

MAGAZINE

TRANSFORMING
THINKING

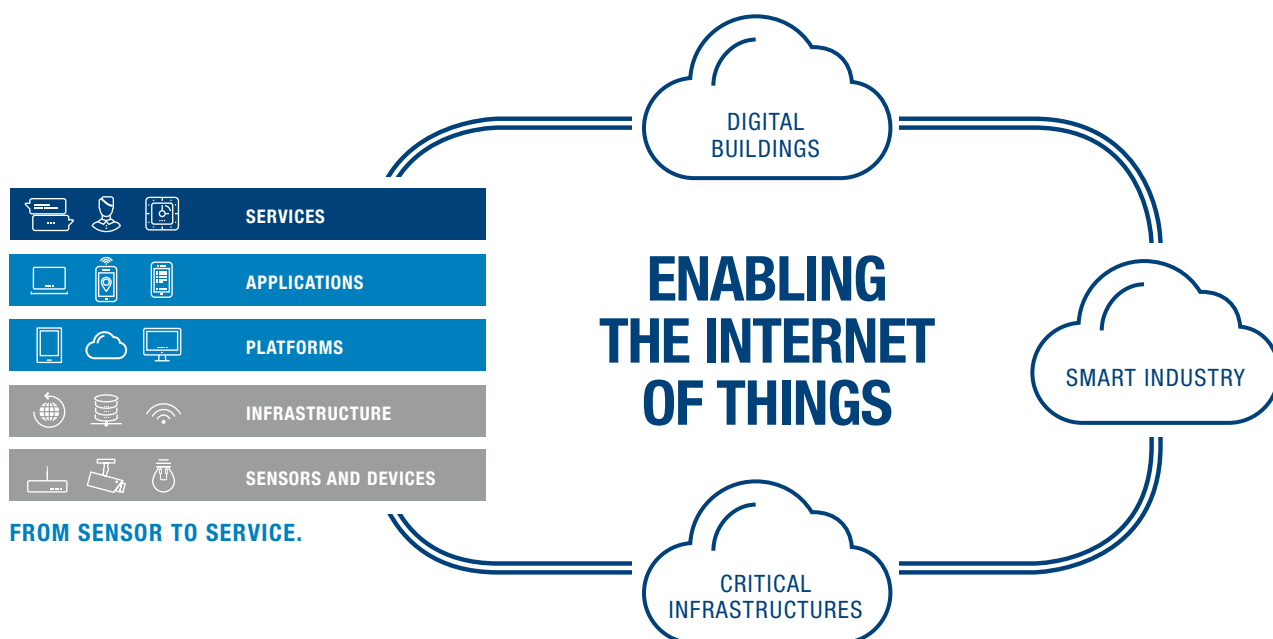
YEARS

euromicron

euromicron – CUSTOMIZED CONCEPTS FOR THE INTERNET OF THINGS

The euromicron Group develops tailored IoT solution concepts in the markets “Digital Buildings”, “Smart Industry” and “Critical Infrastructures”.

We boast vertical know-how that is unique in our market. It enables us to formulate a technical infrastructure to suit each of our customers to a tee. To achieve that, we combine the technically and economically most expedient components from the fields of terminal devices and sensors, infrastructure, platforms, applications and services. In that way, we offer our customers a one-stop shop for solutions and so help them exploit the possibilities of digitalization right now.



DIGITAL BUILDINGS

Everything that can be integrated in networks can also be controlled in the digital building. Technologies and solutions from euromicron ensure that buildings thus become an integral part of the Internet of Things. Enterprises benefit from that in the shape of energy savings, convenience, simple communication and security at all levels.

SMART INDUSTRY

Smart processes, digitized small-scale production, lasting quality assurance or innovative working time concepts – companies are increasing productivity and developing new business models on the basis of Smart Industry. The foundation for that is gradual digitization. euromicron implements that for its customers in a forward-looking way that protects investments.

CRITICAL INFRASTRUCTURES

Secure networks are vital for modern societies: Banks, the energy sector, public authorities, telecommunications, transportation and healthcare depend on fault-tolerant systems. euromicron develops solutions for Critical Infrastructures on the basis of a wide range of different IT and communications technologies.

euromicron

20 YEARS EXPERIENCE WITH FUTURE

euromicron's history is that of a group tuned to the pulse of technological change. Over the past 20 years, euromicron AG has accompanied its customers on their path to a future of technological change and new business models. That demanded and keeps on demanding changes in thinking and skills.

Our goal is to anticipate what's new without simply throwing existing things over board. On the basis of that, we ensure that our customers keep pace with technical advances, while protecting their investments – as we've done for 20 years.

THE CHANGING FACE OF EUROMICRON

How slow is fast? How inaccurate is precise? How obsolete is cutting-edge? Good performance alone is no longer a guarantee of success in the digitized world. New thinking is required to leverage new opportunities. In the past, we at the euromicron Group have built the skills, technologies and service mentality that help our customers tackle the challenges they face now and down the road.

We can look back on 20 years of euromicron AG, over which time we and our customers have moved from the analog world toward digital and Internet-based technologies, applications and business models. Innovative networks and infrastructures for transporting voice and data – that has been euromicron AG's core business since the company was founded. Today, we unite key competences for digitizing network infrastructures, as well as production and business processes, under our roof. With our in-depth solution expertise for "Digital Buildings", "Smart Industry", "Critical Infrastructures" and related smart services, we boast a unique selling point in the market. ■

C

Critical Infrastructures We live in a connected world. Network infrastructures have become the lifelines of modern societies. Banks, the energy sector, public authorities, telecommunications, transportation and healthcare need fail-safe systems. euromicron supports operators of critical infrastructures in implementing tailored vertical solution concepts, IoT migration strategies and cybersecurity measures. To achieve that, we deliver the technically and economically most expedient solutions from the fields of infrastructure, platforms, applications and services. ■



D

Digital Buildings Technologies and solutions from euromicron enable energy consumption, communication, lighting, access and security, convenience and technical building functions to be tailored to users and tasks. Buildings are thus equipped with “intelligence” and integrated dynamically in the Internet of Things. These “smart buildings” offer solution approaches for living in the cities of the future. ■



S

Smart Industry Small-scale production from lot size 1 up. Intelligent processes that guide people in making things safely, securely and without errors. Foresighted actions by machinery to optimize production. The fourth industrial revolution promises to enhance and flexibilize productivity, resource efficiency and ergonomics, as well as integration of processes with customers and business partners. euromicron offers a holistic approach for Smart Industry and the related processes and services – especially for small and medium-sized enterprises. As a result, production can be networked with IT in an energy-efficient, high-performing, yet secure manner. ■

On the basis of that, we allow our customers to embark on digitization in a way tailored precisely to their needs: As a medium-sized group, we know the challenges the Internet of Things poses for companies, in particular small and medium-sized enterprises. We are a reliable partner who develops and implements tailored, future-proof solutions – from sensors to services. We complement our own expertise with technologies from partners who are leaders in their markets. As a result, we enable our customers to migrate their infrastructures and systems gradually to the digital age, as well as develop new services.

In order to answer those questions and address the ever faster pace of innovation cycles, we ourselves have embarked on a process of continual transformation: We are expanding our expertise and changing our thinking. The result is already digitization to touch and feel: in the shape of innovative IoT solutions. Or completely new business models. And expertise that helps our customers move forward. ■

In the midst of the changes as part of digitization, euromicron has offered concrete paths to achieve transformation for two decades: How must powerful and rugged communication technology be designed? How can Smart Industry be achieved cost-effectively? What specific benefits do intelligent building functions offer? How can infrastructure and systems be protected against cyberattacks? How can our customers make investments today so that they can build on them sensibly moving ahead?

THE COMPANIES IN THE EUROMICRON GROUP



TRANS

1998

THE HARBINGERS

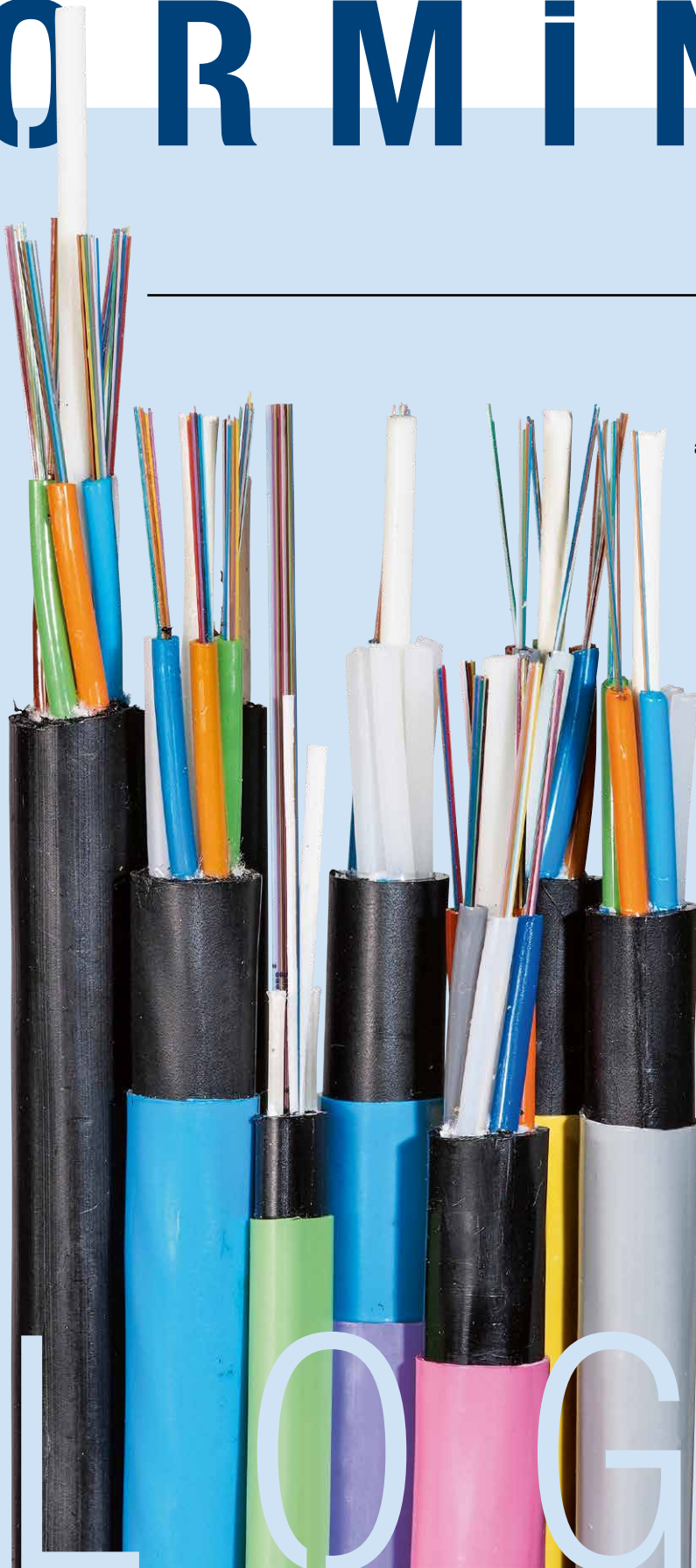
Digitization was euromicron's core business 20 years ago.

TECHN

FORMING

2018
IN THE
INTERNET OF
THINGS
we leverage our
evolved know-how
across technological
boundaries.

LOGY



20 YEARS OF DEVELOPMENT

What was the future of transmission technology 20 years ago? Could we imagine using mobile devices, each with a computing power of an entire office, in our everyday life and work? Would we have thought it possible for business models to be based on casually collected masses of data? What would we have said in response to the question: What is the “Internet of Things”?





W

Whether trains, cars, robots or buildings; We now control large things with small devices. Storage technology, mobile communications, IP, WLAN, fiber optics and the like open up possibilities that were science fiction 20 years ago and have enabled that transformation. euromicron is part of that, because transformation is our core business: from transmission technologies, computing speeds, storage capacities and security issues to intelligently connected things, self-controlling processes and mobile communication anytime, anywhere. ■

The Internet and things

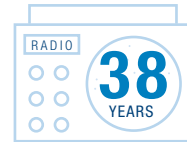
One of the far-reaching changes for life and work is the worldwide spread of the Internet in the past 20 years. In 1998, 147 million people used the Internet, i.e. 3.6% of the world's population. That had risen in 2017 to 3.885 billion, i.e. 51.7%. Behind those bare figures lies a great deal of complexity. Nowadays, any telephone connection, computer, surveillance camera, sensor and machine can be controlled via an IP address. An infinite number of "players" send and receive data in the Internet of Things. That means the challenges are growing. Enormous transmission, computing and storage capacities, as well as effective security concepts, are a must. Small and medium-sized enterprises in particular often lack the resources and know-how for technological connectivity. euromicron helps them migrate gradually with viable, practical concepts. ■



SMART BUILDINGS
in smart cities – we enhance convenience and security in the urban space with the Internet of Things.

RAPID GROWTH: FROM THE PHONE TO POKÉMON

Time needed for the number of users to grow from 0 to 50 million

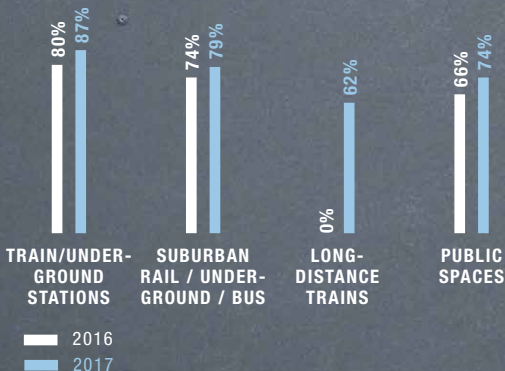


FROM THE GUARD DOG TO THE CAMERA

Intelligent video surveillance has become possible by connecting video cameras with the Internet and using highly specialized evaluation and analysis tools. euromicron is equipping more and more areas where security is vital – train stations, underground car parks, public spaces, entrances to buildings or security-critical facilities – with smart video cameras. That not only increases the feeling of security: it's a greater deterrent to criminals, while potentially dangerous situations are identified faster and can be prevented before they arise. euromicron Deutschland fitted Cologne Central Station with around 200 cutting-edge cameras and a central video management platform and integrated data components in the existing system and process landscape. The project was accomplished in just three months without interruption to ongoing operations. Other stations are to follow. ■



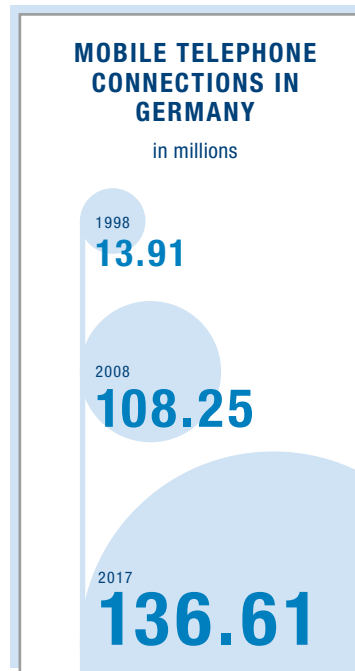
ACCEPTANCE FOR THE USE OF VIDEO CAMERAS





Online everywhere

Growing demands for mobility, bandwidth and reliability have fueled advances in tele-communications in the past 20 years. Global introduction of the fully digital mobile communications standard GSM in 1992 laid the groundwork for a veritable revolution – the cell phone became a multimedia all-rounder. Bandwidth continued to increase during that time. The broadband standard LTE became available as of 2010. The next quantum leap in mobile communications is expected around 2020: the 5G wireless standard. However, quite a bit has to happen before that. Fiber-optic networks have to be expanded and transmission systems converted to cater for the next boom in broadband. euromicron is involved in expanding mobile communications with several of its subsidiaries, is setting up new transmission masts, and is converting existing facilities to digital transmission. ■



Over a short distance

The Internet for all devices – devices are integrated wirelessly in local networks on the basis of the wireless local area network (WLAN). WLAN makes it much easier to access the Internet because cable connections are no longer needed. WLAN supports the trend toward mobility and flexibility, such as at workplaces. However, it also necessitates effective protection against intruders, especially in working environments. The trend is now moving toward cloud-based management of wireless LAN solutions which do away with the need for central hardware to control the environment. euromicron's solutions in the field of software-defined and cloud-based managed network and security services are being used increasingly, in particular by chains and companies with distributed locations. ■



Free channels for emergency services

Mobile communications is now also used by public authorities and organizations that perform security tasks, such as the fire brigade, police and emergency services. Analog radio communications was used for a long time in this area, but had various drawbacks – in particular, it could not be encrypted and did not allow group communication. Digital mobile communications for public authorities uses specially reserved frequencies. Apart from voice transmission, it also permits group communication and sending of image data, a factor that may be vital in the event of disasters. Major events often initiate a step-up in expansion: For the G7 summit at Elmau Castle, euromicron was tasked with expanding the public authority wireless network in the surrounding mountain region. In addition, euromicron converted the radio networks for public authorities in two federal states to IP-based technology. ■



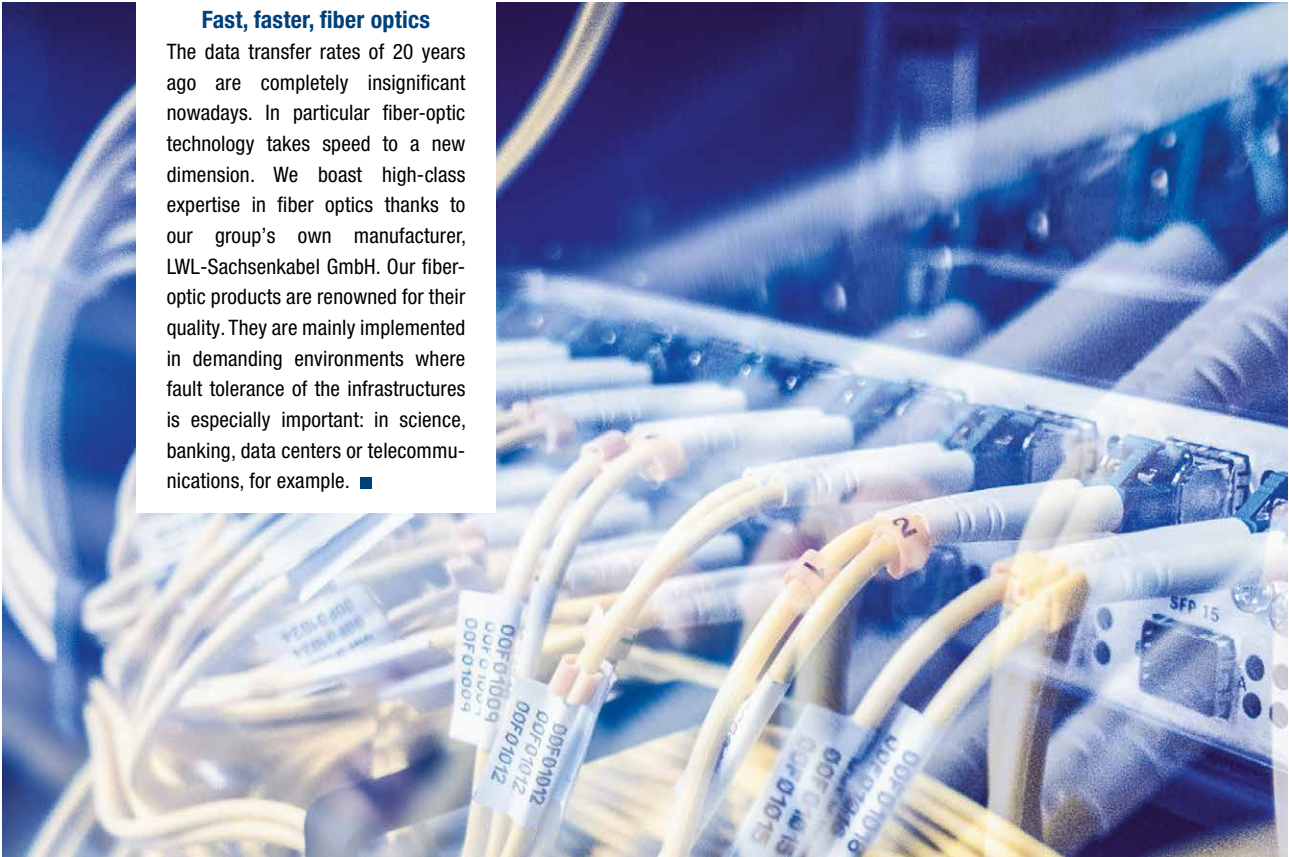
LoRa® – less energy, many transmitters

When things are to communicate with each other, they often only exchange small quantities of data. telent's subsidiary Netzikon is building and operating a secure, closed long range wide area network based on the LoRa® standard throughout Germany. It now plays a major role, especially in industrial environments and for Smart Industry. LoRa® requires little energy, its installation costs are low, and it is quickly available. telent has developed the EvalorIQ platform for systematically pooling the information and data captured and communicated by the devices and interfaces. It not only optimizes process security, but also supplies the basis for innovative digital business models with its evaluations and analyses. ■



Fast, faster, fiber optics

The data transfer rates of 20 years ago are completely insignificant nowadays. In particular fiber-optic technology takes speed to a new dimension. We boast high-class expertise in fiber optics thanks to our group's own manufacturer, LWL-Sachsenkabel GmbH. Our fiber-optic products are renowned for their quality. They are mainly implemented in demanding environments where fault tolerance of the infrastructures is especially important: in science, banking, data centers or telecommunications, for example. ■



Better safe than sorry

Cybersecurity – an issue that only secret services and James Bond probably thought about 20 years ago. Now cyberattacks repeatedly make headlines in the media, and cause considerable damage to companies and private individuals. In particular critical infrastructures, such as those of power utilities, transport companies, security authorities or communications network operator, have to be protected against cyberattacks so that public life is not disrupted. euromicron's subsidiary KORAMIS develops effective security concepts for sensitive areas at public authorities and enterprises. ■

CYBERATTACKS CAUSE DAMAGE OF



The German Office for the Protection of the Constitution puts the annual damage caused by cyberattacks in Germany at €50 billion.

High availability even in difficult terrain

Radio relay is also benefiting from expansion of mobile communications in the past 20 years. The highly available radio relay links are used to connect the base stations of mobile and fixed network operators to higher-level units. Radio relay is also used for redundant connections, connecting remote locations and in difficult terrain. Radio and TV broadcasters also use the technology. In February 2018, euromicron's subsidiary talent won the Europe-wide radio relay tender from the broadcaster SWR. ■



Switch with brains

Switches have always played a key role as data distributors in networks. However, network switches can now do quite a bit more. They are used as a smart means of controlling devices and security equipment, for example in building networks or connected industrial plants. To enable that, the unassuming devices are equipped with intelligent programming – with apps. We all know them from the smartphone: The small software add-ons are some of the key basic elements for the Internet of Things – they are vital to enabling interaction between sensors and actuators in the network. ■



Data lock-keeper: pay per use

The data lock-keeper InDEx, which has been developed by KORAMIS, is a bit like a digital doorman that scans removable storage media for malware and cleans them. InDEx is mainly used in industrial environments or critical infrastructures when always up-to-date protection against viruses is to be ensured without an Internet connection. If, for example, a technician needs to insert a USB stick into a machine in order to carry out maintenance work, the medium is first checked in the data lock-keeper. Important events, data and information can be processed, visualized and controlled easily at any time. KORAMIS offers InDEx in a pay-per-use model. That keeps the initial investments for customers low. ■



Try out the future

Many advantages of digitization are still hard to grasp. The underlying technologies are often complex and the resultant possibilities are barely tangible. That's why MICROSENS' engineers try to illustrate functionalities in the smart building to the company's customers. For example a specimen hotel room was specially developed for a large customer, a designer hotel chain in Poland. It presents the euromicron subsidiary's room automation solutions specifically for applications in the hotel industry and gives an impressive "live" demonstration of the perfect interplay between software and sensors. The walls imitate the rooms' interior. The switches and devices are real-life – to touch and feel. They can be used to try out and experience all the smart features: The access system, heating, air-conditioning, lighting, shading, service and entertainment – all the functions are embedded in the IT and can be operated fully from your smartphone or tablet. Guests can use functions such as "Please do not disturb" or "Please clean" to inform staff of whether they want their room to be cleaned. Specific scenarios are activated, depending on whether a guest or service employee enters the room. Customers can experience the benefits at first hand – giving them a tangible basis for making a decision to move to smart technologies. ■



TRANS



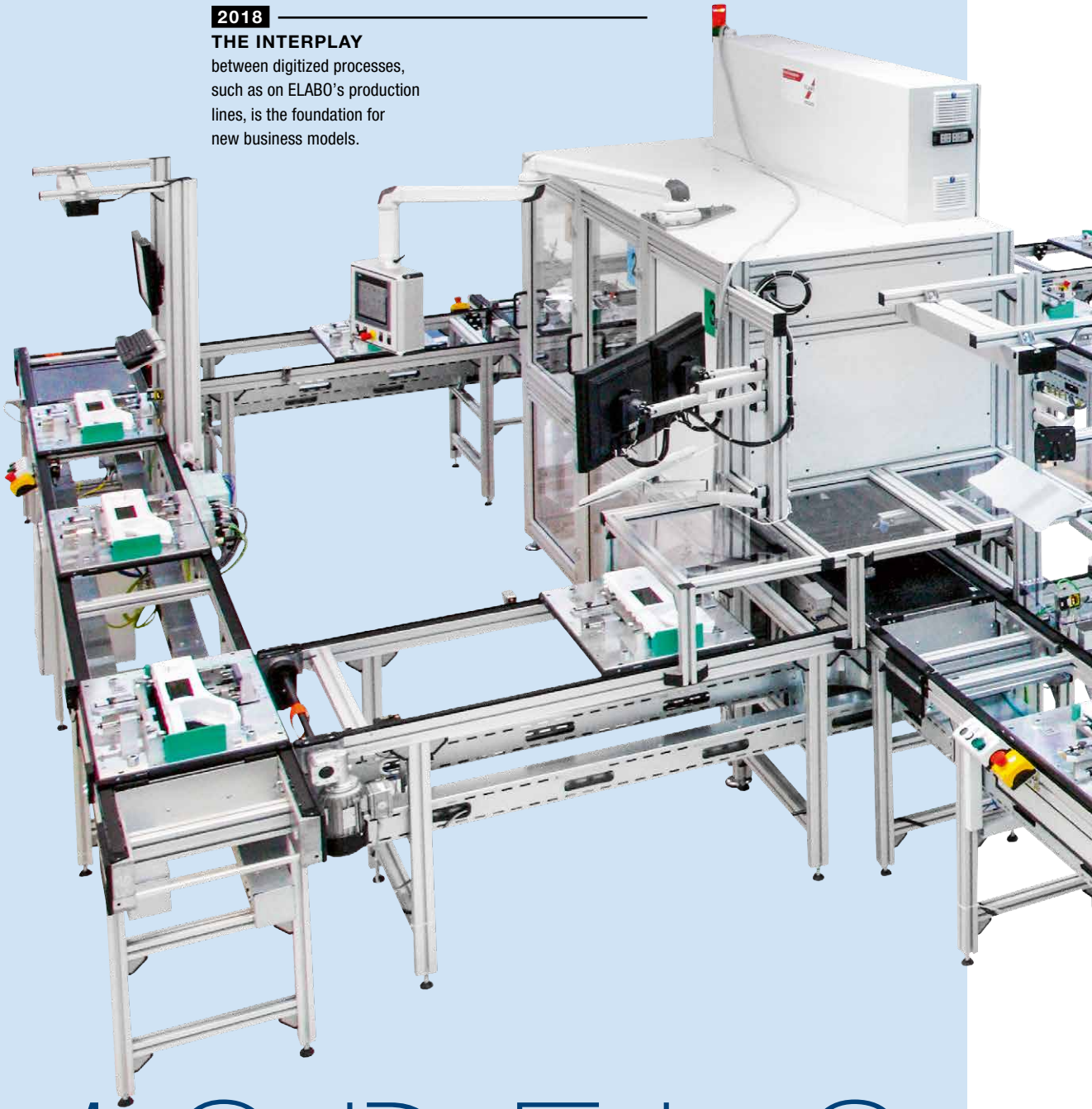
1998
**STRUCTURED
DATA**
is the basis
for processes

BUSINESS

FORMING

2018**THE INTERPLAY**

between digitized processes, such as on ELABO's production lines, is the foundation for new business models.



MODELS

20 YEARS OF RETHINKING

There's a gold rush fever in the "Internet of Things". The many innovations brought about by digitization require services and products. Renovation in technology-driven sectors almost always means growth. Apart from the implementation of new infrastructures and transmission technologies, there's another buzz phrase whirling around in digital fantasies: new business models.





The big players in the World Wide Web have shown the way: business models based on the Internet. They were laughed at a few decades ago, but now our life without them isn't imaginable. Nevertheless, it's always a challenge when it comes to the detail to rethink existing ways of work or offerings and make them fit for digitization.

A



THOMAS HÖFLE
MANAGING DIRECTOR
ELABO GMBH

There are no off-the-peg solutions in Smart Industry. We look at every process individually, analyze it, provide advice and optimize it. From being a seller of hardware, we've turned into a provider of smart solutions and even a management consultant. That's a completely new task.

And no one knows that better than Thomas Höfle, Managing Director of euromicron's subsidiary ELABO. The company is renowned for its refined workplace and testing systems – and since very recently also for Smart Industry solutions. “We’ve focused on workplace handing and testing systems – and since very recently also for Smart Industry solutions. “We’ve focused on workplace handing and software development,” states Thomas Höfle. “These areas are linked together by digitization. We now offer our customers fully networked production and assembly lines, but also have an eye on optimizing the overall processes. Completely new requirements give rise to new services.”

How can a consistent level of quality be achieved? How can errors be traced? How are facilities maintained so that stoppages are avoided? How can the supply of parts and accessories to the work process be organized so that production isn't halted? “Such questions relating to optimization are answered with software and less so with hardware,” says Höfle. “Anyone who cooperates with us not only obtain excellently designed workplaces, but also optimized overall processes.” The company is thus breaking new ground – and initial successes are visible: Between ten and 15 percent of orders in the “Workplace Systems” business area already have a Smart Industry component to them. Our customers also include educational establishments where trainees or employees of companies are prepared for the challenges of Smart Industry in a practical way. In the field of project business for test systems, Smart Industry is already integrated in all solutions at ELABO and is being further expanded.

Seite 11

DIGITIZATION
of production
processes
involves
scrutinizing
every process
and component.



DEVISING THE FUTURE

Smart Industry must become part of vocational training.



The “Internet of Things” also means growing questions about security in the network.

Once the door to digitization has been thrown open, that paves the way for new business models at some time or other – for everyone involved. euromicron’s companies leverage their technological know-how not only to develop new services for their own portfolio, but also for that of their customers. From searching for a place to park using an app, predictive maintenance, to managed services. “Today you can market completely different things other than services or products,” states Michael Krammel, Managing Director of KORAMIS. The company, a subsidiary of telent, has been part of the euromicron

“WE NOW OFFER OUR CUSTOMERS FULLY NETWORKED PRODUCTION AND ASSEMBLY LINES.”

Group for almost two years. Its specialty: Designing and implementing security concepts for digitized industrial processes, such as digitized production processes. “To enable that, we’ve built up a lot of interdisciplinary know-how that’s urgently needed at companies,” adds Michael Krammel.



MICHAEL KRAMMEL
MANAGING DIRECTOR
OF KORAMIS

One of the very big challenges in the Internet of Things: We have to get out of a silo mentality. Up to now, most people have worked in just one department. We have to overcome these boundaries and tackle the new requirements and possibilities as a team.

SMART INDUSTRY

Ten and 15 percent of orders in the “Workplace Systems” business area already have a Smart Industry component to them.





WE SELL
our customers not only sensors and actuators, but also intelligent security systems. Points at the company that are vulnerable to digital attack, as well as human errors, are on the agenda in that.

The company develops solutions for greater security that are tailored precisely to the specific customer. “That means we’re always deeply involved in organizational development and general digitization – security is a challenge that extends across disciplines and departments.” The people at KORAMIS believe that one of the cardinal virtues for leveraging the potential of digitization is in particular to look outside the box: Shed the silo mentality, share knowledge and use swarm intelligence – that’s the motto. This mindset is not yet widespread at many companies – employees have to learn it. That’s not least one of the reasons why Michael Krammel works with associations and research institutes, rubs minds and also keeps an eye on the many sideline issues relating to digitization, such as legal questions. The goal is always to find an answer to the core question: How can value added be created in future?

“SECURITY IS A CHALLENGE THAT EXTENDS ACROSS DISCIPLINES AND DEPARTMENTS.”

“As a small, dynamic company in a medium-sized technology group, we’re flexible and agile. We learn quickly – also as an organization. That’s why we can offer our customers up-to-date answers to their questions.”

And ELABO succeeds precisely in that in the field of Smart Industry. “Products are becoming more and more customized, and product life-cycles are growing shorter and shorter,” is how Thomas Hösle explains the challenge. “We help our customers master this complexity.” One of the most important benefits of our systems is process transparency. Each step carried out by a worker can be documented, while errors and

problems can be recorded and assigned to the causes in a finely granular way. That means a company can document compliance with all standards and specifications in every process. That’s important in many sensitive areas and helps enterprises achieve their objectives.” After all, say the two experts: “What counts at the end of the day is that the potential of new business models is reflected in the customer’s business plan. They then gain acceptance.” ■

Enlightening: EvalorIQ

euromicron’s subsidiary telent has developed “EvalorIQ”, an IoT platform and associated applications in the Smart City and Smart Industry arenas. It enables all the information to be analyzed and visualized. For example, electricity, water and gas meters can be read using “EvalorIQ” and the figures passed on to existing billing systems via standardized interfaces. It also enables presentations in trend graphs or dynamic process images for energy management that can be compared using analysis tools. EvalorIQ sheds light on the masses of data companies collect. Thanks to this platform, the deluge of data supplied by devices and interfaces can be analyzed, and new services and customer benefits delivered on the basis of that. ■

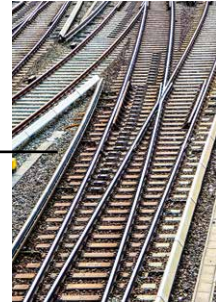


Tight and secure

Whether water, chemicals or fuels – pipelines are vital infrastructure elements in a wide range of different areas of life and extremely important for our needs. Maximum tightness in them is a must – especially if they’re used to convey environmentally hazardous or toxic substances. Special sensors that can measure leak-tightness on the basis of ultrasound have been developed to detect micro-cracks in pipelines made out of glass-fiber reinforced plastic. The sensors send the results of their examination to the IoT platform EvalorIQ. Time-consuming inspections on foot and material analyses are thus avoided, while the environment, people and industrial plants are protected against leaks of harmful substances. ■

Digital mousetraps

They’re a nuisance: Whether in warehouses, the baggage-handling levels of airports or food manufacturers – mice cause considerable damage. That’s why mousetraps are set on a large scale at companies. Employees then do the rounds several times a day in order to inspect the traps and empty them if necessary. But there’s an easier, digital way: A sensor indicates whether a mousetrap has been sprung. Employees can then go directly to it. euromicron supplies an all-round solution – from the wireless sensor, sensor network to the mobile application on the smartphone. That eliminates the need for time-consuming walks to inspect mousetraps. ■



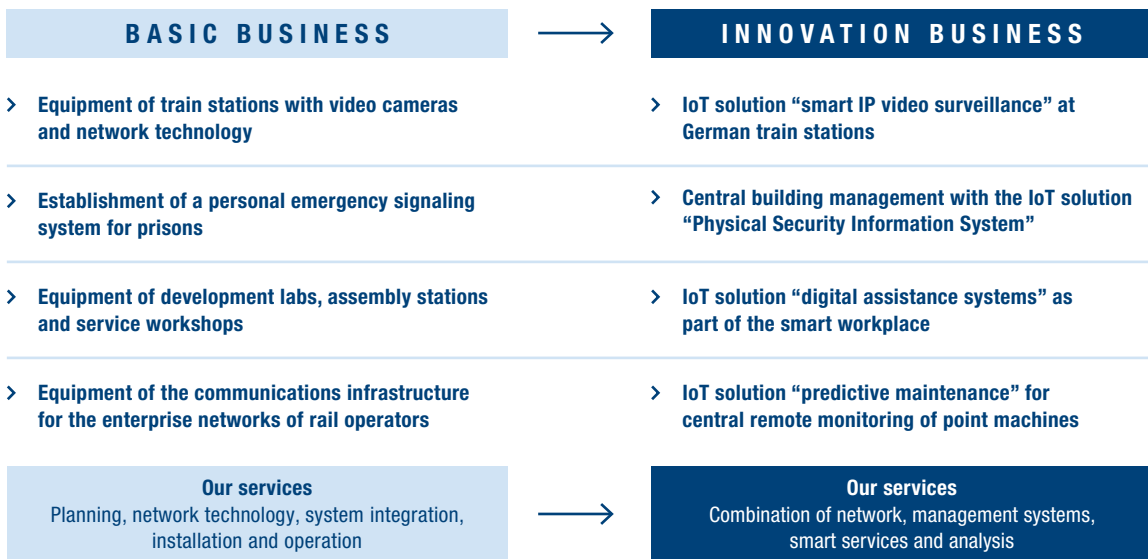
INTELLIGENT POINTS
send status reports to the central office.

Predictive maintenance

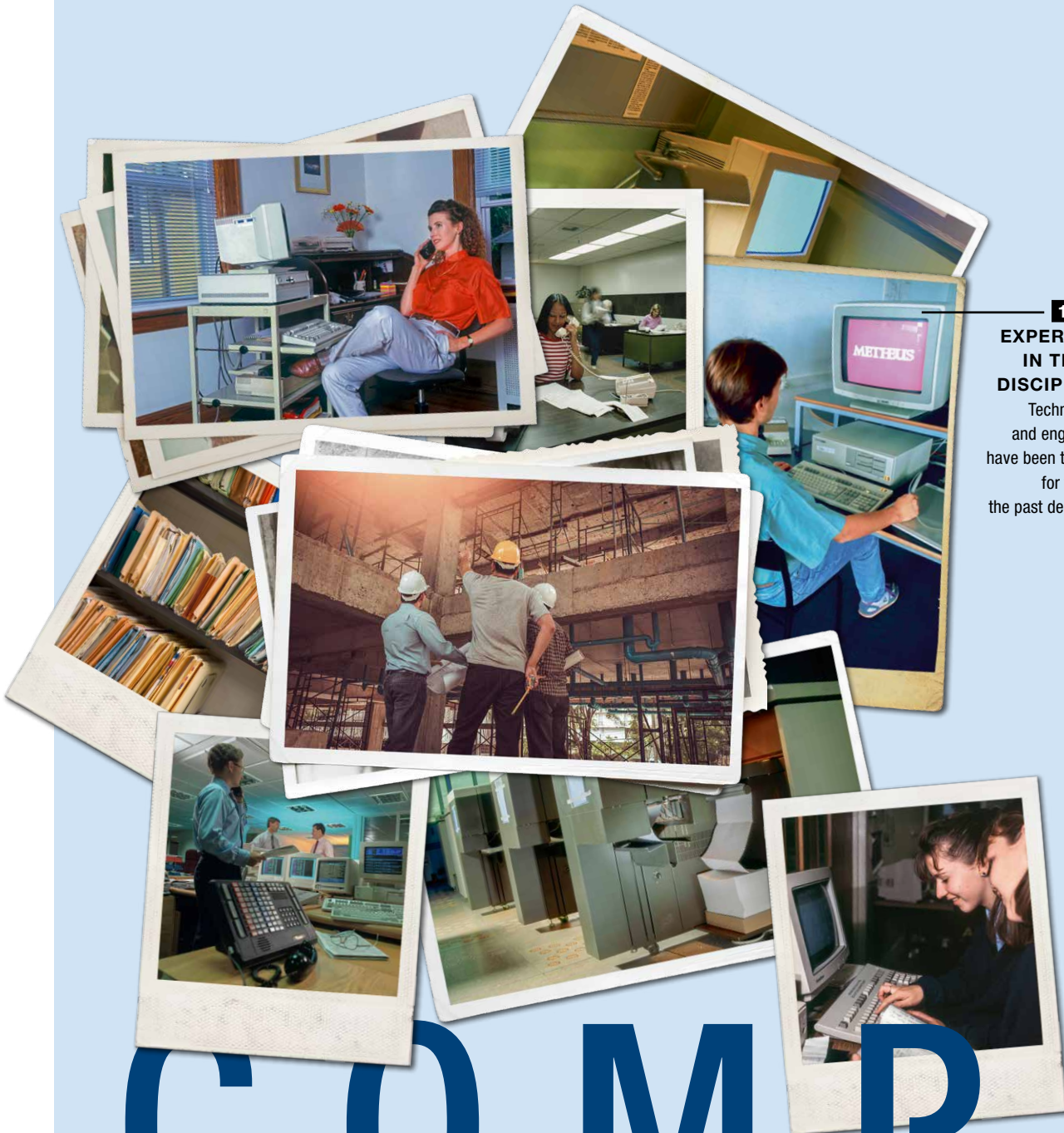
Predictive maintenance denotes proactive servicing of technical systems. The objective is to avoid downtimes by replacing wear parts when they issue a relevant status message. Predictive maintenance can be used, for example, for central remote monitoring of point machines in rail transport, in maintenance of wear parts on machines in industry, or for lighting solutions, such as in road traffic: Sensors capture the status data of the system and send it to a central unit, which analyzes the data. Service teams can thus take action even before a failure occurs. Dangerous situations or production stoppages are completely avoided. ■

DEVELOPMENT FROM BASIC BUSINESS TO INNOVATION BUSINESS

euromicron has planned and designed network infrastructures and related technologies for 20 years. That experience benefits our customers to this day – it forms our basic business. We leverage that as the foundation for developing innovative solutions and business models for the Internet of Things. As a result, we accompany customers – mainly from the SME sector – on their path toward digitization.



TRANS

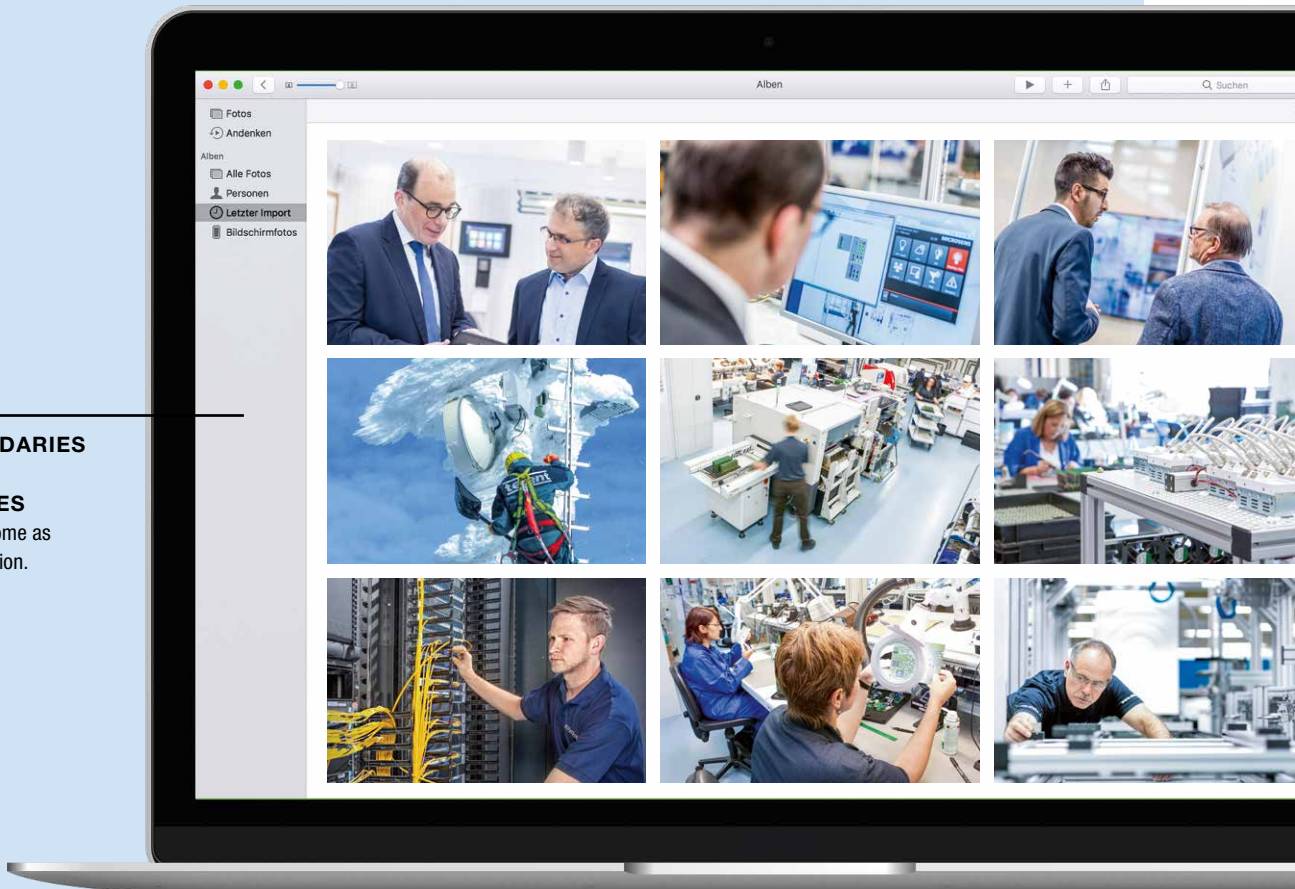


1998
**EXPERTISE
IN THEIR
DISCIPLINE**
Technicians
and engineers
have been trained
for that in
the past decades.

COMPE

FORMING

2018
**THE BOUNDARIES
BETWEEN
DISCIPLINES**
must be overcome as
part of digitization.



TENCES

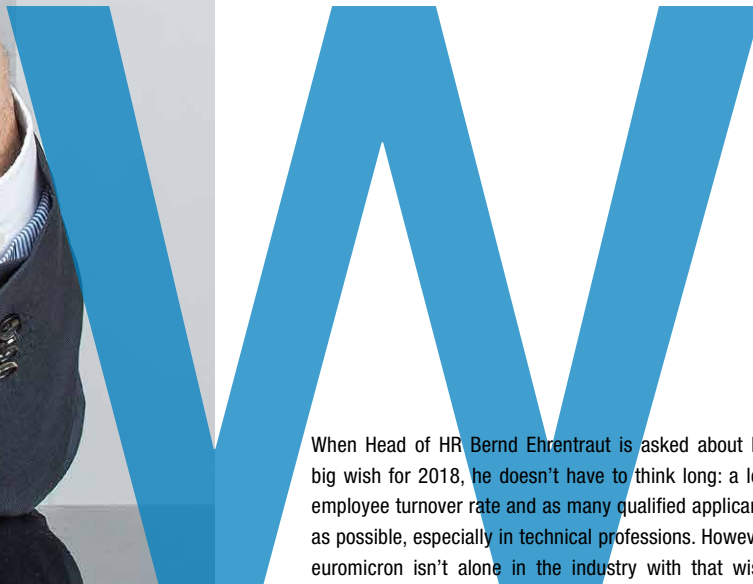
20
YEARS
TUNED
TO THE
PULSE
OF
TECH
NOLOGY



**BERND
EHRENTRAUT**

Head of the
Human Resources
department at
euromicron AG

You can help turn the “Internet of Things” into a reality now: If you find new technologies and their possibilities exciting, working at one of euromicron’s companies in Germany might just suit you down to the ground. The group boasts many advantages in the “battle for brains”: an interesting working environment, professional support for your individual career, recognition of commitment and achievement, exciting opportunities to gain further qualifications, and particularly good training for young people.



When Head of HR Bernd Ehrentraut is asked about his big wish for 2018, he doesn't have to think long: a low employee turnover rate and as many qualified applicants as possible, especially in technical professions. However, euromicron isn't alone in the industry with that wish: There's strong demand for skilled workers. So what needs to be done to win bright minds? "We try to fill our employees with enthusiasm for their tasks and our company," states Bernd Ehrentraut. "We manage to do that because many of our projects are tuned to the pulse of the age and it's exciting – especially for technicians – to work at the forefront of technology." Training is a key tool in the long-term strategy for recruiting employees: "We take this important learning phase for young people

very seriously and have increased our trainee ratio by 20 percent over the previous year." And last, but not least: As a medium-sized group, euromicron offers short career paths. Anyone with the right commitment often rises to responsible positions faster than at a large company. Those are good arguments that make for exciting careers. ■

CAREER: LISTEN AND KEEP ON LEARNING – THROUGHOUT OUR WORKING LIFE

**MATTHIAS
WOLFF**

Head of the Region North/
West, member of
management of
euromicron Deutschland
GmbH



It was probably a bit like love at first sight: Matthias Wolff started at euromicron Deutschland as a trainee. That was 28 ago and even back then he was inspired by what now shapes his entire professional life: technical solutions and networks that can be used to optimize work and infrastructures. Automation picked up pace at the beginning of the 1990s, reaching a level that was too demanding for a conventional electrical engineer. IT know-how was needed to satisfy the new requirements, especially in the field of industrial production. Matthias Wolff had found his trade – he decided to “study together with euromicron”. He completed his course of studies in Manufacturing Informatics at the university of applied sciences while gaining practical experience at his employer – that would probably be called “cooperative education” these days, but tended to be a pretty rare model back then.

Knowledge and communication

That sealed the launch of his career. Matthias Wolff began as a project engineer in office-based sales as part of an internal trainee program, then tested his new knowledge in field service, directly at the interface between IT and electrical engineering: “If you want to work in sales, you need a lot of specialist know-how,” he explains. “And you have to be a good listener so as to gain a proper understanding of the customer’s problems. After all, euromicron Deutschland doesn’t offer off-the-peg products, but instead we develop solutions that are tailored completely to the customer’s needs.”

What else do you need to get on well in sales? To communicate, of course. Matthias Wolff is more of an extroverted type, so that helped: “Sales often means developing ideas in joint discussions, taking about other projects, and conveying enthusiasm for good solutions. You need to ability to inspire your customers.”

“WE’RE CONSTANTLY CHANGING. AND THAT OFFERS YOU THE CHANCE OF A CAREER THAT SUITS YOU PERSONALLY.”

At the thick of things as a manager

Matthias Wolff was promoted to Head of the Region North/West eight years ago and so is responsible for one of euromicron Deutschland’s largest regions with its five locations and 160 employees. He was prepared for his duties by a development program for junior executives. What’s important for him: He also has direct contact with customers in this function, advising them on strategic issues and investments. “That means I keep up-to-date on what’s happening in the market and what our customers want and can more easily anticipate future developments so as to provide cutting-edge solutions,” he explains. “As Regional Head, I’m also in charge of optimizing structures and processes in order to improve productivity.” At the beginning of 2018 he was appointed to the extended management team – a new step in his career. Matthias Wolff is enthusiastic about the fact that he can still keep on learning things even after 28 years at the company: “No one day is like the other, and I’m always facing completely new challenges. That’s simply exciting.”

Matthias Wolff knows from his own experience what opportunities euromicron offers committed employees and how valuable encouragement is. That’s why he also likes lending his personal support to young staff: Last year he restructured a department that had grown quickly. Four new team leader positions were created as a result – and four employees were developed into managers for them. “Commitment pays off here, precisely because we’re not a huge group. This company offers you great opportunities to advance yourself and your career. We’re constantly changing. And that offers you the chance of a career that suits you personally. And that’s something I’m dedicated to ensuring.” ■

Working across disciplines

Intermeshed expertise from electrical engineering, production technology to IT – large projects in the field of intelligent networking in buildings or smart production processes are only possible with people with that background. euromicron Deutschland lines up with cross-discipline teams who ensure dialog among equals with contact persons from the various trades at the companies. ■

MANAGEMENT: STRATEGIC THINKING AND SOCIAL SKILLS



**DR. STAMATINA
BÄRMANN**
Director Strategic
Partnerships,
telent GmbH

It may seem unusual today to spend all your working life at the same location – but at telent in Backnang, a subsidiary of euromicron, that tends to be the rule. That's also because the environment is right, the tasks are exciting and the management style is pleasantly open. That's how Stamatina Bärmann explains why she's been with the company so long. Greek by birth, she started working at the company (which was then Bosch Telecom) back in 1996, experienced the move to Marconi in 2000 and

finally also the transition to telent and the takeover by the euromicron Group. From a technology giant to a medium-sized specialist for transmission technology and wireless technologies – what sort of professional career does that involve? Stamatina Bärmann sums it up this way: Challenging tasks and many possibilities to develop your talents – that's the mix that makes for a long length of service.

“EMPLOYEES HERE HAVE A LOT OF FREEDOM TO FULFILL THEMSELVES. WHAT YOU DO TAKES ON A VISIBLE SHAPE.”

She studied electrical engineering with the focus on communications technology in Athens, then gained her doctorate in “Optical Networks” in London: So Stamatina Bärmann contributed in-depth specialist know-how plus international experience from the outset. She also likes to communicate – and that mix, which tends to be rare among engineers, meant she assumed many tasks in Sales over the years. She has worked in Business Development since 2009 and is now Director Strategic Partnerships. “Of course, it’s incredibly exciting when your work involves dealing with large players like Cisco, Nokia, Ericsson or now Huawei as well. You’re right at the vanguard of technological change.”

And a huge deal has happened in that regard in the past two decades. “We mainly used to sell hardware, but now the focus is on software and service,” is how the engineer sums up the changes. “It’s a different business model, one that makes special demands when it comes to employees’ skills.” telent’s staff are mostly highly specialized experts. They shoulder a lot of responsibility – and have a great influence of the company’s strategic alignment. The manager has a new role: formulating clear objectives, setting priorities, controlling projects, enabling training and acting as the person people contact if they have problems. “Strategic thinking and social skills are demanded,” says Stamatina Bärmann, as she knows from her own experience. “The art is to strike a good balance. And that requires “female skills,” she adds as encouragement to her female colleagues to have the pluck to forge a career. She believes there are great opportunities for development, especially at a medium-sized company like telent: “Employees here have a lot of freedom to fulfill themselves. What you do takes on a visible shape.”

Skill requirements will continue to grow along with the huge technological changes. Clean mobility in the future, for example, in order to cut air pollution in cities worldwide will be achieved on the basis of more computing power, artificial intelligence and networks. “Enjoying your work is a question of whether you feel a sense of purpose in it,” states Stamatina Bärmann. “After all, we’re working here on one of the major issues of our time.” ■

WE ARE LOOKING FOR ENGINEERS AND TECHNICIANS

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- > Commitment and interest in the cutting-edge topic of the Internet of Things
- > Team spirit and interest in learning and gaining further qualifications

Career changers from offer technical sectors are also very welcome!

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Attractive fringe benefits (team events, payment of standby duty, trust-based working hours, flexible work with a high degree of self-determination), development of your personal and professional skills as part of internal and external training programs and our own laboratory environment.

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**MARTIN
GRAEVE**

Project Manager,
Smart Building Solutions,
MICROSENS
GmbH & Co. KG



CAREER START: THROWN IN AT THE DEEP END!

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Anyone who's fresh out of university and is about to start work thinks a lot about what things will be like at their new company. How will my colleagues welcome me? What's the difference between theory and practice like? And will I cope with the tasks I'm entrusted with? Martin Graeve had very little time to ponder all those questions.

“EVEN TO THIS DAY, PEOPLE STILL MENTION THE TRADE FAIR STAND TO ME. AND NOW THE NEXT LIGHT & BUILDING IS COMING UP – AND I’VE SET THE BAR HIGH. I NOW HAVE TO GO ONE BETTER!”

His working life began with a challenging project for which he bore responsibility. In December 2015, he joined the Smart Building unit at MICROSENS and the major trade show Light & Building was around the corner in March. “You’re in charge of technical implementation,” was the assignment. “A tiny moment of shock and then I took the plunge into the deep end. No shore in sight far and wide, but a lot of support and the confidence of my colleagues and boss that I’d manage it,” is how Martin Graeve recalls his first weeks at work. “I was catapulted into the thick of things in next to no time.”

Sure, such a situation isn’t an everyday occurrence, but it’s a bit typical of the SME sector. People who can pitch in and look outside the box are wanted. And that’s exactly why Martin Graeve applied to MICROSENS: “I could have gone to a large company, where I’d probably have attended lots of courses and learned the company guidelines in the first weeks.” And that’s precisely what he didn’t want – instead he was driven by the desire to roll up his sleeves and get cracking. His colleagues and supervisors naturally gave him support. The result was impressive. “Even to this day, people still mention the trade fair stand to me. And now the next Light & Building is coming up – and I’ve set the bar high. I now have to go one better!”

Martin Graeve doesn’t sound like someone who’s just started their career – although he’s been with MICROSENS for just under two-and-a-half years. Before that, he studied Sales Engineering & Product Management at the Ruhr University in Bochum. Does he feel that university prepared him well? “Yes, in terms of methodology, but technically only to some extent – the pace of technological upheaval was too fast. No one had linked a machine to the Internet five years ago – but now that’s state-of-the-art.” It’s in particular his methodological skills that now help the young sales engineer in his duties. After all, there are no off-the-peg solutions – instead, projects are always developed in line with customers’ concrete requirements. Project controlling is an important issue here, which is why he was made fit for that task right away in a course of further training in the subject.

Martin Graeve believes one of the challenges in his job is to convey the advantages of the smart building to customers. “Most customers still regard this topic as simply involving digitization of traditional building functions, enhanced by a few smart features. Yet the new possibilities extend further. And they’re often so complex to a degree that our customers can hardly imagine. What you then need is creativity and good communication skills to present the potential.”

What will his working life look like in 20 years’ time? “To be honest, I’ve not given that a moment’s thought. I’m simply happy at present to have a technologically demanding and challenging job. Sure, I’d like an executive function at some time or other. But the way we’re growing, we’ll have no shortage of responsible tasks in future, too.” ■

**Intelligent building automation
Concepts and solutions for digital buildings.**

MICROSENS has developed solutions for specific application cases in digital buildings for some years now. They are based on intelligent programmable switches and can be implemented in virtually any context. MICROSENS has now opened up a further door toward the digital building: solutions for digitized building automation. The basis is again intelligent switches that are implemented decentrally and are used to enable interaction between actuators and sensors in buildings. Special apps on the switches allow systems such as heating, air-conditioning or audio to be integrated. This interplay creates a decentralized concept with virtually unlimited possibilities. Cost-effectiveness and convenience in buildings can be lastingly increased on the basis of that. ■



**JÖRG-
MICHAEL
KÄTHER**
Director Field
Operations,
telent GmbH

CHANGE: LIVING WITH TECHNICAL ADVANCES

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Technology means change. And that also entails changes in work and life. No one knows that better than Jörg-Michael Käther, head of telent's location in Teltow. He began his career by studying communications technology at the Maritime University in Warnemünde/Wustrow. He went to sea on merchant vessels as a radio officer responsible for the electrical transmission and high-frequency technology on board. "In technical terms," says Jörg-Michael Käther, "you were on your own on the ship and had to rely on your own abilities. That was naturally a challenge." Finally, new technology did away with his

**“YOU’RE STRONGER AS A GROUP.
WE ALSO BENEFIT FROM
THE MANUFACTURING EXPERTISE
OF AND DIALOG WITH
THE OTHER COMPANIES.”**

profession: Satellite technology replaced radiotelegraphy using Morse Code. Jörg-Michael Käther joined the overhead railway in Hamburg as a project engineer for transmission technology – he was fascinated by the complexity of a transport company.

In 1992, mobile communications technology was the shining star in the heavens. The first digital transmission standard GSM was introduced in Germany in 1992, making mobile telephony suitable for large-scale use. Jörg-Michael Käther – who at the time held an executive function with Philips, one of the major electronics companies and a supplier of mobile communications technology – was at the thick of the meteoric technological changes. “The feeling that a new age was dawning in this market was very impressive,” he recalls. However, a damper was put on that when the UMTS licenses in Germany were auctioned for the spectacular price of €50 billion in the year 2000. That meant some companies simply didn’t have the money for necessary follow-up investments. That also impacted Jörg-Michel Käther. His unit became an independent company in 2006 after being hived off from the Marconi Group – and went by

the name “telent”. “Back then we worked on topics such as transmission technology for traffic systems and critical infrastructures for public utilities – fields that didn’t appear so interesting for a large telecommunications provider at the time. At telent, we had and still have answers and precisely fitting solutions for our customers.” Now, as part of digitization and IoT, they’re gaining in importance again. telent then joined euromicron in 2011. “You’re stronger as a group. We also benefit from the manufacturing expertise of and dialog with the other companies. The issue of security has become very important for us in the wake of digitization. telent has a lot to offer here and we’re geared to our customers’ requirements in the field of critical infrastructures.”

Whether mobile communications, traffic systems, infrastructures for public utilities, security or completely new applications emerging nowadays from the interaction between sensors and actuators via the Internet – Jörg-Michael Käther knows how challenging and diverse the tasks are in the field of transmission technology. In a professional life characterized by change, he names one constant factor: “Things are always exciting.” ■

WE ARE LOOKING FOR YOU!

TO TRAIN AS AN ELECTRONICS TECHNICIAN OR IT SPECIALIST

Are you inspired by cutting-edge topics, such as networks, technical infrastructures, security and the Internet of Things? Are you looking for career prospects that offer a good future?

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Learn from and with experts in the Internet of Things, Smart Industry and smart applications – now for the future!



Are you looking for a company that provides training and offers a large range of technologies and applications?

Then you’re in good hands at one of euromicron’s many companies in Germany. We plan tailored solutions for our customers using various technologies and systems that precisely fit their needs. Your colleagues in the teams know their fields inside out – and will be pleased to show you what they’re capable of.

What do we expect from you?

Good knowledge in mathematics, physics and English. Interest in technical subjects. Commitment and a joy of learning. Team spirit and desire for something new.

What do we offer you?

We give our trainees intensive support and access to specialist know-how, as well as exciting practical assignments. We accompany you – from your first professional experience to successful completion of your training.

Do you like the sound of that?

You can find further information and the necessary contact details on our career portal at www.euromicron-karriere.de





**TIMO
BEDNAREK**

Head of the Workplace
Solutions Division,
ELABO GmbH

CAREER CHANGE: APPRE CIATION OF NEW PERSPEC TIVES

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Timo Bednarek is head of the Workplace Solutions Division at euromicron's subsidiary ELABO. He joined the company in April 2017 and is responsible for sales, project management and product management. He's a career changer – he was previously an industrial engineer in the field of waste gas purification and fuel cells. Yet new career paths are not rare as part of such major changes as digitization: After all, change demands fresh thinking.

Timo Bednarek has now worked at ELABO for almost a year and is now at the thick of Smart Industry. The company from Crailsheim in the Hohenlohische Alb mountain region is renowned for its refined workplace solutions, functional tables and equipment for technical workplaces, industrial workplaces and test and inspection systems. What does the workplace of the future look like? That's an old question for ELABO and one to which the company is now finding completely new answers: Linking of all work operations, step-by-step instructions with audio and visual aids, networking and central documentation of the process data as the basis for analyses and improvements. These developments are shaping the future of industrial production, as well as manual production, which is widespread in the SME sector.

From starting as a seller of hardware, ELABO has evolved systematically in the direction of connected systems. The company from Crailsheim was quick to recognize what opportunities Smart Industry offers for small and medium-sized enterprises. That's why the company now boasts unique, longstanding expertise in linking hardware and software and can provide its customers with comprehensive advice on digital optimization of the shopfloor. "How to replace more and more hardware with software, how data management works, how variant management is put into practice – those are no trivial questions, especially for small and medium-sized companies," as Timo Bednarek knows from his first year at ELABO. "We provide a lot of consulting work here."

Learning Factory 4.0 – Pie in the sky sets the tone

Who will shape processes in the factory of the future if not today's trainees? Companies and vocational colleges in Schwäbisch Hall and Villingen-Schwenningen asked that question and obtained an answer right away. In the Learning Factory 4.0, young people and employees from various companies learn about digitized processes and intelligent machines in a real Smart Industry environment. The systems come from ELABO, which can design and implement turnkey, state-of-the-art Smart Industry solutions. Smart Industry can be learned in all its dimensions in such a "real" digitized production environment. ■

“WE REGARD SMART INDUSTRY AS TEAMWORK. THINGS WON'T WORK OUT WITH A BUNCH OF LONE-FIGHTERS, SO COLLABORATING IN NETWORKS IS SO IMPORTANT FOR US.”

One helpful factor is that ELABO not only designs solutions for others, but has also integrated its own divisions themselves into a comprehensive digitization concept. Smart Industry is not only devised, but also lived. "We've developed a modular approach that permits gradual digitization," explains Timo Bednarek. Bednarek's department uses that to design customized, industry- and application-independent workplace systems for discrete manufacturing in small lot sizes, as well as for educational establishments. There's no cookie-cutter approach: In every project, the customer's needs are carefully recorded in a workshop, often together with other companies from the euromicron Group or research partners. Bednarek believes pooling expertise is key: "We regard Smart Industry as teamwork. Things won't work out with a bunch of lone-fighters, so collaborating in networks is so important for us."

Digitization enables people to change from completely different careers, and demands and supports unconventional points of view. That's because it's not precise knowledge of an industry that's important, but above all the ability to gain an understanding of systems, analyze them and optimize them. "You learn transformation in a playful way, your ability to change grows, and you get to know new aids and methods. The experience you bring with you from a completely different sector helps create completely new ideas and is greatly appreciated here," states Timo Bednarek. He sees especially good conditions to contribute his skills at a medium-sized group like euromicron: "You can make a lot of difference as an individual: Flat hierarchies and fast decision-making structures ensure a dynamic climate in your everyday work – and, of course, help you advance professionally. You're always close to the technologies and customers and can see what's happening in the industry. That's simply exciting." ■



**STEFFEN
BONIN**

Project Manager
Power Supply
System Assembly,
TDM Refreshment,
telent GmbH

TRAINING: SIGHTS SET ON THE GOAL

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Steffen Bonin knows precisely what he wants. He's an electronics technician with heart and soul. And he likes working with his brains and hands. As he puts it, he needs haptics: Work you can touch and feel. That's why he embarked on a course of training after gaining his vocational diploma. "Since the first time I painted the fence together with my father when I was a child, I knew I wanted to learn a handicraft trade," is how he describes his motivation. "The care he took simply fascinated me." Steffen Bonin is now 27 years of age – and his penchant for good work helped him in his training and when starting his professional career. He's what people at telent call a "super trainee." His commitment and enthusiasm were

Steffen Bonin: It's possible and worthwhile – especially when the people at the company backs you with encouragement. He has taken a large stride toward his big goal of becoming a master craftsman in a very short time. He's now completing the modules he still needs alongside his work, while still looking after a number of customers. He's currently engaged in a responsible task relating to network expansion for a carrier.

Course set for a career

That dual burden requires self-discipline and commitment. "But I'm confident he's got what it takes," are the words of praise from Stefan Bräsemann for his ex-trainee. Steffen Bonin's career path isn't commonplace, but it shows that anything's possible if you're motivated and interested in a subject. There are more ways than you think, and it's worthwhile for young school-leavers to be well-informed. "Anyone who learns a trade these days has excellent job prospects," is Bräsemann's conviction. "Steffen Bonin is proof that not only studying offers career opportunities. That's really the key message." ■

also impressive. Yet he didn't even begin his training at telent: "I moved from the previous company where I was training because I was unhappy with it and was excited by what the colleagues at telent were telling me about their experience there."

Opportunities, not only for high-flyers

Steffen Bonin was welcomed with open arms at telent's location in Teltow. Up to five people start here every year and are given training as electronics technicians and IT specialists. "We attach great importance to imparting a broad range of knowledge and very good preparation for all exams. Electronics in particular is a subject with wide requirements, there's a lot to learn and at the end you bear great responsibility," explains Stefan Bräsemann, the Head of Training. That suits Steffen Bonin perfectly – he's likes to shoulder responsibility. He showed such great commitment at his new training spot that the instructors and location management suggested a special approach for him: Starting his course to qualify as a master craftsman even while he was still an apprentice. "To achieve that, I had to skip lessons at college and learn the contents to catch up later in my spare time – that was the price of my unusual career path." One thing is certain for

“ANYONE WHO LEARNS A TRADE THESE DAYS HAS EXCELLENT JOB PROSPECTS. STEFFEN BONIN IS PROOF THAT NOT ONLY STUDYING OFFERS CAREER OPPORTUNITIES.”

From the bottom up

Young people who seek and seize opportunities – that's one side to training. The other: A company that invests in the future and takes young people's concerns seriously. Head of Training Stefan Bräsemann speaks about the comprehensive training euromicron gives to electronics technicians or IT specialists, for example.

"You need a broad range of expertise. First, we teach general handicraft skills, such as drilling, filing or soldering, but then above all how to use cabling, systems, networks, wireless technologies and transmission technologies.

After the first year of training, trainees are assigned to preassembly, where the systems designed for customer projects are prepared. That's followed by project work at the customer. Together with the instructors

and experienced colleagues, the trainees gain practical experience: on site at the customer, transmission lines or network nodes. They learn step by step what counts later: Knowing what to do, even in response to difficult questions. We also work closely with vocational colleges and chambers of industry and commerce.

Our prime aim is for our trainees to gain their qualifications. Apart from that, there are additional voluntary offerings where they can learn other things – from an exchange program with the UK to climbing and safety training for work on high transmission masts. You should be good at mathematics, physics and English – then we always welcome an application. We offer a great deal, because we want to keep the young people on after they finish their training. So it's in our interests for them to be really well-qualified at the end of it." ■

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