I4RD

AIT Austrian Institute of Technology
Technische Universität Wien
APG Austrian Power Grid
evon GmbH
kleinkraft OG
Wiesbauer Holding AG
Fischer Brot GmbH
EVN AG
Netz Niederösterreich GmbH
Netz Oberösterreich GmbH
Netz Burgenland GmbH
Energienetze Steiermark GmbH
voestalpine Stahl GmbH
Mondi AG
Energie Kompass GmbH
Siemens AG

28.4.2020, 6:00 am. VMIS2 goes live.

Paul Sattinger
Business Unit
Manager Traffic
Systems
evon



One of the largest and most modern traffic management centres in the world now runs using evon XAMControl's HMI for the monitoring and operation of Vienna's motorway network.

The VMIS 2.0 project (Traffic Management and Information System 2.0) began development in 2018 in a working partnership between evon and its partners Heusch/Boesefeldt and EBP Germany with a team of over 50 people for the company ASFiNAG (Motorway and Highway Financing Stock Corporation).

The project goal is the creation of an Austrian-wide traffic management system that

is a modern control model for traffic control and is able to integrate all of ASFiNAG's operational media in a single HMI. Up until now, ASFiNAG has used many systems with different user interfaces for the monitoring and operation of the motorways and highways with the associated media breaks and gaps in operational matters. The new control model with its openness is ready for future cooperative systems up to fully autonomous vehicles.

4

2025: Full integration of all regions of ASFiNAG in VMIS2 and thus the replacement of all old systems.

3

2022: Integration of the new traffic controller in 5 further ASFiNAG locations.

2

Oktober 2021: Integration of all traffic controllers with the new control model in Vienna.

1

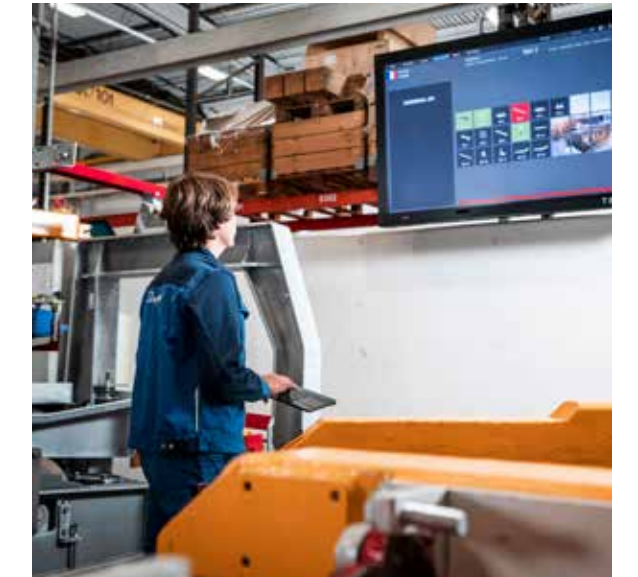
On the **28th April**, at **6:00 am**, the first release of the first level was switched to live in the central site in Vienna.



Precise & Efficient



How Doppelmayr manufactures modern and individual D-line series cable cars at the highest levels of efficiency.



The name "D-line" at Doppelmayr/Garaventa represents a new generation of cable cars in which everything has been rethought: New levels of comfort, new technology, new features, new design, new ways of manufacturing. The result is a generation of cable cars that is comfortable, quiet and smooth. The systems can be easily maintained and can be made individually unique. All this can be traced back to the production line, since only the sum of precisely made components, manufactured in precise processes, result in a high performance and reliable cable car.

Unique items efficiently manufactured

Every cable car today is developed uniquely for the customer. This inspired Doppelmayr/Garaventa to develop the manufacturing process further. The company GRÜBL Automatisierungstechnik GmbH, evon's partner for many years, was responsible for the successful design, development and realization of the production management system over the course of the digitalization process. Different departments and processes are much more closely networked by using evon XAMControl, which has led to high added value and a reduction of daily work effort.

The D-line production line in the Doppelmayr factory in Wolfurt (A) is the first plant with visual support and the documentation of all assembly steps. Every action is documented, tools and material are ordered and procured automatically.

This results in everything being close at hand, delays and mistakes are practically eliminated. The employee can see what is

to be done on the large monitor located at the working station.

Systematically Networked

Now the work instructions are generated, with no detours, by evon XAMControl directly from the CAD and system data that the cable car engineers create in the technical offices. This ensures maximum efficiency and accuracy. On average, 150,000 lines of code are created for each individual cable car station completely automatically and uniquely. Electronic screwdrivers, tools and jigs receive their parameters, the employees receive detailed instructions for the work steps.

This digitalization step not only reduces the work effort in assembly, but also moves analysis and quality assurance to a new level. Almost 2,500 lines of code are played back as a result of the production process. They form the basis for documentation and also for the active process improvement. In the future, the intention is to integrate artificial intelligence and machine learning to help improve further.

Human Factor

A process can only be as good as the employee that applies it. The new evon XAMControl visualization offers a charming option to help avoid the anonymity of producing station components. The name of the cable car and the flag of the customer's country for the current component is displayed on the upper left of the monitor of each workstation. This way, the employees know which cable car guests will enthuse about the quality of their work in the future.



Ing. Andreas Dunst
Authorised Officer
GRÜBL Automatisierungstechnik GmbH

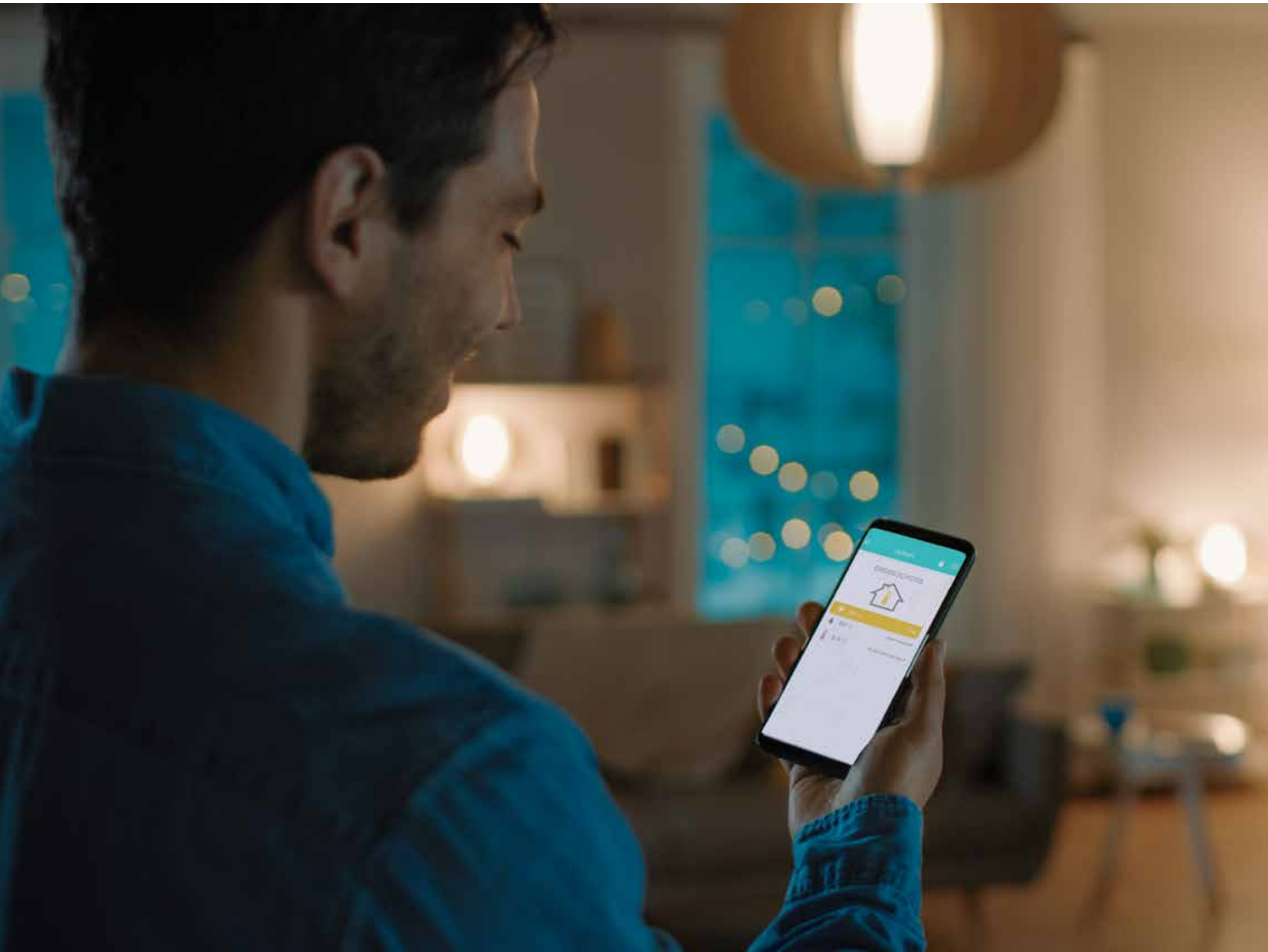


Rene Hirschmugl
Business Unit
Manager Industry
evon

HIGHLIGHTS

- From individual, single components to complete cable car station in one shift
- 1 element per hour, 1 cable car station per shift
- Approx. 15,000 lines of automatically generated code per element, almost 150,000 lines of code per system
- 8-15 employees per shift
- 700 m² pure manufacturing area

Perfect Match



evon Smart Home and EEBUS as perfect partners using the Vaillant heating system as an example

Werner Nevrsal
Product Marketing
Vaillant Group Austria GmbH



Achim Kotremba
Head of Development
evon Smart Home



Whoever produces energy locally in their own home today, whether solar or geothermal heat, attempts to use the harvested energy in the best possible manner. Although this is already possible by using a whole series of functions in evon Smart Home, one thing is missing: An all-encompassing standard for the communication.

EEBUS, the solution for future-proof energy management

EEBUS is an international initiative that has developed a communication standard for the intelligent networking of all smart home components (photovoltaic & storage, heating, ventilation & climate control, whiteware, e-mobility). It is a significant European initiative in the domain of the Internet of Things and unites all leading manufacturers from differing sectors.

EEBUS is an open and free standard. EEBUS communication does not need any special bus cable and works over available IP networks (Ethernet, WLAN). This means a DSL or WLAN router is sufficient to integrate all domains into the smart home network (plug and play).

Vaillant and evon Smart Home

Vaillant is an active member of the EEBUS initiative. All heating systems can be networked with EEBUS. This made it obvious for evon to join with Vaillant in making the first step towards EEBUS integration. The result is the complete integration of Vaillant heating systems in the evon Smart Home.

This means that every user immediately has intelligent control possibilities for energy management. For example,

current weather data and user behaviour data can be taken into consideration. In addition, the natural warmth of the sun can be used or blocked (depending on the season). The intelligent interaction of house technology makes a home efficient and saves energy.

With EEBUS towards the future

The openness of EEBUS will also enable energy storage solutions and electric vehicles to be included in a proprietary, smart network in the future. This will enable energy to be stored and the optimization will not only improve the CO2 balance, it will also reduce costs. The first successful step has been taken together with Vaillant and it shows the potential of the EEBUS standard.



Logistics Centre 2 and RECA minis

Christian Hennerbichler
Authorised Officer
GTS Automation GmbH



Patrick Resch
Managing Director
evon



Modern Building Management for Logistics
and a Kindergarten

Kellner and Kunz AG is known as the expert for screws, tools, dowels, fasteners, construction, metal, DIN and standardised parts. GTS Automation GmbH, evon's partner, was selected to install the entire building management system for the new logistics centre.

Kellner & Kunz is one of the two leading companies belonging to the RECA group of 27 companies in 19 countries. The group concentrates on servicing the markets for industry and craft and offers a competent and comprehensive portfolio of products and services. The logistics centre in Wels directly supplies all customers in Austria and Eastern Europe.

GTS specialises in the automation of classical heating, ventilation, and air-conditioning systems (HVAC control). The company also offers specific control solutions for the lighting, shading and climate control of individual rooms. The seamless integration of further, relevant, disciplines enables video access and alarm systems to be integrated into an overall system thus creating an extensive building management system.

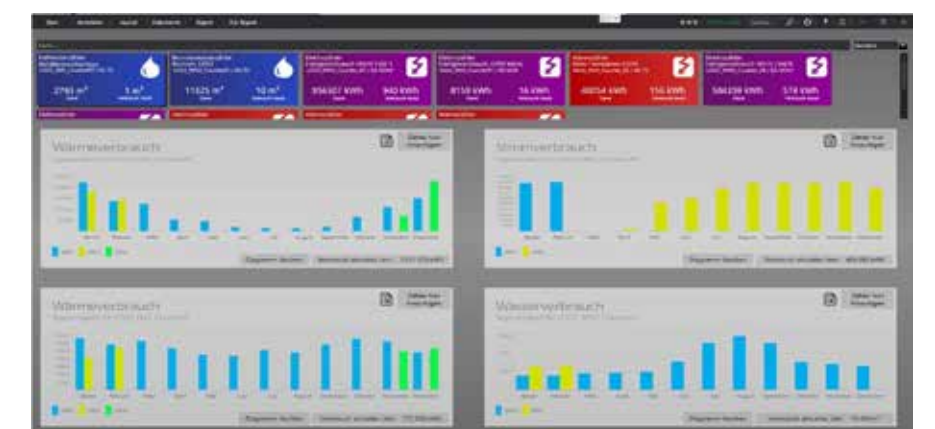
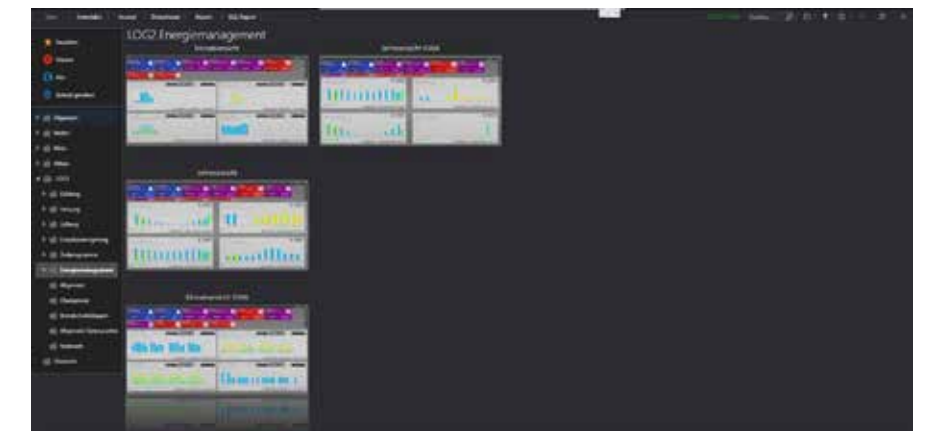
Kellner and Kunz AG doubled their logistics footprint at their headquarters in Wels with the construction of a modern logistics extension in 2019 and 2020. GTS Automation AG relied on evon XAMControl for building management.

The project includes the control of heating, ventilation, and cooling systems as well as the entire smoke extraction control with a certified ring bus system complying to ÖNORM F3001.

Thanks to the flexibility and openness of evon XAMControl, the room automation from Thermokon Joy could be integrated quickly and efficiently via Modbus. The fire dampers and the smoke extraction control (both supplied by Agnosys) were connected via BACnet.

Fresh Air for the RECA-minis

In addition to the logistics centre, the company's own Kindergarten "RECA-minis" profited from the advantages of the new building management system based on evon XAMControl: The control of the ventilation system is done on demand and zone-by-zone per room via air quality sensors that ensure the continuous supply of fresh air in the rooms and simultaneously operates the system with the lowest possible energy consumption.



Glückstein Quarter in Mannheim



Happy Tenants in Building No. 1 Thanks to ROM and
evon XAMControl



Foto: DIG Deutsche Innenbau GmbH



Since 2018, ROM - Rud. Otto Meyer Technik GmbH & Co. KG (ROM) have been evon's partner in the building automation sector. ROM is a traditional company with a history spanning over 150 years and currently employs around 2,300 highly qualified people. The company offers comprehensive expertise in all areas of technical equipment for buildings (heating, ventilation and climate control) to its customers in Germany acting as a planner, constructor and also as an operator.

Glückstein Quarter Mannheim

In 2011, construction work began on a new city quarter on a 33 hectare plot that used to be owned by the German railway company, Deutsche Bahn. Once completed, office buildings, scientific institutions, a hotel and public parks will offer space for almost 4,600 workers and 1,500 inhabitants. In 2019 and 2020, ROM equipped Building No.1 with modern building automation software from evon. Project management and execution was carried out by Consus Real Estate AG.

No. 1 Glückstein Quarter Mannheim

Building No. 1 was built with 14 storeys with a floor space of 19,000 m² and houses a variety of occupants (offices, hotel, retailers). The tenants include well-known companies from all business sectors.

The diversity of use placed ambitious demands on the building automation system. Thanks to evon XAMControl, the various components for heating, ventilation and climate control are combined in a single system via Modbus, OPC-UA, MBus and BACnet using Beckhoff hardware. The comfort of each individual tenant is provided by 36 evon Smart Room Controllers for individual room control. This ensures Building No. 1 will remain the number 1 for energy efficiency even into the future as cooling systems and district heat transfer stations are also integrated. All energy meters are connected via MBus and continuously deliver data for optimization purposes.

The combination of software (evon XAMControl) and the high level of expertise at ROM for the implementation has resulted in a successful project with verifiable added value for the client.



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HIGHLIGHTS

- Fläche: 19.000 m², 14 Stockwerke, Nutzung: Büro, Hotel, Retail
- 36 Smart Room Controller für über 250 Achsen flexible Raumautomation
- Brandschutzklappensteuerung über Modbus
- Einbindung von Kältemaschinen und der Fernwärmeübergabestation über BACnet
- Energiezähler über MBus

Production full digitized according to Industry 4.0 standard



From the outside, all that can be seen are two silver metallic silos that lend the sober white building some flair: But inside, production processes run entirely digitally according to the Industry 4.0 standard, thanks to evon XAMControl.



A closed system from delivery to filling of OTTO's sealants

The Hermann Otto GmbH, or OTTO for short, was founded in 1881 and is a traditional Bavarian company. It has been producing and selling silicon sealants and adhesives based on silicon, polyurethane, silane-terminated polymers (hybrid) and acrylates since the 1960s.

The new factory in Kaltenbrunn produces popular OTTO sealants in large volumes and profits hugely from the high-tech plant based on evon XAMControl. The manufacturing process is conducted almost completely fully automatically and in a closed system. This is in contrast to the previous production methods that continue at the site in the Krankenhaus-straße to manufacture in small batches and with a comparably high level of employee intervention in the individual process steps. The raw materials in Kaltenbrunn, namely the polymer from the tank and the silica from the silo, are automatically dosed and fed into the mixing container. The introduction of additives and colour pigments for each product colour is achieved via a static mixer in the filling section of the cartridges. Just as for the filling, robots print, package the items in cartons and complete the palletization completely automatically.

The centrepiece: evon's process control system XAMControl

The interaction of software, electronics and the machines themselves plays a major role in ensuring that production processes run smoothly and that quality is consistent. Specialists from evon teamed up with those in OTTO to develop a tailored process control system based on

evon XAMControl to control and monitor all processes in the fully automated plant. A digital control room that displays the entire production process and its data gives the production manager insights into current processes and enables the exact source of any faults to be located and, if required, permit manual intervention. Data recording enables the processes to not only be monitored, but also analysed and traced. A crucial element for production is the integrated maintenance plans and the notification of faults (SMS, email).

It is not only the production aspect that is integrated in the process control system, evon XAMControl, but also logistics. This offers a series of advantages: On the one hand for the logistics area, since stock level monitoring brings more security in to the production process and the commissioning with tablet and handheld devices guarantees seamless tracing. On the other hand, the complete production of supply media (heating, compressed air, etc.) for the site and the process can also be monitored and controlled using the same software solution.

evon XAMControl communicates in real-time with OTTO's ERP system. This is responsible for the overall corporate planning and control: From purchasing and stock management, procurement and order fulfilment, up to controlling.

evon XAMControl supports, the human is in charge

The advantages of this closed system are obvious and are also a clear goal of Industry 4.0 since using automation eliminates the typical vinegar smell of the acidic cross-linking raw materials and



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dust pollution caused by the silica in their dry state. Although the otherwise unavoidable side-effects of the production process are not a health risk, they are unpleasant for the employees. In addition, a large proportion of the heavy lifting work is now supported by machines. From now on, the OTTO team can concentrate on quality assurance. And the team remains indispensable: The pre-produced colour pigments and mixtures need to be prepared and the sealants must be made available to the individual production lines. Colour matching still requires a practiced human eye, despite the use of an optical spectrometer. The employees in quality assurance compare samples from the current batch with the corresponding colour reference template. So despite all the machines, the human remains in charge. All in all, the integration of Industry 4.0 in OTTO's new factory enables the highest degree of productivity while simultaneously maintaining OTTO's high and unchanging demands on quality.

The danger, that a
computer will become
like a human is not as
large as the danger that
a human will become like
a computer.

Konrad Ernst Otto Zuse