

### **GROW TOGETHER**

# **GROW TOGETHER**

WHY DO PEOPLE CHOOSE A PARTNER? WHY DO THEY PUT THEIR TRUST IN A PERSON, AN INSTITUTION OR A COMPANY? Those are the questions that the 25 stories in this book are all about. Let us introduce you to a start-up building a professional IT system from scratch, an insurance group keeping up with the fast pace of change, and a mid-size machinery manufacturer providing connected equipment and services. Every project is different, and every company stands out. Altogether, the stories show how multi-faceted our work with our clients is.

As you would expect from an IT partner, the main topics are ostensibly ones such as processes and programming, cloud concepts and AI applications, SAP and Microsoft solutions. Essentially, though, this book is about something else.

### What lies behind our projects are not technologies, but people.

People who want to advance and shape an idea – and who need someone they can trust at their side. That's where our experts come in. They provide the necessary industry experience and expertise to handle a wide range of tasks, from strategic advice and solution development through to infrastructure operation.

The additional skills they bring are harder to define yet just as crucial, if not more, for ensuring all-round success. Another important philosophy adopted by adesso is to use common sense. The stories below also tell of this approach: of a feel for what is feasible, of paring down to the essentials, and of a passion for making things happen.

Since adesso was founded, we have seen countless technologies come and go. No one can reliably predict what kind of influence today's hot topics, such as generative AI and quantum computing, will have on business and projects. But regardless of the tasks that lie ahead of us, trust and common sense remain the foundations of successful collaboration. And neither can be digitalised.

We would like to thank all the employees, partners and clients who have put their trust in us in the past decades. The selection featured in this book represents just a small sample.

I hope you get as much pleasure from reading the stories as we did in writing and compiling them.

### Perhaps one of our projects will inspire you to discover new aspects to your own digitalisation story.

**Prof. Dr. Volker Gruhn** Chairman of the Supervisory Board adesso SE

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# ITBE GINSSON THAPSON BLEM

And then comes a start-up to solve it. In the case of eCovery, this classic story centres around the importance of physiotherapy as part of medical treatment. Patients are told by therapists to keep up their exercises at home, but often do not heed these words properly. As a result, therapies do not have the desired effect, and back or hip pain lingers. This problem preoccupied three founders from Leipzig so much that they set about bringing physiotherapy to people's smartphones. Using eCovery's app, which contains instructions and exercise videos, patients can continue their rehabilitation at home.

While this story might not be unusual, the journey taken by eCovery certainly is. The reason? adesso ventures (formerly inQventures GmbH) is helping develop the software for the start-up. The adesso Group's corporate VC arm offers its services in a different way. Instead of simply acquiring a stake at an early stage, it invests smart capital. This includes IT services, developer capacity and support with certification, as well as access to adesso clients and adesso industry experts – an important factor for early-stage companies in particular. adesso ventures is backed by the entire adesso Group, with all its potential, know-how and client relationships. adesso ventures' services are in demand with start-ups. There are plenty of venture capitalists out there offering purely funding. The market for developers, however, has been completely emptied. This is a big obstacle, especially for young companies looking to develop digital solutions or offerings.

The founders of Resility also found adesso ventures to be the right partner for them. Their SaaS cloud security solution Mitigant helps companies continuously monitor cloud infrastructures. Resility's service makes it possible to identify and protect incorrectly configured and insecure applications. The idea has attracted investment from High-Tech Gründerfonds (HTGF) and Brandenburg Kapital, among others. adesso ventures contributed the development resources.

### FUNDING ALONE IS NOT ENOUGH

adesso ventures has been involved in the start-up scene for three years now. Its target group is new companies in the areas of fintech, insurtech, healthtech, IoT, mobility, the public sector and utilities. adesso ventures is itself a start-up based on an idea that came from adesso employees. The team of founders recognised how much potential lay in adesso's development expertise. "Problem, solution, start-up" was defined as the guiding principle when the corporate VC arm was established. What do founders of tech start-ups need at the early stage? Funding and IT expertise. adesso ventures provides both. Malte Unger, one of the managing directors of the incubator, explains the fundamental idea: "We offer young entrepreneurs the technical knowledge and services of our adessi. In return, adesso ventures receives shares in the start-up." He and his team put together an individual support package for each young company. adesso's workforce, which currently numbers more than 8,000, helps teams of founders design the architecture for their applications, while also providing assistance with programming, testing and business development.

The offering is not just striking a chord with founders, though. Plenty of experts at adesso are "really keen to join a start-up project", says Unger. Colleagues make time amid their day-to-day work to help adesso ventures evaluate a start-up idea, for example. Inspiring ideas, exciting teams and new technologies all entice the technology-loving adessi to get involved. The experience that they gain in the start-up world then benefits adesso's everyday business, with many adessi taking new approaches into their normal work.

### IN THE IDEAS FACTORY

adesso ventures is now well connected in the start-up scene. More and more frequently, other venture capital investors are directly approaching the company and asking it to take part in investment rounds. At present, adesso ventures is invested in eleven companies. It receives new pitches for business ideas every day. The incubator's management looks at aspects such as the monetarisation concept, market size, founding team and compatibility with the adesso world. The focus is on B2B solutions with a software-based business model.

### ADESSO IS AN IMPORTANT SOURCE OF INSPIRATION

Many investments can be traced back to ideas developed by colleagues. Right now, a particularly interesting one is urban energy, a start-up with its roots in adesso. The founders use big data analysis to make homes cost-efficient and carbon-neutral.

Like any corporate VC firm, adesso ventures is setting its sights on the next big thing. With a combination of capital, expertise and clients, the company will continue to give a helping hand to lots of promising ideas.

### THE COMPANY

adesso ventures is the adesso Group's incubator. The company makes early-stage investments (pre-seed – series A) in start-ups that have a B2B software-based business model. Its preferred sectors include banking, insurance, public bodies, sport, utilities, manufacturing and mobility. The funding provided by adesso ventures takes the form of venture capital and tech for equity. The start-ups in its portfolio have access to development expertise from the outset. adesso ventures also introduces its investees to adesso clients from the relevant industries. This provides the start-ups with feedback from the market so that they can achieve an early product/market fit and expand their customer base.



## **INSURANCE?**





# **COMING RIGHT UP!**

In football, it's the goalkeeper's fear of facing a penalty. Copywriters talk about struggling against the blank page. So what is it called when IT developers get a mental block before trying to put down the first line of code? There were no such problems in this project. When the Provinzial Group approached adesso in 2018 with nothing more than an idea, the team didn't hesitate for a second. The mission: to create a digital commercial insurance solution from scratch. **THE ANSWER: IT'LL TAKE US LESS THAN A YEAR.** 



ANDSAFE BUILDING A DIGITAL INSURER In the end, it took less than eight months. This is a story of successful development at lightning speed by a team of digital natives faced with a challenge that they gladly put their programming skills to the test to meet: inventing an online insurance solution that you don't need a scrap of paper to arrange. It all started from nothing, since neither the first insurance product nor a logo had been designed. There was simply no playbook – something the participants made up for with a lot of pragmatism and trust.

This attitude was thanks to the courage of those responsible at the Provinzial Group, says Kai Kroker, one of the people in charge of the project at adesso. The public insurer with a long tradition wanted to do a lot of things differently when it came to spinning off the new venture. A business case had been prepared, but many other parameters were still to be determined. A major opportunity was calling – and adesso's team took it on at high speed. Since no structures were in place, things could not be done as they always had been.

### **"WE SET UP AN AGILE STRUCTURE STRAIGHTAWAY. EVERYONE WAS AWARE WE WERE CREATING SOMETHING COMPLETELY NEW."**

JENNY GURSCH | ADESSO

That's why agile coach Jenny Gursch organised the work around an agile model from the start: "We set up an agile structure straight away. Everyone was aware we were creating something completely new." She opted for an approach based on the scrum framework. This normally means a period of training for everyone – a crash course in agile working. But Gursch had to accept that the ambitious schedule meant learning on the job. The scrum method was put straight into practice, rather than being taught. That meant shared responsibility instead of hierarchies, and focusing on a shared goal instead of individual targets. The term "scrum" comes from rugby. Transferred to the office environment in which the first digital commercial insurer was founded, it meant first and foremost close proximity, constant contact and always keeping in mind what everyone else was currently working on in a highly motivated atmosphere. "Everyone was eager to constantly improve," says Gursch. "That was the defining feature of this project throughout."

### **CROSS-FUNCTIONALLY AGILE**

adesso insurance solutions provided the andsafe-specific configuration for the insurance products. Three interdisciplinary teams set up the front end, comprising the application paths and the customer portal. Teams with different areas of expertise - software development, marketing, sales and insurance – worked together on the new insurance solution. At the same time, the team tackled the colour scheme for the front end, the intuitive application path, a solution for a completely cloud-based infrastructure and the complex process of applying to the German Federal Financial Supervisory Authority (BaFin) to register a brand new, independent insurer on the market. The new name andsafe, along with the logo nd playful turquoise tone, conveys both lightness and reliability: a message of simplicity and security, or even surprising simplicity.

Taking out insurance is now a straightforward process – but getting the idea off the ground wasn't always easy. Christian Buschkotte, Managing Director of andsafe, recalls unusual times for conference calls, and one or two public holidays that everyone deliberately overlooked.



Still, he says, "when the team is as passionate as ours, it works." At andsafe, the focus was always on getting things done. And that is still the case, perhaps more so than ever. When everyone feels responsible, they will actively work on effective solutions at any time.

The result is the digital market leader, born out of a company with a tradition stretching back 300 years and made possible by a partnership with adesso built on trust, together with the courage to take on something new. "Our team is so agile that we can quickly adapt our plans if new opportunities arise," says Executive Board member Christian Brandt. "An example of this is our successful bike insurance policy."

Right from the start, both sides built up skills that helped them to progress: Provinzial gained digital skills that the parent company benefits from. Meanwhile, adesso is developing into a permanent partner for an insurer in the digital market.

### "WHEN THE TEAM IS AS PASSIONATE AS OURS, IT WORKS."

CHRISTIAN BUSCHKOTTE | ANDSAFE



### DEVELOPED IN LESS THAN EIGHT MONTHS 48 DEVELOPERS IN ONE PROJECT SPACE ONE PROUD PROJECT TEAM

### THE COMPANY

A digital start-up with a long tradition – that's what the young insurance company andsafe AG calls itself. A wholly owned subsidiary of the Provinzial Group based in Münster, Germany, the new firm is backed by 300 years of experience in insurance, but is still agile, fully digital and cloud-based. This makes it the ideal partner for all businesses looking for a quick and simple way to insure themselves online. Being licensed and regulated by BaFin, financially secured by the Provinzial Group, internally flexible and always at the cutting edge of the digital world pays dividends. For example, andsafe's business liability insurance has an outstanding rating and thousands of satisfied customers.

### BARMENIA SOFTWARE FOR INSURANCE

If the people involved had realised what would become of their small workshop as they gathered on a Saturday morning in 2007, they would have taken a photo. The meeting of several insurance and IT experts at a Düsseldorf hotel laid the foundations for software applications that would shape both Barmenia's insurance products and adesso. It marked the birth of Barmenia's modern IT system and – without anyone realising it – a new standard solution for insurance.

### SOMETHING'S DEVELOPING AT BARMENIA

The gathering spawned a project to define and reorganise the company's software landscape. A plan was fleshed out that described how to replace the existing legacy systems at Barmenia with new applications.

The options considered were revamping individual legacy systems, developing a new infrastructure and purchasing standard solutions.

At the time, there were only two systems on the market that the life insurer considered viable. However, the two providers behind them merged just at the moment Barmenia started searching for a solution, leaving the company facing what felt like a monopoly. Alternatives were needed.

The discussions soon turned to the big picture of a life insurance system. adesso's representatives jumped at the opportunity, telling Barmenia: "We'll work with you to develop a system that fits your requirements exactly – a system that is so standardised and sophisticated that it can be offered to other insurance companies."

The problem? adesso was already handling numerous IT projects for insurers. Up to then, its experts had gained little experience of the complex actuarial science and highly technical nature of life insurance. Only after finding a partner with in-depth knowledge of the subject area was adesso able to convince Barmenia of the idea.

Together, the project team consisting of Barmenia, adesso and the partner set to work. As in many revamp projects, they faced a formidable opponent in the form of a legacy system whose functionality had aged tremendously over the years.

### TAKING ON A LEGACY SYSTEM

The life insurance system put in place by Barmenia around 2010 had a history that went back a long way. It was programmed in Cobol, a programming language that emerged in the late 1950s. In the subsequent years and decades, the Barmenia team had added new functions, closed gaps and fine-tuned the application. Nevertheless, the company's system had reached the end of its life cycle.

It would have taken too much effort to incorporate new product classes, such as fund-based life insurance.

The outdated technology stack meant that it was only a matter of time before the application could no longer be maintained, updated and operated by the available staff. Even back then, it was getting harder and harder to find Cobol developers.



### **BUILDING A NEW SYSTEM**

From the start, the aim was to design the new system as a standard software product evolved and maintained by adesso that could also be offered to other insurers.

Unlike its competitors, the product would keep any maintenance work for Barmenia and other customers to a minimum through regular releases of the standard to ensure that the system is constantly up-to-date, as well as through continuous release readiness.

The extensive standard functionality would minimise the number of customised components/add-ons required. The main component of the standard is the core, which contains the actuarial expertise that Barmenia needs for its work. That means all the mathematical and statistical processes that form the basis for offers, tariffs and the management of insurance contracts.

Only customer-specific components are looked after by the insurance company.

One example from the standard provided is the Markov chain, a stochastic process that plays a major role in determining the probabilities of future events occurring. It sets actuaries' hearts racing – and gives software developers grey hair. After all, there had not previously been a software solution for life insurers that mastered this process. The adesso project team achieved exactly that: the very first version of the life insurance system was "Markov chain-ready".

That is just one of the complex topics that the team tackled. Another objective was to reflect all the expertise, definitions and extensive regulations that define the German life insurance market in the standard application. Every aspect of a life insurance product – be it an investment or an interest rate – is regulated. The rules are strict, and mistakes can have serious consequences. What's more, the legislation is constantly being amended.

THE GOAL WAS TO REFLECT ALL THE EXPERTISE, DEFINITIONS AND EXTENSIVE REGULATIONS THAT DEFINE THE GERMAN LIFE INSURANCE MARKET IN THE STANDARD APPLICATION.

### LIFE GOES LIVE

In these challenging circumstances, Barmenia and adesso worked together to create a product from scratch. "The starting point for our joint project was fund-based life insurance," says Dr Alfred Bröckers, now Managing Director of adesso insurance solutions GmbH, in which adesso has pooled its product business for the insurance sector since 2014. "Barmenia instructed us to design a modern system that offers a wide range of functions from the outset." And the team delivered. In 2012, the project managers pressed the proverbial button, and PSLife, as the product was named, went live.

What followed was a decade of evolution of both the system itself and adesso's collaboration with clients. In the subsequent years, adesso insurance solutions has designed a suite of other standard software products modelled on PSLife: private health insurance, property liability and accident insurance, as well as company pension schemes. Systems for calculating

### THE EXTENSIVE STANDARD FUNCTIONALITY MINIMISES THE NUMBER OF CUSTOMISED COMPONENTS/ADD-ONS REQUIRED.

and invoicing commissions, collection/disbursement and other cross-functional systems round out the offering, which comprises an entire ecosystem of 15 core applications for insurers – the insure Ecosphere. The number of clients has now grown to 50, with new ones being added each year.

The history of the insure Ecosphere shows that innovations in the tech world don't always come about in garages between pizza boxes. A small gathering at a Düsseldorf hotel was the foundation for one of the standard software products for insurance companies. ■

### THE COMPANY

Barmenia Versicherungen is an independent German insurance group. The group includes Barmenia Allgemeine Versicherungs-AG, Barmenia Krankenversicherung AG and Barmenia Lebensversicherung a. G. The companies are one of the largest employers in Wuppertal, with over 2,000 staff in that location. In total, they employ some 4,500 employees throughout Germany.

CONVERSATION	
BEING VALUED AND CREATING VALUE	E
DIVERSITY AS A SUCCESS FACTOR	

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## THE BAD OLD DAYS

"COMPANIES NEED DIVERSITY TO STAY FIT FOR THE FUTURE."

### **BEING VALUED AND CREATING VALUE**

### DIVERSITY AS A SUCCESS FACTOR

#### MICHELLE EUZET

(born in 1972) is a champion of true cultural change, high-performance teams and effective diversity in organisations. The owner of the management consultancy EUZET CONSULTING also delivers ideas and motivation as a keynote speaker and executive sounding board. A large helping of humour and a little provocation make Euzet's interventions lively, accessible and stimulating. Her expertise is rooted in her 20-year career working for German B2B hidden champions.

### DIRK POTHEN

(born in 1967) is the member of the adesso SE Executive Board responsible for the Automotive & Transportation and Manufacturing Industry divisions, as well as for the foreign subsidiaries. He also oversees the adesso investments material. one AG and adesso manufacturing solutions GmbH. On the Executive Board, he is additionally responsible for the Human Resources, Proposal Management and Corporate Communications departments.

### What

kind of company do we want to work for? This is the first question that many organisations ask when thinking about topics such as diversity, equality and inclusion. Diversity touches a wide of range of aspects, from business success to social responsibility, and from the behaviour of individuals to cultural change for all. Euzet and Pothen address a good few of them in their conversation, which centred around the idea that if diversity activities at companies are to be successful, and they must be closely tied to to ked business operations. and

### **DIRK POTHEN:**

While preparing for this conversation, I asked myself whether and how we would have talked about diversity ten years ago. My feeling and my recollection tell

me that the topic wouldn't even have come up. Back then, it was hard to imagine prioritising such supposedly soft factors. Mechanisms and hard facts were what business leaders overwhelmingly believed in.

MICHELLE EUZET: Looking back, I tend to agree. The level of acceptance of all the aspects around diversity was low. In my previous roles as a manager at B2B companies, I enjoyed having fierce debates about these "soft success factors". I believe their significance is underestimated. How do we work together? How do we deal with each other? Do we accept differences? How do we create value together? I am absolutely convinced that being valued and creating value are mutually dependent, in both directions.

**DIRK POTHEN:** A company that values diversity ensures that its workforce is enriched by different characters and biographies. I can remember a number of situations in which I arrived at very good solutions with a diverse team. I felt that they were better than ones that would have been achieved by a monocultural, homogeneous team. This is precisely where we see how much sense d to their biography, personality and strengths. Managers must recognise potential at this level – and then translate it into performance. That is the lever we can use to

diversity makes in

business. The focus

is on the individual and

performance. That is the lever we can use to influence a company's economic development. Increased performance leads to better projects, more satisfied customers and greater business success. And this recognition of potential doesn't just apply to the people who are already there.

**MICHELLE EUZET:** Companies need diversity to stay flexible and fit for the future. Two developments are troubling me at the moment, though. First, there is a tendency on all sides to be very dogmatic and lecturing. All that matters is what you can and can't say, and the topic itself gets overlooked. Second, companies place too much emphasis on the visibility of their actions, and too little on the substance. The link between diversity initiatives and day-to-day business is frequently missing. Both developments are causing even supporters of diversity to grow tired of hearing about the subject.

**DIRK POTHEN:** That's why you need a close connection between diversity and the operating business in order to nip this kind of misguided approach in the bud. With that in mind, adesso decided to specifically address

### DIVERSITY TAKES US FORWARD

"The will – or sometimes even compulsion – to change is an interesting topic." the issue of attracting more women to IT, since finding enough qualified staff is one of the crucial factors in our success. The initiatives and programmes we have launched to convince more female developers, project managers and managers to join us contribute to this very goal. Although we have established a clear link between diversity and our day-to-day business, it has required a lot of patience from us – and that will remain the case. It simply takes time to anchor the topic in our culture.

**MICHELLE EUZET:** Cultures can be slow-moving. That said, I have seen time and again how quickly

organisations can change. Sometimes, all you need is one new person in a team, and the way people deal with each other changes. Suddenly, the members see new forms of behaviour. The tone within the group changes, as does its image to outsiders. That can be contagious. After all, even though we often focus on the company as a whole, diversity is practised at team level. In our

everyday behaviour, we need to respect differences, even encourage them, and promote diversity, as well as recognise which profiles we still lack in order to make useful additions to the team. First of all, though, companies must ask themselves: do I want to change anything? **DIRK POTHEN:** The will – or sometimes even compulsion – to change is an interesting topic. adesso is a successful, fast-growing company. In this situation, wanting to strengthen diversity is not a given, especially if you are satisfied with the approach you have been taking up to now, and the short-term prospects remain good. In my experience, there are two things that trigger a willingness for change: either the current situation is so unpleasant that I want it to go away, or the goal is so attractive that I voluntarily set about achieving it.

MICHELLE EUZET: On the other hand, if a company is in the midst of a crisis, you often hear the phrase "we don't have the time or money for diversity right now." If you're looking for the "perfect time", though, you usually won't find it. What really counts is the conscious stance taken by an organisation, and a clear answer to the question "will diversity take us forward?" Even if your head says yes based on sufficiently validated economic studies, your gut also needs to agree. After all, diversity is always about a mindset, about the will to leave your own comfort zone and grow

as a person. That's the attractive goal you were just talking about. Head and gut must come together to give diversity management a non-negotiable significance and bring about change – for an individual, a team and a company. And for society as a whole.

"We don't have the time or money for diversity right now."

## **GROWING TOGETHER**



BITMARCK AND ADESSO -A PARTNERSHIP THAT LASTS

BITMARCK DIGITALISATION OF STATUTORY HEALTH INSURANCE





In a good marriage, you start off looking amorously into each other's eyes. Then, over time, you look in the same direction side by side, ready to face any obstacles and crises that may come along.

BITMARCK and adesso now have a partnership stretching back more than 20 years – and counting.
### A PASSION FOR SOFTWARE ENGINEERING

In 2002, BITMARCK was called Informationssysteme der Krankenversicherungen (ISKV) and had just been spun off from the German Federal Association of Health Insurance Funds. It quickly became clear that ISKV's product – the software used by health insurance funds to conduct their core business – was outdated. ISKV needed a new offering to respond to the changes taking place in the market for business, trade guild and alternative health insurance funds. It was an existential issue.

ISKV was looking for a partner for this crucial project. The then chief technical officer knew a young IT professor, Volker Gruhn, who had just co-founded a software company called adesso in Dortmund. Gruhn sent one of the small group of consultants he had already recruited. Jens Spitczok von Brisinski vividly recalls his first impression: "The job was perfect for us, and we were really keen to roll up our sleeves and get stuck in." It was this enthusiasm that won over the decision-makers at ISKV. After all, adesso had not yet had time to build up either its brand or decades of industry experience. "Of course, we quickly needed to back up our enthusiasm with technical expertise and know-how," says Spitczok von Brisinski. Back then, model-driven architecture was all the rage. Together, BITMARCK and adesso wanted to adopt the most innovative approach, including clearly separating functionality and technology using generators that wrote schematic source code. It was a big challenge for the team of developers. What gradually emerged – as a solution to the complex demands of a health insurance fund's core business – was the statutory health insurance standard BITMARCK\_21c|ng. Andreas Prenneis, then Technical Managing Director of ISKV, rapidly needed a lot of people. As a result, adesso provided both advice and a group of programmers, some of whom were based at ISKV's offices. "The core system created at the time works to this day," says Jörg Schroeder, more than 20 years later. He previously held a management position at BITMARCK and is now Chief Financial Officer at adesso.

As in every good relationship, the challenges and the conflicts alike enable both sides to grow. By working together to master the development phase, which was hectic at times, the project team comprising members from both companies was moulded into one big family. As managing director, Prenneis was in the thick of the action. "When you're in each other's faces, the language can sometimes be direct," he says admits. But that fitted in with the attitude of the joint team: we get things done – and even if the going gets tough, we don't run away.

A highly tense moment was when the largest health insurance fund in the BITMARCK community, DAK-Gesundheit, introduced BITMARCK\_21c|ng. "The transfer of the around five million insurees at DAK from 2015 onwards proved that any health insurance fund can use this software," says Schroeder. Since then, the system has been consistently enhanced. BITMARCK has now evolved from a provider of software for health insurance funds into the largest data hub in the healthcare system – offering everything from software engineering, and data centre operation to software services. The question that the company always asks is: "How can we make life easier for insurees?"

Now appearing on the horizon are topics such as cloud-compatible IT architecture, container capability and the secure handling of social data, which is

more strictly protected than banking secrecy. The 20 to 25 million lines of code that make up BITMARCK\_21c|ng will have to be transformed in the future. Key subjects include automation, individualisation of processes and workflow development. The real challenge for BITMARCK will be taking all the players in the healthcare sector with it on this journey. After all, half of all faxes in Germany are still sent by doctors. Despite the early digital transformation in healthcare, there is still plenty to do.



### ... AND NO END IN SIGHT

# AGAIN AND AGAIN YES!!!

BITMARCK is one of adesso SE's longeststanding clients and the best proof of how rewarding it is to build stable partnerships. These are the kind of partnerships that both sides permanently benefit from.

#### 20 YEARS OF PARTNERSHIP 150+ CONSULTANTS 20 MILLION+ LINES OF CODE

#### THE COMPANY

Headquartered in Essen, Germany, the BITMARCK Group is the largest full-service provider of IT in the statutory health insurance market and is subject to government supervision by the German Federal Office for Social Security. The company was founded in 1994 as Arbeitsgemeinschaft Informationssysteme in der gesetzlichen Krankenversicherung GmbH (ARGE ISKV). In 2008, ARGE ISKV was merged into the newly formed BITMARCK and has been driving forward digitalization in the industry ever since. BITMARCK meets this challenge thanks to its constantly updated BITMARCK\_21c ng software for business and trade guild health insurance funds, DAK-Gesundheit and other alternative health insurance funds. This means that more than 80 per cent of statutory health insurance funds are clients of the BITMARCK Group.

# BIG PLAYER

Whenever federal authorities in Germany award contracts – be it work for tradespeople, the construction of a daycare centre or maintenance of fire extinguishers – they are required to do so via the federal government's electronic tendering (e-Vergabe) platform. The Procurement Office (BeschA) of the German Federal Ministry of the Interior and Community (BMI) is responsible for this platform, and itself acts as the central purchasing authority in the business area of the BMI. The digital platform, which was first made available by the BeschA in 2003, is used to award contracts worth billions every year. adesso helps the BeschA to enhance, maintain and support the system.

WHAT MIGHT SEEM A RATHER DRY AND UNINSPIRING SUBJECT BECAME A REAL LABOUR OF LOVE FOR THE PROJECT TEAM MEMBERS.



#### **LOOK BACK TO 2012.**

The Public department is adesso's smallest unit, with eight employees. It cannot point to any major reference projects. When you are an unknown quantity in public administration, winning tenders from high-profile clients is all the more challenging. "Back then we were trying really hard, but the big players regularly got the better of the small ones," recalls Ralf Gerstenberger, Requirements Engineer in the electronic tendering project at adesso. However, adesso scored a huge success by beating the competition to secure the award of a multi-year framework contract. And the client's name certainly stands out in the company's portfolio: the official client is the Federal Republic of Germany.



#### **BIG CLIENT, BIG IMPACT**

Since then, the adesso team led by Project Manager Alexander Mohr have been in charge of the technical maintenance and evolution of electronic tendering. They act on behalf of what is now the BMI, and specifically the BeschA. In a large number of individual projects, the platform is equipped with modern technology and undergoes procurement-related enhancements. This enables the BeschA to respond flexibly to changes in legislation. "Right from the start, we had a feeling that adesso could be a very good fit," says Project Manager Veronika Bagriantseva from the BeschA, adding: "We are happy to have a partner like adesso at our side - one that has excellent knowledge of both the technology and the subject area, and that we enjoy working with." Project references such as this heralded the breakthrough of adesso's Public department, which led to a continuous expansion and additional public-sector contracts. Today, the department has several hundred employees. After the framework contract expired in 2018, the project team was able to win the follow-up tender as well.

#### **RIGHT MIX OF YOUNG AND OLD**

adesso's experts have put in place a variety of and launch of a new server infrastructure, the implementation of a persistence layer for a maintenance-friendly database connection and the for example. The evolution and maintenance of existing systems, as well as the support provided for them, take place at the same time as the implementation of new functions. companies to register for the e-Vergabe platform quickly and easily so that they can submit offers. "Previously, it took up to three weeks for login data to be generated and sent," says Erik Luge, an expert from the electronic tendering team at the BeschA. "That was far too long when you've got companies who want to bid for tenders that only have a few days left to run." Results such as these show that adesso's highly skilled professionals can respond flexibly to problems. However, the project did not just involve experienced experts. Student employees and trainees also took part. "The client would certainly like to see younger colleagues help young and old, which is something that you don't find every day and shows how much trust we all

#### **TEAM SPIRIT TRIUMPHS**

Winning the follow-up tender in 2018 was very much a team effort. After working so successfully with the BMI Procurement Office for six years, the Public department set its next goal: securing the tender for the years to come. On the evening before presenting its proposal, the project team from Dortmund, Munich, Berlin and Bonn came together. "We sat down for a relaxed dinner together and discussed the final details. You could already see how great the camaraderie was," says Gerstenberger, describing the atmosphere at the time. That team spirit would pay off. While part of the team was giving the presentation to the client, the developers had to complete a test in the background to show the standard of their work. In less than three hours, they had built a mini-application according to specific instructions. "We presented the application at the end. It went down incredibly well with the client," recalls a smiling Gerstenberger, who is a long-serving adesso employee. "As a team, we and our colleagues did an excellent job. We still talk about it today when we meet again at events." The team plans to be in the frame for the next tender as well.

The project never gets boring, says Gerstenberger, adding: "Personally, I can well imagine staying on for a few more years."

## **GREAT SPIRIT**

#### THE AGENCY

As one of the largest public-sector clients, the BMI Procurement Office purchases goods and services for federal government authorities, foundations and organisations. Its core responsibility is to pool purchases and settle them centrally. Customers and taxpayers benefit from this.



THE COMPANY: The family business from Werne, Germany, is a leader in the development and production of cranes and construction lifts. Over 600 employees create a broad product range, primarily comprising truck and trailer cranes. Böcker invented the mobile truck crane in a lightweight aluminium design. The German-made cranes set standards not only in terms of their weight and workmanship, but also due to their particularly high payloads, long extension lengths and ever increasing digitalisation.

### THE SMARTEST TRUCK CRANES COME FROM WERNE

**BÖCKER** DIGITAL SERVICE PORTAL The specialists at Böcker, a company based in Werne in the Westphalia region of Germany, know a thing or two about truck cranes. Böcker's products set standards when it comes to payload, extendable height (also known to experts as extension length) and outstanding manoeuvring capabilities. In 2018, the company had the idea of not just building good truck cranes, but also making them digital and smart. Colin Doert, Head of IT at Böcker, and Dr Martin Peters, Head of the IoT department at adesso, both understood quickly how the cranes' journey towards digitalisation could work. "Our focus from the start was on Böcker's customers, such as roofing companies. We wanted to develop something that would significantly add to the benefits of the machines," Peters recalls. The vision: a customer portal with live crane data on an IoT basis.

### FROM IDEA TO PROTOTYPE IN THREE MONTHS

Above all, it had to be done quickly - right from the word go. Just before Christmas 2018, Böcker met with the IoT experts from Dortmund for an initial exchange of ideas. Requirements were defined, but one parameter was non-negotiable: time. Böcker wanted to present a prototype with the core functions at the next Bauma, the world's largest construction industry trade fair, at which numerous manufacturers showcase their innovations. The perfect location to raise awareness of digital truck cranes among the trade and the public. An ambitious deadline, but not an impossible one, all the participants thought. "The tight time frame in particular unleashed additional energy. Everyone knew we were working on a flagship for the company. So absolutely everyone pitched in," says Dominik Rhein, Project Manager for control technology at Böcker. The prototype was ready on time, and Böcker impressed the trade fair visitors with functions such as data analysis, geo-fencing and a live view of a crane at work.

#### ADESSO DEVELOPS NECESSARY INDUSTRY KNOWLEDGE

However, time is only one aspect in successful project work. An even more important factor is that everyone involved knows the target group's needs inside out. This applied to both Böcker and adesso. To create an IoT solution that was as useful as possible, the team led by Peters first had to grasp what truck cranes are all about. "To be honest, our knowledge of the industry was limited at the beginning. But it was that very fact which made the difference at adesso.

We want to understand our clients. Only then can we develop products that are tailored to their needs," says Peters. The solution: the entire team of developers took part in a workshop at Böcker to gain an extensive picture of the challenges and requirements in the truck crane sector. Armed with this knowledge, the developers were able to understand their own client, Böcker, as well as its customers.

### AGILE TEAM SPIRIT: THE KEY TO SUSTAINABLE COOPERATION



This has led to a number of services that round out Böcker's portfolio:

- > Remote maintenance: service technicians can track the crane's control system via a live view
- > Anti-theft system: users define the operating radius of an individual machine. If the crane leaves this area, the system raises the alarm.
- > Extensive fleet management, including via smartphone
- > Proactive service: permanent data transmission means that maintenance requirements can be precisely determined

More than 500 machines are now connected, from 32-tonners to compact trailer cranes. In particular, the live view of the crane's control system provided by the service portal has had a lasting effect on the everyday work of crane operators and service staff. Böcker's specialists regularly help the person working with or in the crane in especially tricky situations. "We used to support customers by telephone, but there were

always misunderstandings and language barriers, so mistakes inevitably happened. A quick look at the live data solves these problems and helps us create real added value," says Rhein.

The team led by Peters and the participants at Böcker swiftly formed a powerful collective. They developed the requirements together using an agile approach, and decided on how to implement the technology. "Agile working paid off in this project. Initially, we held very frequent discussions. We worked together to flesh out details such as interfaces, data volumes and variables," recalls Doert, the responsible IT manager at Böcker. Now, the dialogue still takes places regularly, but at longer intervals. adesso makes BöckerConnect available as software as a service (SaaS) on its own IoT platform.

Another focus besides maintenance is the ongoing enhancement of the solution. The plan is to add more services in the near future to make the portal even more effective. "For example, we want to use the data we gather to take predictive maintenance to a whole new level. If we can precisely determine wear and tear based on data, then IoT will really be playing to its strengths," says Doert. Connecting various systems with each other is also on the to-do list, including the enterprise resource planning system (ERP). There are still plenty of things to tackle.



# OLÉ OLÉ OLÉ OLÉÉÉ



# DREAM TEAM

HOW BORUSSIA DORTMUND AND ADESSO TEAMED UP, BOTH ON THE PITCH AND IN THE TECH WORLD

> **BVB** DIGITALISATION

#### **88 YEARS**

That's the amount of time between the birth of Borussia Dortmund and adesso. 1909 was when it all began for the football club, 1997 for the IT service provider. Both made names for themselves, celebrated successes and mourned defeats. They discovered Europe, each in their own "market", but never forgot where they came from: the Ruhr Valley. Germany's largest metropolitan region, it is home to five million people, with Dortmund right in the middle. The area's 22 universities, universities of applied sciences and countless football clubs are a magnet for talent.

#### **4.5 KILOMETRES**

That's the distance between SIGNAL IDUNA PARK and adesso's headquarters. They are more or less neighbours. On a good day, it takes less than ten minutes to drive between the two on the B1 highway. You could sense that this close proximity would lead to a business relationship. After all, adesso's team of founders included some passionate Borussia Dortmund fans. Their paths crossed time and again – in the stadium, at events or at local activities. Eventually, the time felt right for both sides to turn their connection into collaboration. However, the people involved had different ideas as to what form this should take.





#### TWO SPORTS MANAGERS AND A SOFTWARE ENGINEER MEET AT A RESTAURANT ...

Like many good things, it started with a good meal. Michael Zorc, then Sporting Director of Borussia Dortmund, and Carsten Cramer, Managing Director of Borussia Dortmund, wanted to "just have a chat" with adesso founder Professor Volker Gruhn. That was a happy coincidence, since adesso had also been keen to do the same for some time. The two sports managers talked enthusiastically about sponsorship at youth level and the possibilities for shirt and perimeter advertising. The software engineers preferred to discuss IT strategies, cloud solutions and digital customer interfaces. Even before the first drinks orders had been brought to the table, it was clear that the two sides saw things differently.

Everyone spent the rest of the meal making certain what Borussia Dortmund and adesso had in common, as well as talking about regional roots and European ambitions. At the end, Gruhn took with him a Borussia Dortmund shirt adorned with the adesso logo, while Zorc and Cramer had an appointment for a workshop with adesso in their calendars. At the workshop, adesso's experts demonstrated the potential that modern technology offers Borussia Dortmund. There were plenty of points that tied in with the work of a football club. On the one hand, a football club is a normal middle-market company, the only difference being that it has fans instead of customers. An organisation like this also has ERP or CRM solutions working in the background. Managers think about commercial processes and new markets. On the other hand, there's the action down on the pitch – where IT is playing an ever greater role.

Whether it's in talent scouting, fitness monitoring or tactical analysis, undiscovered treasures are waiting to be found in the data held by clubs. Professional sport in the US shows what is possible in this area. For example, American football teams use high-end technologies and work with legions of data scientists to squeeze even the smallest competitive advantage out of the data.

Prof. Dr. Volker Gruhn | adesso SE

"FOR EVERYONE INVOLVED, THIS COLLABORATION IS PROOF THAT THE BEST RESULTS COME ABOUT WHEN PASSION AND FUN ARE IN PLAY."





#### THE COMPANY

Borussia Dortmund GmbH & Co. KGaA is an international football club with one of the strongest brands and one of the highest average attendances in Europe. The business activities of the organisation and its subsidiaries within the group focus on professional club football and the commercial exploitation of the related income potential, in particular the marketing of SIGNAL IDUNA PARK. The majority of revenue generated by the Borussia Dortmund Group comes from matches (including ticketing), the marketing of television rights (including pay TV), advertising (sponsorship), retail sales (including merchandising) and player transfers. Alongside its core business, Borussia Dortmund is also involved in football-related business fields. adesso presented approaches and ideas for both areas – Borussia Dortmund the company, and Borussia Dortmund the football club. The sports managers soon realised that this could be a promising partnership. After a number of internal discussions and negotiations, adesso's management was also on board. The collaboration received the green light, and adesso became a Borussia Dortmund sponsor.

It was important to those involved that the deal did not simply mean printing a logo on a shirt and signing a cheque. They showed a great deal of creativity in order to bring the word "sponsorship" to life.

- > Black-and-yellow half-time: adessi and Borussia Dortmund employees team up to take a look behind the scenes at the club in a quarterly online event covering everything from talent selection to athlete nutrition. A frequent feature is the everyday routine of the boys in Borussia Dortmund's youth academy.
- Summer on the pitch: the BVB Evonik Football Academy puts on a course in the school holidays that lets children who love football train almost like professionals. adesso holds regular draws in which a large number of places on the holiday camps are granted to promising young talent from the region.
- > IT-Tacheles podcast: Carsten Cramer and Volker Gruhn take part in an edition of the adesso podcast, in which they talk about what it means to make a professional football club fit for the future.
- Vocational training: young, up-and-coming footballers regularly visit adesso for internships or activities to help them prepare for their future career. The goal is to spark the schoolchildren's enthusiasm for the IT sector.

#### CUSTOMER FAN RELATIONSHIP MANAGEMENT

In the end, the two topics discussed over the meal – IT and sponsorship – led to a partnership. Borussia Dortmund chose adesso as the IT partner to lead the setup and implementation of its digitalisation strategy. And adesso's logo graces not only the shirts of the youth teams, but also those of the Borussia Dortmund women's teams, which were established in 2021. That's something else the partners have in common, since adesso is equally keen to encourage and support women. The company's "She for IT" initiative aims to get women interested in IT and promote female employees.

adesso's experts are currently ensuring that Borussia Dortmund's IT is up there with the elite. This includes running applications, deploying the salesforce multicloud platform, performing overall project management for the roll-out of a new ERP solution and providing an interim IT manager.

By building a modern IT infrastructure, Borussia Dortmund is laying the foundations for success both on and off the field going forward. The experience of working with the football club prompted adesso to launch a new business area, the sports industry. The activities relating to the partnership with Borussia Dortmund have become a permanent fixture for adessi – even for those who are fans of different clubs. A shop with products to make machines go fast



Festo is both a responsible family-owned business and a global player in automation. Some 20,000 employees around the world pursue a shared goal: helping customers achieve maximum productivity and competitiveness in factory and process automation, as well as in technical training. An important milestone on the company's journey was building a modern e-commerce platform.

In its webshop, the company offers drives, valves, controllers and sensors that make machines and systems faster and more reliable. "We know them all very well," says Volker Bogacki from adesso. He and his project team worked together with colleagues from Festo to develop the new B2B shop solution, which is embedded in the tech firm's digital brand identity.





# BEST PITCH

"The pitch at Festo was the first and best pitch that we have done to date," says Project Manager Bogacki. At the time, the team from ARITHNEA – a company that is now part of the adesso Group – locked themselves away for weeks. The goal was to design an ideal project world for customers. UX experts joined forces with persona, customer journey and scrum master specialists. "The way we prepared the pitch back then is still the gold standard," Bogacki recalls. "We still copy a lot from it today."

The instruction from Festo was: "Outline an example of a person's journey through Festo's new website, taking into account sales promotion and supportive, brandbuilding methods." Bogacki and his team delivered first in their pitch (the resulting proposal won over Festo's managers) and then in the project. After the internal pitch party, the work really got going. The tasks set by Festo were to make its new website the first port of call for customer requirements and to transform its successful shop platform, which was one of the first in the B2B sector to be launched back in 2001. On top of that, the company also wanted to become even more agile internally.

#### MAKING COMPLEX PRODUCTS EASY TO CONFIGURE

Experts from the industry know that complex products have to be designed so that they are easy to select and configure, and ultimately convenient to purchase. Festo's managers set the target of increasing the shop's revenue fourfold by 2025. In particular, the individual requirements of customers were a challenge. After all, the product must be perfectly configured so that it fits the bill. The teams found the answer during the Festo Online Experience (FoX) project. The project managers used interviews with Festo customers to come up with a successful user journey, and requirements resulting from the interviews were addressed together with the technology team at UX workshops.

The core element of the shop is the compelling user navigation, especially in the shop and product configurator, which is intuitive to use thanks to the combination of creativity and technical expertise displayed by the website. For example, there is now one single, intelligent search function instead of the three different search fields previously available. "Our analysis revealed that almost 40 per cent of users start with a search," says Bogacki.

#### **CLOSE COOPERATION**

"Together, we and Festo found our way as agile developers. We built teams in a spirit of partnership, gradually familiarised Festo employees with agile methods and celebrated our successes," Bogacki explains. "A large number of sprints took place at Festo's offices – and the teams mixed more and more in the course of the project. We developed not only a new application, but also trust in the people and methods."

Bogacki still remembers the launch of the webshop and online presence in the US: "A lot of praise came from all sides. We received our own Festo certificates and were very proud of the project, the client, ourselves and our teams."

#### NUMEROUS USER INTERVIEWS

At the end of the project, the teams took stock: the compelling solution included numerous user stories (in other words, requirements resulting from the user interviews) and over 2,900 individual tasks in Codebeamer, which the teams define as a life cycle management tool covering the entire process of software product development.

The large project team has now turned into three smaller teams. Bogacki and his colleagues continue to coordinate the partnership. "That's the normal process of loosening ties," he says. "We'll keep on acting as a stability anchor for a while longer. However, the agility of the teams radiates across the entire company."

Today, Festo's online shop measures up to other webshops from the B2C world. So it's time to prepare for the Festo cobot.

#### THE COMPANY

Festo is a global player as well as an independent family-owned business based in Esslingen am Neckar, Germany. Since its earliest days, the company has been setting standards in industrial automation technology and technical training. This allows it to contribute to the sustainable development of the environment, business and society. Festo supplies pneumatic and electric automation technology for 300,000 factory and process automation customers in over 35 industries. The lifetech business, including medical technology and laboratory automation, is gaining in significance. The company's products and services are available in 176 countries worldwide.

#### FLENDER CONFIGURATION SYSTEM



# TODAY'S PROJECT, TOMORROW'S PRODUCT

HOW FLENDER AND ADESSO CREATED A SOFTWARE TOOLKIT FOR THE INDUSTRY

### ONE TWO THREE

THE RIGHT GEAR UNIT SOLUTION NEEDS ONLY THREE PARAMETERS



Design your own pair of trainers? Completely normal. Pick out the equipment for your new car? Standard practice. Mix your own muesli online? Almost old hat. Individually configurable consumer goods have long been available to everyone. Mass customisation is the name of this megatrend, in which consumers order individual, custom-made items, and manufacturers nevertheless produce huge volumes. Take fashion, for example: get a tailor-made suit, but only pay as much as for a similar one off the peg.

However simple a customer's wish might sound, though, it still has a complex effect on the products and processes of manufacturers. Like many companies, Flender too faced this challenge. A change in a component in the gear unit affects the entire value chain. Among other things, engineers have to adapt the design, reschedule production and ensure that the strict quality requirements are met – time-consuming and costly tasks for the gear unit experts based in Bocholt, Germany.

Flender set itself the goal of reconciling two challenges: customer wishes and complexity. The result was a new and unique gear unit solution called Flender One. "Application, performance, speed: customers can find the right gear unit solution using just three parameters," says Dr Jan Reimann, explaining the configuration approach used for Flender One. "Instead of asking for the specifications or characteristics of the gear unit, we focus solely on the benefit requested by our customers. They tell us how and where they want to use the gear unit, and we tell them which gear unit with which functions they need."

#### THE COMPANY

Headquartered in Bocholt, Germany, Flender is a leading international supplier of mechanical and electrical drive systems and has been producing drive components that meet the highest levels of performance, innovation, quality and reliability for more than 120 years. Flender offers a broad range of gear units, couplings, generators and associated services, with a focus on key industries such as wind power, cement, mining, oil and gas, power generation, water and wastewater, marine, conveyor and crane technology.

#### AUTOMATION PAVES THE WAY

This is made possible by the automation of business processes on the basis of a sophisticated and comprehensive enterprise architecture. The partnership between adesso and Flender has already led to the creation of the revolutionary software solution FIRE, the centrepiece of the enterprise architecture. It contains a smart toolkit that manages the business processes involved in manufacturing. This includes all workflows, from the customer enquiry through to final commissioning and servicing at the operator.

To realise this enterprise architecture, adesso used a modular approach to combine various solutions from different system environments, such as SAP and Salesforce, as well as Siemens PLM, Microsoft Azure and other tools. As a result, adesso provided everything from a single source, including the design of a customer portal that offers a 3D visualisation of the gear unit and a simple self-configuration process for customers.
# FLENDER

For Peter Hensel, Head of Configuration and Data Management at Flender, the result is nothing less than a breakthrough in customisation and sustainability: "Flender One provides our customers with a completely new type of gear unit solution that precisely meets their requirements at all times, and therefore avoids waste. This is made possible by the automation of our business processes on the basis of a sophisticated and comprehensive enterprise architecture."

The new production approach not only makes customers happy, it also simplifies the everyday work of Flender's engineers by saving them time. In a 40-year career, an engineer spends an average of nine years on configuration. Automated processes such as those offered by Flender One ensure that this figure is reduced and that the employees can devote more time to their actual job.

### FIRE: FROM PROJECT TO PRODUCT

adesso supported Flender for almost three years leading up to the launch of Flender One – a period in which German engineering skills and excellent digital expertise enriched each other and created something unique. "This software toolkit is currently one of a kind in the German manufacturing sector. Our system masters all levels of complexity in an integrated configuration system for end-to-end processing," says Andreas Liesche, Managing Director of the adesso subsidiary adesso Manufacturing Industry Solutions.

Inspired by what they had achieved together, the partners decided to take their collaboration one step further and open up the software toolkit developed by them to other companies. The project was turned into a product with the name FIRE (Framework for Intelligent Rule Engineering), which the partners offer to other companies as a modular variant configuration and automation solution, together with the FIRE software toolkit. The market potential is huge, since one thing is clear: mass customisation is here to stay.

#### THE COMPANY

GEMA is an organisation based in Germany that collects royalties for musical works. It operates all over the world and acts as a trustee for over 85,000 members, including composers, lyricists and music publishers, as well as the legal successors of the aforementioned groups. GEMA manages the rights of its members and of more than two million rights holders, ensuring that they are remunerated for their works. In 1903, a group of composers in Germany founded AFMA – a forerunner of GEMA and the country's first collecting society. GEMA's head offices are located in Munich and Berlin.



**GEMA** DIGITALISATION

GEMA is a German collecting society that represents creators who want to protect their musical works. It has long since moved on from documenting songs in analogue form, as its predecessor organisation did 100 years ago. Thanks to adesso's support, GEMA can now offer its members digital solutions.

> GEMA is one of the world's leading collecting societies for musical works. Over the course of the past decades, IT applications have become more and more important for the organisation, as it has increasingly been digitalising its analogue systems. IT experts at GEMA developed tailored systems for the individual areas such as radio, television and events, and put in place an entire IT environment. These systems worked perfectly for several decades. But GEMA realised that once solutions are developed, they have to be constantly updated, improved and adapted to reflect changing needs. Knowledge of the IT systems was held by individual employees who were due to retire in the foreseeable future. At the same time, technological potential was growing rapidly, but the individual systems could no longer benefit from it. GEMA responded by establishing the subsidiary IT4IPM – IT for Intellectual Property Management – in 2014. The new team put together an IT roadmap with the aim of modernising the system environment at GEMA.

#### **START OF THE PARTNERSHIP**

adesso first worked for GEMA in October 2015. Its experts took over a failing project from another service provider and completed it on time. "Our expectations were simple. After an onboarding period, we wanted adesso to submit a proposal and then deliver it exactly as offered. We could not have been happier with the result," recalls Lorenzo Colombini, a member of GEMA's Managing Committee. The new system implemented at the time is designed to receive reported uses of music, automatically attribute them to a work and determine the value of the use of the music. It also calculates which works have been played for how often and how long during a year. This helps prepare the distribution of income and marks the start of GEMA's chain of core processes. After completing the project, adesso successfully modernised a number of systems.

#### **GEMA SERVICES GO ONLINE**

In 2017, adesso won the tender to build the online portal, which allows services for music creators and nusic users to be made available online. The team began with a tariff calculator. Organisers can register their events online, from school leavers' parties to multi-day festivals. After it has received answers to several guestions, the configurator calculates the correct GEMA tariff and registers the event. It is also possible to register new musical works and upload MP3 files. The number of services offered by the portal has now grown from three at the beginning to 25. "We design the services, develop them to a high standard and take them live on schedule, while working closely with the IT team at GEMA and IT4IPM. We're also partly responsible for the maintenance, which means we support these services across their entire life cycle," says Gregor Böhme, Delivery Manager for the GEMA projects at adesso. Looking back, Colombini describes building the portal as a special experience: "We constantly grew in an agile environment and rolled out releases every two weeks. We see it as an important product for enabling digital interaction with our rights holders and licensees."

### LEARNING FROM EACH OTHER

Since the cooperation began, it has developed into a close partnership in a spirit of trust, in which both sides benefit from each other. "On the one hand, our organisation learns from adesso's tremendous flexibility and technical expertise. That includes handling agile projects," says Andreas Stibi, Managing Director of IT4IPM, "On the other hand, we can pass on the meaning and purpose of copyright and the importance of fair remuneration for artists." The continuous growth of the cooperation has led to ever greater trust between the two sides. "Our partnership with the staff at GEMA is open and pragmatic. We can address problems quickly and directly at any time in order to find solutions together," says Böhme. Today, GEMA is one of adesso's biggest clients. This is reflected in the number of staff deployed by the IT service provider: 190 experts have so far implemented 35 projects, adesso has now worked more than 53,000 person days for GEMA. It would take one person over 250 years to complete a period of work this long.

CONVERSATION RESEARCH AND INNOVATION

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## WHAT TRENDS AND TECHNOLOGIES SHOULD OUR CLIENTS BE READY FOR? WHAT WILL THE BUSINESS MODELS AND SUCCESSFUL PROJECTS OF TOMORROW BE BASED ON? HOW WILL SOFTWARE DEVELOPMENT CHANGE? AND HOW CAN ANYONE KEEP TRACK OF THE BIG PICTURE AMID ALL OF THIS?

Angela Carell, Head of Research, and Thomas Bendig, Chief Innovation Officer, talk with Volker Gruhn, founder and Chairman of the Supervisory Board, (all adesso) about the significance of innovation and research for an IT service provider.



**Volker Gruhn:** At heart, we at adesso are passionate software developers. We want to build good solutions for our clients in good projects. What role does research and development play in this?

**Angela Carell:** As an IT partner, our job is not just to deliver in our current day-to-day business. We also need to think long-term. That's why we deploy new technologies at an early stage in our applied research projects. We anticipate the future on behalf of our clients. In doing so, we ensure that what we offer them tomorrow will work. When selecting research topics, we make sure that they are closely linked to the needs and sectors of our clients. For us, research is a space for trying out new things, a playground. We tackle our projects together with partners from science and industry. Research initiatives are always carried out in our operating units – in other words, close to the market. Constant feedback from the real world prevents us from overlooking its needs in our research.

Thomas Bendig: Let me pick up directly on that from an innovation perspective. In our field, the task is to identify trends and technologies at an early stage and determine whether they represent an opportunity or a challenge for us or our clients. To achieve this, we have to master the tools of our trade, meaning the latest technologies in software development, and understand our clients' industries. With the emphasis on "and". An in-depth understanding of the industry is particularly important to us at adesso. We also look at innovation topics from this angle: can a specific idea or new technology help our clients do business more successfully? Does it make for better and more efficient projects? Only then do we engage with a topic On this basis, we conduct a forward-looking analysis of what changes are in store for companies, how to take advantage of these changes and what skills are necessary to deal with them. In a nutshell, we want to have answers ready before we are asked the questions.

Volker Gruhn: Both aspects are related. How do you shape the interaction between innovation and research?

**Thomas Bendig:** For us, it's a pipeline. At one end is the early identification of technology, and at the other the finished projects and solutions. Between the two, you've got innovation management and research. We assess the topics identified and then jointly decide whether, when and how to bring them to market through research projects.

**Angela Carell:** We see the key factor for this assessment as being the transition "from if to when", as the authors Geoff Tuff and Steven Goldbach put it in their book Provoke. This means the point when it becomes clear that a topic or technology will establish itself, although it is not certain when this will happen. And at that precise moment we decide the parts of our innovation process in which we will address the topic: in major research projects, as internal R&D, as proof of concept together with clients or in another form. Sometimes, a topic develops such great momentum that we tackle various parts at the same time. Other times, we deal with one after the other.

**Volker Gruhn:** That is the environment for innovation and research at adesso. And what comes out at the end? Can you give some examples?

**Angela Carell:** A health project immediately springs to mind. At first, it wasn't a success at all. Together with Leipzig University, we set up a research project in 2016 with the aim of developing an app for people affected by depression. We wanted to use data to detect the signs of the start or end of a depressive episode in these people. It was an ambitious task – there was a lot of scepticism at adesso too. And we were indeed unable to deliver the desired results.

But we kept pursuing the topic. There were follow-up projects, and the legal framework also changed in the meantime, allowing patients to be prescribed digital health apps. We were simply too early in 2016. That said, the experience we gained back then is the basis on which we develop health apps for our clients today. That proves two things: without the courage to truly think big, which of course makes failure more likely, we wouldn't have any research that really takes us forward. Sometimes, a lot of patience is required until we and our clients can reap the rewards.

Thomas Bendig: We look particularly closely at innovations that could be relevant for us as software experts, such as development methods and tools. The current ones are no code or low code. Together with our experts, we assess what impact the topics will have on our work and whether they represent a risk for our business model or an opportunity for new projects. Of course, we explore whether our clients will continue to require adesso's support in the future if everyone will be able to create applications without needing extensive programming skills.

Volker Gruhn: Oh, that would interest me too.

Thomas Bendig: I can put your mind at rest. There are signs that no code and low code processes will be exciting tools for our teams and will help them produce showcases and prototypes more quickly. This will accelerate coordination processes with clients and enable fast results, but it won't replace developers. Looking much further into the future, there's quantum computing. Clients approach us and want to know what effects this technology will have on their business and processes. As is often the case with innovations, you have to analyse the real usable development behind the overheated debate. As things stand today, we are still some distance away from having powerful hardware and easy-to-use software development kits for quantum computers. However, the potential for disruption in the next ten years is huge. That's why we are already engaging with the topic and developing experience and expertise. As always, our approach is open-minded when it comes to technologies, and we cooperate with various technology partners.

**Volker Gruhn:** Our research and innovation activities cover a broad spectrum, from health apps through to quantum computers. One final point is important to me. I believe that thinking across industries presents us with opportunities. For example, we are researching new mobility concepts in the automotive sector. The findings we have gained also help us in logistics projects for manufacturing companies. Connections like this ensure that the entire organisation and all our clients benefit from new knowledge and new skills.

**Angela Carell:** I would like to finish by underlining that engaging with research and innovation has more than just direct practical benefits. It also helps us stay curious and deal with major uncertainty, as well as see other possibilities and take new paths.

Thomas Bendig: And curiosity has been one of our fundamental principles for a quarter of a century.



## "ENGAGING WITH RESEARCH AND INNOVATION HAS MORE THAN JUST DIRECT PRACTICAL BENEFITS. IT ALSO HELPS US STAY CURIOUS."

**¥** 19

Dr Angela Carell has been Head of Research at adesso for more than ten years. Together with her team, she looks for and develops future topics in areas of application for IT, in cooperation with numerous research consortiums. This allows important findings for new IT solutions to be gathered and then used directly at adesso.

Thomas Bendig is CIO at adesso. His role involves identifying trends, hypes and new technologies at an early stage. It is important to Bendig to correctly assess and analyse these trends. The results help adesso lay the foundations for being able to offer its clients innovative software solutions at an early stage. Professor Volker Gruhn co-founded adesso SE (formerly adesso AG) in 1997 and is now the Chairman of the Supervisory Board. He is Head of the Software Engineering Department at the University of Duisburg-Essen. Since 2017, Gruhn has been a member of the Digitalisation Advisory Board of DAK-Gesundheit. He joined the University Council of Leipzig University on 1 March 2019 and sits on the Advisory Board of the Fraunhofer Institute for Software and Systems Engineering.

# WHEN THINGS GET

# KELVION STAYS

**KELVION** DIGITAL PLATFORMS

80 | KELVION

Heat exchangers are everywhere these days, from freezers in supermarkets to gas turbines at industrial plants, and in sizes ranging from "fits in the palm of your hand" to "needs a heavy goods vehicle". The devices and systems play a role in a wide variety of scenarios. They ensure that a frozen pizza is kept at the optimum temperature throughout the logistics chain and are essential for the operation of data centres. To cool facilities such as these, large amounts of heat must be extracted reliably and efficiently, since the sensitive equipment requires strict temperature and humidity thresholds to be met. Together with adesso, Kelvion develops digital offerings that make it easier for industrial companies to select and configure these complex products.

# HGT CCJL

### TOO MANY CHOICES? THE PLATFORM CAN HELP

It doesn't take long to explain how heat exchangers work: they transfer heat from one medium to another, while ensuring that the two components are channelled past each other, instead of coming into direct contact. Although the basic idea is simple, the engineering behind it is rather sophisticated. Around the world, one name is synonymous with this technology: Kelvion. Since the 1920s, the company based in Bochum, Germany, has built solutions for almost any conceivable industrial application.

Kelvion has put its focus squarely on digitalisation to make it simpler for companies to select the right product from all the different options available and to accelerate internal processes.

One example from the Kelvion world is Kelvion Select, an online platform that enables customers to choose the right solution for them. "Kelvion Select is a complex, digital design platform for heat exchangers used in refrigeration," says Sascha Ostermann, the company's Global Sales & Solutions Manager. "With Kelvion Select, you can find the right heat exchanger and design it according to specific operating conditions in just a few clicks on the basis of various parameters such as temperature and medium." Initially, the development project for the platform did not go smoothly at all. "When I joined Kelvion in 2019, we decided to pull the plug," says Christian Sorowik, Project Lead CCS at Kelvion. "What our service providers had developed up to then did not match our expectations." A new project plan was needed, along with a partner that could deliver. Sorowik implemented the first version of the platform with only two developers. However, the model was not scalable. The growing number of tasks – new product lines, new configuration options – could not be handled with the resources available.

Enter the experts from adesso. The two companies quickly hit it off at both a professional and human level. "With adesso, we feel like we are working with a start-up that is agile and provides compelling and extraordinary ideas. Behind it, though, is a group of companies that has the size and experience to cope with even complex projects."

A sign of the bond between the two sides was the ritual of the sprint change day. Every two to three months, the team didn't just change from the old sprint to the new one. Instead, the project team members from Kelvion and adesso met up on that day in person on site. Sitting down to breakfast as a group, enjoying a quick lunch and relaxing over dinner brought them closer together – in the truest sense of the word.

### **COME RAIN OR SHINE**

Together, Kelvion and adesso built an application to meet the strict requirements. Meanwhile, the history of Kelvion Select continues. The latest update of Kelvion Select RT further extends the range of functions for users significantly. The "ambient weather" function developed by adesso now lets them automatically allow for different weather profiles and extreme weather situations. Microsoft delivers the technological basis with its Azure

### A SIGN OF THE BOND BE-TWEEN THE TWO SIDES WAS THE RITUAL OF THE SPRINT CHANGE DAY.

cloud solution. In the case of Kelvion Select RT, the place where the heat exchanger is to be used determines the selection and design of the product. Operating a heat exchanger in the Arctic or in the desert places different technical demands on the hardware, which must be taken into account in advance.

By creating the "ambient weather" function, adesso made it possible to automatically consider local weather conditions at the design stage. Users can get an overview of the climatic conditions in a town or city by referring to a weather table. For example, if the heat exchanger will be used in Las Vegas, USA, the extreme temperature range from –6 to 46 degrees Celsius must be taken into account. Kelvion RT Select possesses a weather history that goes back up to ten years. "One of the challenges was working with the volume of data. Climate information on a town or city is available for every hour of the year – that means 8,760 data points for a twelve-month period, and there's usually 40 years' worth of information. We used this data to work out proposals that reflect the environmental conditions at the desired location as closely as possible," says Stefanie Schwilski, Senior Software Engineer at adesso and developer of the Kelvion Select platform.

#### **GOODBYE EXCEL, HELLO FIRE**

Another example of Kelvion's digital journey is myAFC. The abbreviation AFC stands for Air Fin Cooler, a device whose optimised material and design enable much more efficient heat exchange. AFCs are not standard products. Each one is tailored to the individual needs of Kelvion customers. As a result, the complexity involved is enormous. In the past, Kelvion's experts configured products using either Excel or outdated tools, none of which sufficiently met the complex requirements.

This is where FIRE comes into its own. The "Framework for Intelligent Rule Engineering " is a modular framework for creating configuration tools. Using FIRE makes preparing offers for customers much more efficient. In May 2021, adesso launched the myAFC project with a proof of concept (PoC). The goal was to build a configurator for the AFC product using FIRE's existing functions.

It didn't take long: the PoC phase was successfully completed after approximately six weeks, and the project got under way. Since then, the project team has added a plethora of functions to FIRE, including interfaces to other systems and an optimisation service that determines the most favourable configuration based on the input data. Along with the FIRE configurator for myAFC, the participants also developed a project management tool and a front end. The system serves as a framework for configurations. It can be used to manage projects, rights or users, as well as to adapt the front end.



### THE POC PHASE WAS SUCCESSFULLY COMPLETED AFTER APPROXIMATELY SIX WEEKS, AND THE PROJECT GOT UNDER WAY.

The additions to FIRE, such as the optimisation function, make it easier for each Kelvion customer to search for the best solution. The ability to put the configuration rules and the front end together using XML means that Kelvion's engineers can make adjustments themselves. For example, if a dependence in the configuration changes, they can adjust the configurator without requiring any programming knowledge. This increases flexibility and reduces response times for specific customer requirements.

The examples of myAFC and Kelvion Select show that when the right experts join forces to address the topic of digitalisation, there is tremendous potential for better processes and solutions.

And if the chemistry is right, as was the case between Kelvion and adesso, the projects can also be a lot of fun

#### THE COMPANY

Kelvion Holding GmbH is a global producer of industrial heat exchangers for a wide variety of market segments. The company has manufactured and sold its products in various markets since 1920. In November 2015, it began doing so using the new brand Kelvion. Its exceptional skills, in-depth expert knowledge, proximity to customers and broad product portfolio make Kelvion an unrivalled partner in the area of heat exchange. The company supplies customers around the world with everything from plate heat exchangers, shell and tube heat exchangers, fin heat exchangers and modular cooling towers through to refrigeration heat exchangers. It serves a wide range of sectors, such as energy, data centres, chemicals, marine, refrigeration and air conditioning, oil and gas, as well as food and renewable energies. Kelvion specialises in providing customised products and services, and serves its customers via a global production, sales and service network.









Week after week, the thought of winning the lottery captures the imaginations of millions. In 1955, "6 aus 49" lottery tickets went on sale in Germany, giving people the opportunity to select six lucky numbers out of 49 in total. More than 60 years later, WestLotto - one of the 16 German state lottery companies offers its customers a wide range of different games. The Münster-based lottery company was adesso's entry ticket into the industry as the new millennium got under way. More than 20 years later, the powers that be at WestLotto still trust their IT service provider, as do numerous other companies around the world. A journey that started in northwest Germany has since taken the lottery experts all the way to Trinidad and Tobago.

# HITTING THE JACKPOT

In 2000, Mark Zuckerberg was 16 years old. Amazon was six. The living rooms of a few digital pioneers were filled with the beeps and whirs of modems. Mobile shopping meant taking a seat in the garden to browse a catalogue. For most people in Germany, the

> internet was still uncharted territory. In the C-suites of many companies, the prevailing sentiment was a mix of curiosity and reservations.

WestLotto quickly came to realise that the new medium could be an interesting channel for customers. From a 2020s perspective, the first attempts seem archaic. Those interested first had to download software known as a client and install it on their home computers. Using the client, they could register, authenticate themselves and play lottery games. Anyone wanting to join the fun needed a substantial amount of IT expertise.

The hurdles were too high for many people. Management at WestLotto wanted to build a new foundation for its e-commerce attempts. adesso was one of the companies to present a concept in response to an invitation to tender. By that time, the experts at WestLotto and adesso already knew each other well.

### X IN THE BEGINNING, THERE WAS A DATABASE

In the late 1990s, a technically adept developer helped WestLotto's IT department work on its databases. That one person gradually became an entire adesso team. And that one database evolved into more complex IT projects. The people involved came to know and appreciate each other. The adessi developed a keen sense of what made WestLotto in particular, and the lotto industry in general, tick. When the management decided to invite tenders for a new IT strategy in 2000, it invited adesso to join in. Among a crowd of big, established consultancy firms, the small IT service provider stood out. Its concept for a new IT infrastructure won over the hearts and minds of the decision-makers, who had the necessary faith in the ideas, skills and capabilities of the experts from adesso.

> What followed was an IT project on a major scale. With a new central system, new terminals and new

networks, WestLotto overhauled its IT from the ground up. The goal was to get its technology and processes into shape for trends such as e-commerce.

### **X** FROM WESTPHALIA TO THE WORLD WIDE WEB

Starting with the infrastructure at hand, WestLotto and adesso worked together to develop a new online approach to selling lottery tickets. The internet, once an exotic, new medium, was starting to play an ever-larger role in people's lives. Leaving the initial, complicated user interfaces behind them, those in charge wanted to provide an easy and secure way to play the lottery online that included things like simple registration and automatic payouts to winners' bank accounts. One crucial realisation for WestLotto was that online players are not anonymous. While the company's headquarters in Münster have no idea who has submitted a particular lottery ticket at a physical point of sale, anyone looking to play online has to log in with their credentials. That offers WestLotto new opportunities to communicate with customers a game-changer in the most literal sense.

In the 20 or so years since then, no line of code has remained the same. The developers have channelled all the new customer expectations, new functions, new technologies and new general conditions into new code. Despite gradual enhancement and a fully new,

state-of-the-art technology stack that was most recently overhauled in 2021, the idea has remained the same at its core: to create an optimum lottery gaming experience that excites customers – on the basis of a system that they trust. For adesso, the partnership with WestLotto has also been a game-changer. The lottery industry has been one of its areas of expertise for over 20 years, from providing advice and support in formulating invitations to tender, rolling out central systems and designing games, to promoting product business with proprietary IT solutions used by lotteries around the world. In this case, "around the world" is no exaggeration. Many countries have only one national lottery, and the industry is international by nature. Those in charge are a close-knit group who regularly rub elbows at conferences and industry association get-togethers. Recommendations and personal relationships play a major role. A handshake counts as a promise.

### **X** FROM PLAYING BINGO TO BUILDING BLOCKCHAINS

Consultants in the lottery business get around, whether it's accounting for eleven time zones while developing an online lottery in Russia, taking part in contract negotiations with the lottery company in Trinidad and Tobago or coming up with a Sharia-compliant gaming solution in Dubai. adesso's LotteryForce suite is used in Israel and Switzerland alike. For the Alpine nation, adesso has even developed gaming components such as bingo that are fully independent of the central system.

At lottery companies, as elsewhere, the role played by digital technology is constantly growing – not only behind the scenes in central systems and IT infrastructure, but also where the main attention is focused: during draws. Blockchain technologies potentially offer a way to securely digitalise the lottery drawing process that complies with the rules. In adessoDraws, adesso has developed the world's first fully digital lottery drawing machine. It meets all the standards that lottery companies place on the good old plexiglas blowers or cages that have been seen on TV for decades.

> The world of lottery companies has changed fundamentally in recent decades, with new offerings, competitors and technologies shifting the landscape. But one thing has remained essentially the same: in lotteries and betting, it is always about trust – in gaming mechanisms, draws and payment of winnings.

> > To live up to these expectations, those in charge of lottery companies have to have faith in their IT. And in their IT partner.

MERE SECONDS – THAT CAN CHANGE THE LIVES OF MILLIONS

1

# RIGHTTO MOBILE RETTER SAVING LIVES THE HEART

Few IT projects are a matter of life and death. But that is precisely what is at stake when working for Mobile Retter. Every eight minutes, someone in Germany clutches their chest and collapses. The diagnosis? Cardiac arrest. Over 70,000 people are affected each year. Every second without resuscitation measures reduces the chance of survival – by ten per cent a minute. For 90 per cent of them, help arrives, quite literally, too late.

Mobile Retter (German for "Mobile Rescuer") is working to change that. There are not enough qualified people who could step in during the crucial minutes before an ambulance arrives. First-aiders, medical students, carers, nurses and firefighters who are close at hand and aware of the emergency could all help. This "could" was the factor that motivated Dr Ralf Stroop, an emergency physician, to look for ways to get first responders to the scene in those crucial first few minutes. His weapons of choice? Smartphones – and a high-tech alert system that coordinates intelligent dispatching. His goal? To have professional first responders on the scene in five minutes. Within a few years, his idea was helping people in Munich and Barcelona alike, thanks to a start-up with a different kind of business model: saving lives. SAVING LIVES? ISN'T THERE AN APP FOR THAT? Some ideas are so obvious that you ask yourself in hindsight why no one ever thought of them before. One day, the lights and sirens of an arriving ambulance alerted Dr Ralf Stroop to an emergency in his neighbourhood. Had the neurosurgeon and emergency physician only known of the emergency next door sooner, he would have been on the scene in mere seconds to provide help. He could have started taking life-saving measures much earlier than the team of first responders. That was the idea behind Mobile Retter.

In practice, local authorities that decide to work with Mobile Retter can seamlessly integrate the system into the existing chain of survival for emergencies. As usual, people report a cardiac emergency by dialling the emergency telephone number 112. The dispatcher then simply needs to press a button to trigger a series of events. The dispatch centre software transmits all of the information to the Mobile Retter system, which automatically contacts the first-aiders who can reach the scene fastest, 🔜 before the ambulance gets there. Those who choose to respond receive data concerning the emergency on their smartphones. An app guides them through the steps, from navigation to record-keeping. Through it all, the data protection and privacy standards meet the strict requirements of the healthcare sector.

# ONTHE SCENE IN 4:33 MINUTES



### MORE THAN 24,000 RESPONSES

### 38 LOCAL COUNCILS

PEOPLE IN REGIONS WITH MOBILE RETTER COVERAGE: 9.5 M

OVER 11,000 ACTIVE FIRST-AIDERS

## OVER 45,000 ALERTS

### THE COMPANY

Since early 2014, Mobile Retter e. V., a non-profit-making organisation, has been dedicating itself to popularising smartphone-based first-aider systems in Germany. The initiative helps local authorities and their emergency dispatch services roll out and operate the systems with an eye to the long term. With a multi-year pilot phase and a large number of nationwide roll-out projects now under its belt, the organisation has amassed extensive experience and expertise. As a result, Mobile Retter has already saved dozens of lives over the past few years.

But it wasn't always smooth sailing. From registering and managing first-aiders (Mobile Retter verifies the credentials of volunteers and trains them thoroughly) to organising partnerships with local authorities, manual effort and processes that differed greatly from person to person were the order of the day when things first got off the ground. Markus Lünsmann, who is in charge of Microsoft projects at adesso SE, was fascinated by Mobile Retter from the start. He got to know the project by chance through Microsoft. The IT expert was certain that Mobile Retter needed a sound technical foundation if it wanted to grow. It did not take much convincing to get the company's management on board: adesso took over medgineering GmbH, the business that developed the software on which Mobile Retter was based. Once adesso got involved, the IT specialists started finetuning the solution's underlying technical workings, with a set of Microsoft platform solutions such as Office 365. Dynamics CRM and the Azure cloud helping to ensure greater consistency and reliability.

### **GOING GLOBAL**

Since the solution was launched, over 11,000 volunteer mobile rescuers have responded to more than 20,000 calls, needing an average of 4:33 minutes to arrive on the scene. Every day, the helpers save lives. Mobile Retter has worked reliably for years. The organisation is now looking for ways to help businesses improve safety at large-scale industrial facilities and transfer its experience to the field of disaster management. The experts from medgineering are there to help it find solutions. "In the event of severe storms, for example, the Mobile Retter network could help those in charge get in touch with contractors," says Lünsmann, outlining one particular scenario. "Their heavy equipment could be used to clean up damage and rebuild infrastructure."

In 2013, Gütersloh became the first local council to use Mobile Retter. A little under nine years later, that number has grown to roughly 40 in Germany, including the city of Munich. All in all, more than ten per cent of the population lives in regions with Mobile Retter coverage. The idea has also been met with interest in other European countries. In 2019, Lünsmann took advantage of a stay in Barcelona to pay an impromptu visit to the local emergency services dispatch centre. The idea quickly won over those in charge. Today, Mobile Retter is helping keep some seven million people in Catalonia safe.

What sounds like a normal IT project on paper – developing interfaces and training users, as well as adding, rolling out and testing functions – is actually a matter near and dear to the hearts of those involved. It is also one that has the potential to help people in many different ways.



# **A CONVERSATION ABOUT THE** NEW ROLE OF IT NEW SCHOOL OF IT -**ON THE DESIRE FOR CHANGE AND** RESPONSIBILITY

HOW CAN IT DEPARTMENTS GO ABOUT THEIR DAY-TO-DAY BUSINESS WHILE ALSO PREPARING FOR THE FUTURE? HOW CAN IT LEVERAGE THE POTENTIAL FOUND IN DATA? HOW CAN IT USE THE CLOUD TO DEVELOP AND OPERATE APPLICATIONS?

THE ROLE PLAYED BY IT TODAY IS DIFFERENT TO WHAT IT WAS JUST **A FEW YEARS AGO. ONCE SEEN MERELY** AS A COST FACTOR, **IT IS NOW BECOMING AN INCREASINGLY IMPORTANT ELEMENT IN SHAPING NEW BUSINESS MODELS.** THE GOAL OF THE NEW SCHOOL OF IT IS TO **PREPARE IT FOR** 

**ITS CONTRIBUTION TO A SUCCESSFUL BUSINESS. WHEN IT COMES TO KEY DECISIONS, IT EXPERTS CERTAINLY NEED A SEAT AT THE TABLE. THE NEW** SCHOOL OF IT COMBINES THE STRATEGIES, **MEASURES AND TECHNOLOGIES THEY NEED TO MANAGE THIS PROCESS OF TRANSFORMATION.** 

# CHANGE COMES BY DOING.

DIRK MÜLLER TOOK OVER AS CIO OF THE HOUSING PROVIDER VIVAWEST IN NOVEMBER 2021. HE AND HIS TEAM PLAN TO POSITION IT AS A DRIVING FORCE AND ENABLER IN ORDER TO EQUIP THE COMPANY TO TAKE ON THE CHALLENGES AND OPPORTUNITIES OF THE FUTURE IN THE HOUSING INDUSTRY.

PROFESSOR VOLKER GRUHN CO-FOUNDED ADESSO SE IN 1997. TODAY, HE IS THE CHAIRMAN OF ITS SUPERVISORY BOARD AND HEAD OF THE SOFTWARE ENGINEERING DEPARTMENT AT THE UNIVERSITY OF DUISBURG-ESSEN. Volker Gruhn: When you think about the new role and responsibility of IT, the housing industry may not be the first thing that comes to mind. People might assume that things are somewhat slower to change there than in other sectors. But we've come to realise in recent weeks and months that you're also very much affected by these developments.

**Dirk Müller: Housing companies** don't just build for the next five months, of course. Instead, we tend to think in years and decades. The business has a long-term, sustainable focus. So far, the specialists from IT have worked behind the scenes to make sure that the processes and systems work. But key digitalisation initiatives in numerous areas of the company show that the way we approach the matter is starting to change. For example, the importance of services related to renting out or digitalising our buildings is growing. That shifts things like intelligent energy management into focus. I believe the role of IT is changing. With our expertise and offerings, we are helping to enable departments and IT to jointly deliver services that the market demands - all while ensuring excellence in operations.

Volker Gruhn: Typically, you've got traditional corporate IT on the one hand, with portfolio management and ERP systems, and experts who have to drive forward digitalisation or tackle new issues on the other. That's something we seize on in our idea of a New School of IT. We call it an "ambidextrous attitude", which refers to how the roles of chief information officer and chief digital officer dovetail. Both roles shape the digital transformation together.

Dirk Müller: That's one of the points of contact that decide over the success or failure of this transformation within a company. Both sides - reliability and excellence in day-to-day business, combined with creativity and a willingness to take risks in exploring digital options - are part of it. Only then can IT live up to its potential. I know from my professional experience at other companies that the different demands frequently lead to tension. There isn't a CDO at VIVAWEST, though. Strategy, not IT, is responsible for the topic of digitalisation. What helps us here is that our colleagues in strategy have developed a good and manageable digitalisation strategy. From an IT perspective, that's the main thing for implementation.

## Volker Gruhn: What makes it manageable?

Dirk Müller: The strategy isn't made up of flashy PowerPoint slides. It's so concrete and action-focused that we can work with it in IT. Subjects that relate to our core areas of responsibility are a part of it – things I would call "day-to-day business", as I just did. Creating general conditions and processes that enable us to respond faster to demands, for example. Volker Gruhn: Any discussion of ambidexterity ultimately circles back to cloud concepts. The two topics are closely related. Where does your company stand right now?

Dirk Müller: So far, we've still been using rather a lot of on-premises solutions. But our IT strategy outlines a new approach here as well. It defines the cloud as the architecture standard for our IT. For us, that means simply shifting applications to the cloud won't be enough. We have to consistently take the cloud into consideration from beginning to end if we want to achieve more flexibility and agility, along with advantages in our day-to-day operations. That's everything the New School of IT dubs "cloud native thinking". Our standard frame of mind with regard to the cloud going forward will be to ask "why not" rather than "why". As pretty much always, though, it's less about rolling out technologies than it is about changing the way people think.

Volker Gruhn: That's an important point. It would behove us to explain the IT philosophy to the colleagues in the departments, as well as what the benefits of using the cloud are. I believe we IT specialists need to step up to the plate here. A lack of acceptance is one of the obstacles to translating new ideas into action. If you want to use cloud technologies, you need to take the people who work at a business along for the ride. Change doesn't come at the press of a button. Dirk Müller: Part of that is a desire to embrace change. And that desire is something we can stimulate within an organisation. People need to understand the potential that lies in new technologies when it comes to optimising processes, for example. IT needs to recognise the opportunities that are opening up here. That goes hand in hand with the willingness to want to take on responsibility as an individual, team or whole line of business. Some IT departments are going to have to leave their comfort zone here.

Volker Gruhn: That's going to affect not only the IT department, but also the whole organisation. More and more, the success of a company is also the success of IT, since new business models or better processes are based on the use of data. The handling of data - gathering, consolidating, analysing, visualising and evaluating it – is the source of new ideas. That only works when specialised domain expertise and IT know-how come together. The experts need to overcome departmental boundaries and take a step towards each other.

### Dirk Müller: My point exactly. Change comes by doing. ■

OGE operates the largest gas transmission network in Germany, measuring roughly 12,000 kilometres in length. Is the network hydrogen compatible? Al solutions are helping search for answers.

ELNE

OPEN GRID EUROPE AI-SUPPORTED DOCUMENT PROCESSING
With the expansion of renewable energies progressing at a snail's pace, hydrogen offers a potential solution. Zukunft RuH2r, a joint project by several transmission and distribution system operators, aims to develop a powerful and efficient hydrogen distribution network and establish hydrogen as the energy source of the future in Germany. But sufficient infrastructure to transport hydrogen has so far remained a pipe dream. The key to making it reality could lie in the gas transmission system of Open Grid Europe GmbH (OGE), a 12,000-kilometre network of pipelines for transporting natural gas. OGE wants to find out whether its pipes, and all their components, are compatible with hydrogen. adesso is helping digitalise old reports and material certificates with the aid of an Al application that it developed in-house. Famously claiming to be "built on coal and fuelled by steel", Germany's Ruhr Valley is proud of its history, its black coal and its mining industry. With the days of mining long since over, forcing the region to find **a new direction**, the Ruhr Valley now has its sights set on becoming a leader in climate neutrality. Essen-based OGE wants to take on a pioneering role in the transport of hydrogen. Right now, its pipes are still filled with natural gas destined for towns and cities around Germany. Every year, 650 billion kilowatt-hours of gas make their way to consumers through the 12,000-kilometre pipeline network. While natural gas may be a key energy source in Germany's climate policy in the short to medium term, it too is slated to go the way of the Ruhr Valley's mining sector by 2050 at the latest. Theoretically, there is nothing standing in the way of using hydrogen to supply energy.

HANDWRITING, STANDARDS AND CONSISTENCY – THE OBSTACLES TO INFRASTRUCTURE CHANGE



**be transported?** To find answers to these questions, OGE wants to assess its pipeline network to see whether it is compatible with a different infrastructure. However, the technical documentation for all of the materials is available only as unbound, scanned documents. And there are quite a few of them:

More than 100,000 inspection reports and certificates on more than 1.6 million individual pages exist. The oldest date back to 1920. At the time, the reports were still written by hand, with typewriters first being introduced years later. Material names and standards that were still applicable then have also changed in the decades since. Moreover, the documents were not always consistently structured. OGE turned to adesso with these challenges. The goal was to extract the relevant information on components and material data, prepare it and make it available for further analysis. It quickly became clear that using artificial intelligence would be the only way to navigate the sea of documents. The advantage is that it generates data that can be used in other AI applications, in fields such as predictive maintenance - an important consideration for pipes and parts that require regular inspection and servicing.

In partnership with Planet AI, adesso developed an AI application that was tailored specifically to this project. The resulting automated document processing approach was capable of significantly higher recognition rates for handwritten and typed texts than an open source solution, for instance. Documents were processed in three steps.

### STEP 1 - CLASSIFICATION

The AI program receives a hint as to the general category of document concerned, such as: "TÜV Süd test certificate from between 1990 and 1995". That makes it easier for the AI to determine where it can find the information it is supposed to extract and what format the information is in, thereby increasing the quality of extraction.

#### STEP 2 – DOCUMENT READOUT

With the help of its acquired expertise, the Al program reads out the correct words in the documents, such as the name of the manufacturer, pressure class or material designation.

### **STEP 3 –**DATA CLEANSING

In this step, the data is cleansed to exclude incorrect or missing data, perform a plausibility check and make corrections, if possible. Similar components are combined into groups.

The process results in a high-quality data set that is provided in the form of a database. Using linked geographic information, material data can be located on a map and assigned to certain stretches of the pipeline. That way, the OGE's specialists can check the materials for hydrogen compatibility on a sectionby-section basis.

### OGE AND ADESSO

"For the first time, we can now take a standardised approach to visualising and evaluating a system that has grown over a period of several decades," says Dr Daniel Bick, an expert for hydrogen technologies at OGE. His enthusiasm about the project results is evident. "We can see what kind of role AI applications already play in day-to-day work," he adds. "For us, they've converted handwritten information, some of it a hundred years old, into data sets. And they've done so with a precision that impresses us anew every day." AI applications like these are interesting and helpful for other businesses too. Many gas pipeline network operators face similar challenges as OGE, says Sven Langhoff, who oversaw the project at adesso: "Together with OGE, we're already in touch with other operators. Wherever the task at hand is to read, understand and process information in text form, AI technologies provide tremendous potential for automating processes and saving time" =

#### THE COMPANY

Open Grid Europe GmbH (OGE) is a transmission system operator for natural gas. Based in Essen, OGE operates the largest gas transmission network in Germany, measuring roughly 12,000 kilometres in length. The company employs roughly 1,450 people in sales, dispatching, services and technical infrastructure. Although OGE opened in its current form in September 2010, its roots stretch back several decades. Aktiengesellschaft für Kohleverwertung (AGKV), which later became known as Ruhrgas AG and was a predecessor to OGE, was founded in 1926. Going forward, OGE aims to promote and encourage the energy transition in Germany by providing its pipeline network to transport hydrogen.

### **A RELATIONSHIP IS BORN**





# THE WINNER IS...

#### KAZANDIRIO: THE DIGITAL PLATFORM FOR LOYALTY POINTS – WITH THE WIN-WIN-WIN EFFECT

**"WE WERE ALMOST LIKE** A START-UP WITHIN A BIG **COMPANY. BUT WITH THE** SECURITY AND EXPERIENCE **OF PEPSICO TURKEY TO BACK US UP. WE WERE IN CONTROL OF EVERY ASPECT DURING THE DEVELOPMENT OF KAZANDIRIO.** WHICH MADE IT POSSIBLE FOR US TO ABSOLUTELY IDENTIFY WITH **OUR PRODUCT. WE DIDN'T HAVE** ANY ROLE MODELS. THERE HAD **NEVER BEEN ANYTHING LIKE KAZANDIRIO BEFORE. NEITHER** IN TURKEY. NOR WITHIN PEPSICO TURKEY. THANKS TO THE SUPPORT **OF ADESSO, WE WERE ABLE TO** TURN IT INTO A SUCCESS STORY."

#### MEHMET BEHLIL

Consumer Loyalty Programs Marketing Manager PepsiCo Turkey Where's that darn voucher? It would have got us so many points on our next laundry detergent purchase! Saving vouchers for months and then losing them at the last minute is just one of the downsides of collecting coupons. In Turkey, though, those days are gone – at least for snacks and soft drinks. Thanks to a partnership between adesso and PepsiCo, the last paper coupon went the way of the dinosaurs years ago. Today, people can collect and redeem points digitally. An app makes it possible, simplifying life for millions.

In Turkey, people have been passionate about collecting for generations. Whether coupons, chips or coins, consumers are keen to rack up points and exchange them for a gift. People are born with the urge to collect things. The reward centre of the brain releases hormones that trigger a feeling of happiness. The joy felt over a small reward is automatically translated into brand loyalty. Or at least that's how marketing departments see it. For newsagents, wholesalers and sales staff, the system was a major challenge, requiring extensive effort to make it work. PepsiCo Turkey's coupons were mainly found in snack packs and under fizzy drink bottle tops. Customers were able to hand them in at their favourite store and redeem them right away. After that, though, the tiny pieces of paper with the voucher information had to pass through too many hands. Once counted at the store, they made their way back to the wholesaler for a recount before landing with a regional distributor and being reported back to PepsiCo Turkey's headquarters. Overall, more than 100 million drink bottle tops and coupons used to pass through each of these stations every year, resulting in stress and expense.

#### GIFT VOUCHERS GO DIGITAL

Around five years ago, PepsiCo Turkey started thinking about ways to digitalise its advertising activities and campaigns in this area, with the aim of saving costs and taking a new approach to

customer loyalty and user engagement. Today, the new digital loyalty platform, which is available as a smartphone app, is capable of so much more. Between then and now lie years of brainstorming, conceptualisation, prototype development and testing. Meanwhile, the digital customer loyalty tool is still undergoing constant enhancement and is being adapted to the rapidly changing needs of everyday people in the fast-moving consumer goods (FMCG) sector. "The FMCG sector is aggressive and fast," says Ali Can Yildirim, explaining the industry. Yildirim is a digital transformation consultant at adesso Turkey. "And we had to come up with something so that our client, PepsiCo Turkey, could remain competitive in this challenging market."

#### THE INTER-ACTION ROOM -WHERE IT ALL BEGAN

The ideas came to the team in Istanbul in the adesso Interaction Room. All of the relevant interest groups within the PepsiCo Turkey organisation had the opportunity to get to know each other in the creative and constructive atmosphere of the

workshop and agree on a common set of values, goals and risks for the project. With walls covered in notes and sketches, the two-day brainstorming session laid out the entire user journey, defined the right technology and highlighted the advantages for stores and PepsiCo Turkey's sales staff that digitalisation would have. The mediated process ended with a plan: a proof-of-concept phase would be followed by a prototype, which the team would use to test whether the idea was convenient and easy-to-understand for consumers. adesso had gone from providing advice to offering an end-to-end service. From the idea and its development to the operation of the app, everything was to come from a single source – with each step executed by an agile team. From the very start, plans were in place to focus squarely on user experience. However: "As usual in the FMCG industry, we as a company don't know our consumers personally," says Mehmet Behlil, Consumer Loyalty Programs Marketing Manager at PepsiCo Turkey. "Our products go out to supermarkets, corner stores, cafés and restaurants. We have no direct points of contact with the consumer." With that in mind, teams headed out with the prototype of the new app to test it in stores and gather customer feedback.

#### CONSUMERS, THE GREAT UNKNOWN

Despite being a challenge during the creative process, the lack of knowledge about customers would end up never again being a problem once the app was launched. The fact that the KazandiRio app has since been downloaded more than

30 million times reflects a never-ceasing stream of data about how PepsiCo Turkey products are consumed. Every day, 300,000 users are active, adding up to two million a month. The KazandiRio team is now able to analyse and interpret data in real time, without costly external support. This level of independence is unusual, especially in the consumer goods sector, and benefits the company directly. Today, teams from around the world are asking their colleagues in Turkey how they did it. Beyond the additional data, those involved are also able to proudly boast of their interaction with users through push and in-app messages. After all, direct communication with customers is priceless.

Consumers, who can look forward to great prizes when they buy snacks and soft drinks, also benefit in this win-win situation. Not only do they have the chance to earn more snacks and drinks, they could also take home gaming coupons or discounts for online stores. "Just on their own, the costs saved by shifting from analogue to digital are enough to finance the entire project," says Behlil. Customers can store their winnings in the app's wallet and redeem them in the app or the next time they visit the store. That way, there is no risk of losing a valuable voucher code ever again. A unique series of numbers and letters for each coupon helps to prevent fraud, and the new app technology makes it possible to roll out new security mechanisms at any time.



Meanwhile, the adesso team in Turkey benefits from the third part of this win-win-win situation. Since the kick-off in the Interaction Room, the working relationship with PepsiCo Turkey has evolved into a partnership of equals – with lots of ideas for the future development of the KazandiRio app.

Not only does the KazandiRio app mark the start of the digital transformation of sales and marketing processes at PepsiCo Turkey, it is also the first step in introducing agile methods for the entire IT team.

#### "KAZANDIRIO TAKES OUR PROMOTIONS TO A WHOLE NEW LEVEL. IT WILL FOREVER CHANGE THE WAY WE INVOLVE OUR RETAIL CUSTOMERS – ACROSS EVERY CHANNEL."

**MEHMET BEHLIL** CONSUMER LOYALTY PROGRAMS MARKETING MANAGER PEPSICO TURKEY

#### 1+ YEAR IN DEVELOPMENT

15+ ADESSI IN AGILE TEAMS AT PEPSICO TURKEY

300,000 ACTIVE USERS EVERY DAY

1 AGILE IT TEAM

#### THE COMPANY

PepsiCo has been one of the world's foremost international food and beverage companies since Pepsi-Cola and Frito-Lay in North America merged in 1965. Headquartered in New York, the company's history stretches back to 1898, when an entrepreneur in New Bern, North Carolina, sold his first soda beverages to chemists' shops. The Turkish market is part of PepsiCo South East Europe and is one of 14 divisions within PepsiCo Europe. The partnership with adesso has resulted in more than just a unique customer loyalty app. Today, all IT teams within PepsiCo Turkey work with agile methods – inspired by the success story behind KazandiRio.



# A MODEL OF SUCCESS SINCE 1974

GETTING TO GRIPS AND TURNING HEADS – THE WAY ONLY PLAYMOBIL® CAN



Back in 1974, few would have thought that 7.5-centimetre plastic figures would adorn millions of children's rooms one day. What started with knights, cowboys and construction workers at the Spielwarenmesse toy exhibition in Nuremberg has since evolved into a diverse range of more than 40 worlds and a variety of special-edition figures, such as Martin Luther, Wolfgang Amadeus Mozart or Napoleon Bonaparte. Now, as then, PLAYMOBIL<sup>®</sup> is a symbol that stands for childhoods of millions and is as relevant as ever.

To continue adding new chapters to this success story, PLAYMOBIL<sup>®</sup> has teamed up with adesso to manage and enhance its online store.



Aldo Mühlhause, Head of the Salesforce Competence Center at adesso, is in charge of the project team. He knows from experience just how important the online store is: **"Things took a dramatic turn when the magic lamp and genie from Aladdin broke at our house. We needed the right replacement quickly.** A special part like that wasn't available right away in stores. That's why the web shop is so important. It has exactly these small parts in stock."

PLAYMOBIL® has been using the Salesforce Commerce Cloud to sell its products online since 2008. In 2021, the Horst Brandstätter Group brought adesso in to modernise its web shop, get it ready for the future and improve the shopping experience for customers.

SEARCH FOR OPTIMISATION LEADS TO ADESSO

The group of companies and its PLAYMOBIL® business unit saw a need to optimise its online sales presence. With major online retailers gaining popularity over the years, the company's own digital store was losing traffic. What it needed was a vastly improved digital shopping experience that would lead to greater loyalty than before and generate both repeat visits and buying. The unique selling points of the online shop had to remain the same, though: a wide range of spare parts, expansion packs and additional digital offerings for parents and children. In other projects, adesso had already shown how to solve challenges like these. As a result, it was able to convince PLAYMOBIL® that it was the right partner for better digitalisation.

#### FIRST FEATURES IMPLEMENTED

About a year into the project, the team had already rolled out a wide range of different functions. The home page received a redesign, including an overhaul of the category pages featuring dynamic sorting and filtering. In addition, the specialists from adesso introduced a gift finder. Internationalisation is another important aspect for PLAYMOBIL®. A look at the more than 30 countryspecific website options underscores the willingness and desire of PLAYMOBIL® to offer its customers virtually everywhere in the world an optimum shopping experience. From a technical perspective, however, there are certain specifics to bear in mind. "In some cases, other countries have other laws," says Mühlhause, describing the different configurations for each of the regional websites. "Tax regulations play a pivotal role. The payment process in the US, for example, is different than here in Germany. We've already succeeded in implementing an automated tax calculation for the US."

#### ENHANCING THE PROJECT THROUGH MARKETING ANALYTICS

adesso is in charge of both technical web shop design implementation and analytics. Manuel Trykar, Team Lead Marketing Analytics, joined the project team in early 2022 to help oversee the latter. At first, he and

### THE PLAYMOBIL® WEB SHOP GET TO KNOW THE CUSTOMER BETTER AND BUILD AN ENTIRE WORLD

FUTURE-READY AND MODERN

# ALWAYS

his team initially worked in part on tackling urgent challenges. By implementing a variety of "quick fixes", for example, adesso was able to ensure that the Easter and summer PLAYMOBIL® campaigns went off without a technical hitch. Since then, the tasks at hand have grown to include new ones like updating and improving web tracking, as well as setting up marketing tools. Those efforts make it possible to correctly record and process data and provide it to PLAYMOBIL<sup>®</sup>. "We come up with an analytics concept and implement it with our tools, such as the Google Tag Manager," says Trykar. "In dialogue, the customer is then able to decide on this basis what should be recorded and analysed." Only by analysing customer data can PLAYMOBIL® get to know its online shop's visitors better while also making more targeted use of content elements such as videos, graphics or text on its own channels and platforms.

#### **AN IDEAL SYMBIOSIS**

Combining the development and enhancement of the e-commerce platform with support in marketing analytics has resulted in an attractive overall project for adesso. In particular, the enhanced cross-departmental collaboration within its own organisation is a good fit for the strategy that adesso has decided to embrace. "Our Salesforce and Digital Experience departments complement each other optimally in this project," says Trykar, adding: "We are able to provide the expertise of both areas, work very efficiently and play to all our strengths in the field of e-commerce and Salesforce." PLAYMOBIL<sup>®</sup> is a business unit of the Horst Brandstätter Group. The plastic toy figures were launched in 1974. The global group of companies includes 33 entities. The well-known PLAYMOBIL and LECHUZA brands stand for quality and innovation, offering consumers genuine added value.

# **UP TO DATE**



# AIFOR POVER PLANTS

#### THE COMPANY

RWE Generation SE is the part of the RWE Group that is responsible for generating electricity using gas, hydrogen, hydropower and biomass. Its roughly 3,000 employees operate power plants in Germany, the United Kingdom, the Netherlands and Turkey. Headquartered in Essen, RWE Generation SE is a wholly owned subsidiary of the RWE Group. It operates one of the largest flexible power plant portfolios in Germany, the United Kingdom and the Netherlands and brings together the group's hydrogen activities. The subsidiary commenced operations at the start of 2013.

Power plants generate electricity for entire regions. Private households and industrial enterprises alike depend on the reliability of the machines, sensors and mechanical workings of the plants. Trouble with one or more components can have wide-reaching consequences, including downtime. Thanks to artificial intelligence, it is possible to predict the maintenance needs and health of power plants. RWE Generation SE is gradually integrating AI applications into its facilities. With the support of adesso, staff at the RWE subsidiary are able to pinpoint when the best time is to perform maintenance while ensuring optimised value creation.

CONNECTING DATA FOR OPTIMISED MAINTENANCE.

**RWE GENERATION** VALUE-BASED MAINTENANCE A power plant goes down. That kind of situation is a nightmare for their operators. For them, it means lost income and additional costs of up to one million euros a day. But the utility companies themselves are not the only ones to suffer. At worst, power could be lost for several cities and regions, impacting the water supply, blocking access to the internet, rendering medical equipment inoperable and bringing the entire supply chain to its knees. A blackout can affect millions of people and jeopardise critical infrastructure. Operators of power plants try to avoid scenarios like these by identifying problems with machines at an early stage. One of those operators is RWE Generation SE. Among its facilities is the gas-fired power station in Pembroke, Wales, along the Bristol Channel in the western part of the country. Considered one of the most sophisticated power plants in the world, it supplies over three million residents with electricity. Thousands of sensors constantly measure temperature, pressure and other metrics that document the state of each of the many components. The more sources of data there are, the more difficult it becomes for staff to maintain an overview. RWE was looking to reduce this complexity while also improving the quality and efficiency of maintenance. That is why the Essen-based company tasked adesso with developing and rolling out a platform that compiles, displays and links data - with the help of AI and machine learning.

#### CLEAR STANDARDS FROM THE START

We were looking for an experienced and qualified partner to help us slowly but surely build up our own skills and expertise in the fields of

cloud technology, data analytics, data governance and AI applications," says Louis Grubben, Head of Digital Transformation Office at RWE Generation SE. "It's worked very well so far." RWE approached the adesso team with specific ideas and a clear vision. For Michael Wallenczus, that played a decisive role in creating a good working relationship. Wallenczus is a program manager at adesso and has been part of the project from the start. "Every time RWE passes the ball to us, it's clean and precise," he says. "The approach to communicating is not only very pragmatic, but also characterised by trust and between equals. That makes us proud." The result is YUMA Lake, a platform based on the Microsoft Azure cloud. Using it, the team can create machine learning models, which are necessary to predict potential maintenance measures. The platform forms the foundation of all further steps in the process.

#### VALUE-BASED MAINTENANCE – LOTS OF DATA, ONE COCKPIT

This is where valuebased maintenance (VBM), part of the Digital Transformation Initiative launched by RWE in 2020, comes

into play. "Our VBM cockpit gives the engineers at the power plant an overview of all data sources," says Katarzyna Stoltmann, Proxy Product Owner and Requirements Engineer at adesso. "That lets them see which components need maintenance." The cockpit features specific dashboards and displays a variety of charts. One of them is Health Status, which indicates how well the individual components are

currently functioning based on a scale of zero to 100. Another chart, Wind and Solar, puts a figure on the megawatt amount of electricity being produced by wind and solar energy in Britain every day. If other power stations are producing a large quantity of electricity on a particular day, then the engineers at the plant can temporarily shut it down to quickly replace damaged or old components. That way, they can prevent disruption to the power supply. Machine learning plays a big role here. "The users at the power plants have so far not been able to precisely predict when they need to replace a component," Stoltmann, a computer scientist by education and IT project manager by profession, says. "Our tool lets us do a better job of predicting wear and tear, as well as the optimum point in time for repairs. That saves time and money."

#### REGULAR DIALOGUE AT THE POWER PLANT

RWE and adesso have been working together since 2020. Some 30 people are involved in the project across both companies.

"From the start, we had tremendous faith in each other," says Udo Eberhard, Product Owner at RWE. "Our partnership is open, honest and built on trust. We work as a team on the various digitalisation projects and are very satisfied with the results." The regular exchange is important both to the RWE team and to the experts from adesso. The interactions and face-to-face encounters at the power plants are of tremendous importance to Wallenczus's team – for good reason: "We want to get to know the people on the ground. That helps us better understand their requirements and ultimately optimally incorporate their needs into our dashboard." Getting an impression of the power plant and how things work there is also important for the data scientists at adesso, since it gives them a better sense of where the data comes from and how staff use it.

#### FROM PEMBROKE TO THE WORLD

The gas-fired power station in Pembroke acts as a prototype for the project. It is where the dashboards were first tested and rolled out, successfully so. Two more

plants – a biomass plant in the Scottish village of Markinch and a biomass and coal-fired power station in the Dutch port of Eemshaven – are set to start using the dashboards in the near future. With additional interest already emerging, up to 30 RWE power plants are expected to benefit from connecting data digitally. "We hope that all power plants will use it," says Stoltmann. "All staff need to do is look at the dashboard to know exactly how the power plant is doing. The impact of this tool is tremendous." Thanks to the partnership between adesso and RWE, lost income and the threat of millions in additional costs due to outages at power plants could be a thing of the past.

Going forward, the power plants will operate even more reliably. ■

# 

**TRAVEL MADE EASY – WITH THE SBB MOBILE APP** 

SBB APP DEVELOPMENT

### $A \rightarrow B$

TRAVEL USED TO BE AN ADVENTURE. GOING FROM ONE END OF A COUNTRY TO THE NEXT MEANT NOT KNOWING FOR SURE WHETHER YOU WOULD REACH YOUR ACTUAL DESTINATION -OR WHEN. GETTING LOST MEANT STAYING LOST. THOSE DAYS ARE LONG SINCE GONE. TODAY, TRAVEL MEANS ONE THING IN PARTICULAR: FINDING THE MOST EFFICIENT WAY TO GET FROM A TO B. Sayanthan Jeyakumar and his team from Swiss Federal Railways (SBB) are dedicated to taking train travel in Switzerland to a whole new level from an adventure to an enjoyable experience that is smooth, comfortable and, above all, digitally manageable. Jeyakumar, the Head of SBB Mobile, recently launched the redesigned SBB Mobile app, backed by a motivated crew of developers from adesso Schweiz AG and the Zurich-based digital agency Ubique Innovation AG. Since autumn 2022, the freshly overhauled app for public transport in Switzerland has been installed on around 3.5 million smartphones. That is how many users the app has each month, out of roughly 8.7 million people in the country. The back end is built on adesso's IT knowledge and industry expertise, and helps people get where they need to go in as little time as possible.

When Jeyakumar boards a train in Switzerland, all he needs to do to start his journey is swipe right – as does any other user of the SBB Mobile app.

What is likely to soon be a nearly intuitive gesture for passengers on the country's public transport system means the world for the team of developers. People who manage their train journeys in Switzerland with SBB's mobile app can do so with one hand, without much effort. "It's a huge advantage when the developers are themselves also users of the app," Jeyakumar says in an interview. That's why he appreciates the close partnership with the adesso team at the location in Bern. "When our team here in Switzerland travels with the app. it can understand the customers better and take a look at the main issues. It's essential that our software engineers truly get to know the product and keep working on improvements if anything isn't functioning optimally yet."

## TRAVEL IN NO

#### **SWIPE RIGHT, SWIPE LEFT - DONE**

Once travellers board the train, they can swipe right to check in. The app does the rest. EasyRide is the name of the innovation. It makes every train passenger's dream of simply getting on the train with their phone in hand and getting going a reality. From the moment users check in, the app registers the distance travelled and buys the right ticket without any additional input. The app automatically takes SwissPass fare reduction cards into account. During the journey, travellers can receive push notifications of delays and track changes on their phones.

As a result, the mobile app acts as a virtual travel companion. Passengers are never alone and always receive the advice they truly need. After swiping left to check out, the app calculates the lowest price for the journey, regardless of whether it was by tram, bus, train or boat within Switzerland. Being able to just focus on the journey is nothing short of a paradigm shift in terms of convenience. THE SBB MOBILE APP IS A REAL HIGHLIGHT FOR EVERYONE WHO WORKS ON IT. WE ALL KNOW THAT WHAT WE DO EVERY DAY SERVES A GOOD 3.5 MILLION PEOPLE IN SWITZER-LAND WHO USE THE APP EVERY MONTH.

SAYANTHAN JEYAKUMAR HEAD OF SBB MOBILE



### **ONE, TWO, THREE**

**THREE THINGS MATTER:** 

THE CUSTOMER'S NEEDS THE CUSTOMER'S NEEDS THE CUSTOMER'S NEEDS

With accolades in the category UX and Usability at the Best of Swiss Apps awards ceremony in 2022, the SBB Mobile app is the most popular way of digitally managing travel in Switzerland. That's because it adapts optimally to customers' needs and improves every time users provide their feedback. The team in Bern is keen to learn from good and bad experiences alike. Some 250,000 travellers are equipped with a preview version of the app that allows them to constantly test new features and report back – a valuable community for the developers.

Experts for Android, iOS and UI/UX development work together as part of an agile team that brings together extensive knowledge of the transport sector. The good connections within adesso are an advantage in this demanding partnership. adesso's Swiss subsidiary can turn to the resources of adesso mobile solutions (ams) in Dortmund whenever they need, as well as locations in Bulgaria and Turkey.

Jeyakumar sees the dedication and attention to detail with which his team approaches its tasks. The commitment of the developers at adesso and SBB alike is palpable. For customers, it's the little things that make the redesigned app so attractive. The transitions in the tab navigation are remarkably smooth and resemble the navigation of a browser. What's more, the SwissPass card is displayed with particular elegance, and animated illustrations accompany travellers along their entire journey. The team has created a truly outstanding product – and not just visually. "By redesigning the mobile app, we have built the technological foundation for further modular app development in line with what customers want and need," Jeyakumar says.



#### THE TEAM SETS THE COURSE

Michaela Gasser, Head of Business Line Transportation & Logistics at adesso Switzerland, is part of the overall team's "back-end" squad that makes sure the relationship between the IT provider and the railway company is a smooth one in the long haul. adesso has been working with SBB for 16 years. "Our job is to make sure we're a partner that people are always able to work well with," says Gasser, looking back on the years since 2015. "To me, that's adesso's main strength." Meanwhile, "pragmatic", "goal-oriented" and "always interested in solutions" are the words the people at SBB use to describe their partner. "As I see it, the USP of adesso is entering into sustainable partnerships," she adds. "So that something better is always possible in the customer's interest." The alliance with the team from Ubique is one such partnership. Thanks to smooth teamwork, adesso is able to provide mobile technology, back-end support, testing, business analysis and scrum master services for SBB - all while making sure things operate to plan.

In Germany, the conversation often turns to the record number of train delays in recent years. In Switzerland, however, the small talk frequently centres around the SBB's record-breaking punctuality. The SBB Mobile app gives customers the right smartphone app to enjoy their on-time arrivals, with a subjective record high when it comes to user-friendliness. **These days, travelling is less adventurous than ever before – thanks in no small part to adesso.** 

### **3.5 MILLION** APP USERS EVERY MONTH

#### THE COMPANY

Schweizerische Bundesbahnen AG (SBB) is Switzerland's state railway company. Founded 120 years ago, it is also one of the country's oldest rail transport providers. As defined in its corporate culture, SBB runs on values such as respect, responsibility and ambition to achieve a strategic vision for the future that creates a customer-centric, efficient transport company operated by people for people. Although SBB is managed as a business, the Federal Council defines strategic goals and targets once every four years a special challenge for SBB partners like adesso. Every day, SBB takes almost one million travellers to their destinations and transports 185,000 tonnes of freight. Through it all, just under 34,000 employees make sure people and goods get where they need to be on time.

STAIGE AI CAMERA TECHNOLOGY

THE WAR CALL FOR THE AND

#### IT'S LITTLE KILIAN IN THE BACK, HE TAKES THE BALL, HE SHOOTS -HE SCORES!





# ALIN THE CLOUD FOR

Whether it's sudden-death victories, wasted opportunities, outstanding team performances or collective failure, thousands of dramatic moments play out at football matches every weekend. In the top leagues and on suburban cinder pitches alike, teams battle it out, fans pour their hearts out and team managers scream their lungs out. Fans of professional football clubs have it pretty good. From kick-off to the final whistle, they can follow every ball and watch decisive moments from a variety of different perspectives. However, fans whose hearts do not belong to one of football's top-tier clubs have traditionally been left out in the cold. Those unable to be there in person used to have to rely on summaries and reports in the local press.

That's how it was for Kilian's father. His heart belonged to TSV Meerbusch, the club for which his eight-year-old son played. But sometimes work would get in the way of attending their matches. A simple webcam ought to be enough to solve the problem, he thought. It was an idea he couldn't shake. He didn't stop there, though. Instead, he headed out to his local DIY store to buy a plastic box to protect the camera from the rain. He placed the webcam in the box, made a hole for the lens and connected it all to YouTube. Those involved never imagined that they were looking at the minimum viable product for a start-up. What parents saw was their children's football matches – live and from wherever they happened to be. With grandparents, friends and neighbours joining the streams, the number of viewers grew from weekend to weekend. Apparently there were plenty who wanted to follow the action without being able to be there in person. The idea for Staige started to emerge: streaming the football matches that no one had so far, in a quality previously reserved for the pros. A webcam in a plastic box wasn't going to cut it. So a handful of enthusiasts got to work developing a brand-new system. They asked themselves whether it was possible to automate the camera work, things like panning, zooming and following the ball. That would be the key to getting as many matches as possible onto screens both big and small.

The Staige team quickly came to realise that artificial intelligence (AI) was the answer to this question – or at least it had the potential to be. Image recognition is one of AI's natural strengths. But real-life evidence was still needed. The experts gathered video data from test systems, developed algorithms and trained applications. In the end, they had a solution that could focus on the ball during crosses and skilfully give goals the recognition they deserve. No one has to operate the camera to



### EXCITEMENT

make it work. The system is capable of autonomously recognising where the action is. And the link to the cloud makes sure that even grandma can watch her grandchildren take their free kick no matter where she happens to live. In addition, Staige engineered a camera system that delivers quality on a par with those designed for TV while still spending years hanging from football pitch floodlights in the wind



and the rain, without maintenance. Thanks to AI, a non-professional league match looks just like one in the Champions League.

Those in charge at Staige invested time and effort in developing their hardware and software, and in developing their company. They expanded the team, improved technologies and added new sports to their portfolio. Today, Staige has trained AI applications on offer for horse riding, handball, volleyball, basketball, ice hockey, water polo and field hockey, both within Germany and internationally. In fact, both the highest division of the Luxembourgish Football Association and Moldova's top basketball league rely on the Al expertise from the Ruhr Valley.

Staige has captured the hearts of fans and managers alike, who use the coaching tool to analyse plays and assess players in leagues of all sizes. Video analysis of this calibre is a tool.

And it all started with a father who just wanted to watch his son play football. ■

# "THANKS TO ARTIFICIAL INTELLIGENCE, WE'RE GIVING SPORTS CLUBS

#### THE COMPANY

With intelligent camera systems and digital platform solutions, Staige GmbH is helping clubs, associations and athletes live up to their full potential - no matter the sport.

# THAT HAVE RECEIVED LITTLE ATTENTION SO FAR A STAGE."

From live streams and coaching to content production, from the Ruhr Valley to the world, Staige shines a light on real sport, the kind millions love.




## HUMAN INTERACTION

# SCREEN TO SCREEN

TOOM BAUMARKT

"How much will sharing a beer be worth to us in the future?" This surprising question came up at the end of a virtual innovation project. With almost two years of purely online workshops behind them, Michael Kemper, Principal Consultant at adesso SE, and Stephan Hartje, Lead eCommerce CORE at Cologne-based toom Baumarkt, found their world turned upside down by the entirely virtual process for toom's customer service department. But we'll get to that.

It all started as so many things did: with the outbreak of the Covid-19 pandemic. The new situation meant massive changes for people and businesses, including toom. For many, DIY stores became a last bastion of normality, with customers making regular use of bricks-and-mortar stores and e-commerce channels alike. By mid-2020, customer service enquiries by e-mail, by phone and in stores had gone through the roof, straining staff members' abilities to handle them all. The REWE Group's DIY chain had no option but to react. While the need for innovation in customer service was already clear before, the company now found itself forced to act quickly.

### A DIFFERENT KIND OF INTERACTION ROOM

For cases like these, adesso has the Interaction Room. Ordinarily, the interdisciplinary team of roughly 30 would have initiated a tried-and-tested process resulting in new key issues. Under normal circumstances, they would have worked together, sketching out ideas on canvas boards and creating a sea of colourful sticky notes ready for implementation. But now that collaboration had to go remote – and from the very start, no less. "I had assumed that the roots of all things digital were analogue," says Kemper, looking back on his past beliefs. Between then and now lies a paradigm shift. Hours upon hours of focused online collaboration, as well as extensive on-screen human interaction, have shown that there is indeed another way to work together that is still deep and intimate. More importantly, it doesn't require a mask. After all, interaction means being able to look a person in the eyes,

and facial expressions are an essential part of that. toom and adesso turned a dilemma and necessity during the pandemic into a virtue and innovation.

According to toom's Hartje, one important lesson is not to replicate every aspect of working together in person in online meetings. "Things that were not optimal in the analogue world also won't work in a video conference," he says. In his opinion, a digital environment calls for careful preparation that takes different outcomes and conditions into account: "A board starts out empty, even in the digital realm. And that's not how it should be when you launch into the innovation process."

As Kemper has come to realise: "Methodical precision in a remote setup can sometimes take two or three times longer. After that, the amount of time you need to expend is much lower once the workshop has been set up." The next time, there is no need to create new flip charts or turn spaces into a good working environment. One click, and setup is done.

#### **REAL COLLABORATION, NOT ONLINE BUSYWORK**

Those lessons marked a major step for the toom team.

THE COMPANY With its 300 stores and roughly 18,000 employees, toom is the DIY chain people trust. As part of the REWE Group, its staff set standards in the do-it-yourself retail sector by focusing on the needs of experienced home improvement fans and occasional tinkerers. The product range is tailored to each store and is rounded out by an extensive portfolio of services. The company values employees who offer expertise and an eye for solutions. With dia offere close situ column fan to company values employees who offer expertise and an eye for solutions.



adesso event that deals with digitalisation, Hartje offered attendees a closer look at the situation he and his colleagues faced: "A year ago, we were still using fax machines to communicate at our stores in some cases. Taking meetings on Teams was already quite a big step." But having everyone look at the same slide remotely still does not constitute real collaboration. That is why adesso introduced new standards. Everyone received an avatar that had been designed just for them, and groups of three to four people worked intensively in breakout sessions before handing over their results to the next

At digital day 2021, an annual

group. Outcomes were archived on virtual interaction boards, making it possible to circle back to them at any time. Meanwhile, the process itself was captured for posterity using a graphic recorder. The visual recordings bring transparency to every step along the way, even for people looking to catch up on things weeks later.



"FOR THE LONGEST TIME, I WAS CERTAIN THAT THE ROOTS OF ALL THINGS DIGITAL WERE ALWAYS ANALOGUE. THE TOOM INNOVATION PROJECT MADE IT CLEAR TO ME THAT YOU CAN ALSO USE VIRTUAL MEANS TO UNLEASH THE COLLECTIVE INTELLIGENCE OF THOSE INVOLVED."

> MICHAEL KEMPER PRINCIPAL CONSULTANT | ADESSO SE



# HERE'S TO GOOD COOPERATION

The right mindset is another decisive factor beside the right tools for the virtual realm. Those involved need an open mind so that they can change direction mentally if need be, especially in innovation projects. "There is no full control in these new forms of collaboration," Kemper says with acceptance. "And that's a good thing." The advantage? Hierarchies quickly stop playing a major role. Everyone has the same window. That helps people arrive at constructive results, plus it saves time and cuts travel costs by 90 per cent. Optimally, less time is needed for the workshop as well. The common goal and content-centric focus makes everyone more productive.

Over the months, the virtual four walls of the Interaction Room gave birth to some 35 innovation ideas that toom could translate into action going forward. A few of them are at the centre of the current implementation phase. As part of a multichannel communication strategy, for instance, standard customer service enquiries are set to be automated, starting with the development of a bot that continues learning autonomously through artificial intelligence. That decision will bring with it a host of other changes, such as new work processes and new job descriptions for staff members who will train bots with content in the future. Today, the first new ideas from the virtual world are arriving in the real one.

For nearly two years, few members of the project team had the opportunity to get to know each other personally in the real world. Yet their professional and emotional connection could hardly have been stronger. As Kemper explains, the real-life encounters between team-mates sometimes lead to unexpected moments: "You'd never just run up to a client and hug them. But meeting in person was still something very special after almost two years of collaborating digitally."

Trust can also grow from screen to screen. That is the glue that holds a team together despite the physical distance between its members and makes shared breakthroughs possible when tackling the challenge.

50+ participants 4 moderators 7,800+ sticky notes 14 graphic recording visuals 115+ future stories



# A DIGITAL REVOLUTION IN RECORD TIME

The construction sector is booming! In 2021, businesses in Germany generated more than 143 billion euros in revenue by constructing buildings, roads and railways. With so much money at stake, developers, builders, clients and contractors alike need a way to protect themselves against payment default and potential claims related to workmanship issues. That is where performance bonds come in. They play an integral role in commercial and public-sector construction projects. In the past, such sureties were sent by post for the individual parties to inspect. If there were any corrections, it would take weeks for the final version to reach the recipient. Trustlog GmbH has digitalised the entire surety process in the construction industry. adesso provided support to the Hamburg-based start-up. Now it can look back on a project that is a beacon for the future

March 2020: Germany is in the throes of the first wave of the Covid-19 pandemic, resulting in a lockdown and a previously unknown feeling of isolation. Just a few days before it all began, Jan Jungnitsch and his six adesso colleagues presented a pitch for a platform to digitalise the processes surrounding performance bonds. The client was Trustlog, a recently established joint venture between the insurance companies VHV and R+V. The team successfully prevailed over major players in the industry to earn the privilege of helping develop a platform that would represent the future of performance bonds. It was the start of Trustlog GmbH. Jonathan Szejnmann, Managing Director of Trustlog, still recalls why adesso won the bid: "They scored points with excellent preparation, an authentic image and a proposed solution based on the latest technologies, just like we wished for." The kick-off, social events, updates, weekly meetings - all of it had to take place digitally in the midst of the lockdown. "That didn't make launching the project easy," says lungnitsch, who was responsible for the Trustlog project at adesso. "But we lucked out that we were on the same wavelength as the client and that the chemistry was right. Everyone was on board. Everything was new. Everyone was excited."



#### **TENFOLD GROWTH IN JUST ONE YEAR**

Known as Trustlog, the cloud-based platform was developed in just six months – a potentially record-setting time, considering the pandemic situation during its creation. In that short time, the sevenperson adesso team built the entire platform architecture and developed the corresponding software while providing support for testing, requirements engineering and coaching. The approach through it all was agile. The pilot phase, referred to by experts as the "friendly-user phase", began in October 2020, with a first set of clients managing their sureties through the new tool. Since April 2021, it has been available to the market. By the end of 2021, a variety of construction companies had used Trustlog to process up to 100 sureties a month. A year later, that number had grown tenfold, with more than 1,000 performance bonds each month. The new tool allows users to receive them directly from the guarantor and check them digitally. They can accept the sureties, correct them as needed and release them at the end of the term.

### **BECOMING SURETY ENTHUSIASTS**

The greatest challenge while developing the platform was the time-to-market phase – the period between the company's founding, the creation of the platform and the market launch. "Developing central components of the platform, connecting interfaces to participating insurers' host systems and the hard release phases truly put our skills and abilities to the test," says Szejnmann. "But we mastered them together."

# "EVERYONE WAS ON BOARD. EVERYTHING WAS NEW. EVERYONE WAS EXCITED."

### JAN JUNGNITSCH

TRUSTLOG PROJECT MANAGER AT ADESSO

# LAUNCHED MID-LOCKDOWN

What made the project so special was its greenfield approach. The team started from scratch and focused from the start on the aspects that were most important for the platform's users. "As the months went on, we turned into veritable surety fans," Jungnitsch says with a chuckle. "The more we got to know about the topic, the more interesting it became." The start-up mentality of the developers at Trustlog was a good fit for the adesso spirit of solving problems pragmatically and systematically tackling challenges. Szejnmann agrees: "For our greenfield approach, we looked for an IT provider that sees itself not only as a mere supplier, but also as a partner and a member of the team." Accordingly, the working relationship was close and characterised by a high degree of identification among the experts from adesso. "That was a major success factor for the project," he says.

#### **MISSION COMPLETED**

Today, the Hamburg-based start-up has its own IT experts on board, allowing the specialists from adesso to wind down their involvement in the project. While the adesso subsidiary adesso as a service continues to oversee the platform's operation and provide support, Jungnitsch and his team are done with their part of the project after nearly three years of active participation. An industrial engineer by training, Jungnitsch is satisfied with the outcome: "We can look back on a very successful project. Not only was it a lot of fun, we also learned a lot. Given how it went, we can definitely speak of a model project in the insurance sector."

# GREAT

#### **THE COMPANY**

BSP Bürgschaftsservice-Plattform GmbH was founded in Hamburg in 2020 and is a joint venture of the insurance companies R+V and VHV, each of which own 50 per cent. The Trustlog platform, which is part of the joint venture, was launched in April 2021 and digitalises the entire surety process, from application and confirmation to release.

# COMBINATION:

**STARTUP** MENITALITY MEETS ADESSO SPIRIT

# FASTER EASIER MORE INTUITIVE

HOW ZEUS IS TAKING VEHICLE INSPECTION PROCESSES AT TÜV RHEINLAND TO THE NEXT LEVEL.

# THE POWER OF ZEUS

TÜV RHEINLAND ZEUS | VEHICLE INSPECTION SOFTWARE

# ASCENDING TO OLYMPUS

Over the course of the 2010s, the handling of vehicle inspection processes increasingly became a source of annoyance for the inspectors at TÜV Rheinland, despite being the testing service provider's bread and butter. **The reason for the discontent was the software that the inspectors had to work with.** Programmed in the late nineties, the system had become outdated. What is more, changes in the regulations behind test procedures and new service offerings meant that the program had to be constantly adapted and expanded. Those updates regularly led to new errors. Instead of getting better, the application got worse, and even slower. That, in turn, exacerbated users' frustration.

One of those users is Michael Kelz, who has been with TUV Rheinlan for 23 years. Kelz joined the company as an inspector in 1999, working both on site at clients' workshops and in the provider's own testing centres. **"The old system provided little support** when entering data and didn't check to see if it was plausible," he says. "Entry errors were a common problem in high-stress situations. Correcting them after the fact cost us a lot of time that we would rather have spent in the vehicle, not at our PCs."

Today, Kelz is the Regional Manager in Bonn.

He says he is someone who is happy to pitch in and lend a hand – even when it comes to software.

CORRECTING THOSE ERRORS AFTER THE FACT COST US A LOT OF TIME THAT WE WOULD RATHER HAVE SPENT IN THE VEHICLE, NOT AT OUR PCS."

MICHAEL KELZ | REGIONAL MANAGER FOR BONN TÜV RHEINLAND "I shouldn't have done it," he says today, and laughs. As someone willing to address the shortcomings and potential for improvement, he became part of the project team that was charged with developing a new system. News of the problems with the old program had made their way up into the C-suites at TÜV Rheinland. A solution had to be found. With that in mind, the testing service provider looked for outside help – and found it in Cologne, just a stone's throw from the Rhine, at the local offices of adesso.

#### The company's team in Cologne was delighted to land the job.

"We absolutely wanted the project," says Nikolas Mehnert, Director Microsoft Consulting Services at adesso. However, he was also aware of how big the challenge would be. The old system had fallen victim to its enormous scope of functions. As a result, many functions had to be combined into one application. "There are around 170 services that TÜV Rheinland provides for vehicles," Mehnert explains. **"They range from the famous roadworthiness test and classic car inspections to used car certification and inspections of vehicles used in parades and ceremonies, such as the Carnival floats here in Cologne."** To make matters worse, a competitor of TÜV Rheinland had already been trying unsuccessfully for some time to have its software replaced. The hurdles were high from the start.

> In exchange, the IT experts from adesso did not have to start from scratch. TÜV Rheinland already had a scope statement summing up what the new system had to be capable of. For example, the solution had to be easily distributable due to the regular updates. It also had to be a Microsoft application on Windows, which is where staff at the testing service provider had the most experience. What is more, the software had to be developed in cooperation with TÜV so that the specialists there could maintain and continue enhancing it once the project was over.

# THE MESSENGER OF THE GODS DELIVERS THE DATA

Apart from the technical and organisational demands, there were also practical considerations. To identify them, the adesso team observed the inspectors' work at the testing centres and workshops. **"What became clear was that they needed a nearly-always-on solution," Mehnert says – a solution closely tailored to the users' needs that always works and is available all the time, if need be as a temporary stand-alone solution that is not connected to the Web.** The software had to run on the computers in the testing centres. It had to be operable using protected keyboards that could be used with oil-smeared hands, and more often through shortcuts than by clicking the mouse. On top of that, it had to be user-friendly and self-explanatory so as to minimise or, better yet, avoid errors altogether. And it had to run on the office computers of the staff members responsible for vehicle records and invoicing. To do that, it had to be connected to an SAP operating system. Those were the demands.

## The solution was ZEUS – derived from "zentrales, einheitliches Untersuchungssystem", or "central, standardised inspection system".

"Once that became clear to us, we gave all the components names from Greek mythology," says Mehnert. The interface for transmitting data from the system to SAP is called Hermes, like the messenger of the gods. The central software itself, where everything comes together, is Olympus. "On the one hand, it was very entertaining. On the other, it really helped get the users on board," Mehnert explains with a smile. "After all, what's the point of the best software if users don't accept it? That's why we spent so much time on project marketing. Names like those are helpful here."

"THE GOAL: A SOLUTION CLOSELY TAILORED TO THE USERS' NEEDS."

> NIKOLAS MEHNERT DIRECTOR MICROSOFT CONSULTING SERVICES ADESSO SE

# ANCIENT NAME – MODERN SOLUTION

ZEUS, however, mainly won people over with its functions, allowing inspectors to benefit from the favour of the gods. Because the entire inspection process – from entering vehicle data to mailing invoices – can be managed using a single system, cash flow and other factors are much faster than before, Mehnert explains. Thanks to constant data transfer, ZEUS starts checking whether a vehicle has already been inspected by TÜV Rheinland, no matter where, as soon as staff enter data. In addition, the software also works offline to prevent operations from grinding to a halt in case of Wi-Fi outages. "As soon as ZEUS is back online, it updates the data," the adesso expert says.

> Apart from enhanced data transfer, the new program also features improved user-friendliness, with a self-explanatory process guiding inspectors step by step through testing and inspection. Instead of having to remember what they see under a vehicle and write it down later, users can enter findings directly into an app on their smartphones, take a picture of with their camera and upload it to the system. Users can also generate their inspection reports from the application on-site, rather than having to wait until they are back in the office. What's more, the ease of use reduces the amount of time needed to train new hires on the software at TÜV Rheinland, solving yet another problem.

> > That's the theory, at least. But what are things like in the real world? Kelz is satisfied. "ZEUS helps automate a lot of things now," he says – and that cuts down on time and stress. Moreover, there are fewer inspection and test reports that need correction afterwards.
> > "The system simply spots more errors right away," Kelz explains. From the type of service performed to the number plates and any changes in vehicle registration, the system checks the information entered and flags any discrepancies. That makes life better and easier for inspectors and customers alike. ■

#### **THE COMPANY**

Since 1872, TÜV Rheinland has been committed to making technology safe for people and the environment, dedicating itself to safety for 150 years. From the steam engine to digitalisation, the company has grown from a local organisation monitoring steam boilers in western Germany to a global testing service provider that helps to ensure safety and quality in nearly all aspects of business and life. Today, this responsibility is a common thread for more than 20,000 employees. The experts from TÜV **Rheinland inspect technical** equipment and products around the globe, support innovations in technology and business, train people in various professions and certify management systems according to international standards.

# BALA

UNION INVESTMENT MICROSOFT 365 SERVICES ROLL-OUT



NCE

# EQUAL AND BALANCED PARTNERS

# REMOTE WORK KEEPS OPERATIONS GOING, EVEN UNDER TOUGH CONDITIONS

BY

Tobias Meier doesn't have to think for long. The project that engrossed, challenged and inspired him the most in recent years was the introduction of the complete Microsoft 365 services portfolio. Meier is in charge of IT infrastructure, platform and workplace services for Union Investment. "We started rolling out the full range of Microsoft 365 services in 2019, before Covid," says the Managing Director of Union IT-Services GmbH. "Thank God we did. In combination with the decision to equip all of our employees with mobile devices and introduce software-based telephone technology, which we made and implemented in 2017, it allowed us to create the technical conditions to get through the pandemic and the switch to working almost entirely remotely for our staff. That helped us tremendously. Some of our competitors here in Frankfurt's banking district had to hire taxis to transport their old computer towers and desktop PCs to their staff."

adesso not only created the technical basis, but also acted as a central partner for change management at Union Investment. Switching to Microsoft 365 meant a raft of changes for the more than 3,500 members of staff. Through a variety of measures such as screencasts, blog posts on the Union Investment intranet and training in multiple languages, adesso made an important contribution to the new system's acceptance.

#### THE LONG ROAD TO SHARED SUCCESS

adesso was already a familiar face by that time, with Union Investment having relied on the service provider's IT expertise since 2010. Starting in 2011, adesso was responsible for rolling out the portal solution for the Union partner programme, with 50,000 advisers at over 13,500 branches throughout Germany's cooperative banking network. An app solution offering mobile access to 28 different processes at any time followed from 2017. A standardised platform for field sales staff was also on the agenda, along with numerous other projects that gradually and assuredly solidified the business relationship between Union Investment and adesso.

## A SIMPLE FORMULA FOR GOOD PARTNERSHIP

Meier knows exactly why projects involving Union Investment and adesso are still so successful, even after all these years: "The secret to our long relationship is great reliability, combined with high quality – and, of course, good value for money. That'll earn you a solid spot in our supplier management system. When there's a good personal connection as well, then a lasting business relationship just sort of develops naturally." Both Union Investment and adesso have grown rapidly in recent years. Both sides have maintained the values of transparency, fairness and partnership over the past 14-plus years.

# **TOGETHER!**

GETTING IT DONE -

#### THE COMPANY

With 66 years of experience in the funds business and 406.9 billion euros in assets under management as of 30 September 2022, Union Investment is one of Germany's foremost fund companies. Union Investment is part of the German cooperative financial network and provides investment solutions for the general public and businesses alike.



That is all in a day's work for Corporate Account Manager Uwe Klaas, who has been in charge of the business relationship with Union Investment from the start: "It's a bit like in a marriage. There are highs and lows, but honesty and transparency go a long way to making it work."

### SICK OF EACH OTHER? THINK AGAIN!

adesso is involved in a wide range of business processes at Union Investment. Microsoft 365 has been fully rolled out, and the SharePoint strategy is up and running. Meanwhile, both the online partner programme and the UI mobile app have been stable and undergoing constant enhancement for years now.

Union Investment and adesso have more in common than just countless successful projects. Both companies have grown by leaps and bounds in recent years. The future, as well as a host of new faces, has long been on board at both Union Investment and adesso. In 2020, Lena Schürheck joined Klaas in managing the projects at the fund company. "Union Investment is as youthful a company as adesso," says Schürheck. "There are constantly new, young and enthusiastic personalities joining the team. Change is our constant companion, so there's never a dull moment here." Right now, it doesn't look as if either company will be leaving their shared path to growth.

Union Investment and adesso still have a lot they want to achieve in the years ahead, with a plethora of digital solutions – from large-scale B2B portals and cloud solutions to small yet often pivotal advisory projects – remaining on the horizon. Schürheck and Klaas exemplify the adesso philosophy: both know their clients and work with Union Investment to develop ideas. That's another secret of a long and happy business relationship. "What's very important to me is that we have personal contacts who know our company inside and out, who know what's going on, and who are constantly coming to us with meaningful and solid suggestions on how we can improve," Meier says.



URBAN ENERGY EMISSIONS MANAGEMENT

**FROM IDEA TO START-UP** 



# CARBON-NEUTRAL BUILDINGS WITH AI

# **TURNING THE WORLD UPSIDE DOWN WITH ZEROC**

## PAUL DITTRICH IS MAKING HIS DREAMS COME TRUE

Paul Dittrich has taken a powerful vision and turned it into urban energy. At the start-up, the Berlin native is both the man behind the idea and the CEO steering the path of the company, which was spun off from adesso in 2019. "The vision of urban energy is to start driving forward the energy transition today with the technologies of tomorrow," Dittrich says. The solution behind that mission is called ZeroC, an Al-based energy and carbon management tool made in the heart of Berlin.

# **NOW IS THE TIME FOR ACTION**

### **PITCH IN CRETE - FOUNDING IN BERLIN**

Today, urban energy is a fixture of the Berlin start-up scene. The crucial step towards its founding, however, was taken some 3,000 kilometres away on the Greek island of Crete. It was there that Dittrich, along with David Stolz and Stephan Thies, won first place in "Think!", a contest within adesso to come up with the best ideas. Every two years, adesso calls on its employees to pitch ideas and concepts for new services, solutions and business models. In 2017, the trio heeded the call and fine-tuned its rough idea. Their approach to digital connectivity and managing both consumers and producers in energy networks won the jury over. The prize consisted of seed capital and further support from adesso so that they could pursue the idea. With that, the cornerstone for the start-up was laid.

Armed with their Think! award, Dittrich, Stolz and Thies got to work. The team added additional bright minds. Together, they continued refining the idea with a focus on one of the main challenges in electromobility. The problem? More electric cars means more charging, which could potentially lead to higher peak demand and overloaded power grids. The solution? An IoT platform for recording energy data that uses artificial intelligence to calculate optimum times for charging and manages the charging process accordingly based on energy consumption and the incoming supply of energy. The approach relieves the strain on the grid. Energy consumers can save money by taking advantage of special rates if they charge their vehicles flexibly.

Once fleshed out, the idea became a real product: the urban energy DataHub. When it came time to tackle technical implementation, the team developed a back end, a dashboard, an application and a physical model. "Using Matchbox cars and RFID chips, we simulated an urban neighbourhood," Dittrich recalls. "The analogue model was just the thing to make the product easier to grasp."



### THINK! INNOVATION

adesso's "Think!" competition gives employees' ideas a platform. The contest focuses on new digital solutions and IT-related concepts from any industry or field. Its goal is to translate those ideas into solutions or products within the adesso Group or to spin them off into a separate start-up. adesso helps the winners find venture capital, as well as smart capital in the form of IT and management resources from all parts of the company.

# **A VISION, NOT A DREAM**

## PHOENIX CONTACT COMES ON BOARD

urban energy hit the scene in 2019 – with strong investors to back it up. The idea that impressed judges in adesso's in-house competition two years earlier also won over Phoenix Contact Innovation Ventures. A provider of products and solutions for electrical engineering and automation, the globally active group of companies proved to be an ideal partner for urban energy. "In adesso and Phoenix Contact, we have two outstanding players at our side, giving us access to a pool of top-flight IT and electronic expertise," says Dittrich. "Together, we will be able to make our vision a reality and play a significant part in shaping the energy transformation in cities through smart energy and mobility services." Backed by strong investors, and with the urban energy DataHub in its portfolio, the start-up quickly attracted its first clients. Dortmunder Energie- und Wasserversorgung GmbH (DEW21), for example, turned to urban energy and the DataHub to help it set up an IoT data platform to connect energy generation systems like solar arrays. combined heat and power plants and charging stations within a single neighbourhood. The goal was to ensure a high degree of data transparency through visualisation, generate reliable energy forecasts and efficiently take advantage of flexibility in the distribution network in order to reduce carbon emissions.

For its largest project to date, however, urban energy had to look no further than to Adlershof Science City in Berlin. The science and technology park plays host to 20,000 employees, 6,500 students and 4,500 residents, with more joining the ranks every day. WISTA Management GmbH (WISTA), a company owned by the state of Berlin, is responsible for the site's development and management. The urban energy DataHub is helping WISTA develop its Adlershof 2030 mobility concept. Using a LoRaWAN-based system and a cloud-based database, the company is recording traffic and environmental data in Adlershof that is uploaded to the DataHub. "We visualise the data in a dashboard, forecast the air quality and link up peripheral systems," Dittrich says.

As a start-up, urban energy is constantly growing and evolving. In 2021, that progress led to the creation of ZeroC. The new product combines energy and carbon management into a single software-as-a-service tool focusing on individual properties and entire neighbourhoods. "It's the belief that any property has the potential to be carbon neutral," Dittrich explains. The visualisation and simulation of optimisation measures, alongside automated carbon reporting, play a key role in the solution. As a result, the properties more or less deliver the energy-related metrics needed to draw up sustainability reports. ZeroC makes it possible to simulate and plan the effects of a new solar array or partial renovation on a property's carbon footprint, along with other measures. Based on live energy readings and the simulated measures, it forecasts carbon emission trends for the years ahead. That way, any company can continually track its targets. such as becoming climate neutral by 2030. The approach creates transparency and generates trust among tenants, customers and staff. DEW21 in Dortmund, WISTA in Berlin and several other clients are already using ZeroC today.

#### **DRIVEN BY SUSTAINABILITY**

A lot has happened since 2017. The brainchild of three bright minds has become a vital, growing company. Something adesso found appealing back then is now helping address one of the most pressing issues of the present day: the efficient use of energy with the smallest-possible carbon footprint. For Dittrich, urban energy is more than just a start-up. It's a matter near and dear to his heart. "Now is the time for action," the founder says. "That's because what we do today determines what the world of tomorrow is going to be like." ZeroC gives property owners and management companies the right tool for a more sustainable world, to make sure the vision of carbon-free buildings doesn't remain a mere dream.

# AVERTING DISASTER WITH ZURICH AND ADESSO.

ZURICH SALES DIGITALISATION

# IT'S NOT WHETHER YOU FALL, IT'S HOW YOU GET BACK UP!

At some point in early 2014, things almost ended before they had truly begun. adesso had spent months reforming the agency system at Zurich Group Germany. But now, with the budget largely used up, the goal still well out of reach and the strategy crumbling, the project team was in dire straits. What had happened? The adesso team had underestimated the complexity of an integrated working environment for sales and marketing. The project seemed destined to run aground. Those in charge made the right choice and did the only thing they could: they got together and looked for a way out. "We sequestered ourselves for several weeks and put everything, truly everything, under the microscope," says Tim Langer, Project Manager at adesso. Following a change in project management, new milestones, a detailed expectation management plan and a revised budget, it was (almost) back to square one.

# AGILITY IS THE SECRET

Zurich itself delivered one of the main ingredients in the project's success. One of the most accomplished regional directors and his core team set aside their day-to-day responsibilities for the duration of the project. From then on, they took on the roles of project owner and key user, bringing their business perspective into the mix. For the entire project team, their involvement meant access to valuable knowledge. "In most projects, the project team receives the requirements from the contacts in IT who are responsible for the matter," Langer says. "But there's always a risk of information getting lost along the way. Here we had the luxury of getting to know the business's needs directly and receiving immediate feedback on what we implemented." Thanks to the experienced regional management team, it quickly became clear what form the various applications had to take on to give the target group genuine added value. Internally, the project manager from the business line, the IT project manager at Zurich and the adesso project manager became collectively known as the "triumvirate". This collaboration model has since given birth to a variety of similar setups, including the sales digitalisation team, which continues to successfully oversee the interaction between IT and business.

From then on, things went swimmingly. It quickly became clear that there had initially been no way of knowing what the desired outcome was. Accordingly, agile methods were ushered in to account for the many people involved in the project. When Zurich and adesso launched the project, the insurance company was still using decentralised servers at each of the insurance agencies' offices, plus it was installing and updating software by CD-ROM. It would ultimately take eight years to shift such processes to the cloud. In the end, the partners succeeded in achieving the ambitious milestones over the years that followed. The last step involved migrating the overall system to the cloud. "At Zurich, our impression was that adesso was just the partner we needed to develop IT solutions that were not only fit for the present, but also fit for the future," says Thomas Stoll, Senior Program Manager for Sales Digitalisation at Zurich Group Germany. "The combination of advice and know-how that adesso brought to the forefront was very important to us."

#### FOUR PHASES DEFINE PROJECT PROGRESS

What appeared at first glance to be a simple road map turned out to be a massive project upon closer consideration. The first step was to digitalise the data on hand – all 250 million data sets – and make it available online. "That allowed everyone at Zurich to use the same underlying basis of data for the first time, which was crucial for the further development of the group as a whole," Stoll says. Roll-outs took place in multiple stages. Throughout the development phase, the team kept adapting to new challenges. As a result, it was able to manage the balancing act between rapid implementation and constant transformation processes in order to meet the changing overall conditions.

Any decision to migrate a core system to the cloud makes it necessary to find multiple new solutions. That is particularly true at an international company with countless groups, as is the case at Zurich. All in all, more than 3,500 users depend on the new agency system.

### THE SHARED JOURNEY IS FAR FROM OVER

Even though the project is nearing completion after nine years following the migration of the agency system to the cloud, Zurich and adesso still have ideas for the future. That too is a reason for their shared success. "Zurich worked with adesso to get all of these additional projects up and running, not least because we have an open and fair business relationship built on trust that is ultimately successful to boot," Stoll says.

With the Planet Hero app, Zurich and adesso are bringing a climate protection coach to app stores everywhere. And the next exciting projects for Zurich and adesso – automating marketing and digitalising business with corporate customers – are already in the works.


Until November 2015, the initial roll-out and launch of an online sales partner management system was the main focus

In July 2017, a CRM system was introduced for Zurich Group Germany's exclusive agents

In April 2020, the old system went offline after more than 20 years in use

The new system has been cloud based since July 2022

- > 100+ people involved in the project
- > 37 links to external systems
- > 2,435 user stories

#### THE COMPANY

Zurich Insurance Group (Zurich) is a leading composite insurer that serves over 55 million private and business customers in more than 210 countries and territories. Founded 150 years ago, today's Zurich is a leading force for change in the insurance industry. In addition to insurance protection, the company increasingly also provides prevention services that promote well-being, strengthen climate resilience and much more.





### IT ALL STARTED WITH A QUESTION:

"How can we give the clients, projects and ideas that have shaped adesso – and continue to do so – a moment in the spotlight?" The answer is nearly 200,000 characters and more than 180 pages long. It took a village to transform the initial idea into this printed book. We would like to thank everyone who contributed to "Grow Together", be it through ideas, content or artwork.

Special thanks go out to the many people at our clients' businesses, at our partners' offices and at adesso who gave us a glimpse into their work, and who talked to us about their plans and projects, as well as their setbacks and successes.

# THEIR STORIES TAKE CENTRE STAGE IN "GROW TOGETHER".

adesso ventures andsafe Barmenia Bitmarck BMI Procurement Office Böcker Borussia Dortmund Festo Flender GEMA Kelvion Lottery industry Mobile Retter Open Grid Europe PepsiCo Turkey Playmobil<sup>®</sup> **RWE** Generation SBB Staige toom Baumarkt Trustlog TÜV Rheinland Union Investment Urban Energy Zurich

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