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Business Unit Industrial Services

# The Future is our Business



TÜV®

TÜV NORD GROUP





»» THE NEW,  
DIGITAL WORLD  
MUST BE JUST AS SECURE  
AS THE OLD, ANALOGUE ONE.  
THE SAFETY OF PEOPLE,  
GOODS AND THE  
ENVIRONMENT IS OUR  
TOP PRIORITY. ««

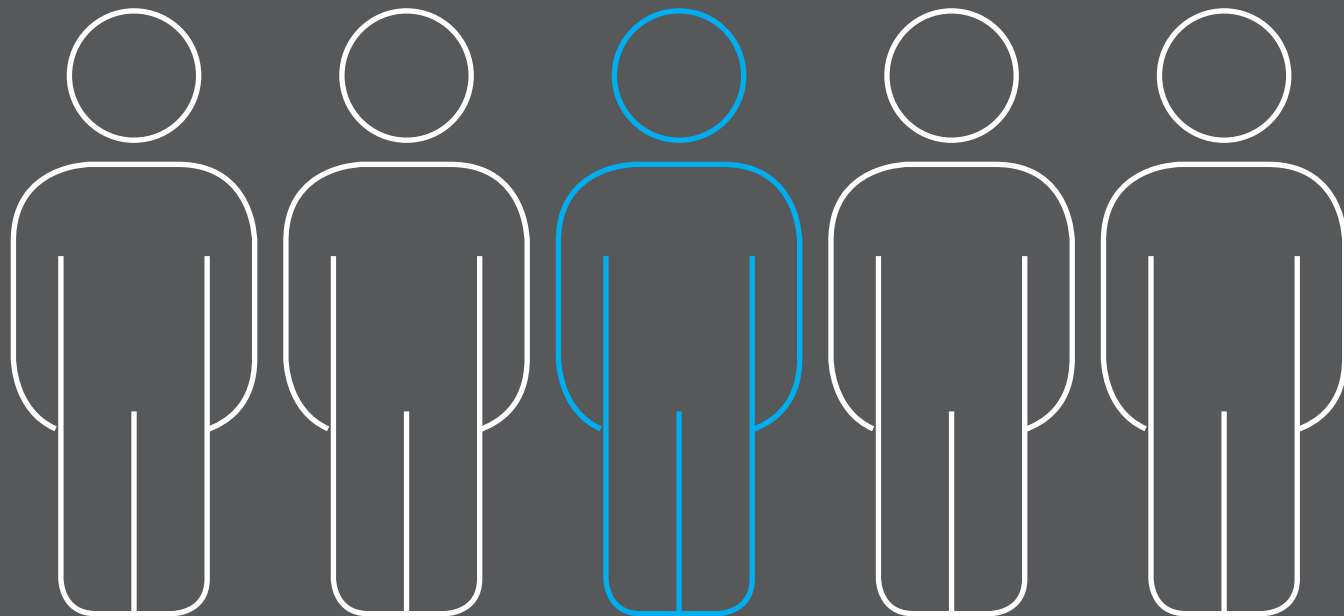
DR. DIRK STENKAMP, CEO

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## OUR CONVICTION

# OUR CUSTOMERS ARE CENTERSTAGE – WHILE WE FOCUS ON OUR EMPLOYEES



Dear reader,

The digital transformation of TÜV NORD's business unit industrial services is in full swing. In 2017, we have created a roadmap based on our group's strategy. In 2018, we began its implementation and today, many of the steps anchored in this roadmap have been completed successfully.

To us, this digital transformation means breaking new ground in our organization, using our strengths and implementing innovative business models.

We have started initiatives for sustainable cultural change, while adapting our structures, working methods and working environments. Various training courses and development programs help our employees and managers to continue acting with competence and foresight in their daily work. For this purpose, we discover new impulses for our company and allow new perspectives by adding staff members with technological and digital competence. During the digital expert training offered by our Digital Academy, participants get a chance to accumulate digital know-how and the respective mindset.

Dr. Ralf Jung

Silvio Konrad

Dr. Astrid Petersen

Ulf Theike

Investment in and cooperation with companies helps broaden our horizon, as does the development of new business areas.

By paying attention to changing customer requirements and actively using the opportunities offered by digitalization, we are able to adapt our actions to our customers' needs. Through better interaction, we accompany our customers in their decision-making process and use the resulting insights to further improve our service, product management, marketing and sales.

With great dedication, we work on implementing the actions on our roadmap, in order to remain a reliable partner and an attractive employer.

On the following pages, we will give you an introduction into the actions already completed.

The General Management Team  
TÜV NORD Systems GmbH & Co. KG

# OUR VISION

## GROWING BY OUR OWN EFFORTS

Experience, safety and reliability are at the core of our tradition.

Worldwide, we are known for being a neutral entity and working at the highest technical level. As a service provider for technology and safety, we work on finding answers to important, global future issues – on a daily basis and all over the world. With a staff of about 6000 in the business unit industrial services, we feel committed to the TÜV brand.

- Safety and success through knowledge.
- Technology, digitalization, networking.
- Anywhere, anytime.



Globalization



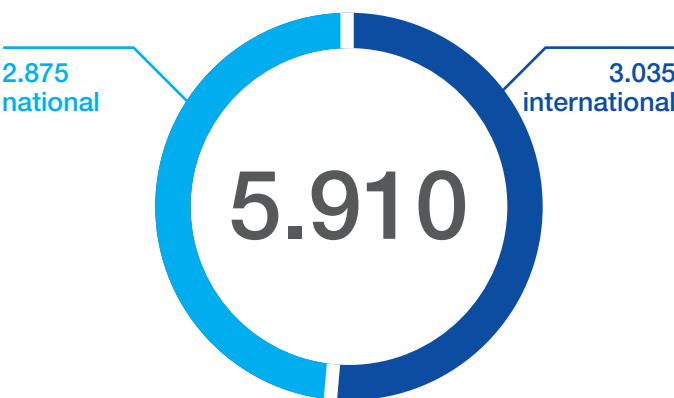
Digitalization



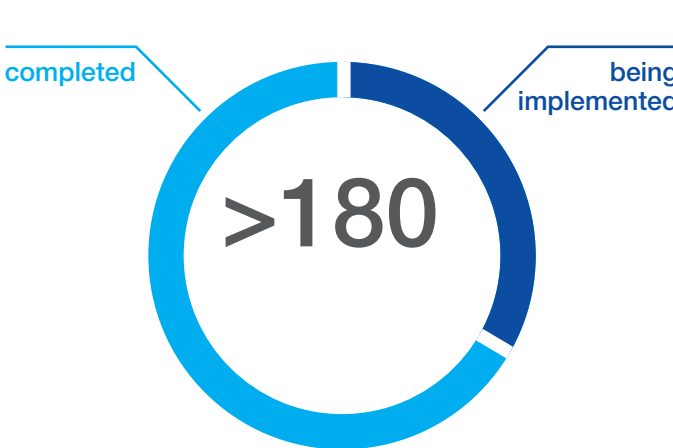
CUSTOMERS OF THE  
BUSINESS UNIT INDUSTRIAL SERVICES

## FIGURES AND FACTS OF THE BUSINESS UNIT INDUSTRIAL SERVICES

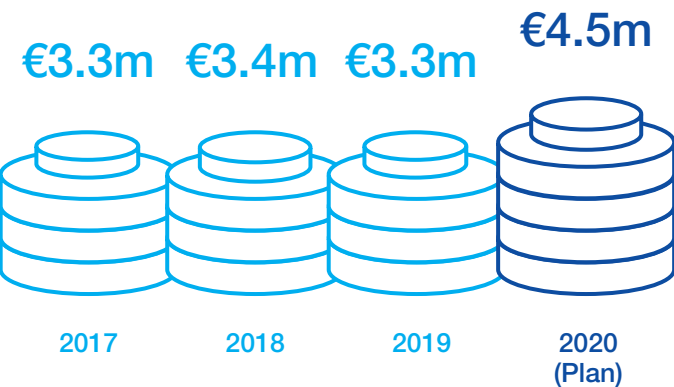
### EMPLOYEES



### ROADMAP ACTIONS



### TRAINING BUDGET FOR EMPLOYEES



### INVESTMENTS IN INNOVATION





## OUR MISSION

# ACHIEVING GOALS THROUGH FOCUS

### WHY?

At the beginning of the digital transformation in 2017, we analyzed the significant effects and consequences of the progressing digitalization with regard to our testing, inspection and certification business. Based on the results, we identified fields of activity and defined the respective strengths and weaknesses. The strengths mainly result from our comprehensive experience and core competence as a testing and certification service provider. There was catching up to do with respect to building digital competence and focusing our efforts on the changing needs and expectations of our customers in the digital age.

#### **The consequence:**

**We developed our own roadmap.**

### WHAT?

Process automation, staff qualification and innovative business models are the core activities in our roadmap. Building on that, we have defined activities to successfully implement our digital transformation. In total, six fields of activity contribute to the digitalization of our business unit.

### HOW?

We have defined a total of 180 activities. Many of them have already been implemented successfully. Through more agile working methods and tools, as well as re-designed working environments, changes in our corporate culture can already be felt now. Impulses provided by newly hired employees, innovative formats for exchange and cooperation between experts in different areas and the opportunity to actively participate in the transformation process, allow us to keep pursuing our goal.

We use concrete milestones to measure our progress. We also pay particular attention to our customers. Their needs and expectations change along with the opportunities afforded by digitalization.

The activities on our roadmap are aimed at addressing our customers individually, offering customized solutions and ensuring a near 24/7 availability. In the fast-moving age of digitalization, we therefore continue to be a strong and reliable partner.

OUR FIELDS OF ACTIVITY

OUR PATH OF  
DIGITAL TRANSFORMATION

COMMUNICATION & CULTURE

We have developed the role of internal and external communication. We see communication as a fundamental factor of our company's success. So, our team began a process of rethinking. We now understand communication as a guide to more farsightedness – based on clever concepts. It is their job to create communication platforms and situations that promote the open exchange of ideas and a dialog among all stakeholders.

In addition to active communication, we provide impulses for a different mindset to create a basis for digital innovations and new business models. We establish creative working environments, enable a modern work life, promote the exchange between colleagues and support the use of digital tools.

→ Pages 12-17



ORGANIZATION & TRAINING

To us, the development of our organization plays an important role in satisfying the changing requirements. Therefore, we believe it is our job to become more agile and flexible, while promoting a self-reliant work ethic. With this in mind, we are adapting the general framework by realigning goals, creating modern work environments, providing project management know-how and tools, as well as building a culture of learning. In addition, we allow our employees to develop their skills and through them the company itself, by providing targeted training and offering participation in internal corporate events.

→ Pages 18-19



INNOVATIONS & ACQUISITIONS

Our innovation managers analyze the changing market environment, explore new market opportunities and continue to develop our business model. For this purpose, they scrutinize the status quo and work on new solutions with their colleagues in charge of the respective products. In addition, our innovation department collaborates with experts from other divisions to develop business synergies for the benefit of our customers. We are also involved with innovative start-ups to access new business areas.

→ Pages 20-23



REGULATION & STANDARDIZATION

Many of our employees are involved in relevant committees and working groups for the development of national and international industry standards. There, they introduce a variety of safety requirements for holistic consumer protection and work alongside industry representatives to establish standards that further improve the value of certification for manufacturers and plant operators.

→ Pages 24-25



PROCESS AUTOMATION

Faster and more efficient processes, as well as the automation of manual work processes, help make our work better and more transparent for our customers. Through the improved integration of information and intelligent staff planning, our customers benefit from smoothly running processes and direct communication. This increases customer satisfaction and paves the way for long-lasting and successful business relationships.

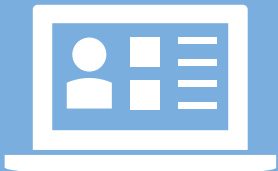
→ Pages 26-27



DATA

New technological analysis methods provide us with additional opportunities for growth. We use data to better understand our customers' needs. Therefore, we are able to create better proposals and acquire new customers through customized solutions.

→ Pages 28-29





## COMMUNICATION & CULTURE

# STRENGTHENING OUR CULTURE OF COOPERATION AND PROMOTING CUSTOMER FOCUS

**Cultural change doesn't happen overnight. It is a proactive, courageous and sustainable process toward the future. Only if everyone involved will adapt to changing conditions, can there be a long-term guarantee for the satisfaction of our employees, our productivity and our corporate success.**

This is why we break with conventional working methods, as part of the digital transformation. We do it to meet the needs of our customers and our employees as well as the requirements of the market.

Instead of exclusively focusing on their respective tasks, employees from a variety of fields have to be able to form interdisciplinary project teams. This allows us to develop a holistic understanding of specific markets and customers. We have already started establishing creative working areas.

In addition, we continue implementing project management know-how, by providing structured information about methods and skills for the establishment of agile working methods. The introduction of additional exchange, learning and creative formats helps us respond more flexibly to new requirements, to benefit from the experience and knowledge of others and to offer added value to our customers through the targeted development of new services and product solutions.

### Networking formats for all employees:

- faiLEARN
- Yammer
- Microsoft Teams
- The Network
- Company parties and works meetings
- TechExperience and Inno-Time
- Let's talk about ...

IMPROVE YOURSELF. IMPROVE TÜV NORD.







## COMMUNICATION AND CULTURE

### NEW SPACES – NEW PERSPECTIVES

Modern and creative office concepts support digital change, because project meetings and the exchange of knowledge are of importance today. These ideas have already been taken into consideration during the design of our Innovation Spaces in the cities of Essen and Hamburg. Open office spaces help in making communication flow more easily. Challenges can be met more quickly, while making processes more transparent.

After new construction projects in Hamburg and Hanover, as well as the respective moving efforts, about 500 employees will move into the new headquarters at the Technology Park in Essen, in summer of 2021. This new building also gives us an opportunity to implement such a new office concept for all employees.

To promote team and project work, we will create various possibilities of collaboration. Additional rest areas for silent work, communication islands for casual exchange and creative spaces will offer the perfect space for any work situation.

In addition, we support the use of new work and communication tools. Technical aids, such as Webex Board, webcams and research desks, or platforms like Microsoft Teams, ILIAS and the new Intranet will simplify our working days and our cooperation.

At the same time, we make sure not to change everything. Cultural change shouldn't turn into a cultural shock. Together with works council members, employees and managers, we think about where and for whom we need modified space and work situations, while weighing the pros and cons.

If it says TÜV NORD on the box, it will continue to be TÜV NORD inside.

OUR EMPLOYEES WILL GET MORE SPACE  
TO ENTER A NEW WORLD OF THINKING.



COMMUNICATION & CULTURE

COMMUNICATION 1x1

INFORM

The information age has profoundly changed our working life. However, our employees, customers and consumers expect more than simple sensation communication. They want to actively participate in the process. They want to understand developments and decisions and they want to form their own opinions. Therefore, we want to fundamentally change the tools we use for communication. We already try to explain the economic, social and informational transformation and provide platforms for exchanging and forming opinions to various target audiences.

Therefore, in our company, communication is not just a means of providing information, but takes on the role of the moderator of a lively dialogue. It can be surprising; it can even be funny, and thereby become more relevant. It's also about giving our employees new knowledge and modern ways of support, so they can do their work more efficiently and with a higher level of motivation.

STIMULATE

QUALIFY

ACTIVATE

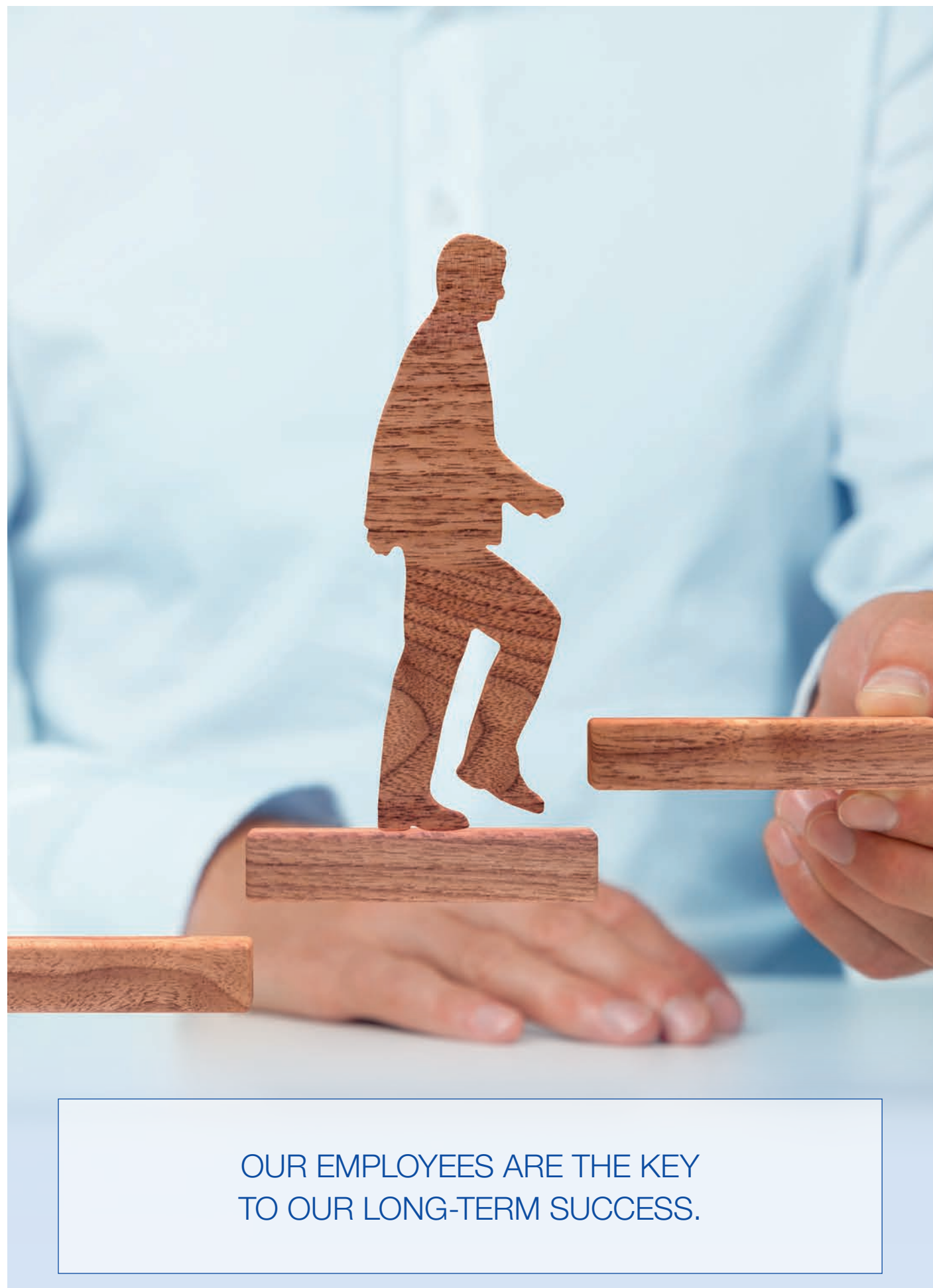
Some of the new and helpful tools in this process include a division-wide newsletter, the operationalization of management guidelines, internal social networks, communication corners and networking events.

But our customers and their needs have changed profoundly in recent years as well. We asked ourselves how we could get closer to our customers and help retain them. One of our goals was to find out what our customers are concerned with in the digital age, how we can provide added value to them and what means of communication we could use to reach them. With this knowledge and a multifaceted communication infrastructure, we are already getting them excited for new product solutions, while communicating with them in a more individualized way.

HOPE LEADS TO BELIEF AND,  
ULTIMATELY, TO CONVICTION.







OUR EMPLOYEES ARE THE KEY  
TO OUR LONG-TERM SUCCESS.

## ORGANIZATION AND QUALIFICATION

### BEING ONE STEP AHEAD

Being tech-savvy, keeping up with technology trends and new standards is nothing new for our employees. But, the novel forms of digitalization ask for quite a bit more. They require the exploitation of existing digital potential, lateral thinking, but even more than that, they require courage, stamina and an ability to take risks.

Therefore, the TÜV NORD GROUP decided to firmly establish a specialized training program for all divisions: **the Digital Academy.**



In 2017, the first generation of digital experts raised awareness for the field of digitalization and created an atmosphere of impending change. During the training program, the participants developed concrete prototypes and business plans for selected product ideas, which they would then finalize and introduce.

In addition, we developed a qualification program especially tailored to our experts, product testers and auditors, which provides knowledge on modified or additional testing requirements. By the end of 2021, 940 employees will have completed this training. Currently, about 750 employees have been receiving basic knowledge.

Using new formats, the innovation department makes digitalization tangible. Up to now, about 30 tech experience sessions explained new technologies, such as the block-chain, the internet of things, augmented reality and virtual reality, while also discussing possible applications in the company with participating employees. The successfully implemented idea management and InnoTime programs promote entrepreneurship and encourage participation. It is also about combining competencies and enabling people to collaborate more and benefit from each other.

Of course, our managers will continue to play a leading role. After all, they create the space for digital transformation to unfold. At its core, the digital transformation is about more than technical knowledge. It's about the way people collaborate and communicate. The management level will not only facilitate these far-reaching changes, but promote them even more intensively in the future.

#### Our staff development programs:

- Digital Academy
- Security4Safety qualification program
- Mentoring program
- Junior Employee Development Programs
- Business Schools
- Work-Study program
- Initiative "Joblinge"
- Individual further education and trainings



INNOVATIONS AND ACQUISITIONS

COMBINING FRESH THINKING WITH EXPERIENCE

Three questions for Carsten Becker, head of the Corporate Center Innovation in the business unit industrial services.

THE CORPORATE CENTER INNOVATION WAS NEWLY ESTABLISHED IN 2017. WHAT HAVE THE EXPERIENCES BEEN SO FAR?

The innovation managers are very committed to their work. Every one of them contributes his or her own technological know-how with a focus on one or two technologies. In addition, all innovation managers have methodical expertise. They know how creative processes work, how to find and select ideas and what successful project implementation looks like. Existing products and business models are analyzed with respect to the goal of increasing customer value

by using a particular technology. They contribute many good ideas and technological experience.

To us, it's particularly important to exchange ideas with specialist departments and other divisions. My employees don't just have a lot of know-how. They also question active processes and decisions, while including their colleagues who are not quite as knowledgeable about digital technology yet.



ENTERING NEW WORLDS.

WHICH INNOVATIONS WILL HAVE A LASTING EFFECT ON TÜV NORD?

TÜV NORD's way of working will change drastically over the coming years. Even today, we are seeing customers who, for a variety of reasons, would like us to do more of our work remotely. Apart from cost effects, customers also think about employee safety. This development won't happen overnight, but we have to start preparing for it today. We have already implemented important projects (e.g. remote audit, Aeroarms or virtual reality training) and are currently working on new ideas (e.g. remote inspection), in order to be ready for the future.

Apart from these fundamental changes in the way we provide services, we also see changes we have responded to. Customers would like to monitor their systems on a continuous basis. This is where we can help them with our Digital Monitoring System. With it, we won Germany's Excellence Award in 2019. Since then, several customers have committed to using this system. In 2020, we won the German Excellence Award for our virtual training solution – another confirmation of the validity of our approach from an independent source.

We respond immediately to newly forming markets. In the field of 3D-printing, we have developed a service called property determination of metal powder in collaboration with the expert department. Another important trend we have responded to is the field of IT-security. We view it as being in conjunction with functional safety and currently achieve sales of about 5.4 million euros in this area.

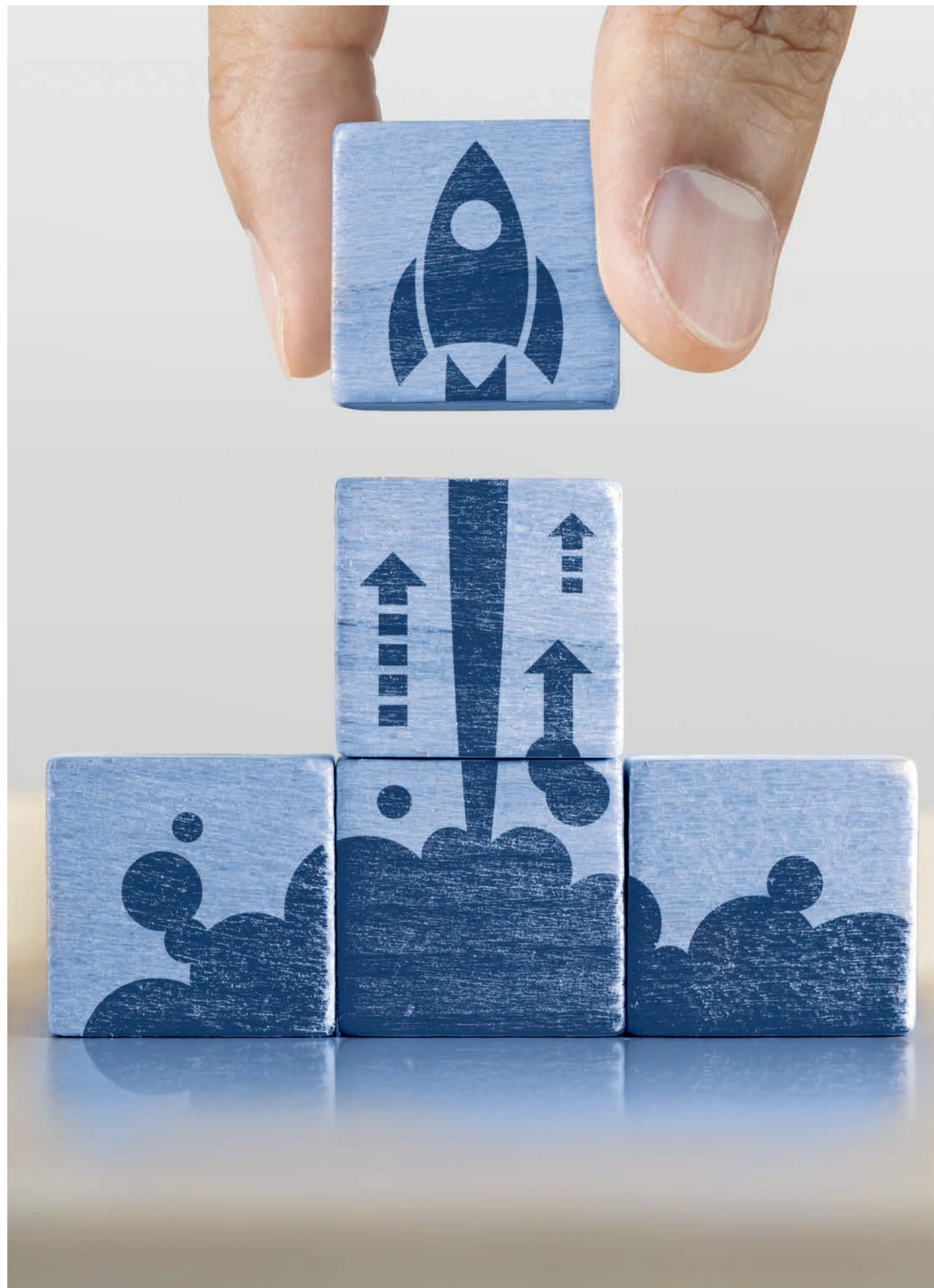
HOW DO YOU SUPPORT THE TRANSITION TOWARD A DIGITAL MINDSET?

So far, success factors included the excellent predictability of our business and the outstanding competence and reliability of our inspectors and auditors. In today's fast-moving competitive environment, knowing about customer needs and being able to adapt to change are paramount. This requires a direct dialogue with customers and a joint learning effort when providing a service.

The innovation managers have all been trained in agile methods, predestined for the analysis and the ability to respond to such issues. In addition, we invite all of our colleagues to play an active role in the transformation process. In regular TechExperience sessions, they can learn about new technologies in a relatable and tangible way. Our idea management is now firmly established, so that personal contributions made by our employees are recognized and honored. InnoTime offers all employees an opportunity to engage in personal exchange with innovation managers in order to address individual issues and ideas. At this point, there should be a suitable way of interaction for all of our employees.

	TODAY	2025	2035
How are we going to work?			
Where are we going to work?	Employees → System Product Company	Office ← Employees → System Product Company	Office ← Employees
Testing Innovation	ASIS (elevator inspection) metal powder qualification	Remote Stamp International Food Laboratories Additive Manufacturing	
Inspection Innovation	Amusement parks Fire protection flaps International Trade Aeroarms Security4Safety	Remote Inspection Live Expert Remote submarine vehicles (ROV) Digital Monitoring System (DMS) Drone Inspection VR-training Threat Arrest Dream (drone-based inspection) Security4Safety (IoT, IIoT)	Trust Center/Blockchain General Digital Monitoring System VR-Training/Inspection/Certification AI-Training/Inspection/Certification Additive Manufacturing Online Monitoring of Products and Services
Certification Innovation	Security4Safety audits (ISO27001, IEC 62443, TISAX)	Remote Audit Auditor Marketplace	





## INNOVATIONS & ACQUISITIONS

### DISCOVERING NEW HORIZONS

The rapid technological progress keeps leading us to new technological opportunities. Additional drivers of innovation are changing customer needs as well as rules, laws and standards established by lawmakers, and then applied to the business landscape, particularly in the testing services market. This is why innovations and acquisitions are anchored in our division's strategy.

It is important to view innovations from a holistic perspective and at all levels of the company. For this, we also rely on new outside impulses. Through cooperation with strategic partners or the acquisition of other companies (M&A), we strengthen our competences and solutions in a targeted way, enabling us to serve new markets and audiences. In addition, our activities help implement synergies and increase efficiency.

Over the past ten years, our division has made twelve acquisitions and founded six new subsidiaries. Five of the acquired companies are based in Germany and seven abroad.

As part of our M&A transactions, we were able to strengthen our core business in a lasting way, build know-how and anchor new services. We also established a new area of activity: food laboratories. After a period of organic growth, we now successfully operate food labs in India, Indonesia, Thailand and the United Arab Emirates.

#### Our collaborations and partnerships in the area of digitalization

Microsoft | [www.microsoft.com](http://www.microsoft.com)

Fraunhofer Institut | [www.fraunhofer.de](http://www.fraunhofer.de)

Westfälische Wilhelms-Universität Münster | [www.uni-muenster.de](http://www.uni-muenster.de)

TÜVIT | [www.tuvit.de](http://www.tuvit.de)

Japan Quality Assurance Organization | [www.jqa.jp](http://www.jqa.jp)

secuvera GmbH | [www.secuvera.de](http://www.secuvera.de)

admeritia GmbH | [www.admeritia.de](http://www.admeritia.de)

TÜV TRUST IT GmbH | [www.it-tuv.com](http://www.it-tuv.com)

#### Our worldwide acquisitions and newly founded companies

2010 | Brazil

2014 | Germany

2010 | Sweden

2014 | Germany

2011 | Germany

2018 | Germany

2012 | Luxembourg

2018 | The Netherlands

2013 | Germany

2019 | Italy

2014 | Spain

2019 | The Netherlands

WITH STRATEGIC ACQUISITIONS AND START-UPS,  
WE STRENGTHEN OUR COMPETITIVENESS  
IN A TARGETED WAY.





REGULATION & STANDARDIZATION

CONNECTIVITY NEEDS SECURITY

As a national and international body, we are subject to high demands regarding our organization, competences, neutrality and independence. These requirements are determined by the relevant entities (regulations, international standards, rules, resolutions, recommendations) and checked for conformity on a regular basis (surveys). The determined requirements also have a direct effect on agreements with customers or contracts, our work on site or at the testing lab, as well as the certification body, regarding our plans and evaluations.

As a result, a whole team is committed to working on risk minimization, through regular audits in our global companies, for example. There are opportunities with regard to process optimization as well as investments in areas like digitalization and energy management, social standards or consumer protection.

Another one of our tasks is creating services in a sustainable way and driving developments. After all, our customers expect us to keep up to date with technological developments. We are active in committees, organizations and working groups, with the goal of creating standards and we have to be able to provide state-of-the-art testing.

We have achieved initial successes with regard to holistic and safe testing in the age of networked products and systems:

- Supplementing the medical devices directive with IT-security aspects
- Publication of the DAkkS disclaimer resolution, making state-of-the-art testing a mandatory requirement
- Creation of VdTÜV leaflets for inspection and marketing

Our employees are active in the following committees and working groups:

Organizations:	Authorities:	Accreditation Bodies:
TIC Council	ZLS	DAkkS
VdTÜV	BSI	UKAS
BDI	Ministry of the Environment	ASI
HDE/IFS	Labor Ministry	IEC
VDMA	Ministry of the Economy	
VDA	Ministry of International Development	
VDI		
KBA		
		Standardization Bodies:
		DIN
		ISO/IEC

WE ARE COMMITTED TO PROMOTING  
RELIABILITY AND CONFORMITY  
FOR THE PROTECTION OF CONSUMERS.





PROCESS AUTOMATION

SMART IN EVERY WAY

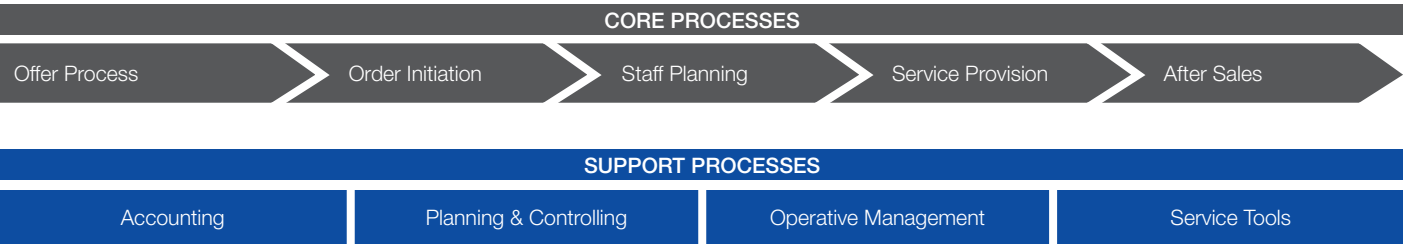
In a few years, the infrastructure, hardware and software used by national and international companies inside the business unit industrial services will have been harmonized.

This means that, over the long term, the entire service provision process of the business unit industrial services, including proposal management, order processing, staff planning and billing, will be automated and standardized. In addition, we will optimize supporting processes and develop customer retention tools.

This opens new digitalization opportunities to us. Customer focus can be intensified. Manual labor will be reduced for our employees (specialists, auditors, administrative

staff, etc.). Transparency inside the certification center, the technology center and management in general will be improved, leading to better quality assurance. This transparency will also make group management more efficient.

Initial developments have been implemented. Today, international customers and consumers can use an online database to evaluate the authenticity and validity of certificates by checking the certificate number or the company name. In future, our customers will be able to interact with TÜV NORD through a customer portal at any time. There they can manage customer data, configure services, digitally confirm offers and manage contracts and documents. In addition, field staff already benefit from mobile access to customer information and documents, reducing processing time, errors and communication infrastructure.



BETTER SERVICE FOR OUR CUSTOMERS –  
MORE FLEXIBILITY FOR US.





DATA

MERGING DATA FOR THE BENEFIT OF OUR COSTUMERS

Our customer relationship management (CRM) is predicated on the idea that all interactions between TÜV NORD and our customers are recorded in a central database, which is accessible to all employees across our organization. We do this because, today, our customers appreciate individual support with a personal touch in every interaction. Our CRM-system helps us better understand our customers' needs, support them professionally and offer them a customized service.

BENEFITS OF OUR CRM

- We reduce administrative work**  
CRM helps our sales people store their contacts, activities and appointments in a safe and central location and gives them unlimited access to this database from anywhere.
- We stay focused on our customers**  
CRM helps our sales people optimize their daily appointments and prioritize goals, to make sure that customers and important prospective buyers are contacted and cared for.
- We know what we are doing**  
CRM helps our sales people with the automated creation of weekly and monthly activity reports, and makes them transparent for management.

**We know what our customers really want**  
Saving all relevant customer information in the CRM helps our sales people analyze our customers' needs and anticipate problems – at the right time. For example, this might include the expiration of testing deadlines, changes of regulations, contract extensions or new products. The result: happier and more loyal customers.

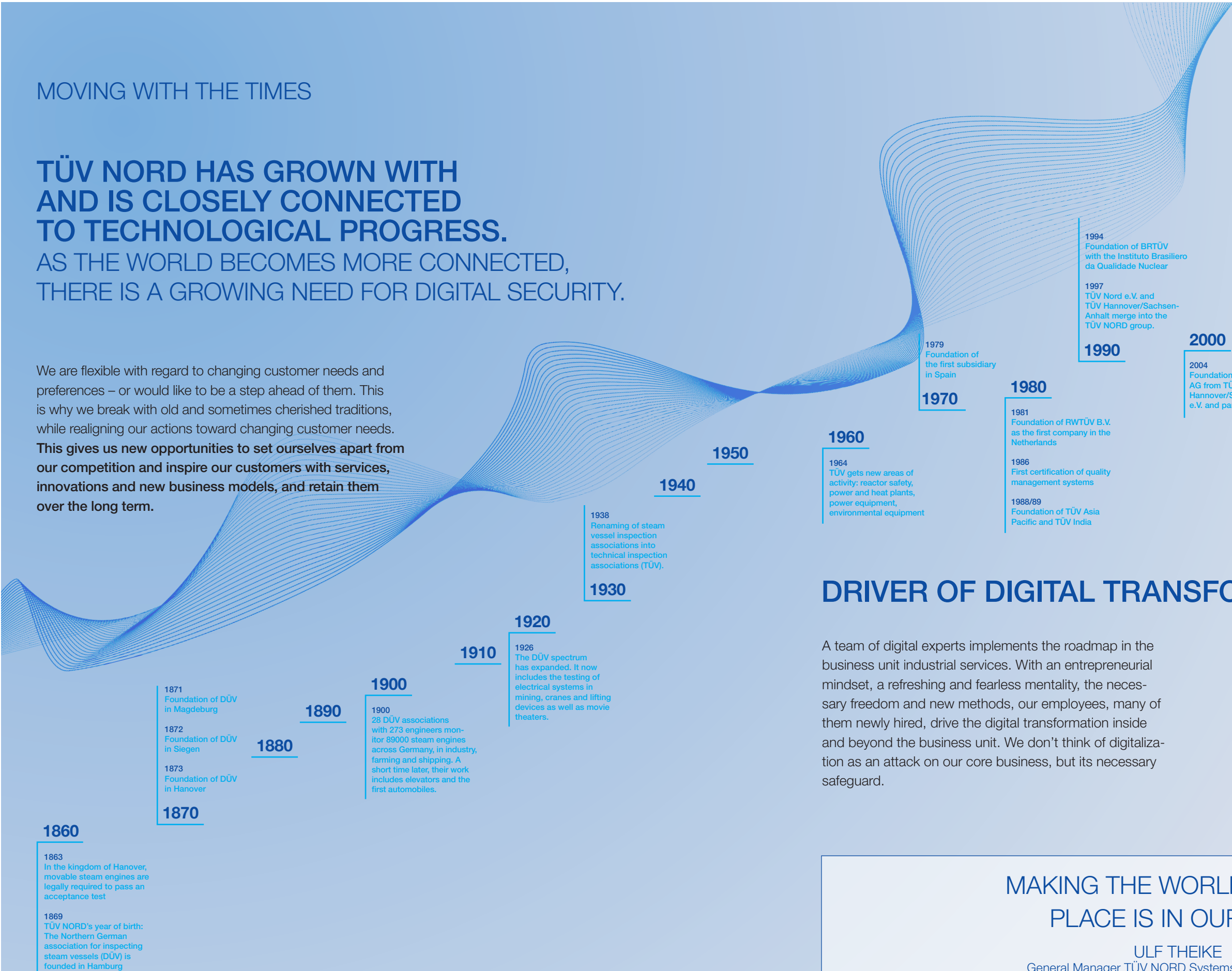


DETERMINED FOCUS ON OUR CUSTOMERS

MOVING WITH THE TIMES

TÜV NORD HAS GROWN WITH AND IS CLOSELY CONNECTED TO TECHNOLOGICAL PROGRESS. AS THE WORLD BECOMES MORE CONNECTED, THERE IS A GROWING NEED FOR DIGITAL SECURITY.

We are flexible with regard to changing customer needs and preferences – or would like to be a step ahead of them. This is why we break with old and sometimes cherished traditions, while realigning our actions toward changing customer needs. **This gives us new opportunities to set ourselves apart from our competition and inspire our customers with services, innovations and new business models, and retain them over the long term.**



DRIVER OF DIGITAL TRANSFORMATION

A team of digital experts implements the roadmap in the business unit industrial services. With an entrepreneurial mindset, a refreshing and fearless mentality, the necessary freedom and new methods, our employees, many of them newly hired, drive the digital transformation inside and beyond the business unit. We don't think of digitalization as an attack on our core business, but its necessary safeguard.

MAKING THE WORLD A SAFER PLACE IS IN OUR DNA.

ULF THEIKE  
General Manager TÜV NORD Systems GmbH & Co. KG



As a recognized technology service provider, we are known globally for safety and trust, neutrality and quality. We also keep our eyes closely on the digital future. Independent engineers and IT-security specialists offer excellent solutions for security, quality and an outstanding competitive position. At home in 50 countries and active in more than 100, our workforce of 14000 employees helps strengthen companies' understanding of their responsibility for mankind, technology and the environment. We have accompanied all industrial revolutions, helped develop globally recognized safety standards and, in a digitally networked era, continue to contribute to safety and security.

**TÜV NORD**

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