Reference Booklet
Cloud Services
Success Stories

T Systems

Let's power
higher performance

Cloud environments that are always under control

This booklet contains the success stories of our clients, which benefit from private cloud solutions with security control, public cloud services with a cloud strategy in place that make cloud migration work for their business needs, and success stories of clients which operate in a dynamic cloud environment that includes both public and private cloud solutions.

Discover how companies modernized their business-critical legacy mainframes and future-proofed their IT. For example, a car manufacturer planned its mainframe modernization with minimum risk, and as a result of millions of dollars in licensing savings, the amortization period of the project was realized in 2-3 years.

We hope this selection of successful customer projects will inspire you.

What would you like to achieve for your company?

Contact us now!

Online contact form

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Full speed into the cloud

Pipeline operator implements cloud-first strategy with 40% cost reduction

“The Cloud Migration Framework proved its worth as a mature transformation methodology that unlocks hidden value in the cloud.”

Ralf Poggemann, T-Systems

Companies in the energy sector sometimes have to radically change their business models. Pipeline operators, for example, act more like building contractors during their first business phase. Their top priority is to complete the investment phase with the pipeline construction project quickly, to reduce costs. The first gas deliveries mark a radical change in the business model, shifting the focus from construction of the pipeline to operation and supplying gas. The pipeline builder turns into a transmission system operator (TSO). In this role, it earns its money – and generates yields for its investors. The business disruption also offers an opportunity to redesign the IT landscape and reorient it toward cloud computing. As the customer’s long-standing IT partner, T-Systems was asked to support this journey to the cloud.

At a glance

- Radical change of business model after completion of pipeline construction: transmission system operator
- Cost reduction targets
- Improved business agility
- Enables innovations
- Elimination of technical legacy systems
- Consulting and Cloud Assessment by T-Systems
- Cloud-first strategy: Microsoft Azure
- T-Systems Cloud Migration Framework for assessment and migration
- Robust migration planning enabled smooth implementation (scrum method)
- Improved operational efficiency
- IT costs permanently reduced by over 40 percent
- Fit for the future

The reference in detail

The challenge

The pipeline operator is a long-standing customer of T-Systems, which provided reliable support to the company through its IT services in recent years. T-Systems runs the SAP and non-SAP systems from its data centers for the TSO, which only has a small internal IT team. Facing the foreseeable change to its business model, the company identified the necessity to completely rethink its IT structure. It wanted to achieve greater business agility, implement business innovations, increase its operating efficiency, and drastically reduce its costs. This also entailed eliminating legacy technical systems. The way there: a cloud-first strategy.

The solution

The pipeline operator initially ordered a Cloud Assessment from T-Systems to lay a solid foundation for its cloud strategy. To do so, T-Systems used its Cloud Migration Framework (CMF), a service portfolio with a modular structure. It is based on hyperscaler cloud adoption frameworks and supplemented with best practices from T-Systems. It maps every aspect of a cloud journey. Three modules were used for the situation analysis: Cloud Discovery and Cloud Assessment mapped the current systems and pointed out potential migration paths to the cloud. T-Systems used the third module, the Cloud Business Case, to show the corresponding trends for the IT costs – thus addressing one of the customer's central requirements directly in the planning phase. The technical analyses showed that around a third of the systems could be decommissioned, while another 40 percent could be transferred using a "lift and shift" approach. New solutions had to be found for around a quarter of the systems – to be delivered as SaaS or managed services. In combination with the financial analysis, the customer now had a firm foundation for elaborating its cloud strategy. The company decided in favor of Microsoft Azure, not least to remain in its familiar Microsoft environment. Based on these results, T-Systems also won the follow-up order to modernize the IT landscape based on Azure. T-Systems relied on the Cloud Migration Framework for this step as well. In an initial phase, the existing landing zones were consolidated. T-Systems then implemented the agreed cloud migration plan, starting with smaller test migrations, followed by the shared services and concluding with the main applications. The migration was completed by 2022.

Customer benefits

The key to a successful cloud migration is knowing the customer's business objectives. The assessment phase identified them, making it possible to develop a clearly defined cloud strategy that enabled a rapid migration and minimization of the migration risks. The cloud migration gives significant business benefits to the customer, which can now be more agile in its market environment, roll out innovations quickly, and significantly reduce its cost base. And even track them with established cloud cost controls. The project demonstrated that rehosting and replatforming can also deliver significant cost savings when the application landscape is optimized. What's more, a cloud transformation always poses an opportunity for companies to dispose of technical legacy systems – just like the customer did here. Ultimately, the customer has achieved a permanent reduction in IT costs of over 40 percent, making it fit for the future.

Successful spin-off

Migration to AWS and private cloud and taking over application management for SAP, non-SAP, and PLM

Reference project

powered by: aws

vitesco TECHNOLOGIES

“With their migration expertise, particularly their extensive SAP competency, T-Systems guided us safely and reliably through the spin-off.”

Thomas Buck, Senior Vice President Information Technology, Vitesco Technologies

Vitesco Technologies is a leading international developer and manufacturer of modern powertrain solutions for sustainable mobility. With its smart system solutions and components for electric, hybrid, and combustion engines, Vitesco Technologies makes mobility clean, efficient, and affordable. Its product portfolio includes electric engines, electronic controllers, sensors, and actuators as well as solutions for exhaust gas after treatment. In 2020, Vitesco Technologies generated revenue of around EUR 8 billion and employed nearly 40,000 people at around 50 locations. Vitesco Technologies is headquartered in Regensburg in southern Germany and wants to play a leading international role in vehicle electrification. To achieve this goal, the company is pursuing a clear strategy with a focus on sustainability. Until 2019, Vitesco Technologies was a unit of Continental AG. Continental then decided to consolidate its expertise for powertrain technology in a separate company. A new industry heavyweight was born. The spin-off was finalized in 2021: the company had to stand completely on its own. This also affected the IT systems, which are key for the value creation of the company. As a strategic IT partner, T-Systems supported Vitesco Technologies in building its IT landscape and has taken responsibility for the business-critical IT systems.

In addition to application management and SAP system operations, this also involves operating and further developing the Windchill system for PLM (product lifecycle management), which runs in the AWS cloud. A joint data privacy concept ensures that all services are performed privacy-compliant pursuant to Schrems II, even under the best-shoring approach.

At a glance

- Create an IT foundation for Vitesco Technologies (Continental spin-off)
- Disaggregate data, SAP systems, and PLM system from Continental’s IT landscape
- Low business impact thanks to minimal downtime
- Establishment of a separate private cloud landscape
- Migration of the Windchill PLM system to the AWS cloud
- Assumption of application operations and management
- End-to-end responsibility for SAP delivers benefits for IT governance
- Fulfills data privacy requirements pursuant to Schrems II

Cloud Consulting & Migration

The reference in detail

The challenge

As part of the Continental Group, Vitesco Technologies had been using the company's existing SAP, non-SAP, and PLM systems since it was founded. The spin-off required changes here. As such, the first key task involved disaggregating the systems and data needed for Vitesco Technologies' business activities from the Continental network and migrating them to a separate platform. However, the transfer of such large data volumes makes system downtimes unavoidable. A typical volume of 10 TB requires around two to three days of downtime. Minimizing this downtime – for both Continental and Vitesco Technologies – was a primary objective of the project, along with ensuring that Vitesco Technologies could get up and running quickly and permanently. After all, during downtimes, neither Vitesco Technologies nor Continental could continue production, manage suppliers, or accept orders – which directly impacted business.

The solution

As the operator of Continental's SAP systems, T-Systems already knew the platforms very well. The project partners decided to copy the complete systems, including data for Vitesco Technologies, to a separate private cloud landscape on a 1:1 basis. T-Systems designed this infrastructure with a separate firewall landscape directly from the start, in line with security requirements and with its own IP address range. The measurement data is already encrypted when it is stored in the vehicle and remains highly encrypted and secure at all times. This also applies to the transport layers, including the transport protocols between the vehicle and edge resources as well as to network access points.

As a result, the course for a subsequent, simple separation was laid at a very early stage. In the private cloud, the systems for the core functions to meet the needs of Vitesco Technologies were provided within two days. Thanks to optimized overall project planning, the runbooks for migration, with its more than 100 individual processes, were developed and practiced meticulously.

The result was minimum downtime for the actual migration. Continental's data was successively removed while Vitesco Technologies was already using the new systems. The T-Systems team took a similar approach for the PLM system, the only difference being that another migration step to the AWS cloud followed. In addition to core operations, T-Systems also took over application management for the SAP, non-SAP, and PLM systems, with incident and change management. When designing the application management, the team used a privacy-compliant best-shoring approach with a detailed analysis of the arising tickets. As such, Vitesco Technologies gets all its SAP services from a single source, from core operations to application management. This means, all support requests arrive at one service desk, and Vitesco Technologies gets consolidated reporting based on standardized processes. A high level of automation increases the efficiency of operations and ongoing enhancement of the SAP systems.

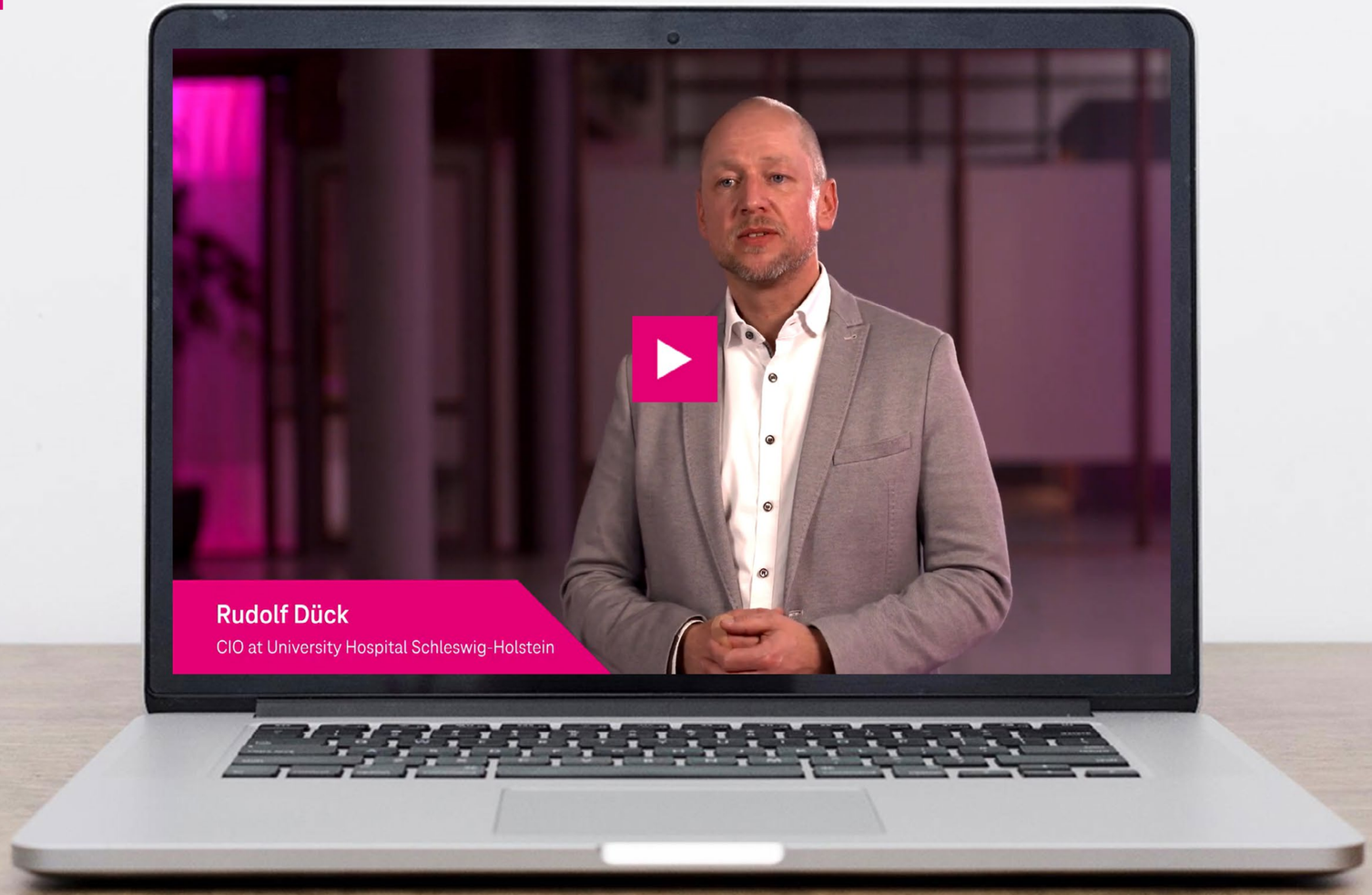
Customer benefits

With end-to-end responsibility for the SAP systems, Vitesco Technologies captures vast benefits for ongoing IT governance and systems integration – with a highly streamlined IT team. Every facet of future developments in the system landscape can be anticipated at an early stage, giving Vitesco Technologies a high level of planning security. The optimized overall concept with established best practices minimized the risks and impact of the migration. Downtimes were minimized for both Vitesco Technologies and Continental, ensuring that the migration only had a minuscule impact on business activities. At the same time, the application management concept with its best-shoring approach fulfills data privacy requirements pursuant to Schrems II and minimizes the costs for ticket resolution.

Further advantages:

- T-Systems' SAP expertise ensured a smooth and seamless migration
- Rapid provisioning of new infrastructure capacity from the private cloud
- Continuous further development
- Fulfills legal requirements for system separation

The University Hospital Schleswig-Holstein (UKSH) shares its experiences with the T-Systems sovereign Cloud powered by Google Cloud



Scalable high performance in the web

1. FC Köln modernized its website with AWS

Reference project:

“We were able to modernize our website and lower our costs with AWS. The managed services from T-Systems offer everything our fan community needs to interact with our website content quickly and reliably.”

Dominic Theißen, Head of IT, FC Köln

1. FC Köln isn’t just any soccer club – it’s one of the 20 largest sports clubs in the world. And their red-and-white-clad fans in Germany’s fourth-largest city follow their club through feast and famine. The three-time German champion certainly feasted in the 2021/22 Bundesliga season – Cologne’s “Billy Goats” finished the season a strong 7th and will play in the UEFA Conference League in 2022.

The soccer club depends on its website fc.de, the central medium for interacting with its 114,000 supporters. In addition to presenting the latest news and information, such as video content, it is also the central channel for ticket sales and the fan shop. The complex website also integrates third-party content. 24/7 availability is a must, of course, to meet its fans’ information needs – but when ticket sales start and around match days, the load on the website skyrockets to more than tenfold. The site operators wanted to ensure a good user experience even during such peak loads. As such, the performance of the site is a decisive factor for the club’s digital footprint.

At a glance

- Ensure scalability and performance of the website
- Leverage potential cost savings
- Agile, dynamic management of the infrastructure
- Enhanced user experience for the central channel for fans
- Migration to AWS
- Modernization through replatforming and reengineering
- Implementation of modern GitOps-based deployment strategies
- New security mechanisms based on AWS best practices
- Managed services from T-Systems according to DevOps principles
- Capture of further digitalization potential through modern AWS services
- Cost efficiency
- High degree of automation (infrastructure scaling, infrastructure as code, and CI/CD pipelines)

The reference in detail

The challenge

In the past, scaling capabilities and capacity management repeatedly posed challenges to the web team. The CMS did not support scaling. The legacy environment was not actively improved by the provider, nor was it documented sufficiently. The only way to deal with the temporary peaks under the classic hosting model was to increase infrastructure capacity in the long term. The result was high and unnecessary costs for infrastructure – because the peak load resources had to be operated and paid for the entire time. The web team at 1. FC Köln set out to find a model for dynamic system provisioning, based on user requests. They wanted the system to run in a dynamic mode, not only due to regular changes to servers, middleware, and applications. Last but not least, the system had to deliver consistently high performance – at low costs. 1. FC Köln decided to migrate to AWS and selected T-Systems as its consulting, migration, and managed services partner to do so.

The solution

Together with the web agency, T-Systems modernized the entire website. The originally planned lift-and-shift approach was quickly replaced by a reengineering and replatforming model. The process involved modernizing both the application level (by the web agency) and the infrastructure level. At the same time, the website was given new, modern security mechanisms based on AWS best practices. In the first step, T-Systems built the landing zone in the Billy Goats' AWS account, with central security configurations. It enables management of the AWS resources from a single source. The foundation of the website consists of redundant EC2 instances for the back end (in two European AWS availability zones), which are linked through load balancing and auto scaling. They serve as the hosting platform for an Apache PHP back-end construct, where the website runs.

An upstream content delivery network serves static content and utilizes the Amazon CloudFront service. The back end also hosts an in-memory cache (Redis), which buffers user requests, an NFS file share to store static data (such as JavaScripts, CSS, HTML, and media data), and a Relational Database Service (RDS) that replaced the old MySQL database. The security features implemented by T-Systems include a web application firewall and AWS GuardDuty, whose settings were optimized based on the collected logs for the website. They protect the site against the usual web exploits and bots and contribute to maintaining high performance. This cloud native foundation also enabled the web team to implement DevOps practices. In their approach, Amazon machine images are generated automatically, based on the established Git-Flow principle. The GitLab CI pipeline rolls out the deployments to the (new) development environment and – after release by an admin – to the production environment.

Customer benefits

The editorial team now has a modern platform for running its website, one that can respond dynamically to user requests. Resources are scaled back automatically under low loads, generating significant cost benefits – and the architecture ensures that performance remains good for users even under higher loads. At the same time, the DevOps approach enables agile, dynamic management by the web team. T-Systems has their back, as a recognized managed services partner (Leader in ISG's Provider Lens for AWS Ecosystem). With their new foundation and access to the AWS ecosystem, 1. FC Köln can now take the next steps toward digitalization. The analysis of log files enables targeted offers for fans – and much more. As an AWS partner, T-Systems also ensures that best practices such as the Well-Architected Framework are followed. "We were able to modernize our website and lower our costs with AWS. We can tackle the challenges that operators of modern sports websites face. The managed services from T-Systems offer everything our fan community needs to interact with our website content quickly and reliably," summarizes Dominic Theißen, Head of IT for the Billy Goats.

aws partner network

Premier
Consulting Partner

Cloud Consulting & Migration

A partner on the journey to digitalization

T-Systems is transforming and migrating the entire IT infrastructure of gkv informatik to the cloud, creating the foundation for new services in the healthcare sector

Reference project:

gkv informatik
unternehmen synergien

“T-Systems has supported gkv informatik for many years, in a close partnership for the digitalization of the healthcare sector and supports the customer in all disciplines – private and public cloud, SAP, and security.”

Udo Lingen, T-Systems

gkv informatik is a leading IT service provider for social health insurance providers: it provides IT applications, such as office systems, for 38,000 employees of these health insurance providers, and is responsible for managing over 17 million insurance customers. The partners (clients) of gkv informatik represent around one-fifth of the overall German healthcare market. gkv informatik is a consortium that was formed in 2006 through the merger of BARMER and several regional AOK organizations in northern Germany. Its goal was to capture synergy effects in IT operations. Its partners, the health insurance providers, were able to build on these effects to further improve service for their customers. In gkv informatik, the social health insurance providers have a specialized partner with profound industry expertise and extensive IT skills that develops and runs innovative solutions for the digital transformation of the healthcare sector. gkv informatik has two data centers in the western German city of Wuppertal, where it runs SAP and non-SAP applications. In 2018, gkv informatik decided to outsource key IT services to T-Systems to realize the transformation of its IT services into agile, cloud-native technologies and hone its focus on application management, requirements management, and service development. This was the kickoff for a German “health cloud”, with a high level of data security and strict, GDPR-compliant privacy protection from German data centers.

At a glance

- Outsourcing in the healthcare sector
- Foundation for new, improved digital healthcare services
- A perfect combination of digitalization, data security, and – primarily – privacy in a regulated market
- Transformation of IT infrastructures into a private cloud
- Deployment of cloud-native technologies
- One of Europe’s largest server installations
- Provision of container platforms
- Introduction of DevOps methods
- Support by DevOps engineers and DevSecOps architects
- Takeover of complete IT security management
- Excellent service reliability, with high availability and system resilience

Cloud Consulting & Migration

The reference in detail

The challenge

Thousands of servers, hundreds of systems, and many petabytes of data. gkv informatik subjected its potential new IT service providers to a selection process that lasted more than a year. Above all, the company sought a partner that was capable of guaranteeing data protection and the confidentiality of its extensive data pool. Healthcare data is subject to extremely strict protection demands in Germany, and the provider has to prove the ability to comply with these stringent demands in this regulated environment. The managers at gkv informatik also expected their new service provider to help them navigate the development paths toward IT modernization. They sought a partner who would work with them to master the challenges of digitalizing the healthcare market together. This meant they also had to be capable of reliably managing a large-scale IT transformation. The third selection criterion was a hygiene factor for outsourcing: excellent reliability of the services through high operations quality. In particular, the oscare® core system had to be robust, with high availability for the health insurance providers: customer master data, healthcare funds, billing – all critical processes run on or with this highly individualized SAP system.

The solution

T-Systems met all of gkv informatik's requirements and won the contract. As part of a comprehensive transformation project, T-Systems migrated all workloads from the data centers in Wuppertal to its modern twin-core data center in Frankfurt. In the process, the applications were migrated directly to modern infrastructures that offer a high level of virtualization and automation – a large portion of them run in a Cisco-based private cloud. T-Systems took full advantage of the platform's feature set for this "health cloud": with nearly 1,000 servers, 7,000 virtual systems, and around 10 petabytes of data, the platform is one of the world's largest installations of its kind. The same applies to the SAP HANA® databases, which use multiple Superdomes with 24 TB of RAM each – the largest systems certified by SAP at this time. The health cloud provides an extremely high level of security, but also enables the establishment of a DevOps culture and the use of container platforms. An OpenShift platform supports the agile deployment of cloud-native applications for gkv informatik's clients. "Together with T-Systems, we're establishing a highly automated container platform for the healthcare sector," summarizes Ralf Gietz, Enterprise Architect at gkv informatik. In addition to the IT services for all SAP and non-SAP applications, T-Systems also assumed management of the hybrid workstation infrastructure, with thin and fat clients (some classic, some virtualized). This involves 50,000 email accounts, among other elements; T-Systems is also responsible for software packet assembly and distribution and print services. T-Systems also took over the complete IT security management: among other activities, the security infrastructure was completely rebuilt and 24/7 monitoring was implemented by the T-Systems Security Operations Center.

Customer benefits

With its transformation, gkv informatik has created a modern platform that health insurance providers can build upon to offer innovative healthcare services like the electronic health record (EHR) to their customers. The new platform supports the acceleration and simplification of processes in the healthcare system, a more intensive customer relationship, and improved customer service. With the transfer of responsibility and outsourcing of its systems, gkv informatik has achieved significant cost savings while making its IT much more flexible at the same time. It now receives secure, robust IT services from a single source and has gained the leeway it needs to concentrate on its core competencies for application management. Its clients' cloud readiness to tackle the upcoming challenges posed by the digitalization of the healthcare market has risen dramatically. New digital services can now be rolled out quickly and cost-effectively.

Further advantages:

- Best-in-class IT security management
- Access to specific IT expertise
- Highly stable operations
- Seamless transformation of legacy applications into the cloud

ENIO trusts the T-Systems Sovereign Cloud powered by Google Cloud with its sensitive data

“ENIO, a leading provider of e-mobility solutions based in Austria, trusts the T-Systems Sovereign Cloud powered by Google Cloud with its sensitive data.”

Public charging points are important, but the future lies in building proprietary, suitable infrastructures for companies, communities, and institutions. This is because 70 to 80 percent of all charging does not take place in the public domain, but rather via separate charging grid infrastructures. ENIO GmbH sees the greatest potential in large vehicle fleets, property development and management companies, the logistics sector, and operators of parking garages and lots. When it comes to charging increasing numbers of electric cars, the most important technical challenge is avoiding current spikes that strain the grid. According to ENIO, innovative charging technologies that enable on-demand, grid-protected, environmentally friendly charging are the absolute key to success.

In addition to operational control and billing, ENIO also offers load management and energy management to its customers. Due to its many originally monolithic applications, the company incurred heavy expenses for maintenance. It needed a cloud solution that enabled the dynamic provision of resources for peak loads and also supported the introduction of new white-label services. A further challenge involved transforming the applications into a more flexible microservice architecture. To master all of these challenges, ENIO chose the T-Systems Sovereign Cloud powered by Google Cloud as the trusted platform for its sensitive data. Based on a container platform, the dynamic application services are now run in the public cloud. CI-CD pipelines now provide for automated deployments to support the cloud-native development of the services. “As we see it, the clear benefits of the T-Systems Sovereign Cloud powered by Google Cloud lie in the additional flexibility and simple scaling of the business model, greater system resilience, and reduced geographical impact of disruptions, as well as shorter release cycles and the GDPR-compliant processing and storage of our sensitive customer data. In addition, the cloud solution provides full cost transparency, thanks to a pay-as-you-go pricing model,” explains Dr. Michael Viktor Fischer, CEO and Managing Director of ENIO.

The manufacturer-neutral software packages from ENIO enable intelligent control of charging points, secure payment transactions, and optimal distribution of the available energy. The company was founded in 2013. From its headquarters in Vienna, it develops and distributes software for e-mobility infrastructure, as well as for the management and billing of services with electrical devices, throughout Europe. Customers with more than 5,000 charging points from 14 countries have trusted in ENIO’s innovative products for many years.

Cargodian: Enabling New Business Transformation with AWS

“The challenge was to implement our business model deploying state-of-the-art technology solutions fully cloud-based, accessible for our customers globally, applying European data governance. T-Systems’ consulting expertise in Data Protection on AWS and clarity of what measures are specifically relevant to our use case has been instrumental in helping us move forward at the right pace.”

Peter Selmayr, Founder and CEO, Cargodian

In the rapidly changing market, tech innovation and digital transformation are driving the transformation of global commerce. Different technologies have been adopted to fundamentally change the way resources are allocated and international trade operates.

One of the recent players in this revolution is Cargodian, a fintech startup from Bavaria that offers next-generation trade financing based on blockchain technology. The young company offers an innovative digital global trade solution that is easy to use, affordable, fast, transparent, secure and cost-efficient. It will help in democratizing trade finance giving back control to the seller and buyer. By leveraging blockchain technology, the company is looking to address global trade issues such as high costs and lack of transparency and security.

With the state-of-the-art technology and expertise in data protection, T-Systems is collaborating with Cargodian to transform their business and secure their data in a world with evolving regulations, technology, and risks. Recently, T-Systems has partnered with AWS to launch Data Protection as a Managed Service in the cloud. This solution allows the security of the client data in the AWS cloud with encryption and transparency controls. The managed service also adheres to the GDPR and the Schrems II judgement. Moreover, it allows the client to reap enormous benefits from the innovation, speed, scalability, breadth, and depth offered by AWS cloud.

At a glance

- T-Systems driving business innovation for Cargodian with AWS consulting and solutions
- Providing the advantage of the innovation, speed, and scalability that AWS cloud services offer
- Utilizing T-Systems’ expertise to provide Data Protection as a Managed Service in the AWS Cloud
- Ensures adherence to the European General Data Protection Regulation (GDPR) requirements
- Helped the startup in getting its business up and running
- The focus is purely on application development and providing a platform for development

The reference in detail

The challenge

Cargodian is a startup, founded by Peter Selmayr and Klaus Burkart, that offers a new, innovative digital platform for secure and efficient global trade with guaranteed and automated payments. An alternative to a letter of credit, the platform is designed to protect both the buyers and sellers by entering the respective trade chain of a mercantile trade transaction as an intermediary. The online platform, built on blockchain technology, ensures both trading partners secure financial settlement and allows a quality check for the delivered goods before the purchase price is paid in full. The smart contracts make it easier for small and medium-sized companies and simplify the letter of credit processes with halved costs and minimized risks.

As a startup, Cargodian did not want to invest significant money and resources into buying licenses and hardware. This is why they identified AWS as the perfect solution to take them to the next level and provide value for their platform. They needed automated solutions and uninterrupted business operations backed by robust Service Level Agreements; and proactive round-the-clock support to tackle outages, attacks and performance issues.

Moreover, with the European General Data Protection Regulation (GDPR) requiring all organizations that process the personal data of EU data subjects to take appropriate measures to protect personal data, Cargodian wanted a trusted partner with expertise in Data Protection to help them in the way ahead.

The solution

With industry-specific consultation, first-class cloud services and IT infrastructure solutions, T-Systems has been at the forefront of enabling Cargodian's business model. The AWS cloud solutions enabled numerous opportunities for growth, efficiency, and the development of the startup. According to the ISG's Ecosystem Provider Lens™, T-Systems is one of the leading service providers for Amazon Web Services (AWS) in Germany and has achieved four leader rankings in the categories of consulting services, migration services, and managed services.

As one of the most comprehensive cloud platforms, AWS ensures a faster pace of innovation and greater flexibility to startups such as Cargodian that needed the expertise for uninterrupted business operations and enabling future growth. To supercharge its innovation capabilities, Cargodian uses blockchain functionality ("Hyperledger technology") from the AWS platform for its service. T-Systems has helped Cargodian unlock this potential with AWS consulting and solutions.

T-Systems has setup the landing zone with AWS network functions, like load balancer and DNS resolution for customer specific pods in the Kubernetes Cluster. The global design is approved and utilized in US, EMEA and Asia. Security is ensured with a virtual private cloud (VPC) separated into a public and a private subnet including automated scaling of services and DNS translation from external to internal resources. A disaster recovery concept for business continuity is in place. Along with this, T-Systems has setup Networking, resilient and fault design. The solution uses Elastic Kubernetes Service (EKS) with AWS Fargate and Elastic File Service (EFS). T-Systems has provided the development and operations platform via managed service for the company.

T-Systems also offers Data Protection as a Managed Service in the AWS Cloud and IT infrastructure support and maintenance for Cargodian. This includes Data Confidentiality with T-Systems who will provide guidance on what cloud encryption tools to use depending on the data classification to ensure that the right level of encryption is being applied to protect their data. The client can also easily manage tasks associated with controlling data access and location through a managed service. With all the security measures in place, Cargodian can ensure they adhere to AWS Security best practices. The preventive and detective guardrails enable the management of security features like auto-compliance remediation and Security Incidence Response.

Customer benefits

The cloud services along with the consulting and operations support by T-Systems has allowed Cargodian to scale its business. With its strong cloud experience and expertise, T-Systems aided the company in accelerating business innovation, reducing costs, and minimizing time to value.

To avoid the common threats faced by online businesses, the startup wanted to adopt a holistic scalable approach to managed security services. T-Systems provided a one-stop, cost-effective solution for global data protection through AWS which were in line with the client's requirements. With a centrally managed AWS account, Cargodian will be able to meet business goals, adhere to the data protection requirements and ensure cost transparency. The AWS platform also provides enhanced security with managed access, secure network configurations, encryption and key management.

From adding new workloads to the platform to building new products and processes, T-Systems has also proved to be a valuable partner for Cargodian. As an AWS expert, the company has built a strong working relationship with the client. T-Systems has provided a production platform that has allowed the client to select the comprehensive services from the AWS cloud platform. The company will continue working and ensuring the delivery of innovative and reliable technology that delivers next-generation services to Cargodian with speed and agility.

Ready for the future: SAP on AWS

T-Systems migrates a complex SAP landscape to the public cloud

“Complex systems migration of SAP to AWS – T-Systems is the perfect partner, because we combine SAP know-how, established tools, and AWS expertise for risk-minimized migration and reliable operations.”

Manuel Mierzwa, T-Systems Account Management

Extensive division of labor, intensive networking, and just in time – today’s vehicles are built in global value chains where every player has to collaborate efficiently. In this dynamic environment, excellent delivery capability is a must for automotive suppliers to set themselves apart. OEMs often expect components to be delivered within days or even hours. And every OEM needs different components. The share of individualized production is particularly high in Europe.

To meet the different expectations of its customers in the OEM environment, a leading automotive supplier relies on SAP to support its international production and delivery processes. As such, it is obvious that these business-critical systems must have reliable around-the clock availability to ensure that the car parts can be installed in the major manufacturers’ production lines in time.

At the same time, sustainability is a hot topic for the automotive supplier. It has developed a number of environmentally friendly and energy-conserving products, helping to ensure that automotive manufacturers can reduce the carbon footprint of their vehicle fleets.

At a glance

- Need for SAP transformation
- SAP strategy for forward looking positioning
- Business-critical systems for a highly dynamic business environment with just-in-time demands
- Achieve greater innovative capacity and scalability
- T-Systems as partner for migrations and operations
- Robust cloud security architecture
- Smooth transformation (lift and shift) to the AWS Cloud
- Largest SAP Sybase ASE database on AWS
- Run in high-availability mode
- Perfect combination of SAP and AWS expertise
- Perspectives for further SAP transformation to SAP HANA and SAP S/4HANA
- High level of SAP automation
- Flexibility and scalability for business developments

Application Operations

The reference in detail

The challenge

In 2020, managers at the international automotive supplier made a fundamental decision in favor of the public cloud. They wanted to attain a forward-looking position, standardize their SAP landscape, and reduce operating costs. At the same time, they wanted to capture the potential for scaling and innovation offered by the cloud. The move to the cloud was also supposed to kick off an SAP transformation, given that the discontinuation of SAP support for ECC 6.0 and R/3 (in 2027) was already on the horizon.

The managers chose Amazon Web Services (AWS), the market leader for public cloud solutions – yet the existing SAP landscape, based on the old R/3 ECC 6.0 standard, was highly complex. Among other factors, the company maintained one of the largest SAP databases in its industry, with data volumes continuing to grow at a rapid pace.

The automotive supplier sought an experienced AWS partner to migrate its business-critical SAP systems to the AWS cloud – one that would not only guarantee a smooth, risk-minimized migration, but also subsequently ensure high-quality, uninterrupted operation of the systems from the AWS cloud. It also had to model the company's high security standards in the cloud. This was no simple task, particularly given the supplier's highly individualized security architecture. The supplier decided in favor of T-Systems.

The solution

In the first step, T-Systems built a scalable global network architecture as a foundation for SAP operations, which combined the best practices of the Well-Architected Framework from AWS and the existing firewall architecture based on Palo Alto. To guarantee high availability of the systems, the network services were designed redundantly in two availability zones.

The migration of the SAP systems was to take place in regional waves over a period of two years. In this process, the SAP systems were migrated to the new cloud platform as-is, that is, in a lift-and-shift approach. This created the basis for subsequent transformations to SAP HANA and S/4HANA. The EMEA region was the first to start. This entailed migrating nearly 80 SAP instances in a high-availability setup to the AWS data center in Ireland. The proprietary T-Systems tool COSMOS, which enables standardized, risk-minimized switchovers, was used for the migration. With more than 40 TB, the SAP Sybase database was the largest installation running on AWS at the time of the migration. In the next wave, some 90 instances for the U.S. market were migrated from SAP HEC to the AWS data center in northern Virginia. Since the migration, T-Systems has been responsible for running the SAP systems from the AWS cloud and guarantees high service levels and availability of the services.

Customer benefits

With T-Systems, the automotive supplier has an experienced AWS partner at its side, one that also has the expertise to handle even complex SAP migrations and transformations – as confirmed by its repeated classification as "Leader" in the independent ISG Provider Lens for the AWS ecosystem.

The migration has given the customer room to continue to grow its business. At the same time, it can start the next steps toward transforming its SAP systems: reducing its datasets, switching to SAP HANA as the new database standard, and enhancing its processes for SAP S/4HANA.

The cloud relieves the automotive supplier of infrastructure-related tasks and provides it with simpler scalability and a greater capacity to innovate. What's more, thanks to the collaboration with T-Systems, many processes involving the management and provisioning of SAP systems have been automated, making them faster, more efficient, and more cost-effective. Last but not least, the move to the cloud has enabled the company to shrink its carbon footprint significantly, advancing its sustainability agenda.

Next step to the hybrid cloud

Future Cloud Infrastructure for flexible SAP basis operation convinces Continental

“The private cloud is a compelling option for us for operating our SAP systems. It combines stability and cost efficiency. The migration to a next-generation private cloud was logical and T-Systems provided us with the best support in all phases as an end-to-end provider.”

Christian Eigler, Corporate CIO Continental AG

Founded in 1871, Continental AG from Hanover is one of Germany’s largest multinational companies. The automotive supplier is a DAX 30-listed company. With over 190,000 employees at 561 locations in 58 countries, the company generated sales of just under €34 billion in 2021.

In 2022, Continental AG was split into three independent group sectors: Automotive, Tires, and ContiTech. The group sectors comprise 16 business areas. Automotive develops and produces electronically controlled chassis and safety systems. The Automotive group sector is the company’s largest business segment and offers solutions for driving safety, drive, and comfort. The tire business is bundled in the Tires group sector. ContiTech manufactures other rubber and plastic products for industrial applications, such as hoses, conveyor belts, vibration and sealing systems. Continental AG also grew through acquisitions in the 2000s. Integrated companies or company units included Phoenix AG (2004), Motorola‘s automotive electronics business (2006), Matador (2007), and Veyance Technologies Inc. (2015).

Continental AG uses SAP to manage its enterprise processes. The company operates one of the world’s largest SAP landscapes with over 450 SAP systems. The landscape that has grown over time is extremely complex.

“The private cloud is a compelling option for us for operating our SAP systems. It combines stability and cost efficiency. The migration to a next-generation private cloud was logical and T-Systems provided us with the best support in all phases as an end-to-end provider.” stated Christian Eigler, Corporate CIO Continental AG Uninterrupted availability to support international business is therefore vital for the automotive supplier. Continental chose T-Systems as its partner for operating the SAP landscapes.

At a glance

- Search for a future-proof SAP operating platform
- Leveraging of cost reduction potential
- Facilitation of hybrid scenarios
- Absolute operating stability
- T-Systems as long-term SAP operating partner
- Migration to next-generation private cloud: Future Cloud Infrastructure
- End-to-end service
- High level of automation
- Increased scalability and flexibility
- Cost reduction
- Basis for system consolidation and S/4HANA transformation
- Optional: operation of non-SAP systems
- Establishment of hybrid concepts (Azure).

Application Operations

The reference in detail

The challenge

SAP production systems have hitherto been operated on a classic on-premises infrastructure – with a perfect record: With its operating services, T-Systems has provided Continental with high operating stability and reliable availability of the SAP services for many years. Yet the established private cloud technology was becoming outdated.

Continental was looking for a new operating concept, which, on the one hand, replicates the existing stability, but also offers greater flexibility, increased scalability, and more convenient use of SAP. At the same time, the various company units should be able to integrate their own preferred platforms to pave the way for hybrid working, for instance with Azure. It was particularly important for Continental that the new operating concept or the used platforms offer maximum cost efficiency. In particular, the continuous operation of the production systems should be as cost-effective as possible. It was also important for Continental to outsource all services end-to-end to a single provider. In this way, Continental receives a competent contact for all SAP issues.

The solution

With the switch to the Future Cloud Infrastructure (FCI), those responsible at Continental decided to retain a private cloud, which also supports hybrid cloud usage as the pivotal point for SAP operation over the long term. The Future Cloud Infrastructure is a next-generation private cloud. It opens up many functions that users and operating teams are familiar with from the public cloud. These functions include comprehensive automation of regular workflows that allow complete application stacks, for instance, to be provided in less than three hours or make possible seamless resource scaling by a factor of 80. At the same time, the FCI paves the way for integrating public cloud resources, such as for developing and testing new applications.

To use the FCI, T-Systems sets up a landing zone on the shared private cloud platform in the Frankfurt data-center cluster. The VMware basis for both platforms, the old and the new, also simplifies the migration. Three migration steps are envisaged through 2024 where T-Systems will minimize the downtimes. After these steps, T-Systems will operate the SAP landscape entirely on the FCI platform.

Customer benefits

With T-Systems, Continental has a partner at its side that delivers end-to-end expertise for all SAP questions: From the infrastructure, platform operation through to application support. Numerous analyst reports have singled out over many years T-Systems' expertise in private cloud and SAP. Retaining the underlying platform technology based on VMware makes the migration much easier.

Sophisticated migration procedures reduce downtimes and, in turn, costs for the migration. Substantial cost reductions thanks to the FCI platform and its efficient management are another advantage when continuously operating the production SAP systems. In addition, SAP operation on the flexible and scalable FCI opens up further opportunities for Continental going forward. These include operating non-SAP systems, some of which work together very closely with the SAP systems, and the introduction of hybrid scenarios (by incorporating public clouds such as Azure). With the new platform, Continental also gains a sound basis for the upcoming transformation to SAP S/4HANA and possible consolidation projects within the group.

Consistent, competent support for specialist applications

The German State of Brandenburg relies on T-Systems for SAP application management

Reference project:

LAND BRANDENBURG

“The federal state’s SAP systems have to support the functional procedures reliably and with high, targeted performance. In this regard, T-Systems has more than satisfied the customer’s demands, with outstanding service for managing applications for nearly 15 years.”

Timo Czajka, Service Delivery Manager, T-Systems

14.7 billion euros: that’s the amount of the budget available to the German State of Brandenburg in 2022. This money goes toward the federal state’s many different activities – and it needs to be funded, too. The body primarily responsible for all financial flows of the federal state’s public administration, its income and expenditures, is the Ministry of Finance and Europe (MdFE). This Ministry must ensure that political decision-makers have transparency over the funds, their distribution, and their utilization at all times in order to coordinate the federal state’s development.

The Ministry also encompasses subordinate agencies, such as the state central treasury (Landeshauptkasse) with its sites in Potsdam, Frankfurt (Oder), and Brandenburg (Havel), the federal state’s 13 tax offices, the technical tax office, the University of Applied Sciences for Finance, the state school of finance (Landesfinanzschule), the state training center (Fortbildungszentrum), the central salary office (Zentrale Bezügestelle), and the state company for property and construction (Landesbetrieb für Liegenschaften und Bauen).

The Ministry is based in Potsdam and has around 4,800 employees: just under 390 in the Ministry itself, around 3,500 in the tax offices, and around 530 in the Brandenburg state company for property and construction. The Ministry and its subordinate agencies have to ensure that political decisions are mapped in the fiscal authority systems in near time. Examples include changes to tax rates, support for state subsidies for private individuals and industry, and new laws such as tax relief legislation.

Powerful IT systems play a decisive role in all of this. The Ministry has been running an SAP landscape for the federal state that has been supporting the budget, the treasury offices, and the accounting systems since 2006. The reliable operation of these systems is essential for the persons responsible and for the federal state’s employees. T-Systems supports the Ministry with extensive SAP services, including management for SAP applications.

Application Operations

At a glance

- Need for a reliable service provider for SAP application management
- Technical mapping of functional requirements in SAP systems
- 24/7 support for the complex SAP landscapes of the integrated entities
- Service, incident, change management
- Advice on changes to functional procedures
- Implementation of changes
- Use-based pricing model with distribution to cost centers
- High service availability and reliability
- Meet security and compliance requirements in projects with onshore resources

The reference in detail

The challenge

Following its decision in favor of SAP, the Ministry of Finance and Europe (MdFE) sought an experienced partner for its SAP application management – one that could provide continuous, reliable support for the systems and take on the continually increasing effort needed to manage a variety of SAP applications in the integrated entities. The partner was also expected to provide system integration services and support system customizing. The MdFE entities expected professional advice for their questions. Another important requirement: application management should take place in Germany, ideally nearby, securely and with absolute compliance.

The solution

T-Systems prevailed over other external applicants after a tender process and has since confirmed its status as a reliable application management partner in multiple follow-on tenders – the Ministry reviews the rendered services and issues a new call for tenders every four years.

“Shortly after taking on SAP operation, we also took over application management. As a result, the MdFE has a single point of contact and receives end-to-end support for SAP,” explains Timo Czajka, Service Delivery Manager at T-Systems.

The major advantage: close links between application operation and application management. When changes are needed or if any disturbances occur, the expertise is practically sitting at the same table – which means the MdFE gets solutions quickly, along with consulting expertise.

Within the application management framework, T-Systems supports the MdFE with a variety of ITIL processes, including service management, incident management (operation of the ticketing system and first/second level support), and change management. “The SAP systems at the MdFE not only need the typical regular patches, such as for security, but also require other modifications. Changes to tax rates or funding programs have to be mapped in the systems at short notice,” says Czajka.

As such, application management represents the bridge between the processes at the MdFE and the technology. Most recently, in its role as applications manager, T-Systems answered questions and supported the technical and functional implementations of changes due to the state funding programs associated with the coronavirus pandemic and the war in Ukraine.

“As a public sector entity, the MdFE is primarily a service provider to the citizens,” explains René Albert, the responsible sales manager at T-Systems. “As a result, our services have to be available to the employees – and thus indirectly to citizens and the political decision-makers as well – reliably at all times.” Application management does its part to achieve this goal.

Customer benefits

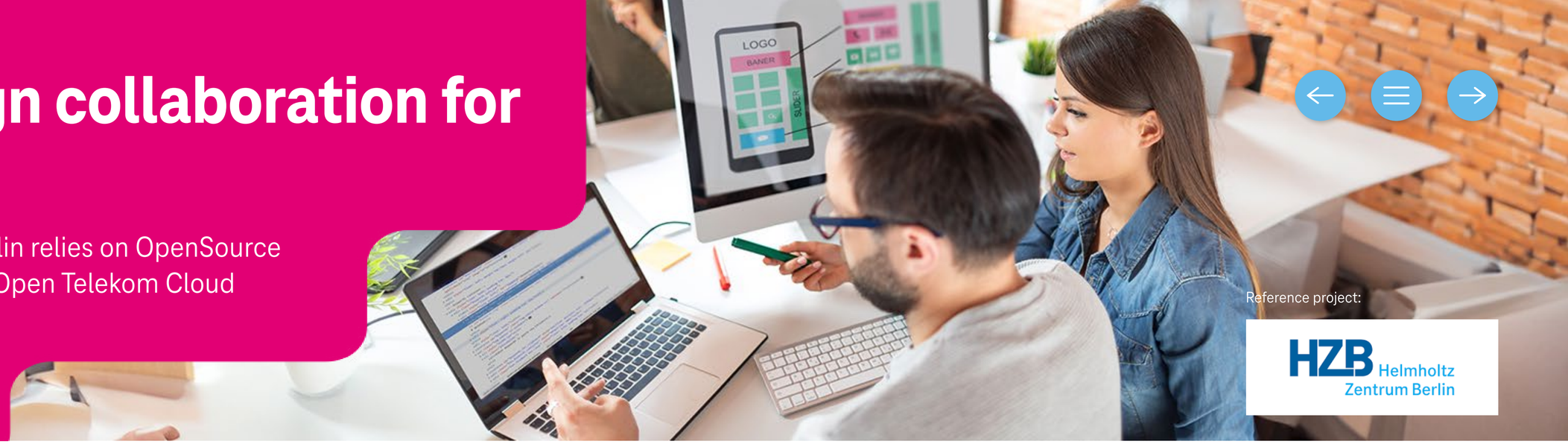
With T-Systems, the Ministry has found a partner at eye level – including proximity to the customer, regular interchange, and local support by German staff. The MfDE gains access to the SAP expertise as well as to contact persons to make sure that all the developments in the extensive SAP landscape are mapped and supported cleanly above platform operation as well. “The most important factor for the federal state is that the SAP systems support its functional procedures reliably at all times. T-Systems has absolutely met the customer’s needs in this regard, with outstanding service for application management for more than 15 years,” sums up Timo Czajka.

ITG benefits from outsourcing of Commodity Services to T-Systems

Application Operations

A sovereign collaboration for research

Helmholtz-Zentrum Berlin relies on OpenSource Collaboration from the Open Telekom Cloud



Reference project:

HZB Helmholtz Zentrum Berlin

“T-Systems put a package together for us in nearly no time at all and proved to be a reliable and competent partner whose primary objective was to help us – and acted pragmatically to do so.”

Ingo Heinzel, Head of ApplicationServices, Helmholtz Center Berlin for Materials and Energy (HZB)

Cutting-edge research for major challenges – that’s the motto of Helmholtz-Gemeinschaft Deutscher Forschungszentren e. V. (the Helmholtz Association of German Research Centers). Founded in 1995, its 44,000 employees and budget of over 5.8 billion euros (2021) make it one of the world’s largest scientific research organizations. Institutes like the Alfred Wegener Institute in Bremerhaven, DESY in Hamburg, DKFZ in Heidelberg, KIT in Karlsruhe, and the Jülich Research Center all do research under the umbrella of the Helmholtz Association. Many Helmholtz centers are part of the European Open Science Cloud and Germany’s national research data infrastructure.

The Association has a footprint in Berlin with the HZB, the Helmholtz Center for Materials and Energy. At two sites in Berlin, Wannsee and Adlershof, this institution conducts research on technology development, applied physics, and chemistry with respect to achieving a climate-neutral society. Research topics include next-generation solar cells, capturing sunlight to generate green hydrogen, and new types of batteries. In professional circles, the HZB is known for its X-ray source BESSY II. The opportunities available at the institution also attract guest scientists from around the world.

Based on its members, the HZB is considered to be a public-sector facility. The work of its more than 1,200 employees is funded largely by the German government and the State of Berlin. The HZB is active in the Helmholtz-wide MALTHGF working group, which aims to establish a sovereign IT system – in line with the German government’s digital strategy. The HZB had contact with T-Systems and started a trial for the OpenSource Collaboration service, an alternative to the common Microsoft products for collaboration.

The HZB fell victim to a cyberattack in mid-June, 2023, forcing the institution to shut down its IT systems completely. Among other losses, the scientists could no longer access the HZB-internal collaboration services, posing a serious disruption to their research work. The HZB needed a solution – and quickly – to enable its scientists to get back to work. The IT managers approached T-Systems and asked them to accelerate the rollout of the OpenSource Collaboration solution. As such, the hacking attack became the catalyst for switching over to open source-software.

Application Operations

At a glance

- Hacking attack caused total IT failure
- Search for fast alternative collaboration solution
- Replace the Microsoft suite
- OpenSource Collaboration from T-Systems: Grommunio, Jitsi, Nextcloud, Mattermost
- Change of the back-end system: Establishment of the Open Telekom Cloud
- Solution implemented in just two weeks
- Execution of digital strategy: Sovereign workplace on open source
- Attractive price

The reference in detail

The challenge

Daily newspaper Tagesspiegel got straight to the point: “Unable to work for months? Helmholtz-Zentrum Berlin battles with the consequences of a hacking attack”. No email, no SharePoint – all the internal IT systems had to be frozen and subjected to a forensic examination. At the same time, the team from Head of ApplicationServices Ingo Heinzel began searching for a fast solution to give the scientists efficient workplace solutions for collaboration again.

“We benefited from the fact that we had already evaluated OpenSource Collaboration from T-Systems,” explains Heinzel. “We had already classified the service as a potential future solution as part of the sovereignty discussion. But it was unclear how quickly we would be able to implement it. We decided to find out just how fast T-Systems could be.”

The solution

Heinzel contacted T-Systems. Then everything went quickly. Marten Bütow, Tribe Lead Collaboration Services, got the ball rolling for the agile project at T-Systems. He addressed the Open Telekom Cloud team and Matthias Greska from Cloud Sales. The technical solution and the contract with the HZB were set up concurrently. “In principle, the technical blueprint was already there. As a result, everyone knew what they needed to do,” explains Bütow.

As the Open Telekom Cloud team was setting up a tenant for OpenSource Collaboration, the requirements on the company side grew. In addition to an alternative for groupware/Exchange, the HZB wanted to have a full collaboration suite right away, including a videoconferencing system, chat, and file shares. The groupware solution by Grommunio was joined by Mattermost as Chat, Jitsi as videoconferencing system, and Nextcloud as file-share system.

The HZB solution was built according to the blueprint, which meant restructuring the entire collaboration back-end, while the front-end clients (such as Outlook and Thunderbird) were retained. As a result, the work environment was preserved for both mobile and stationary user devices. The scalable tenant in the Open Telekom Cloud was made available within a week, followed by the complete collaboration back-end for OpenSource Collaboration one week later. This also included setting up a native LDAP – utilizing the data that was extracted from an SAP system which the HZB had outsourced to an external partner and was therefore unaffected by the cyberattack.

The HZB initially decided to forgo a data migration, leaving one final question: How to send the access credentials for the new system to the employees securely. “We found a pragmatic solution here, too: We simply handed out the printed access credentials by internal mail,” explains Heinzel. “We concluded the contract in parallel to the technical work, enabling us to close the entire project package completely,” summarizes Matthias Greska. In the end, 1,200 employees were able to resume their work within three weeks. In the meantime, the system now hosts 2,000 accounts – guest scientists and research assistances also have access to the new collaboration services.

Customer benefits

The HZB solved two problems at once with OpenSource Collaboration. Firstly, the research institute minimized the impact of the hacking attack: The 1,200 employees were able to access fully-equipped collaboration features again in nearly no time at all. At the same time, the HZB set course toward sovereignty: The back-end system is based fully on open source and is provided from a European cloud.

Meanwhile, the users were not impacted by the fundamental changes to the back end: They continued to work with the established client software – regardless of device. Scalability and the technical architecture also let them access the same account from different end devices concurrently – a feature designed specifically for scientists. The package is rounded out by a highly attractive price, which is much lower than the costs for the Microsoft suite.

The Head of ApplicationServices summarizes: “T-Systems put a package together for us in nearly no time at all and proved to be a reliable and competent partner whose primary objective was to help us – and acted pragmatically to do so”.

How the partnership with T-Systems is shaping the future of telecommunications

Legalian: AI vs. money laundering

Innovative solution achieves up to 80 percent efficiency gains with respect to reporting obligations and risk analysis

Reference project:

LEGALIAN

“With the T-Systems Sovereign Cloud powered by Google Cloud, we can now take off on the market with an innovative, AI-based service for compliance with the Federal Money Laundering Act”.

Maximilian Reinhard, Founder and CPO Legalian.io

Money laundering – something that sounds like the big, international financial world. However, money laundering is an issue that many other occupational groups also regularly come into contact with. This is especially the case when they establish new business relationships or – as stated in the Federal Money Laundering Act – “significant circumstances” change with current customers or clients. This is particularly relevant for notaries, lawyers, tax consultants, and independent auditors – as these occupational groups are among the “obligated parties” within the Federal Money Laundering Act.

The central task for “obligated parties” within the context of the Federal Money Laundering Act is to know who they are doing business with (“know your customer”). To this end, obligate parties must analyze and document the nature of the business relationship and clearly identify the persons involved in order to report any suspicious transactions to the supervisory authorities. The latter require a risk analysis of the respective business relationship – this must be “thorough, complete, and appropriate.”

Money laundering has many aspects. The Federal Money Laundering Act not only comprises the fight against illegally acquired money from organized crime, but also the prevention of money flows that support terrorism. In addition, business relationships with politically exposed persons (such as ministers or members of the Bundestag) or companies from high-risk third countries must be documented in accordance with the Federal Money Laundering Act.

As obligated parties, notaries, lawyers, tax consultants, and independent auditors must collect the necessary data, e.g., on the shareholder structure of their clients. They must gain transparency about who is the “beneficial owner” of the client company; in other words, who controls the company in question. This can be quite time-consuming when dealing with complicated, sometimes internationally intertwined shareholder structures.

Benedikt Reinhard, Constantin Wild and Maximilian Reinhard from Munich have discovered potential for optimization here and are now declaring war on time-consuming Federal Money Laundering Act verification processes with their start-up Legalian. Benedikt Reinhard sums up the situation in a nutshell: “Why should people waste their working time on tasks that algorithms can perform much more easily, consistently, and quickly? With the T-Systems Sovereign Cloud powered by Google Cloud, we can now take off on the market with an innovative, AI-based service for compliance with the Federal Money Laundering Act” Maximilian Reinhard, Founder and CPO Legalian.io Innovative solution achieves up to 80 percent efficiency gains with respect to reporting obligations and risk analysis.

Maximilian Reinhard continues: “With the help of artificial intelligence (AI), necessary research tasks and their documentation can be greatly simplified and accelerated. Data gaps are recognized and consistently closed on the basis of the connected register data. Risk analyses are also created automatically with the help of an algorithm. A clear added value for the Federal Money Laundering Act compliance process.”

Legalian’s AI professionals are accredited partners of the public registries that hold relevant information. They relieve notaries, lawyers, tax consultants, and independent auditors (and their clients) of time-consuming administrative processes and achieve massive efficiency and quality gains with AI. This allows them to concentrate more on the client or the assignment itself and on maintaining the client relationship.

At a glance

- Research to fulfill the requirements of the Federal Money Laundering Act is time-consuming
- Research and risk analyses as separate, manual processes
- High susceptibility to errors, high time expenditure
- Legalian: AI-based all-in-one solution can be used as required (Federal Money Laundering Act compliance platform)
- Provided from the T-Systems Sovereign Cloud powered by Google Cloud
- Massive relief for notaries, lawyers, tax consultants, independent auditors and their clients
- Simplified process, up to 80 percent efficiency gain with simplified quality control
- Significantly faster, consistent reporting
- Compliance of data sovereignty requirements
- 100 percent compliant with the Federal Money Laundering Act and the Federal Financial Supervisory Authority
- Scalability for new business model

The reference in detail

The challenge

“We have intensively addressed the topic of Federal Money Laundering Act checks in our previous professions – as part of our professional experience in the FinTech and private equity environment, we have experienced firsthand how time-consuming and error-prone such research is. We decided to professionalize this process,” explains Constantin Wild.

The aim was for a solution to be developed for the specific requirements of the Federal Money Laundering Act that uses AI to perform the necessary searches in the registries, presents the results transparently and comprehensibly, and, on this basis, performs the risk analysis and the required documentation – an all-in-one platform that handles the Federal Money Laundering Act compliance process in a legally compliant and automated manner for notaries, lawyers, tax consultants, and independent auditors.

To achieve this, Legalian needed a scalable and modern platform that also had to ensure a high degree of data sovereignty. Ultimately, the analyses include confidential and personal data from various international sources that only the respective obligated party and its respective business partner/client are permitted to view.

The solution

Legalian decided to use the Google Cloud for the development and operation of the solution. “We’d been using tools from the Google ecosystem for our algorithms for some time. Among other things, we use machine learning models and enhance them continually,” explains Constantin Wild. “Working with Google is straightforward.” Legalian uses the T-Systems Sovereign Cloud powered by Google Cloud to handle sensitive data in order to meet the high requirements for data protection, compliance, and data sovereignty.

Legalian, the Federal Money Laundering Act compliance platform, uses a state-of-the-art cloud architecture that customers can use as needed in a simple as-a-service model. If a lawyer wants to create a Federal Money Laundering Act check for a client, they log in to Legalian.io via their account and enters their request directly. The relevant data is then compiled in the background, the shareholder structure is checked, the beneficial owners are identified, and all further aspects of the Federal Money Laundering Act requirements are ticked off step by step. Handwritten PDF scans, which are often the only original data source available to the registries, are not an obstacle, but are read using specially trained, AI-based font recognition models and provided in the relevant context. The platform also provides customized reporting which, in addition to the general client and mandate documentation, also meets the requirements of the respective chamber in the context of a Federal Money Laundering Act audit.

Legalian accesses the data in the registries on site via APIs, meaning that Legalian uses the sources and data only for the specific purpose and stores the result in an individual repository for the respective user. This file can only be accessed by the client of the Federal Money Laundering Act profile, e.g., the lawyer. On this basis, they carry out an initial plausibility check and triggers the risk analysis. They release the completely pre-filled documents, including the risk analysis, to the client, who can easily check the information with the help of the original documents stored, adjust or supplement them if necessary, and finally confirm them.

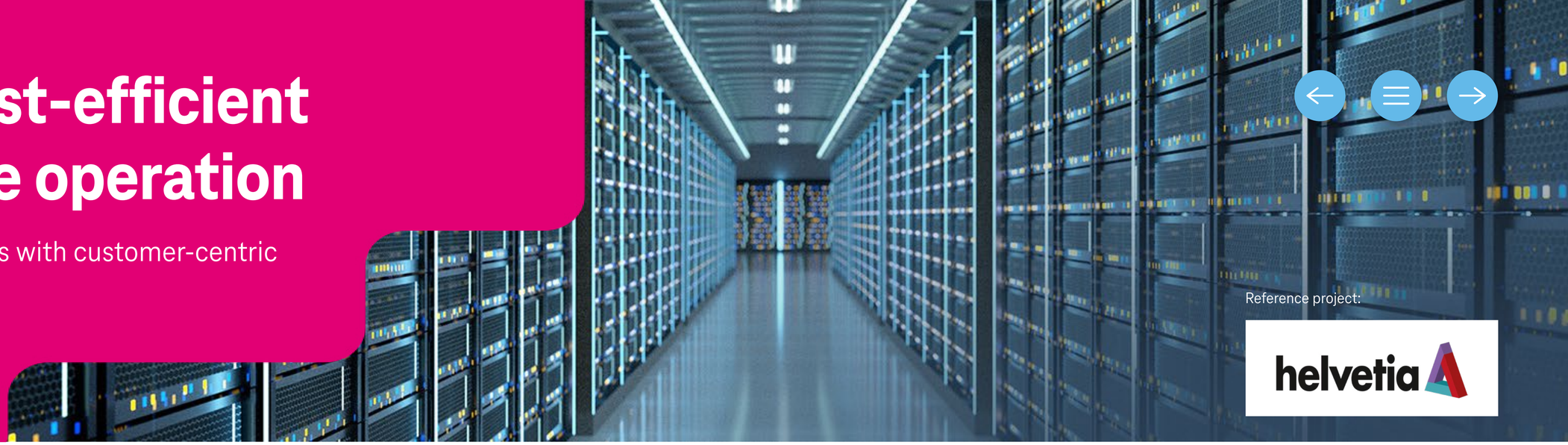
Customer benefits

With the T-Systems Sovereign Cloud powered by Google Cloud, Legalian has found the ideal technical basis. “This means we can now hit the market with an innovative, AI-based solution for Federal Money Laundering Act compliance,” says Maximilian Reinhard. The start-up clearly demonstrates how an AI-based solution can also be implemented in a confidential environment and used with great added value.

Obligated parties such as notaries, lawyers, tax consultants, independent auditors, and their clients benefit equally from the service from the sovereign cloud. As a digital assistant, the all-in-one service assumes all data-based research and documentation tasks, so that the human only has to supplement the content in exceptional cases. The time required to prepare analyses compliant with the Federal Money Laundering Act and Federal Financial Supervisory Authority is reduced by up to 80 percent and more – secure and GDPR-compliant document storage is also ensured with the sovereign cloud.

Stable, cost-efficient mainframe operation

Helvetia: T-Systems wins with customer-centric mainframe services



Reference project:

helvetia

“T-Systems took our needs for a cost-efficient, yet robust mainframe engagement seriously.”

Markus Marksteiner, Head of Infrastructure & Operation in IT at the Helvetia Insurance Group

Helvetia’s vision is to be the best possible financial security partner and set new standards for customer convenience and availability. These include simple closing, fast claims settlement, and transparent contracts – in line with the company’s purpose: “Life is full of opportunities and risks. We’re there when it matters.” The Helvetia Group is an international insurance group that was founded in Switzerland in 1858. Helvetia is the leading Swiss all-line insurer in Switzerland. In the Europe segment, with Austria, Germany, Italy and Spain, the company has firmly established market positions with above-average growth. In its Specialty Markets segment, Helvetia offers custom-tailored specialty and reinsurance coverage worldwide. With life insurance and an extensive range of specific insurance policies, the company addresses seven million consumers and business customers. With a business volume of over 11 billion Swiss francs and 12,000 employees, the Helvetia Group is one of the top three all-line insurance companies in Switzerland.

The company is pursuing an ambitious digitalization and IT modernization strategy. The use of the cloud is part of this strategy. The mainframe systems currently give reliable support to the company’s mission-critical business processes – and that won’t change in the medium term. The mainframe will remain a strategic factor.

Helvetia wants to maintain its stable, secure operations of core processes with the mainframe, but also structure the transformation to the digital future at the same time.

At a glance

- High-availability, secure, and cost-efficient mainframe platform for mission-critical insurance processes
- Flexible and cost-effective mainframe solution
- Long-term stability of costs and operations
- Long-term access to mainframe expertise
- Ongoing modernization of the system platform
- Compliant with FINMA (Swiss financial market supervisory authority) operating standards
- Support for the digitalization strategy

Infrastructure & Platform Services

The reference in detail

The challenge

Companies that use mainframes know the challenges of these proven mainframe systems in detail: They have to manage operating and maintenance costs, ensure access to expertise, and lay the foundations for rolling out new business functions on the stable, highly scalable technology stack.

Helvetia wanted to tackle these challenges with a partner who not only had experience with mainframes but would also work with the insurance company as equals. At the same time, the company wanted the partnership to increase flexibility in mainframe service provisioning. With T Systems, the insurance company found a provider that guarantees stable, cost-efficient operations in the coming years.

The solution

In November 2021, the Helvetia team decided to migrate its mainframe systems that support its German, Italian and Swiss businesses. The partners concluded a dynamic contract that maps the services as needed and gives Helvetia the necessary flexibility. To achieve this, T-Systems built a new environment for Helvetia in its mainframe data center, based on the existing mainframe installations, and ensured a smooth migration of the workloads based on its years of expertise in this area.

Since then, T-Systems has been responsible for running the mainframe systems. In addition to guaranteeing stable operations, the provider also maintains the ongoing modernization of the mainframes in line with technological developments – such as enhancing automation and installing regular software updates.

The managed mainframe services provided to Helvetia from the twin-core data center comply with the requirements of FINMA, the Swiss financial market supervisory authority. To guarantee access to the necessary data in Switzerland at any time, for instance, the data is replicated in Switzerland several times per day. As a result, Helvetia guarantees auditability and local data availability at all times.

Customer benefits

“T-Systems took our needs for a cost-efficient, yet stable mainframe service seriously,” says Markus Marksteiner, Head of Infrastructure & Operation in IT at the Helvetia Insurance Group, “which created a solid foundation for a long-term partnership.” Frank Schumacher, Head of Sales at T-Systems Schweiz AG, adds: “A partnership among equals created an optimal solution. Working together, we created a managed mainframe service that meets all the requirements of FINMA. It is a flexible, secure, and cost-effective solution for business-critical financial processes.”

Economies of scale and a high level of automation in operations were the decisive factors for the bid. These factors stem from the efficient, permanently optimized operating and management processes and the company’s years of mainframe expertise.

T-Systems has already demonstrated its mainframe expertise for the customer with a seamless system migration. With the service agreement, Helvetia has gained a long-term partner that ensures permanent access to mainframe expertise and always keeps the systems up to date. Having secured its operations, the insurance company is now free to concentrate on implementing its helvetia 20.25 strategy.

Car manufacturer: Mainframe modernization with minimal risk

Automated migration of an IDMS database to DB2Car

“Our customer defined quality requirements for accuracy, response time behavior, and robustness of the migrated system that were far above average, and was very surprised that our migration procedure exceeded them all.”

Rüdiger Bosch, Project Manager, T-Systems

E-mobility is a hot topic in the automotive sector, along with connected and software-defined vehicles. Modern IT methods and platforms play an important role here. At the same time, however, OEMs are often traditional companies that use historically evolved IT for many established business processes.

To execute time recording (employee clock-ins and clock-outs), a central cross-functional process, the T-Systems customer has relied on a centralized time management system from T-Systems for many decades. This system is based on robust, powerful mainframe technology. All the employees within the automotive group use a variety of access portals to record their working times every day. The time management system stores this data and processes it in (overnight) batch processing mode.

The mainframe solution consists of several hardware and software components. For instance, the time management system uses a legacy integrated database management system (IDMS) from CA Technologies as its database. The license fees for the database were a key element of a drastic increase in maintenance costs. The database vendor had announced further price increases in the coming years.

At a glance

- Business-critical time recording system for an international corporation
- Lock-in: high (and still increasing) license fees for the IDMS data-base
- Legacy technology hindered modernization
- Loss of IDMS expertise
- Search for a modernization approach with minimal risk
- Include frequent maintenance and enhancement releases
- Migration from IDMS to DB2 (transfer to a relational database model)
- Highly automated code transformation
- Continuous modifications to automatic migration for a zero-fault conversion
- Migration within two years and go-live within two days
- Trouble-free migration
- System enhancements are possible during the conversion project, reducing the necessary system freeze to just a few weeks
- Fully automated testing
- First step: Setting the course for further mainframe modernization
- Reduction of license fees
- Vendor lock-in ended

Infrastructure & Platform Services

The reference in detail

The challenge

Aside from its continually increasing costs, the system was also a dinosaur from a technological perspective. The pool of available IDMS expertise is shrinking steadily – not only within the company, but also in the overall market. Any adaptation of the database to new requirements is costly, preventing a number of modernization approaches that could benefit the mainframe, such as integration with cloud solutions.

The legacy hierarchical database technology proved to be one of the greatest obstacles to the modernization (or fundamental transformation) of the time recording system. At the same time, it is a crucial cross-functional system that every employee uses every day. Failed modifications to the system could have significant consequences for the company.

To put the system on a course for the future, the system owners decided to replace the IDMS, to take a first essential step toward the modernization of the central time management system. However, they also wanted to minimize the risks of this first step. This is where T-Systems came in, to develop and implement a viable modernization concept.

The solution

T-Systems presented several options. Ultimately, the customer decided to transform the IDMS database to DB2, which is also established in the mainframe sector, but – in contrast to IDMS – offers a variety of modernization options. What's more, relational DB2 databases don't only support COBOL, but also Java, C#, .NET, C++, and SQL.

This type of cross-database migration represents the most complex migration path for databases. Data models and data formats need to be transformed, but the most effort is required for the conversion of the source code for the database management system (DBMS). As the name implies, the DBMS manages the database, for example, offering interfaces for creation, editing, and queries. Over the years, the source code for the IDMS database had grown to 4.5 million lines, all of which had to be scrutinized and adapted. In addition, the code was subject to frequent maintenance and enhancement cycles, for instance, to meet new legal requirements or reflect developments at the company. A human developer can usually write around 150 lines of code per day. A variety of dependencies in the code must also be taken into account, however – a typical source of errors in this kind of mainframe refactoring projects. "Based on financial and efficiency factors, we decided to automate the code transformation," explains Rüdiger Bosch, the Project Manager for T-Systems, "and relied on a solution from our partner Astadia to do so."

The Astadia tools are well suited to transforming code from legacy programming languages into state-of-the-art languages like Java. "Nonetheless, we had to keep a close eye on the tools." Over multiple cycles, the team transformed the code, tested it, identified errors and corrected them, establishing the specifications for the transformation. The finalized solution was created within 18 months. It enabled a 99.5-percent degree of automation and ensured that the code was transferred with zero faults. Only a two-day time window was available for the migration of the IDMS system itself.

Customer benefits

"A successful go-live is really good," summarizes Project Manager Rüdiger Bosch, "but we couldn't really judge the success of the project until one month after the conversion." Like in payroll accounting, a month is an important time frame in time management: "We ran all the monthly activities – with success! A full month without considerable disruptions after a technical conversion like this is simply outstanding." By replacing their IDMS, the T-Systems customer not only freed itself from high license fees for the mainframe system and escaped the vendor lock-in, but also set a course toward the future. In the medium term, it will be possible to map the application in microservices, manage it with containers, and ultimately separate it from the mainframe. The automated migration once again proved its high level of maturity – companies that still use mainframes can use the factory approach from T-Systems to take their first steps toward modernization at a minimized risk level. "Another major benefit was the ability to upgrade the system during the conversion project, which reduced the necessary system freeze to just a few weeks," explains Rüdiger Bosch from T-Systems. Due to the savings in license costs in the millions, the amortization period of the project is 2-3 years.

Complete IT Outsourcing

Volkswagen Autoeuropa renews its trust in T-Systems for the management of its production control systems and IT infrastructure in Portugal

Reference project:

“This collaboration contributed to the adoption of the production cloud, with a view to the process of interoperability of applications, which allows Volkswagen Autoeuropa to better manage its production.”

Nuno Piedade, Account Manager, T-Systems Ibéria, S.A.

Located in the city of Palmela, near Lisbon, Portugal, Volkswagen Autoeuropa is the production plant of the renowned automotive brand in Portugal. This accounts for 4% of the country‘s export volume in 2022, with an annual production volume of around 231,100 vehicles and a sales volume of €3,674 million.

Placing its trust in T-Systems again, Volkswagen Autoeuropa has renewed the contract for the maintenance and management of its production control systems and IT infrastructure. T-Systems Portugal, as the technology partner, will maintain and manage its technology ecosystem with a proximity support model at its locations in Portugal. Over the past twelve years, T-Systems has been a strategic partner, supporting the adoption of the plant‘s cloud by guaranteeing the interoperability of applications to ensure the best management of plant production. The focus will be on the development of procedures at the level of logistics and production that allow the manufacturing model to fit the new markets.

With support from T-Systems, Volkswagen Autoeuropa is currently one of the 100 production plants worldwide that operate with T-Systems‘ GIMM suite for production and logistics control. It was also the first to implement the Road Test Predictor application to reduce time, costs, and CO2 emissions in on-road vehicle testing.

At a glance

- A new five-year contract for the maintenance and management of its systems and infrastructure
- Focus on the development of new logistics and production solutions to adapt the manufacturing model to the new market
- Volkswagen Autoeuropa has been a benchmark for innovation in vehicle production and testing in recent decades
- T-Systems has collaborated closely with Volkswagen Autoeuropa to assist in the adoption of the cloud in the factory, ensuring the interoperability of local applications to improve production management

Infrastructure & Platform Services

The reference in detail

The challenge

Given the continuously changing market conditions, Volkswagen Autoeuropa focused on sustaining and upgrading production management and technological infrastructure. The company was aiming to establish new logistical and production solutions that would allow it to adapt the manufacturing model to the new market while also ensuring the interoperability of various systems and applications to maximize the plant‘s efficiency and productivity.

Furthermore, there was a focus on reducing costs, time, and CO2 emissions in road vehicle testing.

The solution

With the help of T-Systems, Volkswagen Autoeuropa pioneered the implementation of the Road Test Predictor application. The main objective, based on an artificial intelligence algorithm, is to improve the reliability of the prediction and reduce the volume of road test vehicles while maintaining the same level of quality. After the vehicle surface audit phase, a confirmation is received in the application as to whether the road test should be performed. Following the vehicle surface audit step, the applicant receives confirmation as to whether the road test should be done. Currently, 10% of road testing is no longer undertaken, resulting in significant CO2 emissions reductions.

The app sends production data to the DPP cloud on AWS, where an algorithm predicts the digital road test with high accuracy. T-Systems Portugal worked on the adaption and construction of interfaces between the factory‘s Production Information Systems and the AWS cloud for its operation.

Developed by T-Systems Iberia, the T-Systems GIMM suite facilitates the digitalization of industrial companies through its three modules: LINCS, which synchronizes Just in Time and Just in Sequence systems between OEM and suppliers; PROCS (MES), which carries out production traceability and compliance; and STOCS (WH), which integrates warehouse management into the supply chain (SCM). GIMM is a versatile, scalable, and highly configurable solution, which has standard interfaces to simplify deployment, and incorporates innovative picking processes, e-INK, and integrates into poka-yoke, error-proof systems. It is currently available in PaaS mode in the Microsoft Azure Cloud.

Customer benefits

GIMM uses Machine Learning and Artificial Intelligence technologies to detect and predict potential faults in manufacturing processes, as well as to configure new needs in an agile, flexible, and cost-effective manner.

Volkswagen Autoeuropa has renewed its trust in T-Systems due to the proven effectiveness of its local team in Portugal in project completion, proactivity, and the quality of service provided. With the creation of new logistics and production solutions integrated into the company’s Shopfloor IT platform, the collaboration assures the ongoing improvement of the production plant’s technical systems, minimizing response times and ensuring maximum system security.

Maximum flexibility through a multi-cloud approach

Gerresheimer AG relies on a combination of managed Azure Cloud and Future Cloud Infrastructure

Reference project:

gerresheimer

“With T-Systems, we’ve found a partner who is a competent guide for navigating the cloud. With our multi-cloud approach, we have optimally positioned ourselves for the future.”

Benjamin Benning, Global Director IT Infrastructure, Global IT, Gerresheimer AG

Gerresheimer AG from Düsseldorf has a diverse product portfolio: The company is known for its pharmaceutical packaging and medical accessories, including inhalators, pharmaceutical vials, injection systems, insulin pens, and ampules. Gerresheimer supplies businesses in the pharmaceuticals, healthcare, wellness, and biotechnology segments with these products, which are essential for many people. The company’s portfolio also includes cosmetics packaging and glass containers for the food and drink industry. Pharmaceuticals and healthcare make up the lion’s share of the company’s revenue. It employs 10,000 people and produces its products in 36 plants worldwide. The listed company generated revenue of 1.8 billion euros in 2022.

Gerresheimer AG also expanded through acquisitions, which – together with organic growth – resulted in a heterogeneous IT infrastructure that was run in-house and decentralized at 45 different sites. The company decided to consolidate its heterogeneous business IT on a uniform base and identified migration to the cloud as an opportunity – and to address sustainability aspects at the same time. The packaging specialist migrated the first systems to the Azure Cloud together with Microsoft. With the help of T-Systems, the company developed a suitable cloud strategy, including migration and operation in a public or private cloud, depending on the system.

At a glance

- Decentralized IT generated high internal costs and was not future-proof
- Consolidation of IT systems for improved transparency, standardized governance, and greater operating efficiency
- Design of a forward-looking IT landscape based on cloud computing (including sustainability aspects)
- Search for comprehensive cloud expertise for migration and operations
- Mapping of privacy requirements
- T-Systems was chosen as a partner to develop and implement a cloud strategy
- Multi-cloud concept: Future Cloud Infrastructure (private cloud) and Azure (public cloud)
- Assessment of the server landscape, definition and realization of the appropriate modernization path
- Operations based on suitable service level agreements
- Managed services from T-Systems for Azure Cloud and Future Cloud Infrastructure
- Reduction of operations tasks and focus on core competencies
- Access to cloud expertise
- Greater transparency and operating efficiency
- Ability to react to business developments
- Sustainability assessment proves: Reduction of carbon footprint by more than 90 percent
- Forward-looking positioning – optimally aligned with Gerresheimer’s expansion plans

Infrastructure & Platform Services

The reference in detail

The challenge

Implementing a central IT governance concept to improve the transparency of the IT landscape and its costs wasn't the only reason why Gerresheimer chose to migrate to the cloud. The company also reckoned that consolidating its systems in the cloud would relieve employees of operating duties and bundle these duties company-wide, improving operating efficiency. As part of this process, the company also planned to consolidate its IT partners to optimize its supplier management.

Last but not least, Gerresheimer wanted to ensure that its migration to the cloud also covered privacy aspects. Since the company prefers to manage its IT in-house, it sought a partner for managed cloud services to navigate them competently through the cloud transformation process and, subsequently, provide reliable maintenance for the cloud systems in the form of robust SLAs. A total of 900 – mainly VMware-based – systems were in focus. 50 of them were already in the Azure Cloud. That's where T-Systems came into play.

The solution

Together with T-Systems, Gerresheimer AG analyzed the situation and ran through various scenarios. As a result, the company determined that full system migration to the Azure Cloud was not the optimal target scenario. Based on the needs of the applications, as well as privacy considerations, the partners decided on a multi/hybrid cloud concept for Gerresheimer's future IT landscape. It became apparent that Future Cloud Infrastructure (FCI), a modern private cloud solution from T-Systems, would deliver major benefits in the migration process.

Since the vast majority of the IT systems are based on VMware technology (like FCI itself), these systems could be migrated to FCI completely as-is. This enabled Gerresheimer to quickly achieve its primary goal of platform consolidation and increased operational efficiency.

With the leeway thus gained, the process owners at Gerresheimer were able to work with the T-Systems experts to analyze the application landscape in detail and develop an optimized target vision. As part of the cloud migration framework, the partners envisioned different target scenarios for the servers – depending on the technical and privacy needs of the applications. Some would remain in their current state, while others would be migrated to new platforms: Systems with a high level of dynamism and in need of innovation will still be migrated to the Azure Cloud, where they are maintained in a standardized landing zone by T-Systems. The landing zone also features state-of-the-art security. Systems with a lower level of dynamism, which will continue to run on VMware, remain in the Future Cloud Infrastructure, where they are managed either in-house or by T-Systems – depending on how important it is for Gerresheimer to have direct access to the platform and the application.

Customer benefits

With T-Systems, Gerresheimer has gained a strategic partner for the future of its IT systems that can support the full life cycle – from consulting and migration to managed services. Gerresheimer is not only achieving its objectives of IT consolidation and improved transparency and efficiency; with its multi/hybrid cloud approach, it is also gaining an IT landscape that adapts to the company's needs optimally. In turn, this enables the IT team to respond flexibly to business developments. The company is also reducing the number of its partners significantly with this step. Several interfaces and communication channels can be eliminated.

The managed services enable Gerresheimer to reduce its internal administrative efforts, freeing up resources for strategic IT topics. Service level agreements guarantee that business processes run uninterrupted. Last but not least, Gerresheimer is making significant gains in sustainability through its move to the cloud: the efficient utilization of IT resources – in both the private and public clouds – is reducing its carbon footprint by more than 90 percent.

“Kommune 2.0” – using data to set the right course for the future

DKSR, the data competence center for cities and regions, uses the Open Telekom Cloud as a basis

Reference project

DKSR
Daten-Kompetenz
für Städte & Regionen

“With the Open Telekom Cloud, we have found the right basis for our open urban data platform – offering flexibility as well as data compliance.”

Tim Cleffmann, Head of Business Innovation at DKSR

DKSR focuses on the future of municipalities (“Kommunen”) and, in doing so, places a clear emphasis on the added value of data. “We are convinced that cities, municipalities, and regions can substantially benefit from using data. This data gives decision makers in the field of public administration completely new insights and creates a solid basis when it comes to reaching decisions and implementing measures. Smart cities can be created where life is more pleasant and sustainable”, explains Tim Cleffmann, Chief Business Development Officer at DKSR.

DKSR was founded in 2021 as a joint initiative from five Fraunhofer Institutes, the [ui!] Urban Software Institute, axxessio, and Deutsche Telekom. The idea: Using open source technology as the basis. The idea was to create a central point for cities and regions to collect urban data (e.g., via IoT devices), to process it and then use it for city and regional development – on a lasting and large-scale basis, across pilot projects. The projects and applications serve to create a more sustainable urban design, whereby mobility is the most important aspect: Parking, electric charging infrastructure, intermodal transportation, and improved traffic management for fewer traffic jams and emissions are typical subjects that cities are addressing (or are having to address). However, municipalities are also pursuing initiatives to reduce their energy consumption.

And it is clear that this requires more than just data analytics from the perspective of data scientists. At DKSR, data experts work alongside developers, consultants with urban expertise, and communicators who accompany change processes – an interdisciplinary team with diverse skills, perspectives, and expertise. DKSR is therefore able to extensively advise its customers and develop suitable solutions.

A central element of DKSR’s business model is the open urban data platform (OUP), developed on the basis of open source. It is the central hub for data, data analysis, and implementations to which the team also connects apps from third parties. “From the outset, we were clear that we wanted to concentrate on our original value creation with the OUP. This does not include the operation of sensor technology or proprietary applications. Everything we implement for municipalities is performed using an open source stack”, explains Mr. Cleffmann, Head of Business Innovation at DKSR.

As the business model expects continuously increasing data volumes and the agile further development of offered services, the team also needed an infrastructure able to keep pace with the dynamism: A high-performance cloud. This is where Deutsche Telekom’s Open Telekom Cloud came into play. The team decided to become a Circle Partner, therefore benefiting from the Open Telekom Cloud partner support for its business.

At a glance

- Concentration on development of the business model
- High requirements from customers with respect to data security and protection
- Reduction in infrastructure management tasks
- Search for a scalable and secure cloud
- Operation of the open urban data platform on the Open Telekom Cloud
- Full scalability for data growth and higher load
- Implementation of various offer packages
- Establishment on the market: Growth with successful customer projects
- Cloud supports growth
- Support via Circle partnership
- Less infrastructure-related costs
- Focus on further development of the offer and customer relationship

Visualization of scooter trips

The reference in detail

The challenge

“Data can be collected and processed in any cloud. But to be taken seriously as a partner for customers from the public sector, our services also need to meet the requirements of the administration bodies – across the complete IT stack”, explains Mr. Cleffmann. DKSR therefore decided to establish a solid basis for its business model with a European cloud in order to avoid any complications from the outset. Furthermore, it was hoped that the European cloud would also offer the company sustainable growth. “The Open Telekom Cloud meets both requirements: it ensures that data compliance regulations are met and offers all features of a public cloud”, explains the Head of Business Innovation.

The solution

DKSR found the right partner with the OpenStack-based, comprehensively-certified Open Telekom Cloud which is provided from German data centers and operated by European staff. The Berlin based center implemented its service, which is also Open Source-based, on the Open Telekom Cloud and manages it as a platform as a service (PaaS) for its customers. The service is offered in various sizes and performance classes – depending on the customer’s requirements. Over 160 standard connectors are included to connect various data sources as well as various third party evaluation and presentation tools such as Power BI, Jupyter Hub, or Grafana.

With access to the cloud storage and computing resources, the open urban data platform is able to grow together with the demands of its customers at all times, there are no limits in terms of data volume, new connectors and evaluation options continuously increase the opportunities offered by the platform.

Customer benefits

DKSR is a success story made in Germany: In recent years, the team has successfully implemented more than 30 customer projects for German cities and municipalities and, as a result, has established itself as a digitalization partner for the public sector on the market. The basis: A reliably available cloud made in Europe. “With the Open Telekom Cloud, we have found the right basis for our open urban data platform – boasting flexibility as well as compliance”, explains Mr. Cleffmann. The team also benefited from the partner support offered by the Open Telekom Cloud and the usage-based billing model, which made a great contribution in terms of the establishment of the business.

With the open urban data platform, DKSR makes a decisive contribution towards the digitalization of municipalities and the implementation of the UN’s sustainable development goals (SDG). The supported municipalities are now able to exploit the potential afforded by digitalization, make data-based decisions, and develop their urban areas for the citizens in a targeted manner while also meeting all expectations in terms of data protection and security.

Privacy in the public cloud

Uniper uses Office 365 with secure encryption

Reference project

uniper

“With its Cloud Privacy Service (CPS), T-Systems offers us a solution that allows us to standardize our global collaboration landscape based on Azure”

Igor Kozlov, Project Manager, Uniper

Uniper is Germany‘s third-largest energy company listed on the stock exchange and one of the largest energy companies in Europe, with an energy generation capacity of over 33 gigawatts. With a workforce of over 11,000 employees, the company operates in 40 countries as an energy producer, trader and developer of innovative energy solutions. Apart from Germany, Uniper’s core markets are in the United Kingdom, Sweden and the Benelux countries.

With its current focus on gas as an energy source, the company is contributing to achieve supply security in the transition to a low-CO2 energy future. In addition to transition technologies, the company is also playing an active role in the energy transition: by 2035, all energy generated by the company in Europe should be fully CO2-neutral. To achieve this, Uniper also relies on water and hydrogen as energy sources. At the same time, the energy provider also advises municipal utilities, local authorities and industrial enterprises on implementing measures and practices aimed at decarbonizing their operations.

Upon its foundation in 2016, Uniper opted in favor of workstations that would support modern collaboration methods and flexible working conditions for its employees. These workstations are based on Microsoft Office 365, which T-Systems provides globally for the company – with one exception. Uniper is, after all, a critical infrastructure company (CRITIS). What this means precisely is revealed in the current geopolitical situation and related debates (as of fall 2022): across businesses and households alike, the subject of “secure energy supply” has become the main topic of discussion.

As a CRITIS company, Uniper is subject to a specific framework conditions that apply, among other aspects, to IT security and compliance – not only in Germany, but also in Sweden, for example, where the company produces energy.

At a glance

- CRITIS-related statutory requirements in Sweden prohibit the widespread deployment of Office 365 from the public cloud
- Reducing additional costs and management expenses
- Presenting a solution aimed at international standardization
- Launching Cloud Privacy Service in Sweden as an add-on service
- Operation of external encryption gateway in Magdeburg/Biere, Germany
- Migration of local Office 365 installation to the global platform
- Meeting country-specific compliance requirements
- Standardized operation on an international scale
- Future-proof
- Scalability

Infrastructure & Platform Services

The reference in detail

The challenge

Swedish law does not permit Uniper to simply use Microsoft Office 365 from the public cloud. “As a CRITIS company, we must ensure that specific data does not leave the country”, explains Igor Kozlov, Project Manager at Uniper. Therefore, the company needed a customized solution for deploying Office 365 in Sweden. A local partner with a data center in Sweden was required to particularly operate the exchange servers at its data center. Connected local data storage, thus ensured that the relevant data remained in Sweden.

At the same time, however, this special solution created inefficiencies in the global collaboration landscape and ultimately also had an impact on operating costs. Therefore, Uniper needed a solution that would standardize operations on an international scale and, at the same time, comply with Swedish regulations.

The solution

“With Cloud Privacy Service (CPS), we now have a solution that fulfills all compliance requirements and thus allows us to standardize our global Azure-based collaboration landscape”, elaborates Igor Kozlov, who is in charge of the project at Uniper. This is because CPS allows the company to encrypt data before it enters the cloud. In other words, only Uniper has access to the encryption keys and can thus ensure that unauthorized access by third parties is impossible – even in the event of a data leak. This solution also meets the stringent Swedish data security requirements expected of Uniper as a CRITIS company.

T-Systems operates the Cloud Privacy Service gateway – independent of Microsoft’s public cloud – in Magdeburg/Biere, Germany. All email traffic is initially routed through this encryption gateway before it reaches Azure. This applies not only to permanent operations, but also to the migration of the existing on-premises instance in Sweden.

T-Systems transfers data to the global platform via the Cloud Privacy gateway. As a result, there are no “compliance issues” even during the transfer, or in other words, adherence to Swedish compliance regulations is guaranteed even during the migration.

Customer benefits

Encryption now makes standardized management of the collaboration platform possible and cuts operating costs. Thanks to the add-on service, Uniper also meets the requirements of the Swedish regulatory authorities. At the same time, the Cloud Privacy gateway also has a soft spot for users: the proof of concept has shown that Office 365 users do not, in any way, need to compromise on performance: Emails are sent and received, without any significant delay, at the usual speed that users are accustomed to.

With the Cloud Privacy Service, Uniper has a future-proof and fully scalable solution that can be rolled out to other subsidiaries at any time to ensure data protection and compliance, for example if stricter regulations are also established in these countries.

Thank You

T Systems

Let’s power
higher performance