
2017

ANNUAL REPORT

TÜV NORD GROUP

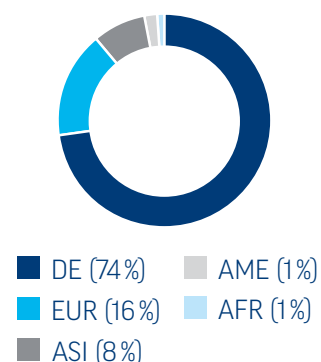
Expertise for your Success

"The new digitalised world needs to be just as secure as the old analogue one. The safety of people, goods and the environment is the top priority in everything we do. IT security already goes hand-in-hand with mechanical and electronic safety. Industrial robots, self-driving cars and electricity and water utilities need to be protected from cyber-criminals." Dr Dirk Stenkamp

VISIONS



Revenue by Region



10,539

employees worldwide

REVENUE OF

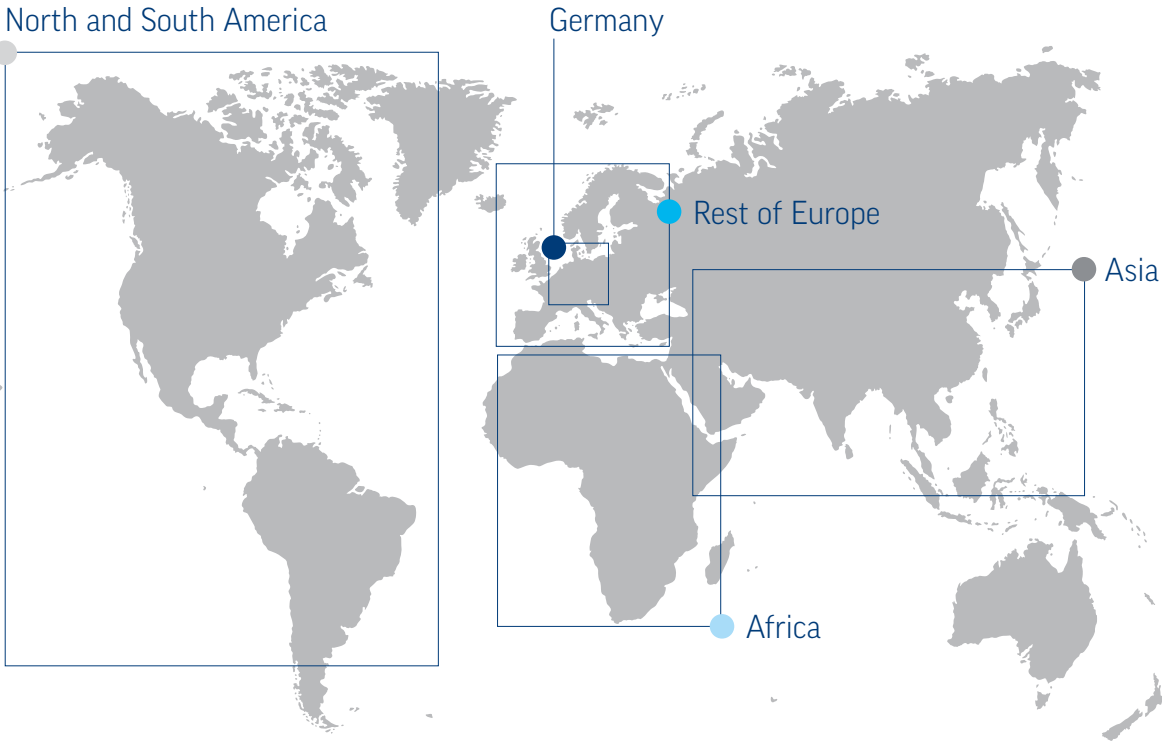
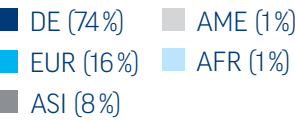
€1,184.8

million

YOU WILL FIND THE MOST IMPORTANT KEY RATIOS FOR 2017 HERE: ➡

TÜV NORD GROUP AT A GLANCE

Revenue distribution 2017



REVENUE IN 2017 AND 2016

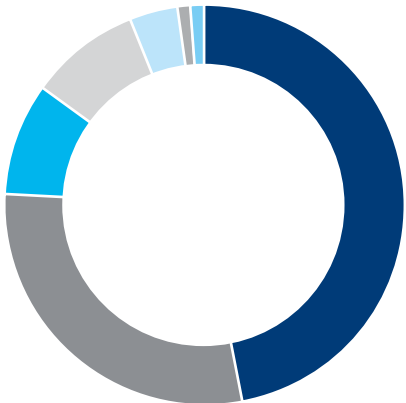


KEY FINANCIAL RATIOS IN 2017

EBIT*	€77.5	million
EBT	€76.6	million
Balance sheet total	€888.4	million
Net financial position	€32.9	million
Pension provisions	€484.9	million

* Before special effects

Revenue by business unit



“The good result for the year reflects the most important cultural constants of our TÜV NORD GROUP: Our employees are the key to our success.”

Harald Reutter, Board Member for Human Resources and Labour Director

Investments of



“Once again, we made significant investments in 2017 to set ourselves up well for the future. Two visible examples of this are the Digital Academy and the new buildings in Hamburg and Essen.” Jürgen Himmelsbach, CFO



Employees

DEAR READERS,

If we are to play an active part in shaping the future, we need visions and the skills to bring these visions to life. In this Annual Report, members of staff from every area of the TÜV NORD GROUP offer insights into what it is that motivates them.

How can we make software and smart products as secure as possible? This is something that Matthias Springer, head of Security4Safety co-ordination body, is working on. His vision is to use “Security by Design” to close security loop-holes, starting with the process of development.

How can many decades of experience in space travel be put to good use in the future? Driven by this burning question, a team under José Carlos Muñoz at ALTER TECHNOLOGY came up with Gateway: A Big-Data-supported search engine for satellite components.

How can people play an active part in shaping the digital transformation? This is the principal question occupying Melanie Braunschweig in the Group’s own Digital Academy projects and training programmes – which might well also set a precedent for other companies.

How can we provide better protection for people, the environment and resources? Solving this problem has long since become a global challenge. Dr Bernhard Teigler from DMT is supporting the South African government in its efforts to protect water resources. Helge Schmidt from the Institute for Vehicle Technology and Mobility is using real-life exhaust emissions tests to contribute to the cause of clean-air and climate protection.

In this Annual Report, members of staff of the TÜV NORD GROUP formulate their personal vision for a safe and secure world – one that is technically advanced, digital and networked.

We wish you informative reading.
Kind regards from the TÜV NORD GROUP



We also recommend the digital version of our annual report:
≥ www.tuev-nord-group.com/annualreport2017

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LETTER FROM THE CHAIRMAN OF THE BOARD OF MANAGEMENT

Dear customers of the TÜV NORD GROUP,
Dear colleagues and partners,



_____ The TÜV NORD GROUP is in the midst of the digital transformation. The rapid spread of the Internet of Things and data-based mobility and the progressive interconnectedness they offer are presenting testing organisations with new and exciting tasks. The smartphone, which has just celebrated its 10th birthday, symbolises the speed at which digitalisation and networking have spread throughout the entire economic sector and the private lives of individuals, offering information and the possibility of interaction for all – at any time and in any place. Smart products are continuing the irresistible onward march of digital networking: Smart Cities, Smart Mobility, Smart Home, Smart Grids, Smart Factories. Intelligent and autodidactic machines and systems are at the forefront of this trend. And it is in the light of such developments that we, as a major testing and consultancy service provider, must find answers to new questions. One such question is this: after many years of independent learning, are robots based on artificial intelligence still safe, and will they behave properly in emergency situations? When it comes to answering these questions, with all their security relevance, the TÜV NORD GROUP has

its contribution to make in the industrial sector and to automated driving.

There is one principle which we will never forsake: the new digital world must be just as secure as the old analogue one. The safety of people, goods and the environment is the top priority in everything we do. IT security already goes hand-in-hand with mechanical and electronic safety. Industrial robots, self-driving cars and electricity and water utilities need to be protected from cyber-criminals.

Digitalisation and networking are expanding our mission: as well as protecting our mission, we also increasingly need to protect machines from human manipulation. We in the TÜV NORD GROUP have for this reason regarded IT security and physical safety as connected disciplines for many years and have developed products for this purpose under the “Security4Safety” label. After all, without IT security there can be no product safety.

We are all involved in networked processes all the time. To cite just a few examples, our experts have already completed over 30,000 app-based lift tests and 2.5 million periodic vehicle inspec-

tions with the aid of a digital adapter. Then there is everything we do from the certification of basic IT protection for SMEs through to comprehensive security tests of large-scale data centres – the list is a long one.

With our new corporate mission statement, we aspire to align ourselves even more consistently with the requirements of our markets. In the digital age, knowledge is fast becoming a decisive success factor. Where in the mission statement it says that “future security for our customers is our goal”, this statement is both an assertion of what we have already achieved and a spur to greater things. In this Annual Report, members of staff from every area of the company offer insights into what it is that motivates them. They formulate their personal vision for a safe and secure world – one that is technically advanced, digital and networked.

In 2017, with the Digital Academy, we took some decisive strides of our own toward instilling knowledge of the digital transformation in our staff and qualifying them to lead our company into the digitally networked era. In the context of this dedicated training programme,

they are being given instruments with which they will digitalise our existing services and processes and develop new innovative business models. Our Digital Academy also sees itself as a qualification programme for those of our customers who are actively seeking to take their place in the digital world and the networking that goes with it.

I wish to thank all our customers and business partners for the positive cooperation we have enjoyed and the trust they have placed in our company and its people.

Once again in 2017, our staff has across the world successfully dedicated its efforts to advancing the TÜV NORD GROUP. In the name of the Supervisory Board, the Group Executive Committee and employee representatives, I offer my heartfelt thanks for this commitment and what we have achieved together.

Kind regards,

Dr Dirk Stenkamp
Chairman of the Board of Management

THE GROUP EXECUTIVE COMMITTEE

The new management committee of the TÜV NORD GROUP, the Group Executive Committee, started its work on January 1 2017. All the areas of the company are represented; all decisions draw on a broad knowledge base and are made on an interdisciplinary basis. In 2017, the TÜV NORD Group continued its consistent policy of investment to improve the Group's performance. At the Am Technologiepark site in Essen, the new hall of the Institute for Vehicle Technology and Mobility (IFM) was ceremonially opened. The investment volume was €5 million. Over an area of 3,100 square metres, components such as tyres and wheels are tested and vehicles for import and export inspected. This makes it possible to process customer orders even more quickly at the highest possible technical level. On an immediately adjacent site, IFM specialists are working on car IT systems and autonomous driving – in a nutshell, on the mobility of tomorrow. 70 piles were sunk for the construction, 1,250 m³ of concrete used and 18,000 electrical cables laid. In the summer of 2018, a further piece of high-technology equipment in the form of a state-of-the-art half-axle test stand to measure driving dynamics will be installed in the IFM hall on the A 40 motorway.



From left: **Luis Gómez:** Aerospace business unit, **Dirk Kretzschmar:** IT business unit, **Dr Ralf Jung:** Industrial Services business unit, **Jürgen Himmelsbach:** CFO, **Dr Dirk Stenkamp:** Chairman of the Board of Management, **Harald Reutter:** Board Member Human Resources, **Prof. Dr Eiko Räkers:** Natural Resources business unit, **Hartmut Abeln:** Mobility business unit, **Jörg Becks:** Training business unit.

REPORT FROM THE SUPERVISORY BOARD



In the year under review, the Supervisory Board carried out the tasks incumbent upon it according to the law and the articles of association; it regularly supervised the management work of the Board of Management and offered continuous advice to the Board in its management of the company. The regular meetings took place on April 4, May 30, September 26 and December 5 2017. The principal focus of the meetings was on business development and the risk and opportunities management of the TÜV NORD Group.

At the meeting of May 30, the Supervisory Board considered the customer-focused organisation of the Industrial Services business unit and innovation management in the TÜV NORD GROUP. At the meeting of September 26, the Supervisory Board determined that the targets set in 2015 for the proportion of women in the Supervisory Board and the Board of Management of TÜV NORD AG had been met; new targets were set at the meeting of December 5 for the period until 2022. At the meeting of December 5, the budget for 2018 was discussed and approved; in addition, the Board of Management reported at this meeting on the measures adopted to achieve gender balance in the TÜV NORD Group.

The Board of Management informed the Supervisory Board regularly, promptly and comprehensively by word of mouth and in writing about all relevant issues of business devel-

opment and the risk situation and about the situation and strategy of the Group, including the Group's main companies. There were also regular exchanges between the chairman of the Supervisory Board and his counterpart on the Board of Management. In this way, the Supervisory Board was kept abreast of intended corporate policy, corporate planning and ongoing business transactions.

To carry out its tasks and prepare its deliberations and decisions, the Supervisory Board set up two committees which effectively support the work of the plenum.

Five sessions of the presidium/personnel committee took place in the year under review. The discussions focused primarily on the preparation of the plenary sessions and of the personnel and compensation decisions to be made by the Supervisory Board. Where necessary, the Supervisory Board was furnished with recommendations for decision-making.

In 2017 the Finance Committee met three times in advance of the Supervisory Board meetings and paid particular attention to the annual financial statement, earnings trends, risk and opportunities management and the challenges with which the Group is confronted, particularly in respect of pension obligations, arising from the low-interest environment. In its meeting of November 28, the Finance Committee addressed the plans for the 2018 fiscal year.

The auditors appointed by the General Meeting of April for 2017, BDO AG from Essen, audited the annual financial statements of TÜV NORD AG and the consolidated financial statements, including the associated reports on the situation of the company and the Group, published by the Board of Management on December 31 2017. The audit report issued by the auditors was without reservations. The auditors noted that the Board of Management had established an appropriate information and monitoring system whose design and management rendered it suitable for anticipating developments that might pose a risk to the continued existence of the company.

The financial statement documents and the audit reports for the 2017 fiscal year were discussed in the meeting of the Finance Committee of March 20 2018 with the Board of Management and the auditors. In addition, a detailed discussion took place at the meeting of the Supervisory Board on March 22 2018. The auditors were present at the deliberations on the annual and consolidated financial statements. They reported on the main results of the audits and made themselves available to the Supervisory Board should the latter require additional information.

Based on its own audit of the annual and consolidated financial statements and the management reports and the report and the recommendation of the Finance Committee, the Supervisory Board felt able to concur with the auditors' conclusions. No objections were

raised. The Supervisory Board approved both the annual and the consolidated financial statements.

A new management structure was introduced at the beginning of 2017. Since then, the Group Executive Committee has been supporting the Board of Management in its management tasks. The Board of Management remains unchanged. Dr Dirk Stenkamp was once again appointed Chairman of the Board of Management for the period ending December 31 2022. Harald Reutter was once again appointed Labour Director and member of the Board of Management for the period ending December 31 2020.

The Supervisory Board would like to thank all the employees worldwide, the company's managers, the Board of Management, the Group Executive Committee and the employee representatives for their dedicated and successful work in 2017.

The Supervisory Board

Dr Georg Schöning
Chairman

Hanover, March 2018

THE DIGITAL TRANSFORMATION

Consider the printing press, the steam engine or the computer – without visionary developers who tenaciously stuck to the task of realising their ideas, such groundbreaking innovations would never have been invented. We are now living and working in the age of the fourth industrial revolution: machines, cars, sensors, data and communication channels are networked with one another in real time across the entire world. This is opening up undreamed-of opportunities for new business models, products and more efficient manufacturing processes. Digital networking is presenting the TÜV NORD GROUP with new and extended tasks. In this annual report, the experts formulate their personal vision for a safe and secure world – one that is technically advanced, digital and networked.

SECURITY BY DESIGN – CLOSING DOWN THE LOOPHOLES FOR HACKERS

The digital age is opening up previously undreamt-of possibilities for consumers and companies – and for cyber-criminals. It's for this reason that the security experts from TÜV NORD want to make software and networked products are secure as possible, starting from the point of development.



Matthias Springer,
IT security expert.

— In August 2017, 745,000 wearers of networked pacemakers throughout the world were given a nasty shock: The health authorities of the USA had discovered a security vulnerability which would allow hackers to manipulate the pulse frequency or battery charge of these life-saving devices. It took a firmware update to close this dangerous loophole. Security vulnerabilities like this have long since become the rule in our networked present. A study of the German association of electro-technology, electronics and information technology companies (VDE) has found that over half of all companies in Germany have already been affected by cyber-attacks. As the insurance company Allianz Global Corporate & Speciality discovered, cyber-attacks cause damage to companies across the world to the tune of €400 billion every single year. In 2015, over €45 billion worth of damage was sustained by the German economy, and this figure is

increasing sharply. Even critical infrastructures like energy providers are no longer safe from cyber-criminals, as the hacker attack on Ukrainian power plants proved in 2015.

Multi-stage protective barriers

"We have to think about whether we want to continue to chase after the hackers and plug security holes on an ongoing crisis basis – or whether we want instead to adopt a preventive se-

curity policy," says Matthias Springer. For the head of Security4Safety coordination body at TÜV NORD, the solution is this: Security by Design. The idea behind this concept is to prevent security vulnerabilities from arising in the first place. To this end, security experts accompany the entire development process for software or smart devices, working with IT departments and developers in an interdisciplinary capacity. "The principle involved is that of multi-stage protective barriers," Matthias Springer explains. "It's kind of like a digital knights' castle." Just as mediaeval fortifications use a complex system of moats, curtain walls and other defensive walls to keep out intruders, the experts review security elements at all levels: starting with the software and the hardware, taking in the network and the processes, right through to the users. "If you just do that on one level, the other levels will still be unprotected. And attackers are always on the lookout for the weakest points," explains Mr Springer. Just like the master builders of mediaeval castles, they have to make all kinds of assessments: Where might attacks come from, what motives and opportunities do the attackers

have, and how can an effective defence be mounted against them. "If we include all these aspects, what arises is a comprehensive picture of which levels require particular protection."

It isn't sufficient simply to adapt previously established security solutions, Springer explains. "You really have to start with a blank canvas. This is the best way." By doing so, the security experts are supporting the development

"We have to think about whether we want to continue to chase after the hackers and plug security holes on an ongoing crisis basis – or whether we want instead to adopt a preventive security policy."

Matthias Springer, IT security expert

process to create new and individual solutions for every situation. The experts from TÜV NORD and TÜVIT have already implemented Security by Design, for instance, on behalf of the German Federal Office for Information Technology (BSI) in the development of what are known as smart meter gateways. These central communication systems transmit data from electricity meters to energy suppliers and will assume a key role in the smart energy system of the future. To ensure that they were sufficiently well protected, the experts from TÜV NORD monitored the entire development process from specification of the security profiles through to implementation.

In the case of smart electricity meters, the highest possible security standards are now mandatory by law; with many smart products, however, they remain optional. The problem is this: for two thirds of German companies, when push comes to shove, performance and user friendliness are more important than IT security, as was revealed by a survey conducted by Crisp Research by order of TÜVIT. But this is shortsighted: better security gives

rise to an increase in customer satisfaction, component availability and legal certainty. The costs of technical and legal damage limitation exercises fall, as does the risk of reputational damage resulting from successful hacker attacks. As IT expert Mr Springer says: "In the medium and long-term, Security by Design results in a strategic market advantage."

Holistic security needs standardisation

Regardless of how effective Security by Design is for individual network products and applications, what is needed is a cross-sector security codex to guarantee comprehensive security, especially for critical infrastructures. "We need to carry out normative needs analyses for all areas so that we can help shape and develop security standards for all the different sectors. This is the huge task that currently faces the legislature and standard-setting bodies," says Mr Springer. "We're definitely going to need two or three years to do this," the security expert adds. "Which is why we need to get started now." ○

Cyber-attacks cause

€ 400

billion worth of damage to companies across the world every year.

Over

€ 45

billion worth of damage was sustained by the German economy in 2015.

TAKING TO THE ROAD

Since September 2017, new cars have been required to prove how clean they are in actual road conditions. TÜV NORD has pioneered the mobile measurement technology known as PEMS, which the company anticipates will play a key role across Europe in the provision of more realistic exhaust gas measurements and, in consequence, help clean up road traffic.

Only every

10th

modern diesel with exhaust gas standard 6 is as clean on the roads as it is during tests in the laboratory.

90%

exceed the tolerances for nitrogen oxides.

Some drivers may be surprised in the future to see an unusual array of devices on a trailer behind the vehicle in front of them. What looks like a compact generator or a futuristic refrigerator is in fact a Portable Emission Measurement System, or PEMS. It measures the emissions of nitrogen oxides and particulates in car exhaust gas and represents a small revolution with profound consequences: car exhausts have to date been tested only under laboratory conditions on chassis dynamometers. The previous laboratory test, NEDC (New European Driving Cycle), guaranteed comparable measurement results but was increasingly criticised as inapplicable to real driving conditions. Even worse, it also turned out to be manipulable. "We had to concede that there are differences between measurements taken in the laboratory and on the road," explains Helge Schmidt, technical director for Drive Systems/Car Emissions/Motorcycles at the Institute for Vehicle Technology and Mobility (IFM) of TÜV NORD. That there are differences between laboratory and road conditions is nothing new. And yet, the 2015 diesel scandal

made the EU Commission starkly aware of the scale of these differences and prompted it to act.

Improving exhaust gas reduction

A study has shown that nine out of ten Euro-6 diesel cars fail under road conditions to meet the targets for approval they have previously satisfied under NEDC conditions. On average, they emit 4.5 times more harmful nitrogen oxide than the permitted threshold. It is the increase in nitrogen oxide levels over those recorded using NEDC that is widely assumed to explain why urban nitrogen oxide levels are not falling as required by the law. "If we measure these pollutants on the road, we'll be able to significantly reduce the negative impact of road traffic on the environment," explains exhaust gas expert Mr Schmidt. If they want their vehicles to be approved for road use, the manufacturers will have to respond to more precise measurements with improved exhaust gas reduction technology. More realistic measuring procedures are thus becoming a key task for the future of clean road traffic, to which Schmidt and his team can contribute.

Clean road traffic thanks to precise measurements

The response of policymakers to the difference between the laboratory and reality has been to impose more stringent measuring procedures. In September 2017, a regulation was enacted in the EU which the experts from TÜV NORD had been working toward in EU working groups and as consultants to state legislature: new cars presented for type approval must now undergo the Worldwide harmonised Light vehicles Test Procedure (WLTP), which more closely reflects real-life conditions and has superseded the NEDC.

But even more realistic laboratory tests only approximate to reality and can in principle still be manipulated. Since September 2017, therefore, at European level emissions have also been tested on the road using the Real Driving Emissions procedure (RDE). Mr Schmidt and his team were among the pioneers of PEMS technology. In 2004, they deployed one of the first PEMS devices in Europe in a project for the German Federal institution for road (traffic and engineering) issues. Since then, they have been steadily working toward their objective: to advance the cause of clean traffic with more precise measuring procedures. In 2010, they measured real pollutant emissions from diesel vehicles in Stuttgart, a city plagued by particulate and nitrogen oxide emissions. Since 2012, by order of the Swedish government, the TÜV experts have been testing the exhaust emissions of vehicles already in use in road traffic. "Our experience from these projects was then factored into the development of equipment and the new regulations," explains Helge Schmidt.

In the medium term, it will not be possible to dispense with chassis dynamometer tests, says Mr Schmidt. At the end of the day, influence factors such as ambient temperature can only be reproduced in laboratories. However, the RDE tests are designed to provide the greatest possible comparability. Also defined alongside the proportion of journeys made on

country roads, motorways and in urban areas are, for example, minimum and maximum speeds and differences in altitude.

Series-production vehicles also to be tested

If exhaust gas emission expert Mr Schmidt has his way, series-production vehicles with a few thousand kilometres on the clock will also be routinely tested in future. After all, it will be of little use to people and the environment if exhaust gas reduction technology only half works in daily use. CO₂ emissions and fuel consumption, so important for both the climate and consumers, should in the future also be measured on the road. This is already technically possible. However, CO₂ emissions are extremely sensitive to the behaviour of individual drivers. "For this reason, it's crucial to define the conditions for test drives and push ahead with the evaluation of the measurement results," Mr Schmidt explains. A key task for the future of clean road traffic, in which he and his team have a crucial role to play. ○

Real road conditions from the computer

Is it possible to use Big Data procedures to predict how much exhaust gas a car tested in the laboratory will emit on the road? The exhaust emissions experts from TÜV NORD are exploring new ways of answering this question. In collaboration with IBM, they are feeding the artificial intelligence known as Watson with their data from laboratory and road tests. The results are encouraging. Such simulations will not replace genuine RDE tests conducted for approval. However, they might help auto manufacturers factor the real demands of road driving into the adaptation of the exhaust gas reduction systems in their vehicles in the development phase.

Helge Schmidt,
Technical director
for Drive Systems/
Car Emissions/
Motorcycles.



DIGITAL ACADEMY – A UNIVERSAL TRAINING PROGRAMME FOR A NEW ERA

Digitalisation offers opportunities for enhanced quality of life, revolutionary business models and more efficient economic activity. In the Digital Academy, the TÜV NORD GROUP is using its own resources to advance the cause of digital transformation in the Group – the model might well also set a precedent for other companies.

_____ Taxi service provider Uber is turning the taxi business on its head; Amazon is mounting a serious challenge to traditional retailers; 3-D printing is replacing material-intensive processes in production; and machinery equipped with sensors is now setting its own maintenance schedule. There's no doubt about it: the digital transformation is in full flow. It is opening up new opportunities for industry nearly every day and bringing about radical changes to business models. All over the world, ever larger numbers of people are taking advantage every single day of the benefits offered by the digital transformation.

The TÜV NORD GROUP, too, has teamed up its specialists with others who are also brimming with curiosity. Their task is to launch a critical review, questioning every aspect of what the digital future of the company might look like, and to come up with propos-

als to boost performance, quality and safety. The Digital Academy was launched in 2017 to accelerate the process and ensure that what is decided upon as a result actually happens. This is a Group-wide project intended to support all the business units in the Group in their digital transformation and to act as a network between the business units, thereby ensuring that they can benefit from synergy potentials. About 250 managers and influencers were informed directly of the concept behind the Digital Academy.

Developing products digitally

At the same time, a three-month period of full-time training was launched to qualify selected staff as digital experts. "The training concept covers digitalisation expertise and a methodology for the digital transformation of existing and new products and services as well as tools for personal development tailored to our needs," reports

Melanie Braunschweig. The Data protection/IT and electrical engineering product manager at the TÜV NORD Akademie is one of the 12 digital experts. Once the training was over, the digital experts went back to their business units, where they are now actively promoting the transformation process. The special thing about the training programme of the Digital Academy is this: it is so readily customisable that it is also of interest to other sectors, adds Elisabeth Terodde, Director of Corporate Strategy and Organisational Development. "One of the aims is to use our own resources to continue to develop products digitally and to generate innovations for new business models."

The Digital Transformation isn't making people redundant. Instead of taking people's jobs away, the idea is to relieve them of routine tasks. "People and machines will be working side-by-

side in the future and interacting with each other. And this is exactly where we see the potential for the future," confirms Dr Reinhard Geissbauer, head of Industry 4.0 EMEA in the strategic consultancy division of PricewaterhouseCoopers. And, in his "Future Report 2017", trends and future researcher Matthias Horx expresses his conviction that robots and smart machines are not going to replace people. "But the kind of work people do will shift more strongly to things that only people can do, like managing complex tasks."

Exams are the next step

One of the pilot projects which fits in with this picture is one in which



Melanie Braunschweig,
product manager.

Proof of the skills of these members of staff can be provided through individual certification. The test for this certification currently still follows a traditional format: the participants fill in questionnaires in writing, and the completed questionnaires are put through two rounds of review. If they are successful, they receive their cer-

e-mail address," says product manager Ms Braunschweig. A real plus for all those concerned.

Virtual car sharing scheme will save costs and reduce CO₂ emissions

Another of the numerous projects addresses the issue of mobility. Many of the roughly 8,000 employees of TÜV NORD in Germany take the train, or use a company car or their own private vehicle to travel between the Group's three principal sites (Hamburg, Hanover and Essen). "The railway tickets alone are a huge drain on the company budget," reveals Melanie Braunschweig. The expert team is planning an app which will work as a virtual car sharing scheme, helping reduce costs and CO₂ emissions. "A survey of our colleagues showed that most of them would support this project," Ms Braunschweig says.

The Digital Academy isn't, of course, a fly-by-night affair. After the test phase it will go into full operation and gradually make the TÜV NORD GROUP and its customers fit for the future. ○

"A real plus for all those concerned. Thanks to digitalisation we can automatically evaluate surveys and send certificates."

Melanie Braunschweig, product manager

Melanie Braunschweig is playing an important role, digital exams. Ever larger numbers of companies are, for example, taking occupational health and safety, quality and environmental protection seriously, and they now need more staff with proven expertise tailored specifically to their respective functions within the organisation.

tificates 14 days after the test. Once the entire process has been digitalised, the future will look like this: "Once the individual questionnaires have been processed by computers, the system will immediately report whether the test has been passed or not. The certificate will then automatically be sent as a PDF to the participant's personal

FOOD SAFETY GLOBALLY FROM A SINGLE SOURCE

Business processes are becoming increasingly global. Food companies in particular are operating in many countries all over the world – and TÜV NORD will in the future be able to offer them a huge range of services from a single source, regardless of where they are. In this way, the Group is set to contribute to the cause of global health and growth.

Flows of goods and production processes have long since spread all over the globe. According to the 2016 world investment report of the United Nations Conference on Trade and Development (UNCTAD), the hundred largest multinational companies are represented in an average of 50 countries. Its trans-nationalisation index (TNI), which measures the activities of a company abroad, rose by 55.7 percent to 65.4 percent between 1995 and 2015.

Food should satisfy hunger and not make people sick: Which is why it is so important for international standards to be satisfied in the food sector. After all, production and supply chains have long since spread all over the globe. Food scandals have led to stronger regulatory controls. For consumers, verification of the safety of what they eat is increasingly becoming the decisive factor when it comes to deciding what foods to buy. For this reason, companies which operate internationally need independent testing and certification, both for themselves and for their suppliers, to enable them to satisfy global standards and export regulations. The worldwide support of independent and accredited test institutes such as TÜV NORD can make

it easier for companies to work and enhance consumer confidence in their products.

So that it can provide even more comprehensive support to these companies as they grapple with global issues, TÜV NORD has undertaken a thorough overhaul of its own international structures. Although its experts have been using their knowledge to advance the cause of safety around the world for many decades, TÜV NORD has now taken international networking with its clients to a completely new level: thanks to a fundamental change in the internal structure of the organisation at the global level, the company can now communicate with its customers

knowledge and expertise of international TÜV NORD experts across national frontiers. The aim of Korde's team is to arrive at a better understanding of the customers and to offer them more comprehensive, flexible and international support in their particular areas of interest.

A good way to improve the communication with customers is to optimise your own processes: This was clear from the very beginning for Kaustubh Korde and his team. After all, the shorter and more direct the internal channels of communication and the more comprehensive the pooling of expertise and sharing of knowledge, the better the chance of responding in a

international standards – for local producers, international corporations and the Indian food safety authorities. In doing so, the experts are creating the conditions for Indian companies to market agricultural products such as tea, rice and fruit all over the world. In the context of a project with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), they trained over 1,000 food inspectors in different institutions between 2014 and 2016. The knowledge of Korde's team is thus making an important contribution to health and growth around the world.

The improvement in processes brought about by the change to the internal structures is already bearing fruit. The pace of collaboration with international customers has quickened further. In 21 countries from Russia and Brazil to South Africa, the experts from TÜV NORD are now testing, among other things, quality, environmental and food safety management systems for Dr. Oetker. In addition to the safety standards, the experts are also working at selected locations to verify whether products are free of gluten and whether any palm oil used meets the sustainability criteria of RSPO certification. For Austrian packaging company Alpha Alwin Lehner, TÜV NORD is supervising 172 sites in 45 countries ranging from Mexico and Thailand to Saudi Arabia. "New services are now being discussed in the individual OBS and decisions made that take into account local, regional and global opportunities and conditions," says Mr Korde by way of summary of the results to date of the structural transformation. But he isn't resting on his laurels. "We will continue to improve our knowledge transfer and pooling of expertise." For this purpose, the experts for food safety are, for example, developing a central database which the global team can access in one click for information wherever they are in the world to allow them to cater more effectively and in a more targeted manner to the needs of international companies – with the aim not just of feeding the world but also of guaranteeing the quality and safety of the food provided. ○

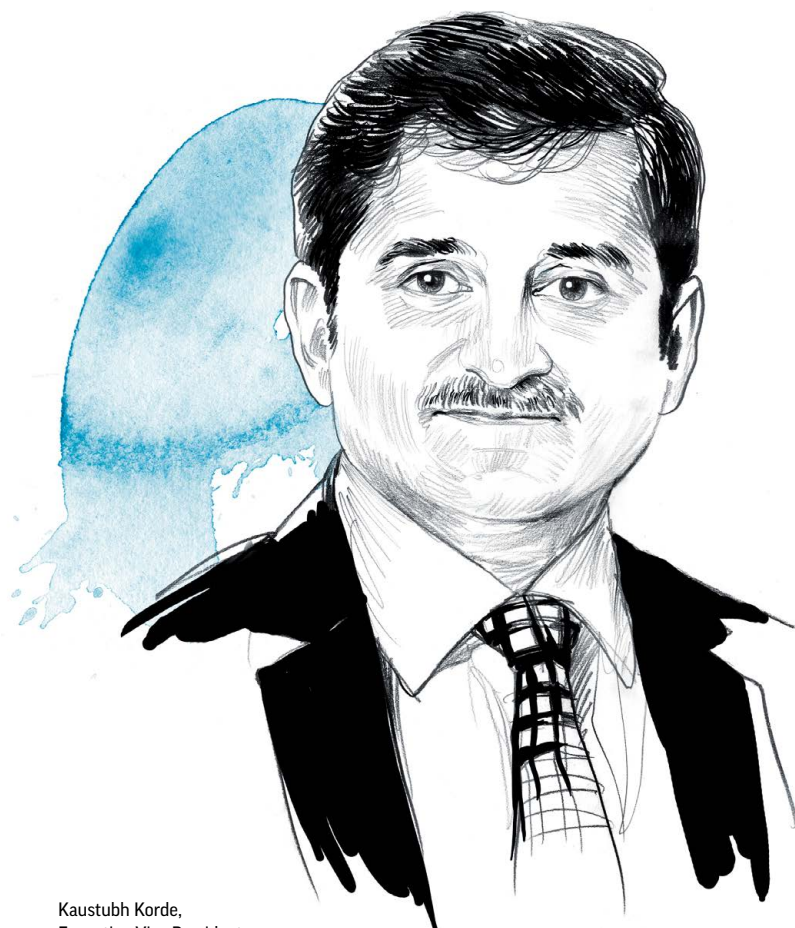
"The international requirements for food safety are growing. To support global players, we've organised ourselves into one team with members all over the world."

Kaustubh Korde, Executive Vice President OBS Food/Agriculture

more effectively and consistently. The spring of 2017 marked the first steps toward the pooling of services across national frontiers. The first pilot projects were launched in the form of what were dubbed the Renewables, Nuclear, Rail and System Certification Operative Business Segments – and the Food/Agriculture area was also reorganised in the same manner. Globally operating companies seeking to have food from their own production or from suppliers in different countries analysed or certified now have only central points of contact. "Our specialists can concentrate on this core area of expertise and cater better to their customers in global companies," explains Kaustubh Korde, who, as Executive Vice President of the Food/Agriculture OBS, has been coordinating the international activities of TÜV NORD in this segment since early 2017. The new structures make it possible to pool competencies and share the

more targeted way to the needs and concerns of companies. It is for this reason that the team in the OBS set about bringing together experts from the TÜV NORD companies: "We've organised ourselves into one team with members all over the world," Mr Korde says. "Working closely with colleagues across the globe and sharing and multiplying knowledge is really exciting and extremely fruitful."

It is of course no coincidence that it should be Kaustubh Korde from TÜV India who has been charged with the task of getting to grips with the needs of the global food industry. After all, the dedicated Indian experts from TÜV NORD boast profound experience in food safety. Since 2012, they have for example been testing food and pharmaceuticals, for example for pesticides and toxic substances, in the food laboratory in Pune, at the highest technical level and in accordance with



Kaustubh Korde,
Executive Vice President
OBS Food/Agriculture.

GATEWAY – BIG DATA FOR SPACE FLIGHT

The aerospace industry is in a state of flux. Increasing numbers of young companies are sending satellites into space. Until now, the wealth of experience gleaned by their predecessors has not generally been available to them. To address this deficit, the experts from ALTER TECHNOLOGY have developed a Big-Data-based search engine for satellite components.

The global dataset will need

163

zettabytes of storage space by 2025.

This is the equivalent of
40 trillion
DVDs

The enthusiasm of José Carlos Muñoz in faraway Seville is noticeable even on the telephone. "In 2015, our team for market and innovation analysis had the idea of harnessing Big Data for the aerospace industry. And that was the start of Gateway." The 36-year old electrical engineer heads up a seven-strong team at ALTER TECHNOLOGY TÜV NORD (ATN). His mission is: to make it possible via Gateway to retrieve all the collected knowledge of the components and systems used in the aerospace industry. This will permit companies to efficiently push ahead with with technological innovations in space flight.

The figures are impressive: The global dataset will need 163 zettabytes of storage space by 2025. This corresponds roughly to the capacity of 40 trillion DVDs. This at least is the shared forecast of hard disk manufacturer Seagull and IT analysts IDC and would represent a tenfold increase compared to 2016. Also needed, however, would

be a corresponding expansion of the capacities for data transmission, particularly for the industrial sector.

Market for small satellites growing apace

It is no wonder, then, that the space industry is booming. Satellites can cover the increasing global demand for broadband connections. At Intelsat, a commercial provider of satellite services since 1965, the use of new high-performance satellites is already being viewed as a game changer for the entire telecommunications sector. The main beneficiaries would be that part of the global population which has until now been excluded from access to the Internet. Private consortia are now taking over the market and launching ambitious space projects. According to management consultancy Euroconsult, the worldwide market for small satellites will grow to \$30.1 billion over the next ten years, compared with \$8.9 billion in the past decade.

"Somewhere between 60 and 70 suppliers can be involved in the construction of a satellite," explains José Carlos Muñoz. Whereas, in the age of the Sputnik, the artificial satellites were still handmade one-offs and their internal technical workings well-guarded state secrets, the current focus is on the standardised series production of larger batches. The use of technical components and systems in space presents unique challenges. Muñoz draws a comparison: "In any modern smartphone, the technology is much more complex. In orbit, however, it's robustness and durability that count." After all, what has always been true still applies today: you can't change any more components once the satellite has left terra firma. Any breakdown or failure would be followed by enormous economic losses.

Search engine for components

ATN can look back on decades of experience in testing and certification but also offers its own technical solutions: for instance, the encapsulation of components for use in space. As a result, ATN boasts a vast pool of technical data on electronic and optoelectronic components in the aerospace industry. Driven by a pioneering spirit and curiosity, the Gateway pioneers

Mr Muñoz. In the process, Gateway makes use of external sources, including NASA, Europe's ESA and Japan's JAXA. In 2017, they launched a completely functional beta version.

Aerospace experts from around the world can now obtain information from qualified sources and use this, among other things, to predict which processors and components will work especially well together. However, ATN can also use the Big Data application to draw conclusions about their users. If, for instance, a manufacturer of com-

tant information for the needs-based customisation of products.

The test phase of the beta version of the Gateway is scheduled for completion in 2018. Mr Muñoz is very satisfied. "We had an extraordinarily good response from the sector; no-one had ever come across a comparable system," he explains with a touch of pride. Because the area of technology concerned is very specific, the group of users is correspondingly hand-picked. Between 30 and 50 users have regular access to the beta version; the intention is to open it up later to roughly 150 specialists from the space sector. ATN has already had cause to celebrate a major success: the European Space Agency ESA is going to use Gateway to select components for its future programmes.

José Carlos Muñoz and his space pioneers are, however, already one step ahead in their thinking. "The system we have developed can safely be transferred to other high-tech industries, such as medical technology or the automotive sector." Given the fact that 163 zettabytes of data are going to need to be stored by 2025, reliable information systems like Gateway are set to become increasingly important. ○

José Carlos Muñoz,
electrical engineer.



"Big Data processes like Gateway are opening up new opportunities to use the collective experience of the space sector and to kickstart innovations."

José Carlos Muñoz, electrical engineer

are now concerned with developing an information system which allows access from the outside. "Simply put, Gateway works like a search engine which specialises in the components used in space technology," explains

ponents mounts a targeted search for the properties of a particular microprocessor, ATN finds out how and for what purpose it is to be used. This makes it possible to generate targeted market analyses which provide impor-

EXPERTS PROTECT WATER RESOURCES AROUND THE WORLD

Water is a valuable commodity – especially in the age of climate change. The experts from the TÜV NORD GROUP are supporting governments, official bodies and industries all over the world in their endeavours to secure the water supply of tomorrow.



Dr Bernhard Teigler,
geologist.

When asked why DMT, a company with a long history of involvement in the mining sector, spends its time on issues of water management around the world, Dr Bernhard Teigler can't suppress a smile. "Managing water has always played a key role in mining. You either have too much or too little." The experts from DMT are active all over the world. In the construction, infrastructure, plant construction and process technology markets and in the commodities field, they offer consulting and engineering services.

Efficient water supplies

In South Africa, Dr Bernhard Teigler and his team of experts from the local DMT company, Kai Batla, are supporting the Department for Water and Sanitation (DWS) in the management of water consumption in mining, agriculture and industry. DMT is also offering advice in the sparing use of water in Ukraine and Russia. The 59-year-old geologist reduces the issues that need to be sorted out for efficient water supply management to a simple for-

mula: "What falls from the sky, what is stored and what is used?"

Dr Teigler is familiar with Africa. He lived for many years in South Africa and Namibia; he now regularly spends his time commuting between Essen and the Cape of Good Hope. His task is to carry out an inventory of industrial

is an essential part of that plan: "Our project is the basis for the management and use of water in South Africa," the geologist explains.

Roughly 9 in every 10 South African households are connected to the water supply grid. However, the infrastructure is dilapidated: 37% of the water

"We need to protect our water reserves for tomorrow - especially in the age of climate change. And water management has a key role to play here."

Dr Bernhard Teigler, geologist

and agricultural water use, based on sound scientific principles, in three out of a total of nine Water Management Areas. These results will be drawn on when it comes to issuing the new licences required under the National Water Act to exploit ground or surface water resources.

The scarcity of water is a very serious problem in South Africa. Since the winter of 2017, Cape Town has been suffering under one of the most severe droughts of the last 110 years. Its causes lie in climate change and weather phenomena like El Niño but also increasing demand for water as a result of growing industrialisation and lifestyle changes. "Managing and distributing water resources is becoming an ever more important task," says Dr Teigler by way of explanation of the challenges faced.

Master plan for water supply

South African government experts are currently forecasting a nationwide shortfall in supply of between 2.7 and 3.8 billion cubic meters of water, roughly 70% of the total needed, for the year 2030 alone. It is for this reason that South Africa has drawn up a master plan to deal with the problem over the coming decades. And the commitment of Dr Teigler and his team

leaks out of the pipes before it gets to its destination. This is compounded by a further problem: in the reservoirs, which number thirty or so, and the hundreds of storage basins, the available supplies are dwindling rapidly. "There is actually enough storage capacity as long as the reservoirs are regularly replenished. But this hasn't happened for years," Dr Teigler explains.

The last available measurements were in some cases made at the time when apartheid still held sway and completely other priorities applied. In the meantime, the ownership of land has changed and, in many cases, the boundaries between plots are still fuzzy. The structural changes mean, on the one hand, that the significance of self-providers is increasing: on the other, large-scale enterprises are producing important agricultural goods for export. South African agriculture requires almost two thirds of the available water, which has to be distributed between all the enterprises involved.

To record the water data, DMT relies on state-of-the-art methods which are based on the scientific evaluation of available satellite or topographic data and used in digital forecasting models. "We managed to convince our client

that we didn't necessarily need to be present on the ground to carry out this project," Dr Teigler says. Now that the first phase is complete, next on the agenda are presentations of the data collected at stakeholder meetings with all the parties involved.

The water management issue will continue to be a major challenge for South Africa for decades to come. Alongside the development of a functioning information system as the basis for water management, enormous investment in the modernisation of the infrastructure is required, particularly if the current high levels of water loss are to be avoided. For the implementation of its master plan, the South African government has made a deliberate decision to place more emphasis on collaborations between public and private partners, as in the case of the successful cooperation between the government and DMT. In this way, the experts from the TÜV NORD GROUP are already playing their part in securing the water supply of tomorrow. ○

A TÜV NORD engineer who knows no frontiers

Simon Piotrowski (28) is an expert at TÜV NORD. In his spare time, he is devoting his energy to a project run by Engineers without Borders. In this project, he has been working with local partners since 2014 on the construction of a school in Uganda. At the moment, Simon Piotrowski is working to improve food hygiene there. "Our goal is sustainability and not simply to set something up only to disappear again," he says. The TÜV NORD GROUP has been supporting the work of Engineers without Borders since 2013. To find out more, follow the QR code.



CONSOLIDATED FINANCIAL STATEMENTS 2017

GROUP MANAGEMENT REPORT

FUNDAMENTAL PRINCIPLES OF THE GROUP

Business activity

Since its foundation nearly 150 years ago, the TÜV NORD GROUP has been a global technical service provider which deals in safety and trust. Its independent engineers and IT security professionals provide excellent solutions for safety and security, efficiency and quality. Experts and specialists with high levels of engineering expertise have been testing machinery, equipment and products, and compiling expert reports and issuing certificates in Germany and abroad. With more than 10,000 employees, the Group offers a wide range of innovative testing, certification, engineering, consulting and training services. Its customers include global players and small and medium-sized enterprises with a regional and local focus, alongside organisations, institutions and consumers.

As a technical service provider, TÜV NORD is active in the TICET (testing, inspection, certification, engineering, training) market. The activities of the Group are concentrated in six business units and Holding/Services. The activities in the Natural Resources, Aerospace and IT business units complement the traditional TÜV work in the Industrial Services, Mobility and Training business units. This allows the TÜV NORD GROUP to offer unparalleled support and care to its customers in every aspect of their business activities.

- The certification, service and testing portfolio of the companies in the **Industrial Services** business unit includes specific individual tests and the management of complex security solutions.
- The **Mobility** business unit offers numerous services, such as vehicle and driving tests, vehicle assessments, solutions for used car management and development-related consulting for the automotive sector.
- The core activities of the **Training** business unit are vocational education and training for specialists and managers, along with publicly funded training measures.
- The companies in the **Natural Resources** business unit provide testing, consulting, planning metrological and development services in the mining, oil and gas, infrastructure and construction sectors along with plant construction.

- The **Aerospace** business unit is involved in activities concerning the procurement, modification, testing and certification of electronic components for the aerospace industry.
- The services of the **IT** business unit include the testing and certification of all IT products and components, as well as training in selected security and quality issues in the areas of IT security, IT quality and IT infrastructure.

As of December 31 2017, the Group, with its management company TÜV NORD AG, embraced a total of 84 fully consolidated companies, 39 of them domiciled in Germany and 45 abroad. The TÜV NORD AG consolidated financial statement includes all major companies in Germany and abroad in which TÜV NORD AG either directly or indirectly holds the majority of voting rights.

ECONOMIC REPORT

General economic and sector-specific conditions

Following on from a global economic growth rate of 3.1 % in 2016, the year 2017 saw further signs of economic upturn. With an increase of approx. 3.7 %, economic growth remained at roughly the level of the previous year. In the US, Japan and the Eurozone, output grew significantly faster than the global economic trend, resulting in very high utilisation of production capacities in those markets. As a result of economic policy measures, the Chinese economy continues to be a major growth driver for the global economy, with a growth rate of 6.9 %. The upturn in the major economies, along with a slight increase in commodity prices, has also stimulated the economy in emerging markets as a whole.

The upturn in the German economy has gained in both strength and breadth. In addition to foreign business and investments, consumer spending is also contributing to its expansion. Gross domestic product grew by 2.2 % in 2017, marking an increase on the previous year (1.9 %). At the beginning of 2018, the ifo business climate index for the German economy was at an all-time high.

Security continues to be a service with strong global demand. The growth trajectory of the TICET industry is continuing accordingly. Key growth drivers will increasingly be new technologies and the digital transformation. The continued weakness of the oil and gas industry as a result of low commodity prices and low rates of growth in the domestic automotive market is reinforcing the trend towards increased investment in

innovation and the internationalisation of business. Overall, the trend in the TICET industry was positive in 2017.

In the age of digitalisation, aspects of analogue and digital safety and security are now converging. This is creating opportunities for economic growth. Independent certifications and examinations are the prerequisites for security in the digital world. This is set to work in favour of the TÜV NORD GROUP, one of the world's leading technical service groups with an innovative and diverse product portfolio, high quality standards and a global network.

Business Trends

The TÜV NORD GROUP held its own very well in a challenging business environment in the 2017 fiscal year. In addition to the sustained economic boom in Germany, further drivers of this growth were in particular the Group's diversified and innovative product portfolio and its global presence.

The Group grew profitably in the fiscal year under review. The moderate increases in sales and earnings (EBIT/EBT) announced in the management report 2016 and in the forecast 2017 were achieved or exceeded. The Group improved its key performance indicators for the fourth time in a row.

Within the TÜV NORD GROUP, the Mobility and IT business units recorded the highest growth rates in percentage terms and significantly exceeded the forecasts in terms of both sales and result. In the Mobility business unit, this was due above all to the enhanced collaboration with cooperation partners and the improvement in earnings from business developments in China; the IT business unit, on the other hand, added significantly to its business activities in the IT infrastructure segment in particular.

The Industrial Services, Natural Resources and Aerospace business units did not quite achieve their sales targets, whereas the Training business unit's sales performance was in line with the plan. In the Training and Aerospace business units, the planned result was exceeded. In the Industrial Services and Natural Resources business units, the result fell slightly short of the planned figure as a consequence of the reduction in sales revenue. Earnings in the Industrial Services and Natural Resources business units were slightly lower than planned due to lower revenues.

The number of employees of the Group grew as forecast. The Group projects that were decided upon in the context of Strategy 2020plus were continued as

planned in 2017 with the aim of permanently increasing the share of new services.

The trends within the Group in the 2017 fiscal year in comparison with the previous year were as follows:

- Turnover increased by 2.7 % from € 1,153.6 million to € 1,184.8 million. The rise in sales of € 31.2 million was essentially due to the Mobility and Industrial Service business units.
- Before special items, earnings before interest and taxes (EBIT) rose by 11.0 % from € 69.8 million to € 77.5 million. The increase of € 7.7 million can primarily be attributed to the positive development in earnings in the Mobility unit.
- The return on sales, measured by EBIT, was thus 6.5 % compared to 6.1 % in the previous year.
- Earnings before tax (EBT) increased by € 7.6 million to € 76.6 million.
- The number of employees, converted to full-time equivalent, increased from 10,113 to an average of 10,485 in 2017. Productivity also increased.

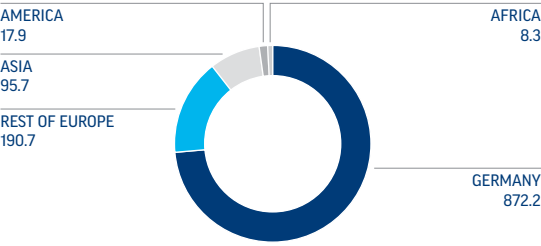
EARNINGS, ASSETS AND FINANCIAL POSITION

Earnings

The 2017 fiscal year came to an end with a turnover of € 1,184.8 million (2016: € 1,153.6 million). The following figure shows the trend of sales in the Group (€ million):

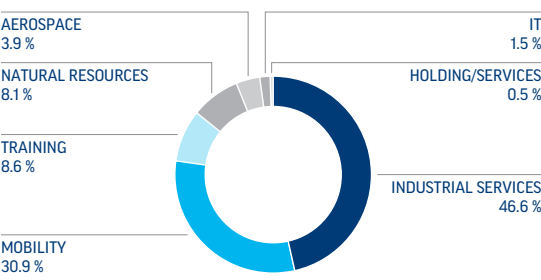


The following figure shows the breakdown of sales by region (€ million):



The Group's domestic revenue in 2017 amounted to € 872.2 million (2016: € 843.9 million). Turnover from the international business amounted to € 312.6 million (2016: € 309.7 million) and achieved a share of 26.4 %.

Broken down by business units and Holding/Services, the following overall picture emerged for the year 2017:



Due the heterogeneous nature of their market presence, their various product spectra and their regional alignments, the individual business units developed very differently.

The Industrial Services business unit generated a turnover of € 551.5 million (2016: € 538.1 million), where the development of foreign business was especially positive. The sales in Germany increased by € 4.8 million to € 355.8 million (2016: € 351.0 million). Sales abroad increased to € 195.8 million (2016: € 187.1 million). The companies in Europe, China and India contributed significantly to this rise. The turnover of the Mobility business unit, at € 366.2 million, was 9.8 % higher than in the previous year, € 333.4 million. The growth is primarily attributable to an increase in turnover in the car dealership and workshop segment. In the Training business unit, sales declined to € 102.1 million (2016: € 107.4 million), because of the end of the Opel contract with TÜV NORD Transfer. In the Natural Resources business unit, a turnover of € 96.0 million (2016: € 106.9 million) was generated, the decrease being mainly due to a lack, or the postponement of, major projects in the seismology field. The sales of the Aerospace business unit, at € 45.8 million, were slightly below those of the previous year (2016: € 47.2 million). The decline from the previous year was attributable to the fact that major projects were invoiced in the first quarter of 2016. The sales of the IT business unit increased to € 17.4 million (2016: € 15.5 million) due to the expansion of the service portfolio in the IT security area.

Group expenses increased by 1.8 % to € 1,149.3 million during the year under review. The cost of materials reached a peak of € 198.4 million in comparison to € 192.2 million in the previous year. This is primarily attributable to higher costs for natural resources and of auxiliary and operating materials.

Personnel expense decreased by 4.6 % to € 699.5 million because of the end of the Opel transfer contract.

Further information on expenses can be found in the Notes to the Consolidated Financial Statements, under No. 3, Consolidated Income Statement disclosures.

All the business units contributed to the positive result of the Group. Earnings before tax (EBT) amounted to € 76.6 million and were thus € 7.6 million above the previous year's result of € 69.0 million.

Net profit, at € 47.8 million, exceeded that of the previous year by 10.6 % (2016: € 43.2 million).

Assets

The TÜV NORD GROUP balance sheet reveals a sound structure. Total assets increased to € 888.4 million during the year under review, as against € 876.5 million in 2016.

Non-current assets rose from € 540.7 million to € 542.9 million. This was due in particular to the rise in deferred tax assets as a result of increased pension provisions. The rate of coverage of non-current assets (equity plus pension provisions divided by non-current assets) amounts to 107.9 % (2016: 104.0 %).

Current assets, which make up 38.9 % of total assets, are recognised at € 345.5 million (2016: € 335.7 million). Cash and cash equivalents decreased to € 84.7 million (2016: € 91.7 million).

The Group has additional hidden reserves, which primarily take the form of property ownership and investments.

Equity capital, at € 101.2 million, is roughly equal to that of the previous year (2016: € 100.8 million). The equity ratio amounts to 11.4 % (2016: 11.5 %). Due to the lowering of the discounting interest rate for pension obligations, actuarial losses in the Other equity positions amounting to € 33.6 million in 2017 (2016: € 41.1 million) were offset, thereby affecting the consolidated income statement.

In the 2017 fiscal year, € 754.3 million (2016: € 740.6 million) of plan assets were netted against pension provisions. The proportion of the provisions for current and future pension obligations that is not covered by plan assets amounted to € 484.9 million (2016: € 461.4 million). The cause for this increase was the significant reduction in the discount rate of pension provisions. The provision for obligations arising out of pre-retirement part-time working amounts to € 6.7 million (2016: € 9.7 million).

Reinsurance coverage of pension provisions increased by € 10.0 million to € 773.1 million. Through this allocation of funds, the degree of coverage adjusted for the effects of a change in the discount rate was once again enhanced as compared with the previous year.

Further information on the assets situation can be found in the Notes to the Consolidated Financial Statements, under No. 5, “Consolidated Balance Sheet disclosures”.

Financial situation, cash flow

Despite high investments in innovation and digitalisation, the TÜV NORD Group was able to maintain its positive net financial position in 2017. Nor was the TÜV NORD Group indebted as of December 31 2017. The most important objectives of the conservative financial policy remain the further maintenance of the Group’s good rating, the safeguarding of an adequate level of liquidity and the centralised financing of the subsidiary companies by the Group at a level that meets their needs. In addition, it is fundamental to the Group’s financial policy to ensure a significant measure of financial flexibility and transparent risk and opportunity management.

The Deutsche Bundesbank, having investigated important financial metrics such as profitability, internal financing strength, liquidity and capital structure on the basis of audited financial statements, has for the eleventh year in succession awarded the TÜV NORD Group the accolade of eligibility for rediscount with the central bank. The Group thus belongs to the round of companies whose credit liabilities can be used by commercial banks as collateral with regard to the Deutsche Bundesbank. This guarantees the TÜV NORD GROUP a preferred position in terms of access to financial resources.

The cash flow (see “Consolidated Cash Flow Statement”) amounted to € 65.2 million and was essentially applied to the reinsurance of pension liabilities, investments in intangible asset and in property, plant and equipment, and equity investments. Capital expenditure excluding corporate acquisitions amounted to € 43.0 million in the year under review as against € 40.6 million in 2016. Of this, € 37.5 million was invested by the German companies, and € 5.5 million abroad. The focus was on the construction of real estate in Essen and Hamburg, physical investment in testing equipment, vehicle fleets and computer hardware and software. No material capital expenditure obligations existed as of the reporting date. The Group spent a total of € 6.7 million (2016: € 9.8 million) on the acquisition of companies and equity holdings during the year under review. All projects were assessed by value

creation criteria; every potential acquisition or capital investment project was scrutinised and analysed both with regard to the return it would bring and also from the point of view of its impact on the consolidated balance sheet.

The Group’s net financial position amounted to € 32.9 million at the end of the year under review, a figure which was below that of the previous year (2016: € 38.8 million).

The existing syndicated loan for the Group in the amount of € 100.0 million had not been used as of December 31 2017.

In 2017 the Group was in the position to meet its payment obligations at all times.

NON-FINANCIAL PERFORMANCE INDICATORS

Innovation report

The current profound technological changes are having a significant impact on the business activities of the group. Driving innovation and environmental technologies is a key concern of the TÜV NORD GROUP. Innovative services are allowing the Group to tap into new market areas, to enjoy advantages over its competitors and to rise successfully to global challenges. Innovations are therefore key drivers of the growth of the TÜV NORD GROUP.

In all business units, with innovations ranging from the development of intelligent testing procedures, innovative vehicle technologies and climate-friendly transport concepts through to the use of new materials, the TÜV NORD GROUP is striking out along new paths in its quest for the solutions of the future.

For its innovation projects, the Strategy Process 2020plus, which deals with the economic development of the Group beyond 2020, is of great importance. The know-how of the TÜV NORD employees and the Group’s global presence form the ideal basis for the development of new ideas, trends and business ideas to support the success of TÜV NORD GROUP’s customers in the digital age. For this purpose, the TÜV NORD GROUP is also involved in universities and cooperates with research institutions. In addition, employees of the TÜV NORD GROUP are present in all relevant committees for the national and international development of industry-specific regulations.

2017 also saw the launch of the Digital Academy. The aim of this programme is to qualify employees for the digital age, to examine existing services for their digi-

talisation potential and to develop new, networked business models for customers. In a first step, digital experts from all business areas were trained. These are now acting as multipliers and influencers in the Group and are working on the operative implementation of digitalisation projects.

Within each business unit, innovation boards are responsible for the monitoring, control and coordination of the innovation process. These boards are also the context for assessments and decisions concerning the continuation of individual innovation ideas and projects from the initial idea through to market launch.

Through its established innovation controlling, the TÜV NORD GROUP conducts quarterly queries and analyses of sales, costs, investments, the number of employees and general innovation costs. The establishment of an innovation cockpit, which provides an overview of the entire innovation activities of the Group and of its most important key ratios, is scheduled for 2018.

The individual business units focused in particular on the following projects in the 2017 fiscal year:

Industrial Services: Due to the very good customer feedback, TÜV NORD EnSys is continuing the DARWIN (Database for Radioactive Waste Information) project. The system is to be extended with the addition of DARWIN 2.0, and archive data will be migrated from other systems. DARWIN provides information about waste along with a cadastre of repositories, correspondence, and conditioning campaigns in regulatory and final disposal procedures.

After the successful completion of the THERRI research project (thermal fatigue crack growth in power plants), the results are for the first time being practically applied in customer projects. The results are also the basis for further innovation projects. The ability to predict crack growth can be transferred to other industries as well as to other materials.

To take account of the rapid developments in 3-D printing (additive manufacturing), an innovation project was launched with the aim of approving components manufactured using additive processes in line with the Pressure Equipment Directive (PED). Together with other planned projects in the 3-D printing field, this allows customers to obtain information and draw on services relating to security, certification and approval issues from TÜV NORD as a one-stop shop, also with new technologies.

In the field of digital test and measurement methods, a fully digitalised strain gauge (DMS)method was developed in collaboration with customers. With the

help of fibre-optic cables and digital transmission systems, a cloud-based measurement solution is now in the portfolio which permits the cost-effective real-time evaluation and condition-dependent operation of infrastructure.

Mobility: The business unit is further cementing its competitive advantages in its core services by flagging up previously identified digitalisation potential. In addition to the technological advancement of their services at sector level, the companies are implementing relevant internal digitalisation concepts for official and free-market services.

2017 witnessed the launch of the Process Design SWG project, which will result in thoroughgoing digital and harmonised applications in service and support processes in the high-volume business accounted for by damage appraisals and valuations. The special initiatives and collaborations will continue in connection with the ever more significant market for “automated and networked driving” and “CarIT – functional safety” in the manufacturing business. The increasing complexity of equipment and vehicles requires that testing be supplemented by the validation of software for security management purposes. TÜV NORD specialists have been appointed to the relevant committees and working groups, with the result that they will be guaranteed a say in the development of guidelines for type certification and test drives with the aim of approval for road use. TÜV NORD Mobilität is for instance actively participating in two projects: the subsidised research projects entitled “Diginet-PS” of the Federal Ministry for Transport and Digital Infrastructure for the validation of a framework for driving with Car2X communication in real urban traffic situations, and “AutoConstruct” for real-time-capable environment detection on building sites for the Federal Ministry for Economic Affairs and Energy (BMWi). The new requirements concerning the validation of vehicle electronics and information systems in respect of data protection and data security are giving rise to opportunities for the expansion of business activities. The developments being spearheaded by TÜV NORD Mobilität are being accompanied by close cooperation in the area of data communication with organisations including the IT business unit for the purpose of the transfer of safety and security into the automotive sector.

Training: The digitalisation trend continues apace, and numerous learning platforms underwent continuous development in 2017 in the Training business unit. TÜV NORD Bildung has been using the “proJobTraining” learning platform for training and further education for more than ten years. For in-house training, the “TÜV NORD E-Training” learning platform has been

designed in such a way that all TÜV NORD GROUP employees have fast, targeted access to digital training materials.

Quantilope, a software solution for fast and efficient digital customer and trainer surveys was optimised, and interactive training systems are now up and running.

The first ever online training course for geriatric care was created in a collaboration between TÜV NORD Bildung and TÜV NORD College. It includes eleven modules supported by learning videos which, with the support of training videos, interactively communicate the content of the training in four learning areas.

At some sites, the trainers of the TÜV NORD Akademie already have digital interactive whiteboards at their disposal, offering them more creative room for manoeuvre in the design of their seminars and giving participants an optimised and innovative learning environment. With a new learning app from the TÜV NORD Akademie, participants in seminars on Quality Assurance can make use of training content, check their knowledge or look up technical terms, at any time and irrespective of where they are. The learning app provides additional training videos and all the documents relating to the face-to-face seminar via smartphone or tablet. In addition to innovative learning concepts, modern seminar contents, such as the operational use of drones, are increasingly being offered.

For the first time, the TÜV NORD Technisches Schulungszentrum has created educational materials for customers in the free market with video technology, which is made available to all participants in digital form. A driver safety training course for bus drivers was accompanied by an actioncam with the aim of documenting and illustrating the perspective of the passengers and the physical forces which act on them. This training drive was also followed and filmed by a drone to give the drivers a new perspective on the vehicles being driven by them.

Natural Resources: Once again, one of the priorities of the Natural Resources business unit in 2017 was the acquisition of research and development orders. As before, the principal focus was on the technologies that will be required in the future if the business unit is to maintain and further improve its market position as an innovative service provider.

The context for this was the innovation projects defined in the Strategy 2020plus that were launched in 2015. These projects are focused on the fields of geotechnical engineering, energy distribution and energy storage, new concepts for extraction and use

in mining, nuclear waste repositories, guarantees of origin for raw materials, intelligent sensor networks, model engineering and process control in mining, and industrial process water purification.

Particularly worthy of note is the already very successful participation of DMT as a core partner in the task of establishing the Knowledge and Innovation Community EIT RawMaterials research and development consortium of the European Institute of Innovation & Technology. In the first calls for project proposals, four DMT-led innovation projects were selected for funding. Thematically, these involve the development of an automated system of shaft inspection, the creation of a network of expertise for the reactivation of former mining areas and a detailed concept for the monitoring of mining residues of former mining operations in collaboration with international partners. Work is also being done with TÜV NORD CERT on the development of a certification scheme for critical natural resources. A further 7 projects involving DMT are being funded in the EIT RawMaterials consortium, meaning that funding to the tune of over € 2.6 million was successfully secured in the very first year of the seven-year EU funding programme.

DMT is also involved in innovation projects of other funding programmes, such as Horizon2020, RFCS and projects of the German government. The projects include, for example, innovative extraction technologies, investigations into the feasibility of different energy storage technologies, safety research for the mining industry, and innovations in the field of coking technology concerning the leak-tightness and control of coke ovens.

Aerospace: 2017 also saw the implementation as planned of the Big Data project known as “Gateway” in the Aerospace business unit; one of the digital projects was the implementation of a digital library. This specialised information, ordering and service platform uses Big Data technologies to provide partners and customers in the Aerospace business unit with key technical data. Customers and suppliers are being brought together more effectively by means of technical information, design and construction plans, information to suppliers etc., thereby opening up further market prospects.

In addition, the business unit is supporting customers and manufacturers in the development of new photovoltaic and semiconductor technologies, radiation procedures, cryptography and new technologies and testing methods for the industrial and civil use of drones. The business unit is also cooperating with universities, research organisations, companies and governments.

IT: Whereas the Internet of Things (IoT) is increasingly gaining in significance in the context of digitalisation and networking, far too little attention has thus far been directed at the security of things. This has been demonstrated by the current spate of cyber-attacks on IoT products such as routers or smartphone devices. The IT business unit is for this reason actively participating in various initiatives and working groups concerned with the development of cyber-security certification for IT products and services, technical guidelines and IT quality seals that will form the basis of future innovative services. It is for this reason that the IT business unit is promoting initiatives such as the creation of a young researcher position in the field of industrial cybersecurity in the “Digital Society Institute” faculty of the European School of Management and Technology (ESMT) in Berlin.

New technological developments are the foundation of innovative business models. The IT business unit is for this reason committed to the task of examining more closely the disruptive potential of new technologies and using the insights derived to develop new business fields. The IT business unit is for this reason currently investigating the connection between blockchain technology and IT security aspects and the possibility of managing certificates within a blockchain.

2017 also saw a more intense focus on the digitalisation of internal processes. Two innovation projects were launched to this end. As an initial step, a “digital testing assistant” is to be developed to digitalise the testing of the physical security of data centres in accordance with TÜViT’s own standard. The idea is for the digital testing assistant to map the entire testing process, from the provision of support to the testers on the ground in the form of simplified data recording via a mobile application, through to the automatic generation of test reports. The application will then at a later stage also be usable for other testing catalogues and fields to enable this process innovation to make a key contribution to the digitalisation strategy of the TÜV NORD GROUP. The innovation entitled “Information-Centred Evaluation” features the transition from a document-based to a database-based common criteria test. It will in the future be possible for customers to enter specific relevant manufacturer data into a web interface, thereby significantly reducing the project duration. The interoperability of both innovation projects will be guaranteed through the creation of a shared technological basis with the aim of realising synergy effects. In the case of both innovations, the data will be stored directly in a database, making it possible to evaluate them electronically. This will pave the way to further development stages for the innovations, such as automatic preliminary test-

ing, the use of Big Data analyses and the deployment of artificial intelligence.

The expansion of the portfolio to include new services and innovations in the telecommunications and consulting sector is one of the aims being pursued in the context of the expansion of the IT business unit. The digitalisation and increasing networking of information, products and systems through the IoT requires skills in both the telecommunications and IT security fields.

Employees

The compatibility of work and family life is an important issue in the TÜV NORD GROUP. TÜV NORD AG and, since 2009, many of its subsidiaries have already been certified according to the “berufundfamilie” (“work and family”) audit. The re-audit for this certification was initiated in the 2017 reporting period and will from now on be carried out for the entire TÜV NORD GROUP, concluding in the 2018 reporting period. Flexible working hours and the possibility of part-time work form part of a family-focused HR policy. If staff members are confronted with particular challenges in the care of children or elderly relatives, an external service provider is on hand to offer advice. The employees can also make use of care facilities and holiday programmes for their children.

Moreover, the TÜV NORD GROUP has now set out its Gender Balance programme with the aim of promoting equal opportunities for women and men in the Group. In the 2017 reporting period, the first measures were implemented with the aim of removing obstacles from employee career paths and providing equal opportunities for women and men in the technical professions. For example, the advertising of vacancies was reviewed with a focus on the use of gender-sensitive language and design. Moreover, training was offered to new members of staff with the aim of enhancing their ability to influence the TÜV NORD culture and to live up to their potential within it, and the requirement for mixed-sex teams to be selected for assessment and guidance centres was made mandatory. The programme will continue in the 2018 reporting period.

A further element of the Gender Balance programme is employer attractiveness. The TÜV NORD GROUP aspires to be equally attractive to good applicants of both sexes. The TÜV NORD GROUP is one of the TOP 100 employers for young professionals and students. The Group is an interesting and attractive employer in particular for engineering graduates. In the universal rankings for its professional specialism, the TÜV NORD GROUP climbed 23 places to 44th place in 2017. The TÜV NORD GROUP was also singled out by Kununu

for the accolade of “Top Company” and honoured by DEUTSCHLAND TEST, which awarded the Group the accolade of provider of “Top career opportunities”.

A further testament to its attractiveness as an employer is the year-on-year increase in the number of applications that the Group receives.

As an employer, the Group is the byword for open and authentic public communication. Since 2012 the Group has been the proud bearer of the Kununu “Open Company” seal of quality, which is confirmation of the implementation of this guiding principle.

With the aim of engaging with and promoting these values, a global employee survey was once again carried out in the 2017 reporting period. The survey picked up where the first employee survey left off in the 2014 reporting period, in the wake of which specific improvement measures were implemented. The objective of the new employee survey was to review the success of the measures undertaken in 2014. It also included new questions, concerning, for example, the issues of innovation and digitalisation. The evaluation and processing of the results is planned for the first quarter of 2018.

As of December 31 2017 the domestic and foreign companies of the TÜV NORD GROUP employed an average of 10,485 staff (converted to full-time equivalent) in comparison to 10,113 in the previous year.

Including the experts provided by the associations, the average number of full-time employees was 10,539 (2016: 10,172). On the sampling date of December 31 2017, the absolute number of employees was 13,108. The proportion of women working in the Group is approximately 29 %.

7,608 employees work in Germany. The number of employees abroad increased in 2017 to 2,931. The largest business unit is Industrial Services, with 5,577 employees in Germany and abroad, followed by the Mobility business unit with 2,604 employees.

With its dual system of vocational training alongside dual courses with integrated training and practice, the TÜV NORD GROUP offers attractive opportunities for school-leavers and young professionals. Roughly 40 new recruits are currently preparing themselves for their future positions of responsibility in the TÜV NORD GROUP in the context of their dual studies. The particular focus here is on the technical/information technology field, for instance, on degrees in engineering or computer science and on courses of study in mechanical engineering, electrical engineering or computer science. Various models of the training and this

dual curriculum are being offered at many sites in the Group.

With the aid of inter-regional partnerships with academic institutes, the TÜV NORD GROUP has since 2008 been sponsoring students from Germany and abroad. The awarding of grants also reflects a commitment to social responsibility by offering financial support to many climbers of the educational ladder and students on degree courses which involve responsibility for society as a whole. The partners include the Leibniz University of Hanover, University of Applied Sciences and Arts in Hanover, the Technical University of Hamburg-Harburg and the Technical University of Braunschweig. As an international group, the TÜV NORD GROUP, in cooperation with the Northern Institute of Technology Management (NIT) at the Technical University of Hamburg-Harburg, also offers international scholarships to bachelor graduates from abroad with first professional experience.

The TÜV NORD GROUP has been sponsoring school students since 2014. With the Start scholarship we have made it possible for a grant recipient from a migrant background to prepare properly for her higher school-leaving exam. In the context of the Start Foundation programme, her individual abilities and talents are being further developed, for instance through projects and training opportunities.

It is the know-how and technical expertise of the staff that form the basis for the future success of the TÜV NORD GROUP. For this to be maintained, a comprehensive and wide-ranging portfolio of measures for the training and development of all the target groups within the Group is indispensable. This also includes the preparation of the staff and managers for what has become known as the Digital Transformation. The task before the company is to work with the staff to initiate this process of change, to actively shape the future and, in the process, to exploit the existing opportunities and generate added value.

In 2017, € 7.0 million was spent on internal and external training events (2016: € 6.5 million). The promotion programmes to prepare staff for management tasks are being further developed and adapted to the needs of the individual target groups. For example, programmes are currently being planned that will enable managers from different business units and international companies to network more effectively. For this purpose, alternative forms of learning such as e-learning and blended learning will increasingly be offered. Regular dialogue is now taking place with the HR managers of the international companies with the aim of identifying and communicating best-practice approaches. Moreover, the talent management

division is also offering the foreign companies direct on-site support in fields such as succession planning, the introduction of staff selection instruments and the organisation of promotion programmes.

A holistic concept was developed for the purpose of transforming the product-oriented corporate health and safety policy into a needs-based, Group-wide sustainable health and safety management system. This was trialled in 2017 in the form of two pilot projects in different subsidiaries. The final evaluation of the pilot projects will be decisive when it comes to the rollout of the system across the entire TÜV NORD GROUP. As before, staff across the Group can take advantage of a wide range of health promotion offers and a yearly health week. Various sporting activities are offered at many of the sites.

For our companies it is particularly important to cultivate a culture that reinforces a high level of mutual loyalty between employees and companies. One way of measuring this is length of service life. Throughout the Group this averages over ten years, a figure which is significantly higher than comparable statistics from the competition.

The Board of Management would like to thank all the staff and company managers, both at home and abroad. The success achieved in the fiscal year under review would have been impossible without their commitment and dedication to their work. Their thanks also go out to the employee representatives for their trusting and constructive cooperation.

Overall situation

In view of the macroeconomic situation, the TÜV NORD GROUP is satisfied with the way the year under review progressed. However, notwithstanding the good operating profit of the Group, every effort continues to be made to improve profitability and continuously enhance the company's position in terms of its earnings, assets and finances. TÜV NORD GROUP assumes that the earnings, asset and financial positions will remain stable in the future.

REPORT ON EXPECTED DEVELOPMENTS, OPPORTUNITIES AND RISKS

Report on expected developments

In the light of existing economic and political risks, the outlook remains uncertain, also due to the fact that the escalation of conflicts in the Middle East and in North Korea has given rise to additional geopolitical risks.

The economic environment for German industry is currently stable. The leading German economic research institutes anticipate an annual global growth rate of roughly 3.5 % in 2018. Of all the industrial nations, it is expected that the US will make a particular contribution to this high growth rate. This assumption is based in particular on the continuation of the trend toward high consumer spending in North America. For reasons including the expansionary monetary policy of the European Central Bank, the growth rate in the Eurozone, at 2.5 %, is forecast to slightly exceed that of 2017. Major drivers of growth in the emerging markets continue to be China, India and some countries in East Asia, with growth rates of over 5 %. The German economy is expected to continue on its growth trajectory with an anticipated rate of growth of 2.5 % in 2018. The German export sector will continue to make a key contribution to this development. However, in the light of existing economic and political risks the outlook remains uncertain, partly because the escalation of conflicts in the Middle East and North Korea added further geopolitical risks.

Increased security requirements for new technologies and the digital transformation mean that the global TICET market is set for further growth. And yet, the high level of fragmentation of the sector and relatively modest rates of growth on both domestic and European markets have given rise to intense competitive pressure, which could have a negative impact on the growth of domestic market players.

The TÜV NORD GROUP thus expects a moderate increase in sales for the 2018 reporting period, with a rate of growth slightly in excess of the level achieved in 2017. This does not take into account possible effects from the acquisition and sale of companies. All business units are expected to contribute to the planned growth rates.

The Industrial Services business unit expects to see continued stable development in its business activities both domestically and abroad. In international business, the Europe, South-east Asia and China regions are likely to make a particular contribution to the increase in sales. At the same time, a decline is expected in the nuclear business in Europe. As a result of the additional costs occasioned by future and growth projects, including digitalisation, innovation, customer-focused processes and sales development, a slight reduction in the result is planned for 2018.

The Mobility business unit anticipates a positive sales and earnings trend. Crucial factors in this trend will be enhanced cooperation with partners in the context of the strategy of market positioning throughout the whole of Germany and increases in turnover in the

areas of periodic vehicle inspections, damage appraisals and valuations.

For 2018, the Training business unit anticipates an increase in sales and a result on a par with that of the previous year. The planned increase in sales will result in particular from growth in the Academy business and the further development of the nursing schools operated by TÜV NORD College.

The Natural Resources business unit is assuming that there will be a modest recovery in the international commodities markets. For 2018, a slight rise in turnover and result is anticipated, to which the Seismology and Industrial Engineering business segments are likely to make a particular contribution. At the same time, the business unit is striving to reduce its dependence on the commodities markets by shifting business activities into other markets. To this end, the intention is to develop new products and services in the context of innovation projects.

The Aerospace business unit is planning a slight increase in sales and result for 2018. It is anticipated that the "Gateway" innovation project will record its first sales as of 2018 and, in the medium term, enhance customer loyalty by offering improved added value. The recently completed integration of Optocap services into the product portfolio will make it possible to engage in more cross-selling activities. In this respect, the business unit will continue to evolve in the direction of a one-stop shop for microelectronics.

The IT business unit is planning continuous revenue increases in all service areas. For 2018, it anticipates a slight decline in result on the back of innovations and the expansion of the business.

The number of employees in the Group is expected to grow in line with turnover in 2018. The Group is seeking to stabilise the productivity of its staff, taking into account growth opportunities on both domestic and foreign markets. The increase in the workforce is accounted for by recruitment in the course of planned innovation, service, internationalisation and growth projects, principally in the Industrial Services business unit. In structural terms, thanks to the continuous growth of the workforce in other countries, staff working in the foreign companies are accounting for an ever-higher proportion of the overall workforce of the Group.

The innovation projects identified in the context of the Strategy 2020plus should contribute to the organic growth of the Group in the long term. These projects will continue in 2018 with the aim of developing new services. In their innovation projects, all the business

units are engaging with global megatrends such as Industry 4.0, the Internet of Things, critical infrastructure and connected cars, with the aim of adopting these developments in innovative and profitable business models.

Risk and opportunity management system

For a global company group like the TÜV NORD GROUP, a responsible attitude to risks and opportunities is key to corporate success and forms an important element of company management. Early identification of both risks and opportunities and forward-looking management form the basis of a systematic risk and opportunity management policy. With its diversified services, the Group is exposed to a wide range of risks but is also ideally placed to exploit a great many opportunities.

With the additional use of market and competition data (market intelligence), opportunities are identified and analysed within the risk and opportunity management system. On this basis, sales and service activities and other measures are scrutinised in respect of their effectiveness and viability. Relevant markets are continuously observed to identify overall economic and sector-specific opportunities in good time. Wide-ranging engagement with both established and growth markets is opening up macroeconomic opportunities for the TÜV NORD GROUP. In order to reinforce its technological base and market position, every effort is being made to improve the Group's ability to innovate. The Group is thus in the position to participate at an early stage in macroeconomic opportunities as soon as the chance arises to do so.

The recording and management of risks to the future development of TÜV NORD GROUP takes place in the context of the risk management system. The objectives of the risk management system are the complete and reliable identification throughout the Group of existing risk potentials, the comprehensive summary and evaluation of risks, the quest for and development of efficient measures to reduce risk, continuous risk monitoring and comprehensive risk reporting.

The strategy of the existing risk management system consists in the systematic identification, evaluation, aggregation, monitoring and notification of the existing risks across the Group and implementation of the corresponding measures for risk reduction or elimination in all the companies in which the TÜV NORD GROUP holds a majority stake. These risks are identified by the end of each quarter in all the business units in a standardised, IT-based, periodic process. As no single instrument is capable of identifying all the risks, the risk management system provides for a

combination of different instruments and methods for risk identification. The identified risks are analysed and evaluated, taking into account the potential levels of damage and likelihood of occurrence, so that countermeasures for risk mitigation or elimination can be coordinated or developed to complement existing measures. On the basis of the risks that continue to exist after the implementation of countermeasures, a report is sent to the risk management department of the TÜV NORD GROUP. Key risks that might jeopardise the very existence of the Group are reported immediately as ad-hoc notifications outside the regular reporting schedule.

The risk management system is so structured as to ensure that the individual risks and their impact on the Group are determined to accurately map the risk situation of the Group.

Where necessary, financial provision is made for individual risks. Moreover, the Group operates a centralised insurance management system to set out and implement a Group-wide insurance strategy. Suitable insurance contracts are in place to limit or eliminate the possible financial impact of potential claims or liability risks.

The Board of Management and the Supervisory Board are kept informed at regular intervals of the current risk situation of the Group. They discuss at length the causes of the risk situation and the measures taken in response to it. Additionally, the effectiveness of the risk management system is verified by the corporate audit department and external auditors. The results of these audits are also reported to the Board of Management and the Supervisory Board.

Risks and opportunities for the TÜV NORD GROUP

With its diversified services, the Group is exposed to a wide range of risks but also ideally placed to exploit opportunities which have not significantly changed in a year-on-year comparison.

No risks became apparent during the 2017 fiscal year which might individually or cumulatively jeopardise the company's continued existence or materially impair its financial position, financial performance or earnings. Nor is there any threat for the foreseeable future of any risks arising that might jeopardise the company's continued existence.

Interest rate risks can arise in connection with pension obligations. The plan assets intended to finance the pension obligations are managed in a fiduciary capacity by the TÜV NORD PENSION TRUST e. V., which was founded in 2008. Changes to the actuarial

interest rates in the valuation of pension obligations can have an impact on the cash value of the discounted pension obligations and thus influence the equity capital and overall earnings.

The Group is not exposed to any material price, credit loss or liquidity risks, nor to risks arising from fluctuations in cash flow. The Group's financial assets are invested in such a way that, as far as can be seen at present, no material risks exist.

Opportunities for the TÜV NORD GROUP are arising from its presence in growth industries and dynamic markets. Investments in innovative areas domestically and abroad offer an opportunity to respond to increasing competitive pressure and to strengthen the Group's market position.

The individual business units report the following risks and opportunities in their business activities:

The Industrial Services business unit expects its business to continue to show a positive development in the coming years. The business unit is exposed to risks above all in its core market of Europe. Intense price competition but also equally intense competition with regard to the recruiting of staff, especially engineers, may have a negative impact on the achievement of its objectives. Moreover, there is a real risk in Germany that regulations will be amended with the effect that previously mandatory tests will no longer be required and other specialist companies will be granted permission to conduct tests alongside the experts currently charged with the responsibility for doing so. This would result in a decline in sales and earnings along with increased competition. Opportunities for the expansion of business activities are to be found in the portfolio of new services, such as the development of digital lift testing. Moreover, existing services are being expanded, and activities such as those in the areas of wind energy and food developed around the world. To realise these opportunities, we set in train the implementation of an organisational structure that focuses even more single-mindedly on the customers, by means of which all the companies within the business unit will in future be controlled using a standardised process. Furthermore, potential to improve the efficiency of the service provision process is arising out of the implementation of productivity-enhancing measures. Digitalisation offers the opportunity both to mitigate the skill shortage threat posed by demographic developments and to slim down processes.

As a result of the amendment of the Atomic Energy Act in 2011, the nuclear company is confronted with the medium- to long-term risk of declining orders in Germany. Opportunities are presented by activities in the domestic decommissioning and waste management

market and, in the long term, in connection with final nuclear waste disposal, and by the ramping up of sales activities abroad.

In the certification business, changes to the statutory base mean that the possibility that individual services will become obsolete or be cut back cannot be ruled out. However, due to the high level of diversification and the heterogeneity of the customer structure, this risk is manageable. The risk remains that accreditation bodies will impose drastic sanctions, up to and including the revocation of accreditation for certain areas, in the event of violations of the rules by individual employees of the certification company. In the Industrial Services business unit, a centralised accreditation management system is being installed to minimise the risks through targeted redundancies and internal auditing. Due, on the one hand, to the growing international trade in goods and, on the other, to the increasing importance of consumer protection, the domestic and foreign markets for almost all certifications are set to undergo robust growth over the medium to long term. Opportunities will arise through process optimisation and investments in the areas of energy and consumer protection. The anticipated positive trend might be affected at any time by risks arising from changes to the local political, social and economic conditions in individual countries.

For the Mobility business unit, the previously known premises and conditions remain largely unchanged. It is for this reason that the business is expected to see stable development in the coming years. The customer-group-oriented strategy of the Mobility business unit fundamentally revolves around the recognition of sector-specific risks and changes in market conditions in the segments and regions in the context of market and competition analyses.

Intensive competition around the core services in Germany is giving rise to risks in respect of the earnings situation and the Group's position on the market. The process of concentration in the car dealership market requires the Group to offer services throughout Germany. This trend is being countered with increasing success by the establishment of national market presence in the form of franchise partners. Long-term competitiveness will be safeguarded by the maintenance of a high level of service, the expansion of the product portfolio and the development of a standard digital process design for existing services.

The Group is courting new staff just as assiduously as it is new customers. Targeted measures are being implemented to find suitable applicants for vacant positions and to enhance the loyalty of service providers to the company.

The risk remains that the lack of evidence of calibration of the test equipment in car dealerships and workshops will make it impossible to carry out testing activities on site. The ongoing expansion of capacities for calibration services on the market will contribute to the solution of this temporary challenge. The signs are that the competent state authorities will in each case draft interim regulations making it possible to continue the testing work until sufficient capacities are in place.

No discernible risks to the Mobility business unit have arisen out of the exhaust emissions scandal that was uncovered in the 2015 reporting period. Neither a slump in sales nor a loss of reputation have been identified. The scandal has impacted on the type approval process in the form of changes to testing and measurement procedures and the increased use of appropriate measuring technology. RDE/PEMS measurements are increasing; as of 2018, tailpipe emissions measurements will be made mandatory once again for all vehicles to ensure the maximum effectiveness of the periodic exhaust emissions tests.

Technological developments in the automotive sector are resulting in changes in the requirements on data protection and data security. The increasing complexity of equipment and vehicles requires that testing be supplemented by the testing of software for security management purposes. The Group sees opportunities to expand business activities in the manufacturing business in the form of the further development of methods to test systems installed in vehicles. The offer of vehicle valuations in growing second-hand car markets around the world presents further opportunities. Penetration of the market will be facilitated here by the use of new technologies and the development of targeted corporations.

For the companies of the Training business unit, falling unemployment could give rise to risks in the coming years, as it may lead to a substantial reduction in the number of contracts for training measures financed from public funds. The companies intend to extend their portfolios of services for the free market, e. g. for the health and nursing services sector. This will give rise to good opportunities to improve the market position. Constant training and information requirements are to be expected as a result of technical developments or changes to rules and regulations, especially in the TÜV-specific areas. The "migration and refugees" issue is continuing to throw up new challenges for education and labour market policy. The educational institutes are accordingly being forced into a prominent role in the development and provision of suitable instruments. This will result in opportunities for the companies in the Training business unit.

The overall situation of the global commodities industry has not deteriorated. The Natural Resources business unit is assuming that there will be a modest recovery in the international commodities markets. As before, the focus of sales activity will increasingly turn to state-financed projects. DMT EIT raw materials activities and participation in other (sponsorship) programmes have resulted in successes in the award of projects, particularly for the medium term. Business expansion in the direction of infrastructure should offset the caution being exhibited in the commodities markets. The restructuring and process optimisation carried out in previous years has enhanced the competitiveness of Natural Resources business unit as a whole. The expansion of international representation remains a priority. Growth opportunities will arise from the implementation of innovation projects which have been elaborated in the context of the development of strategies to accompany the relevant megatrends, such as population growth, increasing urbanisation, rising demand for raw materials and convulsions in energy supply.

The companies of the Aerospace business unit are dependent upon successful partnership with the component manufacturers. In the growing market for satellite construction there is a risk that the component manufacturers may enter into direct business relationships with the builders of satellites or systems. The "Gateway" project was launched to minimise any possible negative effects. The idea behind the project is to improve the partnership with the component manufacturers and at the same time to create a marketing platform for customers. Prospects for business expansion are also offered by increased growth in emerging markets as well as the extension of existing services and the marketing of these services for the aviation sector.

For the IT business unit, risks could arise from the draft law for the creation of a central European cyber-security agency represented by the ENISA and an annex defining "conformity assessment bodies". This draft legislation might very quickly become mandatory for all EU member states. ENISA would be granted sovereign powers in respect of the IT security scheme in Europe and for testing procedures. Previous national procedures and schemes could thus be completely superseded. The principle of conformity assessment could replace the evaluation in which TÜViT has specialised, potentially significantly lowering the bar for testing bodies seeking to enter the market and encouraging the emergence of new competitors as well as increasing competitive pressure from established ones. And yet, this new legislation will also give rise to opportunities: the number of products to be certified could undergo a massive increase as a result of the lower security requirements, as manufacturers would

not be exposed to such high risk of falling foul of stringent requirements.

Competition for the services of IT security experts will continue in the coming year. As there are no longer any trained specialists on the market, further investment will be required in the search for employees with potential and their subsequent training. This will give rise to high initial costs and a loss of productivity.

In the Western world, a trend is emerging toward the increasing consolidation of manufacturers of high-security semiconductors. Increasing competitive pressure and the entry into the market of Asian manufacturers are resulting in company takeovers that are accordingly reducing the number of product lines to be certified. Until just one year ago it was not possible to certify high-security semiconductors made by Chinese manufacturers in Germany. This has now been changed thanks to an agreement with the BSI that was initiated by TÜViT. It will accordingly be possible for the IT business unit to generate new opportunities on the Chinese market in the future.

For some years now, concerted efforts have been underway to promote innovative themes such as Industry 4.0, the Internet of Things and autonomous driving, which are between them generating an enormous potential for IT security requirements. However, the implementation of concepts in a phase in which customers will approve budgets for IT security testing is not yet on the horizon.

CORPORATE GOVERNANCE

Corporate governance provides the framework for the management and supervision of the TÜV NORD GROUP and is based on the requirements imposed by the German Corporate Governance Codex on capital-market-orientated companies. The governance structure is for this reason consistently aligned with the globally recognised Three Lines of Defence (TLoD) governance model and is the byword for responsible management and control with the aim of long-term value creation. With its three connected lines of defence, of which the first is operative management, the second risk management, controlling, law, compliance etc., and the third internal auditing, the TÜV NORD GROUP guarantees the lawfulness of all its business processes and organisational structures along with the efficiency and effectiveness of its established internal control system (ICS).

The Compliance Management System (CMS) of the TÜV NORD GROUP, which was established over 10 years ago and has been awarded multiple certifications, is an essential element of corporate governance as stipu-

lated by TLoD. Its priority is to reinforce the values of and protect the TÜV NORD GROUP. To prevent possible risks and avert damage to the TÜV NORD GROUP, the central CMS at TÜV NORD AG provides for a contact person with responsibility for compliance, whose job is to coordinate compliance issues and tasks. This point of contact is available for all employees. Appropriately conceived and clearly formulated policies and regulations, accessible to all staff at all times via the Intranet, are fundamental factors when it comes to ensuring good corporate governance. The adoption of a corporate philosophy and a binding code of conduct have given employees a concrete framework of guidelines for their actions, thus reinforcing good business practices in compliance with the law. The corporate philosophy and the code of conduct are regularly reviewed and updated. Information events and training sessions are organised to enhance staff awareness of the theme of compliance, as TÜV NORD aspires to a preventive compliance approach and a corporate culture in which heightened awareness among the staff precludes the possibility of breaches of the rules.

All corporate governance structures and processes are regularly reviewed to ensure that they are up-to-date and, if required, adapted to meet new requirements, such as the current revision of money-laundering legislation and the newly introduced transparency register.

The key principles of the TÜV NORD compliance strategy are adherence to applicable law, respect for ethical values and sustainable action. Compliance is also an important assessment criterion in the selection of its suppliers and business partners and is guaranteed by a Compliance Code for suppliers and business partners which forms the basis of existing and future business relationships. By signing the agreement on the Compliance Code, the suppliers of the Group undertake to act in the spirit of the TÜV NORD compliance standards. These include the basic requirements of human rights, equal opportunities and non-discrimination, environmental protection, product and occupational safety, the observance of the law and the extirpation of corruption.

Members of staff, business partners and customers have a further possibility in the form of an ombudsman system, bound by principles of confidentiality and anonymity, to communicate compliance issues or draw the Group's attention to breaches of the compliance regulations of the TÜV NORD GROUP. A renowned

lawyer, appointed as an external point of contact for all employees, customers and business partners, gathers information on any violations of the law or policy to which he is alerted.

Compliance with the corporate governance rules and regulations is continually monitored by the Internal Audit Department through its risk-orientated audit planning. The quality management system implemented by the Group's internal audit department aims to guarantee the efficiency and effectiveness of its auditing work. The effectiveness of the established processes is regularly confirmed by an external and voluntary audit in accordance with the DIIR (German institute of internal auditing) standard.

The CMS was successfully audited most recently in 2015 by an external audit company on the basis of the IDW PS 980 auditing standard. The audit report deemed the implementation and orientation of the CMS to be appropriate. The verdict of the audit confirms with sufficient confidence that the compliance management system is suitable for both the identification of risks of major violations of the rules and the prevention of such violations in the first place.

Awareness and sensitivity concerning compliance at corporate management level and among the employees have been deemed exemplary across the Group over a sustained period. Regular compliance queries submitted by the employees and the recommendations for conduct issued in reply in advance of active business transactions are effective and efficient measures for the prevention of damage. Risk-based process controls, such as, for instance, a compliance check for business partners, systematically reduce potential compliance risks. The tracking, sanctioning, evaluation and documentation of breaches of compliance represent an integral part of the continuous improvement process. In addition to the continuous supply of up-to-date information, the Group's point of contact for compliance presents a compliance report to the Board of Management. These measures will further strengthen the tried-and-tested compliance structures and permanently reinforce awareness of the mandatory nature of TÜV NORD compliance in the Group's day-to-day business.

STATEMENT ON CORPORATE GOVERNANCE

Findings on the promotion of the participation of women in leadership positions according to Article 76 (4) and Article 111 (5) German Stock Corporation Act

The TÜV NORD GROUP pursues a strategy of diversity and is striving to increase the percentage of women in managerial positions¹.

In 2017, the Supervisory Board of TÜV NORD AG found that the targets set in 2015 in respect of the composition of the Supervisory Board and the Board of Management had been met; these did not, however, entail an increase in the number of women in the bodies concerned. For the period until June 30 2022, the Supervisory Board has once again resolved that it is not seeking to increase the number of women in the two bodies. Should any subsequent appointments become necessary, women will, as always, be offered the same opportunities as men.

The targets were either met or exceeded by June 30 2017; for the first tier of management below the Board of Management, the Board set a new target of 30 % (previous target 22 %) in 2017, and, for the second tier of management below the Board of Management, the previous target of 30 % was maintained. For both targets the deadline set for implementation was the end of June 30 2022.

For the other affected companies in the Group, the targets for the proportion of women in the Supervisory Board, the Board of Management and the next two tiers of management and implementation deadlines were set on time.

FURTHER INFORMATION

TÜV NORD AG is deemed within the meaning of Section 17 of the Stock Corporations Act (Aktiengesetz – AktG) to be directly dependent upon TÜV Nord Holding GmbH & Co. KG of Hamburg and TÜV HSA Holding GmbH & Co. KG of Hanover and indirectly dependent upon TÜV Nord e. V. and TÜV Hannover/Sachsen-Anhalt e. V. For the period from January 1 to December 31 2017 and in respect of relevant special transactions during the 2017 fiscal year, the Board of Management of TÜV NORD AG has drawn up a report pursuant to Section 312 of the AktG regarding relations between the company on the one hand and TÜV Nord Holding GmbH & Co. KG, TÜV HSA Holding GmbH & Co. KG, TÜV Nord e. V., TÜV Hannover/Sachsen-Anhalt e. V. and the affiliated companies on the other.

This report ends with the following declaration: “We hereby declare that, in respect of every legal transaction with affiliates, TÜV NORD AG received consideration that was appropriate in the light of the circumstances known to us at the time when such transactions were performed.

Beyond the activities reported on herein, there were no further reportable transactions, measures or omissions.”

Hanover, February 28 2018

TÜV NORD AG
The Board of Management

¹ Pursuant to the act on the equal participation of women and men in managerial positions in the private and public sectors, certain companies in Germany are committed to setting targets for the proportion of women on their supervisory boards, executive boards and in the following two management tiers and to set a date for the achievement of these targets. The TÜV NORD GROUP pursues a strategy of diversity and is striving to increase the percentage of women in managerial positions.

CONSOLIDATED INCOME STATEMENT

€ k	Note	2017	2016
Revenue	3.1.	1,184,755	1,153,601
Change in inventories of finished goods and work in progress		-1,462	-9,661
Other internally generated additions to assets		776	272
Other operating income	3.2.	41,106	95,612
Cost of materials	3.3.	-198,406	-192,202
Personnel expense	3.4.		
a) Wages and salaries		-565,942	-595,804
b) Social security contributions, post-employment and welfare benefits		-133,548	-137,299
Depreciation, amortisation and impairment losses	3.5.	-34,468	-33,813
Other operating expense	3.6.	-216,889	-211,489
Operating profit		75,922	69,217
Income from investments consolidated at equity		729	45
Income from other equity investments		125	22
Interest income		2,198	1,656
Interest expense		-2,194	-1,875
Other financial items		-143	-69
Financial items	3.7.	715	-222
EBT (earnings before tax)		76,637	68,995
Taxes on income	3.8.		
a) Current tax expense		-26,698	-22,545
b) Deferred tax income		-2,108	-3,209
Consolidated earnings after tax		47,831	43,242
The consolidated earnings after tax are attributable to			
owners of TÜV NORD AG		44,017	40,045
non-controlling interests		3,814	3,197

STATEMENT OF COMPREHENSIVE INCOME

€ k	2017	2016
Consolidated earnings after tax	47,831	43,242
Items that will not be reclassified subsequently to the Income Statement		
Actuarial gains and losses		
Changes from unrealised gains and losses ¹⁾	-47,894	-59,638
Taxes	14,271	18,503
Interests from subordinated registered debenture		
Changes from unrealised gains and losses	-2,063	-1,439
Total items that will not be reclassified subsequently to the Income Statement	-35,686	-42,574
Items that will be reclassified subsequently to the Income Statement		
Financial assets available for sale		
Changes from unrealised gains and losses	-47	29
Total Financial assets available for sale	-47	29
Currency translation		
Changes from unrealised gains and losses	-2,799	379
Total Currency translation	-2,799	379
Total items that will be reclassified subsequently to the Income Statement	-2,846	408
Other comprehensive income	-38,532	-42,166
Total comprehensive income	9,299	1,076
The total comprehensive income is attributable to		
owners of TÜV NORD AG	6,737	-1,624
non-controlling interests	2,562	2,700

¹⁾ Including non-controlling interests amounting to € -928 k (2015: € -1,133 k).

CONSOLIDATED BALANCE SHEET

ASSETS	Note	31.12.2017	31.12.2016
€ k			
A. Non-Current Assets			
Intangible assets	5.1.	93,802	94,030
Property, plant and equipment	5.2.	226,429	225,819
At equity consolidated investments	5.3.	6,262	6,895
Other financial assets	5.4.	35,339	36,667
Trade and other receivables	5.6.	158	746
Other assets	5.7.	4,160	3,973
Deferred tax assets	3.8.	176,730	172,608
Total Non-Current Assets		542,880	540,738
B. Current Assets			
Inventories	5.5.	53,477	53,460
Trade and other receivables	5.6.	181,178	172,107
Other assets	5.7.	12,149	11,224
Current tax assets		9,545	6,082
Cash and cash equivalents	5.8.	84,708	91,696
Total Current Assets		341,057	334,569
C. Assets Held For Sale	5.9.	4,460	1,181
Total Assets		888,397	876,488

EQUITY AND LIABILITIES	Note	31.12.2017	31.12.2016
€ k			
A. Equity			
Subscribed capital	5.10.	10,000	10,000
Capital reserves	5.10.	114,413	114,413
Subordinated registered debenture	5.10.	50,000	50,000
Retained earnings	5.10.	171,135	127,820
Other equity items	5.10.	-254,631	-212,650
Non-controlling interests	5.10.	10,263	11,245
Total Equity		101,180	100,828
B. Non-Current Liabilities and Provisions			
Provisions for pensions and other post-employment benefits	5.11.	484,851	461,409
Other provisions	5.12.	37,867	40,132
Financial liabilities	5.13.	567	583
Trade and other payables	5.13.	8,459	17,397
Deferred tax liabilities	3.8.	9,763	12,447
Other liabilities	5.13.	65	17
Total Non-Current Liabilities and Provisions		541,572	531,985
C. Current Liabilities and Provisions			
Provisions	5.12.	50,801	53,446
Financial liabilities	5.13.	330	280
Trade and other payables	5.13.	127,474	114,004
Current tax liabilities		9,692	17,348
Other liabilities	5.13.	57,348	58,597
Total Current Liabilities and Provisions		245,645	243,675
Total Equity and Liabilities		888,397	876,488

CONSOLIDATED CASH FLOW STATEMENT

€ k	Note	2017	2016
Consolidated earnings after tax		47,831	43,242
Adjustments to take account of non-cash transactions			
Depreciation of property, plant and equipment and amortisation of intangible assets		34,468	33,813
Amortisation of financial assets		143	69
Pension expense		-17,202	-10,053
Cash flow		65,240	67,071
Appropriation of profits of at equity consolidated investments		-529	721
Interest income/expense		-4	220
Changes in deferred tax assets and liabilities recognised as income or expense		2,108	3,209
Loss/Gain on disposal of intangible assets and property, plant and equipment		-1,290	-1,679
Changes in inventories, receivables and other assets		-13,694	13,074
Changes in payables, other provisions and other liabilities		29,823	1,325
Income taxes paid		-25,152	-16,406
Cash flow from operating activities	6.	56,502	67,535
Receipts from disposals of intangible assets		0	24
Receipts from disposals of property, plant and equipment		5,519	3,654
Receipts from disposals of other financial assets		35,844	44,037
Payments for investments in intangible assets		-1,825	-1,712
Payments for investments in property, plant and equipment		-41,187	-38,919
Payments for investments in other financial assets		-54,426	-58,090
Acquisitions of consolidated companies		0	-7,730
Cash flow from investing activities	6.	-56,075	-58,736
Receipts from financial resources		0	1,263
Interest received		1,902	1,115
Dividends to owners and non-controlling shareholders		-1,887	-984
Payments for the amortisation of loans		-1,107	-276
Interest paid		-3,801	-2,613
Cash flow from financing activities	6.	-4,893	-1,495
Net change in cash and cash equivalents through payments made and received		-4,466	7,304
Net change in cash and cash equivalents through changes in exchange rates and in the basis of consolidation		-2,522	115
Cash and cash equivalents at the beginning of the period		91,696	84,277
Cash and cash equivalents at the end of the period		84,708	91,696
Supplementary information:			
Receipts from dividends included in cash flow from operating activities		326	788

STATEMENT OF CHANGES IN CONSOLIDATED EQUITY

					Accumulated Other Comprehensive Income							
€ k	Subscribed capital	Capital reserves	Subordinated registered debenture	Retained earnings		Currency translation differences	Financial assets held for sale	Actuarial gains and losses	Interests from subordinated registered debenture	Share of TÜV NORD AG's owners	Non-controlling interests	Consolidated equity
Carrying amounts as of January 1 2016	10,000	114,413	50,000	87,958		-898	-30	-169,624	-429	91,390	9,577	100,967
Comprehensive income	0	0	0	40,045		79	29	-40,338	-1,439	-1,624	2,700	1,076
Dividend payment	0	0	0	0		0	0	0	0	0	-984	-984
Changes in basis of consolidation	0	0	0	0		0	0	0	0	0	-48	-48
Other changes	0	0	0	-183		0	0	0	0	-183	0	-183
Carrying amounts as of December 31 2016	10,000	114,413	50,000	127,820		-819	-1	-209,962	-1,868	89,583	11,245	100,828
Carrying amounts as of January 1 2017	10,000	114,413	50,000	127,820		-819	-1	-209,962	-1,868	89,583	11,245	100,828
Comprehensive income	0	0	0	44,017		-2,187	-47	-32,983	-2,063	6,737	2,562	9,299
Dividend payment	0	0	0	0		0	0	0	0	0	-1,887	-1,887
Changes in basis of consolidation	0	0	0	-452		0	0	0	0	-452	-1,657	-2,109
Other changes	0	0	0	-250		0	0	-4,701	0	-4,951	0	-4,951
Carrying amounts as of December 31 2017	10,000	114,413	50,000	171,135		-3,006	-48	-247,646	-3,931	90,917	10,263	101,180

Further information on equity can be found in 5.10. in the Notes.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. General principles

1.1. Corporate information

The TÜV NORD Group is one of the biggest technical service providers in Germany, offering a broad range of testing, certification, engineering, consulting and training services for its customers in its Industrial Services, Mobility, Training, Natural Resources, Aerospace and IT business units in all the world's major countries.

TÜV NORD AG, with its registered office in Hanover, Germany, is the parent company of the Group, registered with the Commercial Registry of Hanover Local Court under no. HRB 200158.

The Board of Management of TÜV NORD AG completed the preparation of the Consolidated Financial Statements as of December 31 2017 and the Group Management Report for the 2017 fiscal year on February 28 2018, and authorised them for submission to the Supervisory Board.

1.2. Basis of presentation

Taking advantage of the right to choose pursuant to Art. 315e (3) of the German Commercial Code (HGB), TÜV NORD AG prepared its Consolidated Financial Statements as of December 31 2017 in accordance with International Financial Reporting Standards (IFRS), while at the same time complying with the German supplementary provisions pursuant to Art. 315e (1) of the HGB. All the International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) adopted by the International Accounting Standards Board (IASB) up to December 31 2017 and all the pronouncements of the International Financial Reporting Standards Interpretations Committee (IFRS IC) have been applied in relation to the 2017 fiscal year, to the extent that such standards had received the endorsement of the Commission of the European Union up to

the time of publication of the Consolidated Financial Statements and that their application is mandatory. The use of the two-statement approach shows a breakdown of the expense recognised in equity and income (Income Statement) in addition to the Profit and Loss Account, the Balance Sheet and the Cash Flow Statement.

In order to achieve equivalence with consolidated financial statements prepared in accordance with the HGB, all statutory requirements of disclosure and explanation going beyond the IASB requirements have been complied with, in particular the preparation of a Group Management Report.

The Consolidated Financial Statements are presented in Euro and on the basis of original cost (costs of purchase or production), with the exception of certain financial instruments which are recognised at fair value.

Unless otherwise indicated, the amounts are stated in thousands of Euro (€ k). The use of rounded-off values and percentage may result in differences due to financial rounding. For the sake of clarity and to make the financial statements more readily understandable, certain individual items are aggregated in the Balance Sheet and the Income Statement but disclosed and explained separately in the notes.

The Consolidated Financial Statements are based on the consolidated accounts. Separate financial statements of subsidiary companies prepared in their local currencies are translated into Euro.

The reporting periods of the TÜV NORD Group and of all consolidated subsidiaries end on December 31 of each successive calendar year.

1.3. Accounting standards applied for the first time in the year under review

The IASB has issued the following standards and amendments to existing standards, which have received endorsement from the EU, i. e. have been adopted into European law, and whose application is mandatory in respect of the 2017 fiscal year:

Effective Application Standard/Interpretation	Mandatory application
Amendments to IAS 7 "Disclosure Initiative"	Reporting periods beginning on or after 1.1.2017
Amendments to IAS 12 "Recognition of Deferred Tax Assets for Unrealised Losses"	Reporting periods beginning on or after 1.1.2017
Amendments to IFRS "Disclosure of Interests in Other Entities"	Reporting periods beginning on or after 1.1.2017

All the accounting standards whose application is mandatory as of the 2017 fiscal year have been applied by TÜV NORD AG; this has not, however, had any material impact on the presentation of the financial statements.

1.4. Newly issued accounting standards not yet applied

The following standards, interpretations and amendments to existing standards issued by the IASB have already been adopted into European law by the EU, but their application is not yet mandatory for the year under review. The company has not elected to apply this provision in advance of its becoming mandatory.

No application to choose in advance Standard/Interpretation	Mandatory application
Amendments to IFRS 4 "Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts"	Reporting periods beginning on or after 1.1.2018
IFRS 9 "Financial Instruments"	Reporting periods beginning on or after 1.1.2018
IFRS 15 "Revenue from Contracts with Customers" including changes to IFRS 15 "Effective date of IFRS 15"	Reporting periods beginning on or after 1.1.2018
Clarifications concerning IFRS 15 "Revenue from Contracts with Customers"	Reporting periods beginning on or after 1.1.2018
IFRS 16 "Leases"	Reporting periods beginning on or after 1.1.2019

In July 2014, the IASB published the final version of IFRS 9, “Financial instruments”. The new standard includes revised guidelines for the classification and measurement of financial assets and changes to the rules on the impairment of financial assets, as well as revised regulations concerning the accounting of hedging relationships. The regulations must be applied by law to reporting periods beginning on or after January 1 2018. The TÜV NORD Group will accordingly apply IFRS 9 for the first time to the reporting period beginning on January 1 2018 but anticipates no significant impact from this first application on the consolidated financial statements.

In May 2014, the IASB published the new IFRS 15 standard entitled “Revenue from contracts with customers”. The new standard brings together a variety of rules previously contained in various standards and interpretations. A five-stage model governs when and to which extent revenues are to be recorded. Upon the conclusion of a contract, the information to be determined includes, among other things, whether the resulting revenues are to be recorded with reference to a point in time or a period. The application of IFRS 15 becomes mandatory only to reporting periods beginning on or after January 1 2018.

The TÜV NORD Group will accordingly apply IFRS 15 for the first time to the reporting period beginning on January 1 2018. Many of the orders fulfilled by the TÜV NORD Group satisfy the requirements for the period-related recording of revenues in accordance with IFRS 15.35. We do not therefore anticipate any significant impact from the initial application of IFRS 15 on the consolidated financial statements.

In January 2016, the IASB published the new IFRS 16 standard entitled “Leases”, which supersedes the previous leasing standard IAS 17. The new standard must be applied by law to reporting periods beginning on or after January 1 2019. Earlier application is permitted

provided that IFRS 15 is also applied. The Group will accordingly apply IFRS 16 for the first time to the reporting period beginning on January 1 2019.

The new standard envisages a unified accounting model for the lessee: leases are to be recorded on the balance sheet as rights of use and, correspondingly, as a liability. Exempted from this obligation, where the voting rights to that effect are exercised, are low-value assets and leases with a term of less than 12 months. IFRS 16 does not essentially differ from IAS 17 when it comes to lessor accounting. For lessors, the distinction between finance and operating leases must continue to be made as before.

The TÜV NORD Group primarily enters into leases as an operating lessee. The application of IFRS 16 gives rise to the following effects on the presentation of the net asset, financial and earnings position of the Group: With regard to the minimum lease payments under Other Financial Commitments from Operating Leases, the initial application of the standard will lead to an increase in non-current assets by virtue of the inclusion in the balance sheet of rights of use. The financial liabilities will increase by virtue of the inclusion of the corresponding liabilities. Moreover, the nature of the expenses from these leases will change because, in IFRS 16, the previous linear expenses for operating leases are replaced by the depreciation of the rights of use and the interest paid on the liabilities. In addition, according to IFRS 16 the repayment portion of the lease payments must be shown as part of the cash flow from financing activities, with the effect that the cash flow from operating activities will improve.

The Group is currently in the process of implementing the new standard. It has not yet been possible to reliably identify the quantitative impact on the Consolidated Financial Statements. The current operating lease volume is shown in the annex under no. 5.16.

TÜV NORD AG is of the opinion that the application of the standards, which were issued before the reporting date but whose application is not yet mandatory, will have no material consequences for its financial position or financial performance.

The following standards and amendments to existing standards issued by the IASB or the IFRS IC have not yet received EU endorsement, with the effect that their application is not yet admissible:

Application in advance inadmissible Standard/Interpretation	Mandatory application
Annual Improvements to IFRS Standards (Cycle 2014–2016)	Reporting periods beginning on or after 1.1.2018/1.1.2017
Amendments to IAS 40 “Transfers of Investment Property”	Reporting periods beginning on or after 1.1.2018
Amendments to IFRS 2 “Classification and Measurement of Share-based Payment Transactions”	Reporting periods beginning on or after 1.1.2018
IFRIC 22 “Foreign Currency Transactions and Advance Consideration”	Reporting periods beginning on or after 1.1.2018
IFRIC 23 “Uncertainty over Income Tax Treatments”	Reporting periods beginning on or after 1.1.2019
Amendments to IFRS 9 “Prepayment Features with Negative Compensation”	Reporting periods beginning on or after 1.1.2019
Amendments to IAS 28 “Long-term Interests in Associates and Joint Ventures”	Reporting periods beginning on or after 1.1.2019
Annual Improvements to IFRS Standards (Cycle 2015–2017)	Reporting periods beginning on or after 1.1.2019
IFRS 17 “Insurance Contracts”	Reporting periods beginning on or after 1.1.2021

TÜV NORD AG is of the opinion that the application of IFRIC 22, IFRIC 23 and IFRS 17, will have no material consequences for its financial position or financial performance.

2. Summary of significant accounting policies

2.1. Basis of consolidation

In addition to TÜV NORD AG, the Consolidated Financial Statements cover 38 (2016: 42) domestic and 45 (2016: 46) foreign companies in which TÜV NORD AG directly or indirectly holds a majority of the voting power, or over whose financial and operating policies it otherwise exerts control and is thus in a position to obtain benefits from their activities. In determining the situation with regard to control, potential voting rights which are currently exercisable or convertible are also taken into consideration.

In the 2017 fiscal year, the removals from the list of fully consolidated subsidiaries resulted from the merger of two subsidiaries with another fully consolidated Group company and three deconsolidations.

In addition, five companies (see under 5.3) are accounted for by the equity method.

Not included in the consolidation are companies which are of only minor significance for a true and fair view of the financial position, financial performance and earnings of the Group. This waiver of consolidation has the effect of reducing group revenue by 0.6 % (2016: 0.4 %) and of a change of consolidated earnings before tax (EBT) of 0.1 % (2016: 0.0 %).

A list of shareholdings has been prepared in which TÜV NORD Group's affiliates and other equity investments are listed, showing the proportion of the capital held. A list of all the Group's shareholdings is published in the Federal Gazette as part of the Notes to the Consolidated Financial Statements.

2.2. Consolidation policy

The annual financial statements of the subsidiaries included in consolidation are prepared in accordance with TÜV NORD AG's accounting and valuation methods, which are applied uniformly throughout the Group.

Capital consolidation is effected using the purchase method, pursuant to IFRS 3, Business Combinations. Using the purchase method to account for business combinations assumes that, at the time of initial consolidation, all the assets, liabilities and contingent liabilities of the company acquired and also any intangible assets to be recognised in addition are measured at fair value. Any difference amounts between the cost of acquiring the interest in the company and the acquirer's pro-rata share in the reassessed equity at the time of acquisition are allocated to the appropriate balance sheet items of the subsidiary up to the amount of their fair value. Any remaining positive difference is recognised as goodwill. If a negative difference arises, it is recognised as an expense in profit and loss for the reporting period during which the business combination takes place. Goodwill is tested for impairment at least once a year.

The earnings of subsidiary companies acquired or disposed of in the course of the fiscal year are included in the Consolidated Income Statement from the point in time when control was acquired or up to the effective time of disposal.

Significant associates and joint ventures are accounted for using the equity method. An associate is a business

entity upon which the Group can exert significant influence through participation in financial and operating policy decisions, but over which it cannot exercise control. In general, such significant influence may be presumed if the Group holds 20 % or more of the voting power. The pro rata earnings from such equity holdings are recognised under the item Income from investments in associates. Should any such equity investments be subject to long-term impairment, impairment losses are recognised. Where a Group company undertakes transactions with an associate, any resulting unrealised gains or losses are eliminated pro rata to the Group's interest in the associate or joint venture.

Receivables and payables between companies included in consolidation are netted. Profits and losses arising out of intercompany transfers of assets that are to be recognised in the Consolidated Financial Statements are eliminated unless they are immaterial. Revenue and other income between consolidated companies are offset against the corresponding expenses.

During the process of consolidation, income tax effects are taken into account and deferred taxes recognised where appropriate.

Shares in the equity of subsidiaries that are held by parties outside the Group are recognised separately within equity capital. The proportions of the earnings of subsidiary companies attributable to outside shareholders (non-controlling interests) are stated separately in the Income Statement.

2.3. Currency translation

Translation into the presentation currency

The annual financial statements of any foreign Group company whose functional currency is not the Euro are translated into the Group presentation currency, i. e. Euro, in accordance with the functional currency concept. In general, the functional currencies of the foreign subsidiaries are their respective local currencies.

Assets and liabilities of foreign subsidiaries are translated at the exchange rate prevailing as of the balance sheet date. Equity is translated at historical rates of exchange. Expense and income are translated into Euro at average rates for the year. Differences arising out

of currency translation are recognised in Other comprehensive income. Such a translation difference recognised in comprehensive income is posted to profit and loss only if the company concerned is deconsolidated.

Translation into the functional currency

Foreign currency transactions are translated into the functional currency at the exchange rate prevailing at the time of the transaction. Gains and losses resulting from the fulfilment of such transactions and from the translation as at the reporting date of monetary assets and liabilities denominated in foreign currencies are recognised in the Income Statement.

The following exchange rates are among those used for the translation of the currencies of countries that are not members of the European Monetary Union:

Currency	ISO Code	Currency translation			
		Exchange rate as of the reporting date		Annual average rate	
		31.12.2017	31.12.2016	2017	2016
Brazilian real	BRL	3.9729	3.4394	3.6041	3.8273
British pound sterling	GBP	0.8872	0.8581	0.8761	0.7918
Bulgarian lev	BGN	1.9558	1.9561	1.9558	1.9558
Canadian dollar	CAD	1.5039	1.4230	1.4644	1.4665
Chinese renminbi yuan	CNY	7.8044	7.3443	7.6264	7.2058
Croatian kuna	HRK	7.4400	7.5565	7.4644	7.6037
Czech koruna	CZK	25.5350	27.0200	26.3272	27.0241
Danish krone	DKK	7.4449	7.4341	7.4387	7.4473
Egyptian pound	EGP	21.2314	19.1571	20.1086	11.7647
Hong Kong dollar	HKD	9.3720	8.1945	8.8012	8.3165
Indian rupee	INR	76.6055	71.8221	73.4981	72.0669
Indonesian rupiah	IDR	16,233.7662	14,184.3972	15,105.7402	14,705.8824
Korean won	KRW	1,279.6069	1,276.2427	1,275.8357	1,276.6501
Malaysian ringgit	MYR	4.8536	4.7406	4.8501	4.7065
Polish zloty	PLN	4.1770	4.4180	4.2563	4.3394
South African rand	ZAR	14.8054	14.4954	15.0434	15.6409
Swedish krone	SEK	9.8435	9.5657	9.6367	9.3721
Thai baht	THB	39.1210	37.8475	38.2785	38.5371
Turkish lira	TRY	4.5465	3.7288	4.1215	3.4341
US dollar	USD	1.1993	1.0568	1.1293	1.0727

2.4. Use of estimates

The preparation of IFRS financial statements requires management to make certain estimates and assumptions which have an impact on the carrying amounts of assets and liabilities, the disclosure of contingent assets and liabilities existing as of the reporting date, and the income and expense recognised for the fiscal year. In compiling the Consolidated Financial Statements, estimates had to be made in particular with regard to the valuation of employee benefits under IAS 19, the impairment testing of goodwill, provisions from the human resources and social sector, the provision for threatened losses from pending transactions and the deferred tax assets relating to loss carryforwards.

Employee benefits relate essentially to obligations arising out of defined benefit pension commitments, which are determined on the basis of actuarial parameters. These require assumptions to be made about future wage and salary increases, trends in pension levels and the discount rate.

Changes in the parameters for determining defined benefit obligations and plan assets do not however affect consolidated earnings for the current year, since any actuarial gains or losses are recognised in Other comprehensive income.

Goodwill is subjected to an annual impairment test on the basis of the smallest cash-generating unit to which goodwill has been allocated and the management's approved three-year operating plan.

Recognition and measurement of the provisions from the human resources and social sector and the provision for threatened losses are based on estimates of the probability of a future outflow of resources and on the basis of experience values and of the circumstances known at the reporting date. To this extent, the actual outflow of resources may vary from the amount of the provision.

Deferred tax assets relating to loss carryforwards are accounted for on the basis of estimates of the extent to which the tax advantages can be realised in future, i. e. whether adequate taxable income or reduced tax expense is to be expected. The actual tax situation in future periods, and thus the actual extent to which loss carryforwards can be utilised, may vary from the estimate made at the time when the deferred taxes were recognised.

2.5. Accounting policies

Accounting is undertaken in accordance with the following principles:

Revenue realisation

Revenue from services rendered is recognised as soon as performance is completed.

In the case of longer-term contracts, appropriation is carried out pursuant to IAS 18.20 in accordance with the percentage-of-completion method (PoC method). With this method, expenses and income are recorded according to the degree of completion of the contract. The degree of completion per contract to be applied is thereby calculated using the ratio of accrued costs to the calculated total costs (the cost-to-cost method).

Intangible assets

Intangible assets encompass intangible assets acquired for consideration and internally generated intangible assets and goodwill.

Intangible assets acquired for consideration, e. g. software and accreditations, are valued at historical cost. This position also includes items identified during purchase price allocations, e. g. customer relations and trade mark rights.

Internally generated intangible assets, e. g. software or research and development costs, are recognised at production cost if this meets the recognition criteria of IAS 38.

Intangible assets with a certain useful life are subject to amortisation by the straight-line method over a period of generally between 3 and 15 years, depending on the expected future economic benefits. The useful life is subject to annual review, and if necessary is adjusted in accordance with future expectations. If there is any indication of impairment, or if the recoverable amount is less than the amortised cost, an impairment loss must be recognised.

If the reasons for recognising such an impairment loss cease to apply, the impairment loss is reversed, where the resulting enhanced carrying amount may not exceed the amortised cost arrived at by normal amortisation.

Goodwill arising out of a business combination is recognised from the time when control is obtained over the company acquired (the acquisition date). It arises whenever the cost of acquiring the business exceeds the netted fair value of the identifiable assets, debts and contingent debts at the acquisition date. Goodwill is not subject to amortisation; instead, it is subjected to an impairment test at least once a year, and more frequently should any triggering events occur. The impairment test is carried out on the basis of cash-generating units, the recoverable amount of a cash-generating unit being compared with its carrying amount. Under IAS 36, an impairment loss is recognised if the carrying amount of a cash-generating unit to which goodwill has been allocated exceeds its recoverable amount. Impairment losses on goodwill, once recognised, may not be subsequently reversed.

The cash generating units correspond with the international business units Industrial Services, Mobility, Training, Natural Resources, Aerospace and IT and the Group unit Holding/Services.

The recoverable amount is the higher of the cash-generating unit's fair value less costs to sell and its value in use. The recoverable amount of a cash-generating unit is calculated by determining its value in use, using the discounted cash flow method on the basis of the three-year plan approved by management. In determining value in use certain assumptions have to be made, relating essentially to the rate at which operating profit will grow over the planning period, the cost of capital as well as the expected sustained growth rate after the end of the three-year plan. The cost of capital is determined on the basis of the weighted average cost of capital (WACC).

Property, plant and equipment

Assets falling into the category of property, plant and equipment are recognised at depreciated costs (purchase or construction costs). Construction costs include not only direct costs but also attributable overheads.

The revaluation model as per IAS 16.31 is not applied. As a result, under current market conditions the carrying amounts of TÜV NORD Group's real estate include hidden reserves.

Property, plant and equipment is normally depreciated by the straight-line method, unless in exceptional cases some other depreciation method appears more appropriate. Depreciation is based on the following useful lives:

Useful lives of property, plant and equipment	years
Office buildings	30-50
Test facilities	20-30
Machinery	5-12
Furniture, fixtures and office equipment	3-20

Under IAS 36, "Impairment of assets", property, plant and equipment are subject to impairment if the recoverable amount (see also under "Intangible assets" above) of the asset concerned has fallen below its carrying amount. If the reasons for recognising such an impairment loss cease to apply, the impairment loss is reversed, but only to the extent that the enhanced carrying amount does not exceed the asset's depreciated cost. Such a reversal of an impairment loss is recognised as income.

Leases

Leases are classified either as operating leases or finance leases. Under IAS 17, leases under which all the substantial risks and rewards incidental to ownership of an asset are transferred to the TÜV NORD Group are to be classified as finance leases; other leases are operating leases.

In the case of finance leases, the leased item is recognised as from the time of its first use at the lower of fair value and the present value of the minimum lease payments and depreciated by the straight-line method over its estimated economic life, or, if shorter, the term of the lease. The corresponding liability to the lessor is recognised in the balance sheet as a liability from a finance lease and amortised over the subsequent period using the effective interest rate method. In the case of operating leases, the net lease payments are recognised in the income statement over the term of the lease.

At equity consolidated investments

Associates and joint ventures are initially recognised at cost at the time of their acquisition, and in subsequent accounting periods in accordance with the proportion of the equity held, using the equity method. The carrying amounts are increased or decreased annually by the amount of the earnings attributable pro rata, the dividends distributed or other changes in equity. Under IAS 28.33, accounting using the equity method is effected on the basis of the financial statements for the previous reporting period. Any goodwill is reviewed in connection with the impairment testing of the investment in the associate (IAS 39) or joint venture. Goodwill is not subject to amortisation.

Other financial assets

The item Other financial assets covers in particular investments in non-consolidated affiliates, other equity investments, loans, securities and claims arising out of the reinsurance of pension obligations.

Under IAS 39, four categories of financial asset are distinguished:

- Financial assets at fair value through profit or loss (held for trading),
- Available-for-sale financial assets,
- Held-to-maturity investments,
- Loans and receivables.

Investments in non-consolidated affiliates, other equity investments and securities that are available for sale are assigned to the “Available for sale” category. Investments in non-consolidated affiliates and associates are recognised at amortised cost, since no fair values are available and other admissible measurement procedures do not lead to reliable results. Securities that are available for sale are recognised at fair value. Changes in value are recognised in equity, making due allowance for deferred tax effects.

If the fair value of a financial asset falls below cost, the impairment loss is recognised as expense.

Loans granted fall into the category “Loans and receivables” and are recognised at amortised cost.

Claims arising out of reinsurance fund shares that do not form part of the plan assets are accounted for at fair value in accordance with IAS 19.

Inventories

Inventories essentially cover work in progress and are measured at cost of production. This includes not only direct labour but also an allocation of proportions of material and production overheads on the basis of normal utilisation of capacity, and also depreciation. In addition, the costs of occupational pensions and of the company’s voluntary welfare benefits are included, to the extent that they are attributable to the production area. Administrative costs are recognised to the extent that they are attributable to the production area.

Inventories may be written down to an appropriate and adequate extent to take account of contract-related risks. Where necessary, they are recognised at the lower net realisable value. If the reasons for subjecting inventories to such an impairment loss cease to apply, the impairment loss is reversed.

Trade and other receivables, Other assets

Receivables include the company’s trade receivables, other receivables and other assets. They are measured at nominal value or at cost net of impairment. The impairments take into account the individual circumstances of the debtor and are also graded according to the number of overdue days. Non-current receivables bearing no or only low interest are discounted at a rate appropriate to the risk, to the extent that the interest effect is material. The amount discounted is recognised pro rata under interest income until the receivable becomes due.

Other receivables and other assets also include receivables from partly fulfilled contracts to render services pursuant to IAS 18.20, which are recognised by the percentage of completion method. Any advance payments received are netted against the receivables.

Cash and cash equivalents

Cash and cash equivalents include freely disposable cash in hand, cheques and bank credit balances with a term of up to three months. They are recognised at nominal value.

Deferred tax assets and liabilities

Deferred tax assets and liabilities are recognised for all temporary differences between the carrying amounts of assets and liabilities in the IFRS balance sheet and their tax bases and also for consolidation measures recognised through profit or loss and are as far as is permissible set off against one another in the balance sheet. Deferred tax assets are recognised to the extent that it is probable that there will be taxable income against which the deductible temporary difference can be offset. Deferred tax assets also include claims for reductions in amounts of tax payable arising out of the expected utilisation of existing loss carryforwards in subsequent years, to the extent that their realisation within a period of 5 years is sufficiently certain. Deferred tax assets and liabilities are also recognised where temporary differences arise in connection with business combinations (corporate acquisitions), with the exception of temporary differences relating to goodwill.

Deferred taxes are determined on the basis of the rates of taxation that apply or are expected to apply under current law in the individual countries at the time of realisation. Tax rates that will be applicable in future years are used for calculation purposes to the extent that they have already been fixed in law or that the legislative process is practically completed.

Changes in deferred tax assets and liabilities in the balance sheet generally lead to tax expense or income in the income statement; unless they relate to items recognised in comprehensive income; in this case the deferred taxes are also recognised in comprehensive income.

Deferred taxes are not recognised at the reporting date in respect of temporary differences in connection with investments in subsidiaries, associates or joint ventures (outside basis differences). It is not possible to make any reasonable estimate of the amounts of these unrecognised deferred tax liabilities.

For the calculation of domestic deferred taxes, a tax rate of 32.0 %, unchanged from the previous year, has been applied.

Assets held for sale

Assets held for sale are shown separately in the balance sheet if they can be sold in their existing condition and it is probable that they will be. When assets are first classified as “held for sale”, they are revalued at the lower of carrying amount and fair value less costs to sell. Impairment losses resulting from the first-time classification of the assets as being “held for sale”, and also any later impairments (or reversals of impairments), are recognised as expense (or income) in the Income Statement. Assets held for sale are not subjected to amortisation.

Provisions for pensions and other post-employment benefits

Post-employment benefit plans are classified as either defined benefit or defined contribution plans, depending on the economic substance of the plan as derived from its principal terms and conditions. Plans are classified as defined benefit plans if the actuarial or investment risk falls on the employer. Post-employment benefit commitments that cannot be unambiguously classified as defined benefit plans are regarded as defined contribution plans.

The requisite level of pension provisions in respect of defined benefit obligations is determined by actuarial valuation using the projected unit credit method. This valuation is carried out by actuaries as of every balance sheet date. Actuarial gains and losses arising are accounted for directly in equity without passing through the Income Statement and are recognised in the Group Statement of Comprehensive Income.

Through the transfer of claims to reinsurance to TÜV NORD PENSION TRUST e. V. of Hanover, plan assets have been formed which serve to secure the pension obligations.

The service cost included in pension expense and the included net interest expense are recognised under “Personnel expense”.

Payment obligations under defined contribution pension plans (the statutory pension funds) are recognised in the income statement for the period concerned.

Other provisions

Other provisions are formed if a present legal or constructive obligation exists towards third parties as a result of a past event, in respect of which it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate can be made of the amount of the provision required. The measurement of the provisions is effected using the best estimate of the amount required to settle the obligation, which is not set off against any possible claims for recourse. Non-current provisions are discounted if the interest effect is material.

Trade and other payables

Interest-bearing payables to banks are accounted for at the amount disbursed less directly attributable transaction costs. Financing costs are distributed as expense over the term, increasing the carrying amount of the liability in subsequent periods. Trade and other payables are recognised at amortised cost in accordance with IAS 39. Non-current liabilities that are not subject to interest are discounted using the effective interest method if the interest effect is material. Liabilities arising out of finance leases are recognised at the lower of the fair value of the leased item and the present value of the lease payments. In subsequent years, the lease payments are apportioned between the reduction of the outstanding liability and the finance charge; pursuant to IAS 17.25 this is done in such a way as to produce a constant rate of interest on the remaining balance of the liability.

Contingent liabilities

Contingent liabilities are possible obligations that might arise from past events and whose existence will be confirmed by future events not within the control of the TÜV NORD Group. They may also be existing obligations that cannot be recognised because an outflow of resources is improbable or the amount of the obligation cannot be estimated with sufficient reliability. Such contingent liabilities are recognised at the level of liability existing at the reporting date.

3. Consolidated Income Statement disclosures

3.1. Revenue

Revenue breaks down between the six business units and Holding/Services as follows:

€ k	2017	2016
Industrial Services	551,515	538,109
Mobility	366,178	333,392
Training	102,083	107,396
Natural Resources	95,991	106,873
Aerospace	45,845	47,239
IT	17,432	15,512
Holding/Services	5,711	5,080
Total	1,184,755	1,153,601

Revenue amounting to € 872,166 k (2016: € 843,876 k) was generated in Germany, € 190,727 k (2016: € 181,804 k) in the rest of Europe and € 121,862 k (2016: € 127,921 k) in the rest of the world.

Revenue includes € 12,580 k (2016: € 20,420 k) relating to partly fulfilled contracts to render services, which were recognised proportionately by the percentage of completion method as of the reporting date.

€ k	2017	2016
Cumulative costs	40,563	39,825
Prepayments received	33,049	38,651
Production orders with a gross amount due from customers as an asset	14,785	10,238
Production orders with a gross amount due to customers as a liability	313	766

3.2. Other operating income

Other operating income amounting to € 41,106 k (2016: € 95,612 k) is made up essentially of the following components: income from the reversal of provisions € 8,346 k (2016: € 7,011 k), income from the reimbursement of remnant costs in the amount of € 5,616 k (2016: € 60,841 k), canteen takings € 2,236 k (2016: € 2,101 k), income from disposal of tangible assets € 1,957 k (2016: € 2,673 k), income from the reversal of impairment losses on trade receivables € 1,629 k (2016: € 766 k), income from tenancy agreements € 581 k (2016: € 757 k), income from the reversal of a negative difference recognised as an expense € 148 k (2016: € 345 k), income from ancillary services € 72 k (2016: € 242 k).

3.3. Cost of materials

€ k	2017	2016
Cost of raw materials and supplies	31,755	29,395
Cost of services bought in	166,651	162,807
Total	198,406	192,202

3.4. Personnel expense

€ k	2017	2016
Wages and salaries	565,942	595,804
Social security contributions	101,763	106,046
Post-employment benefit expense	28,533	28,066
Other employee benefits	3,252	3,187
Total	699,490	733,103

On average over the year, the consolidated companies had 10,485 employees (2016: 10,113) (expressed as full-time equivalents). Including the experts provided by the associations, the average number of full-time employees was 10,539 (2016: 10,172). 7,608 employees work in Germany. The number of employees abroad increased in 2017 to 2,931. The Group's employees are for the most part salaried staff.

3.5. Depreciation, amortisation and impairment losses

€ k	2017	2016
Depreciation and amortisation of assets	32,895	33,653
Impairment losses	1,573	160
Total	34,468	33,813

3.6. Other operating expenses

Other operating expenses € 216,889 k (2016: € 211,489 k) principally relate to occupancy expenses € 60,593 k (2016: € 60,233 k), travelling expenses € 42,491 k (2016: € 39,914 k), operating and administrative expenses € 21,379 k (2016: € 20,514 k), other services € 18,672 k (2016: € 17,458 k), advertising and communication expenses € 17,959 k (2016: € 16,795 k), legal and consultancy fees € 7,745 k (2016: € 6,936 k)

and donations and contributions € 2,246 k (2016: € 2,275 k). Value adjustments on doubtful trade receivables amounting to € 1,874 k (2016: € 3,304 k) are also included, as are other taxes in the amount of € 2,827 k (2016: € 2,693 k).

3.7. Financial items

€ k	2017	2016
Income from at equity consolidated investments	729	45
Income from other equity investments	125	22
Amortisation of other financial investments and securities	-143	-69
Financial items (excluding interest)	712	-2
Other interest and similar income	2,198	1,656
Interest and similar expense	-2,194	-1,875
Net interest income/expense	4	-220
Financial items (including interest)	715	-222

3.8. Taxes on income

The Group's tax expense is as follows:

€ k	2017	2016
Current tax expense	-26,698	-22,545
Deferred tax expense/income	-2,108	-3,209
Total	-28,806	-25,753

The deferred taxes result from the formation or reversal of tax accruals in profit or loss during the fiscal year. In both fiscal years the deferred taxes are predominantly the result of temporary differences being recognised or reversed.

The following reconciliation statement summarises the individual deferred tax items determined in relation to the individual companies and applying the tax rates prevailing in the various countries, taking due account of consolidation measures. The table reconciles expected tax expense with the tax expense actually recognised.

€ k	2017	2016
Earnings before tax	76,637	68,995
Expected income tax expense (tax rate: 32.0 %; 2016: 32.0 %)	24,524	22,079
Effect of different foreign tax rates/Other differences	-171	-745
Changes in tax rates or tax legislation	-40	86
Permanent differences resulting from non-deductible expense, tax-free income etc.	1,518	1,140
Current taxes for previous periods	247	-175
Deferred taxes for previous periods	-1,206	-295
Effects of value adjustments	3,934	3,663
Recognised income tax expense	28,806	25,753

The expected tax rate for both fiscal years was determined on the basis of a corporation tax rate of 15.0 % plus a solidarity levy of 5.5 % of the tax due and a local business tax rating of 462 %. The applicable tax rates for companies outside Germany range from 10.0 % to 35.0 %.

Deferred taxes resulting from recognition and measurement differences arose in the following balance sheet items:

€ k	2017		2016	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Intangible assets	2,731	6,756	1,758	6,387
Property, plant and equipment	699	10,359	1,218	11,282
Inventories	0	734	0	1,773
Other assets	2,289	2,853	1,909	3,456
Pension provisions	169,627	0	163,369	0
Other provisions	9,969	467	12,505	776
Other liabilities	469	55	603	87
Tax loss carryforwards	2,407	0	2,560	0
Gross amount	188,191	21,224	183,922	23,761
Offsettings	-11,461	-11,461	-11,314	-11,314
Balance sheet recognition	176,730	9,763	172,608	12,447

Deferred tax assets are recognised only if there is sufficient probability that these tax advantages will be realised. Any value adjustments are determined taking into account all positive and negative factors known at the present time that may influence future taxable earnings. The estimates made for this purpose may be subject to future adjustments.

Deferred taxes amounting to € 14,271 k (2016: € 18,503 k) were recognised in comprehensive income. This is essentially a result of the recognition of actuarial gains/losses relating to pension provisions.

As of the reporting date, deferred tax assets were recognised for loss carryforwards in the amount of € 14,637 k (2016: € 14,657 k) existing in the Group. In respect of further tax loss carryforwards in the amount of € 64,314 k (2016: € 70,175 k), no additional deferred tax assets have been recognised as of the reporting date, since it is not sufficiently certain that these can be realised. Under current legislation, there is no limitation, either of time or amount, on such loss carryforwards for tax purposes.

4. Notes on the consolidated statement of comprehensive income

The deferred taxes in the amount of € 14,271 k (2016: € 18,503 k) reported in Other comprehensive income relate to the actuarial losses of € 47,894 k (2016: € 59,638 k) in the fiscal year. The actuarial losses after deferred tax amount to € 33,623 k (2016: € 41,135 k). The other comprehensive income before deferred tax amounts to €-52,803 k (2016: €-60,669 k).

5. Consolidated Balance Sheet Disclosures

In accordance with IAS 1, the Consolidated Balance Sheet (Statement of Financial Position) is structured to present the breakdown between current and non-current assets and liabilities. Assets and liabilities are regarded as current if it is expected that they will be recovered or settled within a year. Inventories and trade receivables are also classified as current, irrespective of their expected use or due dates, if they are to be sold, used or recovered not within one year, but within the company's normal operating cycle. In accordance with IAS 12, deferred taxes are recognised as non-current assets or liabilities.

5.1. Intangible assets

The following changes in intangible assets occurred:

Changes 2017	Concessions, proprietary rights and similar rights and assets, including licences on such rights and assets	Goodwill	Payments made on account	Total
€ k				
Cost (of purchase or production)				
Amounts as of January 1	58,849	91,282	36	150,166
Changes in basis of consolidation	-85	0	0	-85
Additions/Current investments	1,790	0	35	1,825
Disposals	-1,048	0	-1	-1,049
Reclassifications	378	0	-30	348
Currency translation differences	-149	-171	0	-319
Amounts as of December 31	59,736	91,111	39	150,886
Accumulated amortisation and impairment losses				
Amounts as of January 1	55,013	1,122	0	56,135
Changes in basis of consolidation	-85	0	0	-85
Additions	1,914	0	0	1,914
Disposals	-1,048	0	0	-1,048
Reclassifications	307	0	0	307
Currency translation differences	-140	1	0	-139
Amounts as of December 31	55,961	1,123	0	57,084
Net carrying amounts	3,775	89,988	39	93,802

Changes 2016	Concessions, proprietary rights and similar rights and assets, including licences on such rights and assets	Goodwill	Payments made on account	Total
€ k				
Cost (of purchase or production)				
Amounts as of January 1	57,985	78,539	33	136,556
Changes in basis of consolidation	3	12,751	0	12,753
Additions/Current investments	1,663	0	49	1,712
Disposals	-804	0	-23	-827
Reclassifications	24	0	-24	0
Currency translation differences	-22	-8	1	-29
Amounts as of December 31	58,849	91,282	36	150,166
Accumulated amortisation and impairment losses				
Amounts as of January 1	53,477	1,122	0	54,599
Changes in basis of consolidation	0	0	0	0
Additions	2,181	0	0	2,181
Disposals	-635	0	0	-635
Reclassifications	0	0	0	0
Currency translation differences	-10	0	0	-10
Amounts as of December 31	55,013	1,122	0	56,135
Net carrying amounts	3,835	90,159	36	94,030

The changes in the basis of consolidation presented under Goodwill relate to the acquisition of IBH (€ 11,027 k) and Optocap (€ 1,724 k).

Impairment testing of all the goodwill recognised in the Consolidated Balance Sheet did not lead to any additional impairment losses, since in each case the

fair value less costs to sell is higher than the carrying amount recognised by the cash-generating unit concerned. The weighted average cost of capital (WACC) applied for discounting purposes is 6.00 % (2016: 5.00 %), where a growth discount of 1.0 % is applied after the end of the three-year planning period.

No change that might reasonably be anticipated in any of the basic assumptions made for the purpose of determining the value in use of the cash-generating units could lead to their carrying amounts materially exceeding the recoverable amounts.

The goodwill subjected to impairment testing is essentially shared between the Natural Resources (2017: € 35,687 k; 2016: € 35,687 k), Industrial Services (2017: € 28,804 k; 2016: € 28,892 k), Aerospace (2017: € 14,189 k; 2016: € 14,189 k) and Mobility (2017: € 11,210 k; 2016: € 11,210 k) business units.

5.2. Property, plant and equipment

The following changes occurred in property, plant and equipment:

Changes 2017	Land, leasehold rights and buildings, including buildings on third-party land	Machinery	Furniture and fittings, other factory and office equipment	Payments made on account and assets under construction	Total
€ k					
Cost (of purchase or production)					
Amounts as of January 1	281,127	141,987	215,531	9,941	648,584
Changes in basis of consolidation	-5	-112	-433	-1	-551
Additions/Current investments	3,715	8,895	20,656	7,921	41,187
Disposals	-2,513	-2,168	-12,419	-31	-17,130
Reclassifications	-10,441	5,262	95	-8,865	-13,948
Currency translation differences	-116	-316	-587	0	-1,019
Amounts as of December 31	271,768	153,548	222,844	8,964	657,124
Accumulated depreciation and impairment losses					
Amounts as of January 1	152,659	101,459	168,454	192	422,765
Changes in basis of consolidation	-5	-112	-433	0	-549
Depreciation	6,628	8,655	17,262	3	32,548
Impairment	4	0	0	0	4
Disposals	-2,001	-2,005	-8,995	0	-13,001
Reclassifications	-10,262	-372	65	0	-10,569
Currency translation differences	13	-139	-378	0	-504
Amounts as of December 31	147,037	107,491	175,972	196	430,695
Net carrying amounts	124,731	46,057	46,871	8,769	226,429

Changes 2016	Land, leasehold rights and buildings, including buildings on third-party land	Machinery	Furniture and fittings, other factory and office equipment	Payments made on account and assets under construction	Total
€ k					
Cost (of purchase or production)					
Amounts as of January 1	281,793	131,592	212,158	7,095	632,638
Changes in basis of consolidation	0	2,100	1,499	4	3,603
Additions/Current investments	3,040	10,449	19,518	5,912	38,919
Disposals	-5,475	-3,011	-18,229	-11	-26,725
Reclassifications	1,747	877	432	-3,060	-4
Currency translation differences	22	-20	152	0	154
Amounts as of December 31	281,126	141,987	215,531	9,941	648,584
Accumulated depreciation and impairment losses					
Amounts as of January 1	151,731	94,263	166,301	190	412,485
Changes in basis of consolidation	0	1,711	1,054	0	2,765
Depreciation	5,883	8,457	17,289	0	31,630
Impairment	0	0	0	3	3
Disposals	-4,957	-2,860	-16,353	0	-24,170
Reclassifications	0	-91	103	0	12
Currency translation differences	3	-21	60	0	42
Amounts as of December 31	152,659	101,459	168,454	192	422,765
Net carrying amounts	128,467	40,528	47,076	9,748	225,819

The following assets are subject to limitations on their availability:

€ k	31.12.2017	31.12.2016
Machinery	193	140
Furniture and fittings, other factory and office equipment	733	951

Items of property, plant and equipment to the value of € 3,053 k (2016: € 3,653 k) are pledged as collateral for debt. The liabilities secured as of December 31 2017 amount to € 296 k (2016: € 345 k).

Compensation payments by third parties in the amount of € 717 k (2016: € 448 k) are recognised as Other operating income.

The following carrying amounts of property, plant and equipment relate to assets on lease under finance leases:

€ k	Initial recognition amounts		Accumulated depreciation and impairment losses		Net carrying amounts	
	2017	2016	2017	2016	2017	2016
Furniture and fittings, other factory and office equipment	730	708	204	252	526	456

The following minimum lease payments will be payable in future on the basis of existing finance leases:

€ k	Up to 1 year		1-5 years		Total	
	2017	2016	2017	2016	2017	2016
Total minimum lease payments	248	169	376	305	624	474
Interest expense included	-7	-6	-5	-4	-12	-10
Present values	241	163	371	301	612	464

There are no minimum lease payments with residual terms of more than 5 years.

Obligations under finance leases are recognised under Other liabilities (see under 5.13.).

Future obligations under operating leases where the benefits of ownership do not lie with TÜV NORD Group as lessee are recognised under Other financial liabilities (see under 5.16.).

5.3. At equity consolidated investments

The following table shows the names and the locations of the registered offices of companies accounted for using the equity method, together with the percentage of the equity held, the company's total equity and its total earnings after tax:

Name, location of registered office	Share of equity in %	Total equity 100 in % € k	EAT 100 % in € k
National Inspection and Technical Testing Company Ltd. (FAHSS), Damman, Saudi Arabia	25.11	9,891	705
TÜV Middle East W.L.L., Manama, Bahrain	25.10	6,991	75
UAB TÜVLITA, Vilnius, Lithuania	50.00	6,202	891
EnergieAgentur.NRW GmbH, Düsseldorf, Germany	50.00	351	245
TUV NORD NTA Mobility (Shanghai) Co., Ltd., Shanghai, China	49.00	-1,447	-1,741

For the associates that are material to TÜV NORD AG the following table show financial information as well as a reconciliation to the carrying amount of the interest in the associate.

These figures were determined on the basis of audited financial statements for the previous year (see under 2.5.).

€ k	2016	2015
Results from FAHSS		
Revenues	25,521	29,192
Earnings after tax/total comprehensive income	705	2,418
Share of earnings after tax/total comprehensive income	102	607
Balance sheet information FAHSS	31.12.2016	31.12.2015
Current assets	17,916	19,252
Non-current assets	3,300	4,633
Current liabilities	-6,188	-5,032
Non-current liabilities	-5,143	-4,874
Equity	9,885	13,979
Share of equity	2,233	3,311
Dividend payment during the year	0	-386
Other	-362	-362
Book value of the at equity consolidated FAHSS	1,871	2,563

€ k	2016	2015
Results from TÜV Middle East		
Revenues	19,620	22,016
Earnings after tax/total comprehensive income	75	1,904
Share of earnings after tax/total comprehensive income	19	478
Balance sheet information TÜV Middle East	31.12.2016	31.12.2015
Current assets	11,799	13,566
Non-current assets	778	1,233
Current liabilities	-3,803	-3,721
Non-current liabilities	-1,783	-1,929
Equity	6,991	9,149
Share of equity	1,755	2,296
Dividend payment during the year	0	-180
Book value of the at equity consolidated TÜV Middle East	1,755	2,116

Results from non-material investments accounted for using the equity method are shown in the following table:

€ k	2016	2015
Revenue	23,761	21,003
Earnings after tax	-605	-1,520
share of earnings after tax	-303	-761

The following table shows summarised balance sheet information on the non-material investments accounted for using the equity method:

€ k	31.12.2016	31.12.2015
Assets	10,664	11,237
Liabilities	-5,558	-5,107
Equity	5,106	6,130
Book value of non-material associates	2,637	2,216

5.4. Other financial assets

For TÜV NORD AG's other equity investments please refer to the list of shareholdings (see under 7.8.).

The following changes in other financial assets occurred during the year under review:

Changes 2017		Investments in joint ventures and associates (not equity accounted)	Other equity invest-ments	Long-term securi-ties	Loans granted	Shares in guarantee funds arising from reinsurance	Total
€ k	Investments in affiliates						
Cost (of purchase or production)							
Amounts as of January 1	6,769	969	195	10,492	1,195	22,536	42,156
Changes in basis of consolidation	976	0	0	-40	0	-862	74
Additions	4,761	300	0	0	205	540	5,805
Disposals	0	-13	-19	-2,648	-279	-641	-3,599
Reclassifications	0	0	0	0	0	-2,651	-2,651
Currency translation differences	-69	13	0	0	0	0	-56
Amounts as of December 31	12,436	1,270	176	7,804	1,120	18,922	41,728
Accumulated amortisation and impairment losses							
Amounts as of January 1	3,839	303	19	278	1,052	0	5,489
Changes in basis of consolidation	976	0	0	-40	0	-43	893
Additions	143	0	0	0	0	0	143
Disposals	-104	0	-19	0	-67	73	-117
Reclassifications	0	0	0	0	0	0	0
Currency translation differences	-19	0	0	0	0	0	-19
Amounts as of December 31	4,833	303	0	238	985	31	6,389
Net carrying amounts	7,604	968	176	7,566	136	18,891	35,339

The additions/ongoing investments under the shares in affiliated companies refer to companies acquired in the 2017 fiscal year which are as yet of merely minor significance to the communication of a picture of the asset, financial and earnings position of the Group that reflects that actual circumstances.

Of the reinsurance claims on Alters- und Hinterbliebenen-Versorgungsstelle der Technischen Überwachungs-Vereine – VvaG –, Essen, (AHV), claims of € 4,766 k (2016: € 6,780 k) have been pledged as collateral to secure loan liabilities and obligations arising out of pre-retirement part-time working arrangements.

Changes 2016		Investments in joint ventures and associates (not equity accounted)	Other equity invest-ments	Long-term securi-ties	Loans granted	Shares in guarantee funds arising from reinsurance	Total
€ k	Investments in affiliates						
Cost (of purchase or production)							
Amounts as of January 1	5,924	1,811	303	12,992	1,316	26,280	48,624
Additions	816	572	3	0	27	3,017	4,435
Disposals	6	-1,419	0	-2,500	-148	-912	-4,973
Reclassifications	-41	6	-110	0	0	-5,849	-5,995
Currency translation differences	65	-1	0	0	0	0	64
Amounts as of December 31	6,769	969	195	10,492	1,195	22,536	42,156
Accumulated amortisation and impairment losses							
Amounts as of January 1	3,837	303	123	208	1,151	0	5,622
Additions	0	0	0	69	0	0	69
Disposals	0	0	0	0	-100	0	-100
Reclassifications	0	0	-104	0	0	0	-104
Currency translation differences	2	0	0	0	0	0	2
Amounts as of December 31	3,839	303	19	278	1,052	0	5,489
Net carrying amounts	2,931	667	177	10,214	143	22,536	36,667

5.5. Inventories

€ k	2017	2016
Raw materials and supplies	1,486	1,442
Work in progress	46,389	47,248
Finished products and merchandise	4,035	4,079
Payments made on account	1,567	692
Total	53,477	53,460

As in the previous year, no write-downs are recognised under Inventories.

5.6. Trade and other receivables

Trade and other receivables can be disaggregated in accordance with their residual terms as follows:

€ k	2017			2016		
	Current	Non-current	Total	Current	Non-current	Total
Trade receivables						
from third parties	162,724	139	162,863	158,035	662	158,697
from partly fulfilled contracts to render services	15,090	0	15,090	10,172	66	10,238
Receivables from affiliates	774	19	793	605	18	623
Receivables from joint ventures, associates and other entities in which equity investments are held	2,589	0	2,589	3,296	0	3,296
Total	181,178	158	181,336	172,107	746	172,853

During the period under review, value adjustments on doubtful receivables were effected in the amount of € 1,874 k (2016: € 3,304 k).

The development of specific value adjustments was as follows:

€ k	2017	2016
Carrying amount as of January 1	9,901	8,106
Changes in basis of consolidation	-105	9
Additions	1,874	3,304
Use	1,740	751
Reversals	1,629	766
Carrying amount as of December 31	8,301	9,901

Receivables that have not been subjected to specific value adjustments can be disaggregated as follows:

€ k	2017	2016
Trade receivables from third parties, gross	171,164	168,598
a) of which neither overdue nor impaired	80,862	79,896
b) of which overdue by the following periods, but not yet impaired		
1 to 30 days	49,302	47,772
31 to 60 days	15,283	14,817
61 to 90 days	5,672	6,422
91 to 180 days	6,020	6,437
more than 180 days	14,025	13,254
Value adjustments	-8,301	-9,901
Trade receivables from third parties, net	162,863	158,697

5.7. Other assets

Other assets with a residual term of more than one year are classified as non-current, and those with a residual term of less than one year as current.

The other assets recognised essentially consist of accrued items and tax reimbursement claims. The items break down as follows:

€ k	2017			2016		
	Current	Non-current	Total	Current	Non-current	Total
Other assets	12,149	4,160	16,309	11,224	3,973	15,197

As of the reporting date there were no items more than 180 days overdue for which no impairment loss had been recognised.

5.8. Cash and cash equivalents

The cash and cash equivalents consist of cheques, cash in hand and balances on account with a number of different banks in various currencies. The bank balances earn interest at customary market rates.

5.9. Assets held for sale

Pursuant to IFRS 5, developed and undeveloped properties in respect of which disposal procedures have been initiated are reported under the item “Assets held for sale”.

5.10. Equity

For further details of changes in equity between January 1 2016 and December 31 2017, see the Statement of Changes in Consolidated Equity.

TÜV NORD’s capital management policy aims not only to secure the continued existence of the business but also to achieve an adequate return in excess of the costs of capital, thereby enhancing the value of the company in the long term. The equity is monitored regularly on the basis of various indicators.

Subscribed capital

The subscribed capital remains unchanged at € 10,000 k, divided into 100,000 registered no-par-value shares. All the shares are fully paid.

At the time of preparation of the Consolidated Financial Statements for the 2017 fiscal year, TÜV NORD AG had neither contingent nor authorised capital. TÜV NORD AG does not grant any share-based remuneration (share option programmes) to its employees.

Capital reserves

The capital reserves of the TÜV NORD Group in the amount of € 114,413 k correspond to the capital reserves of TÜV NORD AG.

Subordinated registered debenture

As of December 31 2017, the subordinated registered debentures taken out by TÜV NORD AG amounted to € 50,000.

On December 8 2015, TÜV NORD AG took out a subordinated registered debenture without a fixed term amounting to € 10,000 k with RWTÜV e. V., Essen. The interest rate is fixed at 4.125 % until June 7 2021 and will then increase by 100 basis points for each additional 5-year period. A termination option is exclusively available to TÜV NORD AG for the first time as of June 7 2021, thereafter annually.

On October 1 2015, TÜV NORD AG took out a subordinated registered debenture without a fixed term amounting to € 11,000 k with TÜV Nord e. V., Hamburg, and amounting to € 9,000 k with TÜV Hannover/ Sachsen-Anhalt e. V., Hannover. The interest rate is fixed at 4.125 % until March 31 2021 and will then increase by 100 basis points for each additional 5-year period. A termination option is exclusively available to TÜV NORD AG for the first time as of March 31 2021, thereafter annually.

On December 22 2014, TÜV NORD AG took out a subordinated registered debenture without a fixed term with Alters- und Hinterbliebenen-Versorgungsstelle der Technischen Überwachungs-Vereine – VvaG –, Essen, (AHV). The interest rate is fixed at 4.125 % until June 30 2020 and will then increase by 100 basis points for each additional 5-year period. A termination option is exclusively available to TÜV NORD AG for the first time as of June 30 2020, thereafter annually.

Interest payments are at the discretion of TÜV NORD AG. They are also to be paid retroactively in full, for instance, in the event of the redemption of the registered debenture, distributions to the shareholders or the repayment of other liabilities of equal rank or in the case of economically similar procedures.

Retained earnings

The retained earnings include the earnings of the consolidated companies, to the extent that these have not been distributed as dividends. In addition, the offsetting of asset-side and liability-side differences arising out of the capital consolidation of acquisitions up to December 31 2006 and also the net amount of non-cash adjustments in connection with the first-time adoption of IFRS are recognised under this item.

Other equity items

The other equity items include the non-cash impacts on equity of the currency translation of foreign subsidiaries’ separate financial statements, of changes in the fair values of available-for-sale instruments, and of actuarial gains and losses arising out of post-employment benefit plans, and also the deferred taxes recognised in connection with these items.

Non-controlling interests

Non-controlling interests cover holdings by investors outside the TÜV NORD Group in the consolidated equity of Group companies.

The significant non-controlling interests are held in the following Group companies:

€ k	31.12.2017	31.12.2016
DMT Consulting Private Limited, Kolkata, India	623	580
Höntzsch GmbH, Waiblingen, Germany	0	1,203
TÜV India Private Ltd., Mumbai, India	5,395	4,841
TÜV NORD CERT GmbH, Essen, Germany	1,176	1,422
TÜV NORD Mobilität Immobilien GmbH, Essen, Germany	1,055	946
Various other companies	2,014	2,253
Total	10,263	11,245

The voting rights of other shareholders are in proportion to their share of the equity. No further information is given due to lack of materiality on the subsidiaries in which non-controlling minority shareholders have a stake. More information can be found in the list of shareholdings in chapter 7.8.

5.11. Provisions for pensions and other post-employment benefits

Provisions are formed for obligations arising out of entitlements and current benefits of serving and former employees and their surviving dependents, to the extent that these arise under a defined benefit plan. These provisions are determined in accordance with actuarial valuations of existing benefit obligations, which are recalculated every year. The costs resulting from these commitments are allocated over the employee’s period of service in accordance with the actuaries’ findings and comprise current or past service cost and interest cost.

The full amount of actuarial gains and losses is recognised in Other comprehensive income, while making due allowance for deferred taxes. These actuarial

gains and losses are therefore presented in the Group Statement of Comprehensive Income.

The net pension cost is shown as personnel expense.

A contractual trust agreement (CTA) was initially funded with effect from December 30 2008. Shares in reinsurance guarantee funds which serve exclusively and irrevocably to cover and fund post-employment benefit obligations were vested in TÜV NORD PENSION TRUST e.V. Under IFRS rules, the assets of the CTA are to be regarded as “plan assets”. The plan assets consist exclusively of these reinsurance guarantee fund shares. The plan assets consist exclusively of these reinsurance guarantee fund shares. The plans encumber the Group with general actuarial risks, such as, for example, longevity risk, currency risk, interest rate risk and market risk.

The level of post-employment benefit obligations (the present value, determined by actuarial valuation, of the defined benefit obligation (DBO)) was calculated by actuarial methods, a procedure in which the use of estimated values is unavoidable.

Pursuant to IAS 19, Employee benefits, the level of post-employment benefit obligations is determined by the projected unit credit method, under which actuarial methods on the basis of best estimates of the relevant parameters are used to assess the vested future obligations existing as of the valuation date.

The post-employment benefits that are expected to become payable, including dynamic components, are distributed over the employee's entire period of service. For the year under review, the following assumptions were made by the actuaries with regard to the variable parameters to be included in their calculations:

%	2017	2016
Discount rate as of 31.12.	1.55	1.90
Future pension increases	1.20	1.20
Future wage and salary increases	1.50	1.50
Employee turnover	2.00	2.00

The actuaries review and revise their findings every year. The actuarial assumptions with regard to mortality are based (with regard to Germany) on the Heubeck mortality tables, version 2005G. The actuarial assumptions do not materially differ between Germany and other countries with the exception of the discount rate.

The Group has both defined benefit and defined contribution plans for commitments for retirement, invalidity and surviving dependants' pensions based on works agreements and individual contractual agreements. Defined benefit pension plans were offered only to staff who joined the company up to and including December 31 1991 or, as the case may be, December 31 1993. The level of these commitments is calculated according to the eligible income and/or social insurance pension as well as length of service. The benefits are paid directly by the company which granted the pension commitment.

The following table shows changes in the present value of future post-employment benefit obligations and of the plan assets.

€ k	Benefit obligation	Plan assets	Total
Carrying amounts as of January 1 2017	1,201,989	-740,580	461,409
Current service cost	12,714	0	12,714
Net interest cost (interest cost/interest income)	22,892	-14,821	8,071
Net pension cost	35,606	-14,821	20,785
Actual interest on plan assets less actuarial interest income	0	-7,288	-7,288
Actuarial gains/losses from changes in financial assumptions	55,182	0	55,182
Remeasurement of defined benefit pension plans	55,182	-7,288	47,894
Pension payments	-53,670	0	-53,670
Payments from the pension plan	0	39,946	39,946
Employer's contributions to the pension plan	0	-29,119	-29,119
Total payments	-53,670	10,827	-42,843
Transfer of obligations	926	-743	183
Changes in scope of consolidation/changes in currency translation and other effects	-900	-1,677	-2,577
Carrying amounts as of December 31 2017	1,239,133	-754,282	484,851

€ k	Benefit obligation	Plan assets	Total
Carrying amounts as of January 1 2016	1,149,196	-724,479	424,717
Current service cost	12,345	0	12,345
Net interest cost (interest cost/interest income)	27,893	-18,145	9,748
Net pension cost	40,238	-18,145	22,093
Actual interest on plan assets less actuarial interest income	0	-4,908	-4,908
Actuarial gains/losses from changes in financial assumptions	64,547	0	64,547
Remeasurement of defined benefit pension plans	64,547	-4,908	59,639
Pension payments	-53,727	0	-53,727
Payments from the pension plan	0	38,911	38,911
Employer's contributions to the pension plan	0	-28,148	-28,148
Total payments	-53,727	10,763	-42,964
Transfer of obligations	2,888	-2,453	435
Changes in scope of consolidation/changes in currency translation and other effects	-1,153	-1,358	-2,511
Carrying amounts as of December 31 2016	1,201,989	-740,580	461,409

The benefit obligation in proportion to plan assets reflects the funded status of the benefit plan in question, with any excess of the benefit obligation over plan assets constituting a plan deficit. Both the benefit obligation and plan assets can vary over time, leading to an increase/decrease in the plan deficit. Reasons for such fluctuation can include changes in market interest rates and thus in the discount rate, or adjustments to actuarial assumptions.

The TÜV NORD Group's plan assets exclusively comprise employer's pension liability insurance policies and are subject to only limited fluctuation on account of the existing minimum returns. A price reporting on an active market does not exist for employer's pension liability insurance policies. The recognised plan deficit is covered by cash flows from operating activities. It is the long-term goal of the TÜV NORD Group to gradually increase plan assets. The employer contributions to plan assets are expected to amount to € 29.5 million in 2017. The weighted average term of the remainder of benefit obligations is 13.5 years.

The table below shows the effects on the defined benefit obligation (DBO) of any change in the parameters. The analysis relates to parameters where a change was considered possible as of the reporting date. The values here are mean values which were weighted with the present value of the respective pension obligation. Any correlation between the parameters was not taken into account in the calculation.

Sensitivity analysis %	Change in parameter	Increase in parameter	Decrease in parameter
Interest rate	1.0 %	12.4 % DBO decrease	15.5 % DBO increase
Rate of pension progression	0.5 %	5.9 % DBO increase	5.4 % DBO decrease

Employer contributions to mandatory pension schemes as well as contributions to other defined contribution plans were made in the amount of € 44.0 million in 2017 (2016: € 43.3 million).

5.12. Other non-current and current provisions

€ k	Provisions for the areas of personnel and welfare	Sundry other provisions	Total
Carrying amounts as of January 1 2017	48,620	44,956	93,576
Additions	30,406	7,848	38,254
Use	29,068	7,350	36,418
Reversals	1,139	3,900	5,039
Reclassifications/Transfers	433	-1,888	-1,455
Currency translation differences	-107	-143	-250
Carrying amounts as of December 31 2017	49,144	39,524	88,668

The provisions for obligations in the areas of personnel and welfare relate essentially to pre-retirement part-time working, long-service bonuses, social plan measures and other personnel and non-wage personnel costs.

The sundry other provisions relate mainly to provisions for warranty obligations, provisions for threatened losses from pending transactions and other risks.

Of the total amount of the sundry other provisions as of December 31 2017, € 30,601 k (2016: € 37,185 k) are current and € 8,922 k (2016: € 7,771 k) are non-current. No material interest accruals have been recognised on non-current provisions.

5.13. Non-current and current trade and other payables

Payables can be disaggregated in accordance with their residual terms as follows:

€ k	Current	2017 Non-current	Total	Current	2016 Non-current	Total
Amounts payable to banks	90	197	287	118	282	400
Amounts payable under finance leases	240	370	611	162	301	463
Financial liabilities	330	567	897	280	583	863
Trade payables						
to third parties	33,721	0	33,721	26,704	314	27,018
from partly fulfilled contracts to render services	337	0	337	766	0	766
Payables to affiliates	123	2	125	207	0	207
Payables to joint ventures, associates and other entities in which equity investments are held	1,206	0	1,206	492	0	492
Outstanding invoices	24,692	0	24,692	19,869	0	19,869
Amounts payable to employees	27,789	865	28,653	29,380	852	30,232
Other payables	39,607	7,592	47,199	36,586	16,231	52,817
Trade and other payables	127,474	8,459	135,934	114,004	17,397	131,401
Payments received on account	37,450	65	37,514	40,278	17	40,295
Other taxes	19,898	0	19,898	18,318	0	18,318
Sundry payables	57,348	65	57,413	58,597	17	58,614
Total payables	185,153	9,091	194,244	172,880	17,997	190,878

Amounts payable under finance leases relate to leases of capital goods and are recognised as liabilities in the amount of the future obligation.

Trade payables from partly fulfilled contracts to render services relate to contracts with regard to which the payments received from customers on account exceed the accumulated receivables from the fulfilment of the contracts concerned.

Amounts payable to employees include € 15,995 k (2016: € 14,745 k) for obligations in lieu of free time and € 7,940 k (2016: € 7,528 k) for obligations relating to holiday not yet taken.

Other payables include an accrual of TÜV NORD College GmbH in the amount of € 6,925 k (2016: € 12,715 k), arising out of the financing of the operations of the vocational training colleges.

5.14. Contingent liabilities

TÜV NORD AG bears liability in cases where it and its subsidiaries have given guarantees in favour of various contractual partners.

In the year under review, contingent liabilities in the amount of € 12,493 k (2016: € 7,131 k) are recognised which relate to sureties given for the most part to banks. TÜV NORD AG issues performance bonds in respect of liabilities of Group companies arising out of joint projects or consortia. If the consortium partner does not honour its contractual obligations, TÜV NORD AG may be liable to meet claims for payment up to the amount of the agreed surety. Generally, the agreed terms correspond to those of the underlying transaction.

5.15. Litigation

Neither TÜV NORD AG nor its Group companies are involved in litigation that could have a material impact on the economic or financial position of the companies or of the Group. In respect of other litigation, adequate provisions have been formed by the company concerned in any given case for any awards that may be made against it. As of the reporting date, these provisions amount to € 1,707 k (2016: € 950 k).

5.16. Other financial liabilities

As of December 31 2017, obligations exist to order items of property, plant and equipment to the value of € 384 k (2016: € 1,307 k).

The other financial liabilities relate to rental and leasing obligations for premises, furniture and fittings and factory and office equipment which are classified as operating leases pursuant to IAS 17.

The minimum lease payments fall due as follows:

€ k	Up to 1 year	1–5 years	More than 5 years	Total
Minimum lease payments for rented real estate	15,646	41,329	39,251	96,226
Minimum lease payments under other operating leases	3,679	6,074	4,195	13,948

The other financial rental obligations are predominantly classified as non-current. They have terms of between five and ten years.

Expense under such contracts recognised in the Income Statement amounts to € 38,343 k (2016: € 37,571 k).

6. Consolidated Cash Flow Statement disclosures

The figures for cash and cash equivalents presented in the cash flow statement embrace all cash and cash equivalents recognised in the balance sheet, i. e. cash in hand, cheques and balances on account with banks. The recognised cash and cash equivalents are freely disposable and not subject to any restrictions in favour of third parties.

7. Other disclosures

7.1. Events after the reporting period

No events of particular significance occurred after the end of the fiscal year which are having a significant impact on the business of the Group.

7.2. Fees paid to the auditors of the Consolidated Financial Statements

The following fees, paid to the auditors of the Consolidated Financial Statements, BDO AG Wirtschaftsprüfungsgesellschaft, during the year under review, have been recognised as expense pursuant to Article 314 (1) No. 9 of the German Commercial Code (HGB):

€ k	2017	2016
Auditing services	735	720
Tax consultancy services	94	51
Other consultancy services	31	35
Total	860	806

7.3. Financial instruments

The evaluation of categories of financial instruments relevant after IFRS 7 for the reporting and the comparative period is shown in the following overview.

Financial instruments as of December 31 2017					
€ k	Category as per IAS 39	Carrying amounts	Loans and receivables measured at amortised cost*	Available-for-sale financial assets recognised at fair value in comprehensive income	Financial liabilities measured at amortised cost*
ASSETS					
Non-current assets					
Securities	AfS	7,566		7,566	
Loans	LaR	136	136		
Receivables and other assets	LaR	2,787	2,787		
Current assets					
Trade receivables from third parties	LaR	177,815	177,815		
Receivables and other assets	LaR	9,489	9,489		
Cash and cash equivalents	LaR	84,708	84,708		
LIABILITIES					
Non-current liabilities					
Financial liabilities	FLAC	197			197
Trade payables to third parties	FLAC	0			
Other liabilities	FLAC	8,325			8,325
Current liabilities					
Financial liabilities	FLAC	90			90
Trade payables to third parties	FLAC	34,058			34,058
Other liabilities	FLAC	122,081			122,081
Total by category as per IAS 39			274,934	7,566	164,751
of which (aggregated by category as per IAS 39):					
Loans and receivables (LaR)		274,934			
Available-for-sale financial assets (AfS)		7,566			
Financial liabilities measured at amortised cost (FLAC)		164,751			

* The carrying amount corresponds to the fair values.

Financial instruments as of December 31 2016					
€ k	Category as per IAS 39	Carrying amounts	Loans and receivables measured at amortised cost*	Available-for-sale financial assets recognised at fair value in comprehensive income	Financial liabilities measured at amortised cost*
ASSETS					
Non-current assets					
Securities	AfS	10,214		10,214	
Loans	LaR	143	143		
Receivables and other assets	LaR	2,512	2,512		
Current assets					
Trade receivables from third parties	LaR	168,207	168,207		
Receivables and other assets	LaR	9,316	9,316		
Cash and cash equivalents	LaR	91,696	91,696		
LIABILITIES					
Non-current liabilities					
Financial liabilities	FLAC	282			282
Trade payables to third parties	FLAC	314			314
Other liabilities	FLAC	8,052			8,052
Current liabilities					
Financial liabilities	FLAC	118			118
Trade payables to third parties	FLAC	27,470			27,470
Other liabilities	FLAC	120,317			120,317
Total by category as per IAS 39			271,874	10,214	156,554
of which (aggregated by category as per IAS 39):					
Loans and receivables (LaR)		271,874			
Available-for-sale financial assets (AfS)		10,214			
Financial liabilities measured at amortised cost (FLAC)		156,554			

* The carrying amount corresponds to the fair values.

As laid down in the three stages of the valuation hierarchy in IFRS 13.72 et seq., the valuation of financial assets and liabilities is subject to the availability of the relevant information. For the first stage, quoted market prices are directly observable for identical asset values and liabilities in active markets. In the second stage, the assessment is made on the basis of valuation models which are influenced by values that are observable on the market. The third stage envisages the application of valuation models that do not rely on observable market inputs.

No financial assets are held for trading or to maturity.

In view of the predominantly short maturities of the assets and liabilities measured at amortised cost, it is assumed that their carrying amounts approximately correspond to their fair values.

For the securities classified as available for sale, the fair values are based on market prices quoted on an active market (level 1 of the fair value hierarchy).

Net profit or loss by category

Net profit or loss from financial instruments that is recognised in the Income Statement is allocated to the following categories:

	2017			2016		
€ k	From interest	From subsequent measurement	From disposal	From interest	From subsequent measurement	From disposal
Loans and receivables	2,198	-3,089	0	1,656	-2,828	0
Financial liabilities measured at amortised cost	-2,187	181	0	-1,750	154	0

Interest on financial liabilities and impairment losses on loans granted are recognised in Financial items. Impairment losses on receivables (essentially trade receivables) and gains or losses from disposals of securities are recognised under Other losses or gains.

7.4. Management of financial risks

TÜV NORD Group companies are exposed to financial risks in the course of their operations. These risks consist of credit, liquidity and market risks in the form of currency and interest rate risks. The risk situation has not changed in comparison to the previous reporting period.

Through TÜV NORD AG's centralised risk management system these risks are managed and controlled on a Group-wide basis. The principles of the risk management system are explained in greater detail in the Management Report.

Credit default risks

Default risks arise in particular out of day-to-day operations. The receivables of TÜV NORD Group companies are generally subject to a default risk which it may seek to counter by demanding security, depending on the type and amount of the performance rendered. Where required, credit insurance with an excess component is concluded in respect of individual counterparties. In addition, payment in advance may be required. In order to minimise the risk of default, counterparties are subjected to creditworthiness assessments in accordance with internal guidelines before contracts are concluded. Furthermore, customers' financial standing is regularly reviewed during the term of the contract. If there is any concrete risk of default, precautionary write-downs are effected on the basis of either objective evidence in specific cases or the structure of maturities and the actual occurrence of defaults on payment.

Defaults on trade receivables, receivables based on percentage of completion and loans cannot exceed their carrying amount as of December 31 2017. The structure of due dates of trade receivables is shown under 5.6.

The maximum credit risk relating to assets held for sale and financial instruments is equivalent to their market prices as of December 31 2017.

Liquidity risks

Possible liquidity risks – the danger that the Group might not be able to meet its payment obligations at all times – are managed through the implementation of comprehensive short-term and long-term liquidity planning, taking into account existing credit lines. Funding requirements are for the most part covered by equity, participation in cash pooling agreements or loans from banks or from Group companies, to the extent that this is feasible and reasonable in the context of the legal and tax situation in each case. Bank balances are held exclusively with banks of impeccable standing.

A variety of financing instruments available on the market are used to cover the Group's central funding requirements. If events should occur that lead to an unexpectedly high requirement for liquidity, both existing liquidity in the form of cash and cash equivalents and also available credit lines can be drawn upon.

A credit line up to a limit of € 100,000 k (2016: € 100,000 k) is available and can be drawn upon as required; the amount drawn down as of December 31 2017 amounted to € 0 k. Interest at the three-month EURIBOR rate plus a margin of 80 basis points, minimum 0.8 % per year, was payable on the amount drawn down from the time of disbursement.

An overview of the maturities of financial liabilities and the resulting outflows of funds can be derived from the table of residual terms of liabilities (see under 5.13.).

Currency risks

Currency risks result from the assets and liabilities recognised in the balance sheet that are denominated in foreign currencies, the fair values of which may be negatively influenced by fluctuations in exchange rates, and from pending foreign currency transactions whose future cash flows may develop disadvantageously as a result of exchange rate movements.

Exchange rate risk is of only minor importance, since the receivables and payables are due in local currency in the country in which the company concerned is domiciled. There are scarcely any country risks at the present time.

7.5. Related party disclosures

Under IAS 24, Related party disclosures, companies are subject to an obligation to disclose relationships with, on the one hand, related business entities that are not fully consolidated, and, on the other, with persons with whom a close relationship exists.

Related party entities of TÜV NORD Group are basically TÜV Nord e. V., TÜV Hannover/Sachsen-Anhalt e. V. and RWTÜV e. V. associations, “Aktaios” Verwaltungs-GmbH and RWTÜV GmbH with its subsidiaries. For further information in relation to the registered debentures taken out with the associations, see under section 5.10.

In addition, the Group maintains direct or indirect relationships in the normal course of its business activities not only with its consolidated subsidiaries, but also with non-consolidated affiliates and associates. All trading relationships entered into in the normal course of business with non-consolidated related entities are conducted on the basis of normal market conditions such as are also customary in arm’s-length transactions.

Members of the Board of Management and the Supervisory Board are also considered to be related parties.

7.6. Total compensation of the Board of Management and the Supervisory Board

The compensation of key management personnel whose disclosure is required pursuant to IAS 24 embraces the compensation of the serving members of Board of Management and the Supervisory Board.

During the 2017 fiscal year, the serving members of the Board of Management received total compensation amounting to € 1,542 k (2016: € 2,242 k). The present value of the overall defined benefit obligation (DBO) to the serving members of the Board of Management amounts to € 0 k (2016: € 3,973 k) as of the reporting date.

Total payments to former members of the Board of Management and their surviving dependents, consisting of pension payments and other compensation (one-off payments and payments for consultancy services), amounted to € 1,129 k (2016: € 499 k). A DBO in the amount of € 15,289 k (2016: € 10,535 k) exists towards former members of the Board of Management and their surviving dependents.

Members of the Supervisory Board were paid compensation of € 243 k (2016: € 248 k) for their services.

As in the previous year, no loans or advances were granted to members of the Board of Management or the Supervisory Board in the 2017 fiscal year. As was also the case in the previous year, no severance payments were made.

7.7. Proposal for the appropriation of profits

The Board of Management proposes to the Annual General Meeting that, of the net profits of TÜV NORD AG as determined in accordance with the provisions of the German Commercial code, € 1,238 k should be distributed to the shareholders as dividends.

7.8. List of shareholdings

Name, location of registered office		Share of equity %
Consolidated affiliates		
adapt engineering GmbH & Co. KG, Nordhausen, Germany	1)	100.00
ALTER TECHNOLOGY TÜV NORD S.A.U., Seville, Spain		100.00
Asesoría y Control en Protección Radiológica, S.L. (ACPRO), Barcelona, Spain		60.00
BRTUV AVALIAÇÕES DA QUALIDADE Ltda., São Paulo, Brazil		75.01
Cualicontrol-ACI S.A.U., Madrid, Spain		100.00
DMT Consulting Limited, Nottingham, United Kingdom		100.00
DMT Consulting Private Limeted, Kolkata, India		51.00
DMT GEOSCIENCES LTD., Calgary, Canada		100.00
DMT Geosurvey spol. s.r.o., Prague, Czech Republic		100.00
DMT GmbH & Co. KG, Essen, Germany	1) 2)	100.00
DMT Petrologic GmbH & Co. KG, Hanover, Germany	1)	100.00
Dr.-Ing. Wesemann Gesellschaft für Ingenieurgeodäsie mbH, Herne, Germany		100.00
EE Energy Engineers GmbH, Gelsenkirchen, Germany		100.00
ENCOS GmbH & Co. KG, Hamburg, Germany	1)	100.00
FS FAHRZEUG-SERVICE GmbH & Co. KG, Hanover, Germany	1)	100.00
Guangzhou TÜV Industrial Technical Services Co., Ltd., Guangzhou, China		100.00
GWQ GmbH & Co. KG, Moers, Germany	1)	100.00
HIRES ENGINEERING SAS, Toulouse, France		100.00
Höntzsch GmbH, Waiblingen, Germany		100.00
Ingenieurbüro Hofmann GmbH & Co. KG, Bamberg, Germany	1)	65.00
MEDITÜV GmbH & Co. KG – Unternehmensgruppe TÜV NORD, Hanover, Germany	1)	100.00
Nord-Kurs GmbH & Co. KG, Hamburg, Germany	1)	100.00
Optocap Holding Ltd., Livingston, United Kingdom		100.00
Optocap Ltd., Livingston, United Kingdom		100.00
PT. TÜV NORD Indonesia, Jakarta, Indonesia		100.00
THE INSPECTION COMPANY OF KOREA (INCOK), Seoul, Korea		100.00
TÜ-Service Anlagentechnik GmbH & Co. KG, Potsdam, Germany	1)	100.00
TÜ Service Ingenieurgesellschaft mbH & Co. KG, Potsdam, Germany	1)	100.00
TÜV ASIA PACIFIC LTD., Kwun Tong, Kowloon, Hong Kong		100.00
TÜV Croatia d.o.o., Slavonski Brod, Croatia		100.00
TÜV CYPRUS LTD., Nicosia, Cyprus		60.16
TÜV Eesti OÜ, Tallinn, Estonia		100.00
TÜV HELLAS (TÜV NORD) S.A., Athens, Greece		100.00
TÜV India Private Ltd., Mumbai, India		50.00
TÜV Informationstechnik GmbH Unternehmensgruppe TÜV NORD, Essen, Germany		100.00
TÜV Nederland QA B.V., Best, The Netherlands		100.00
TÜV NORD Akademie GmbH & Co. KG, Hamburg, Germany	1)	100.00
TÜV NORD Austria GmbH, Vienna, Austria		100.00
TÜV Nord Baltik SIA, Riga, Latvia		100.00
TÜV NORD Bautechnik GmbH, Hamburg, Germany		100.00
TÜV NORD Bildung GmbH & Co. KG, Essen, Germany	1) 2)	100.00
TÜV NORD Bulgarien GmbH, Plovdiv, Bulgaria		100.00
TÜV NORD CERT GmbH, Essen, Germany		94.00
TÜV NORD CERT UMWELTGUTACHTER Gesellschaft mbH, Hanover, Germany		100.00
TÜV NORD College GmbH, Essen, Germany		100.00
TÜV NORD Czech, s.r.o., Prague, Czech Republic		100.00
TÜV Nord Danmark ApS, Kolding, Denmark		100.00

Name, location of registered office		Share of equity %
TÜV NORD EGYPT FOR INSPECTION AND CERTIFICATION SERVICES (S.A.E.), Cairo, Egypt		60.00
TÜV NORD EnSys GmbH & Co. KG, Hamburg, Germany	1) 2)	100.00
TÜV NORD Finland Oy, Vantaa, Finland		100.00
TÜV NORD Hangzhou Co., Ltd., Hangzhou, China		70.00
TÜV NORD HONG KONG LTD., Kwun Tong, Kowloon, Hong Kong		100.00
TÜV NORD Immobilien GmbH & Co. KG, Essen, Germany	1)	100.00
TÜV NORD InfraChem GmbH & Co. KG, Marl, Germany	1)	51.00
TÜV NORD INTEGRA BVBA, Berchem, Belgium		70.00
TÜV NORD International GmbH & Co. KG, Essen, Germany	1) 2)	100.00
TÜV NORD ITALIA S.r.l., Legnano, Italy		100.00
TÜV NORD Korea Ltd., Seoul, Korea		100.00
TÜV NORD (Malaysia) SDN. BHD., Petaling Jaya, Malaysia		100.00
TÜV NORD Mobilität GmbH & Co. KG, Hanover, Germany	1) 2)	100.00
TÜV NORD Mobilität Immobilien GmbH, Essen, Germany		94.00
TÜV NORD Mobility (Shanghai) Co. Ltd., Shanghai, China		100.00
TÜV NORD MPA Gesellschaft für Materialprüfung und Anlagensicherheit mbH & Co. KG, Leuna, Germany	1)	100.00
TÜV NORD NC GmbH & Co. KG, Hanover, Germany	1)	100.00
TÜV NORD Nederland Holding B.V., Rijswijk, The Netherlands		100.00
TÜV NORD Polska Sp. z o.o., Katowice, Poland		100.00
TÜV NORD Service GmbH & Co. KG, Hanover, Germany	1)	100.00
TÜV NORD SLOVAKIA, s.r.o., Bratislava, Slovakia		100.00
TÜV NORD SOUTHERN AFRICA (PTY) LTD., Cape Town, South Africa		49.00
TÜV NORD Scandinavia AB (former TÜV NORD Sweden AB), Gothenburg, Sweden		100.00
TÜV NORD Systems GmbH & Co. KG, Hamburg, Germany	1) 2)	100.00
TÜV NORD Technisches Schulungszentrum GmbH & Co. KG, Hamburg, Germany	1)	100.00
TÜV NORD (Thailand) Ltd., Bangkok, Thailand		99.97
TÜV NORD Transfer GmbH & Co. KG, Essen, Germany	1)	100.00
TÜV NORD Umweltschutz GmbH & Co. KG, Hamburg, Germany	1)	100.00
TÜV Teknik Kontrol ve Belgelendirme A.S., Istanbul, Turkey		100.00
TÜV Thüringen Anlagentechnik GmbH & Co. KG, Erfurt, Germany	1)	99.94
TÜV Thüringen Fahrzeug GmbH & Co. KG, Erfurt, Germany	1)	99.50
TÜV UK Ltd., London, United Kingdom		100.00
TÜV USA, Inc., Salem, USA		100.00
Unterstützungseinrichtung des Technischen Überwachungs-Vereins Hannover/Sachsen-Anhalt GmbH, Hanover, Germany		100.00
Verebus Engineering B.V., Rijswijk, The Netherlands		100.00
Versicherungsvermittlung TÜV NORD GmbH, Essen, Germany		100.00
Unconsolidated affiliates		
adapt engineering Verwaltungsgesellschaft mbH, Nordhausen, Germany		100.00
BILDUNG EmployAbility GmbH (former TÜV NORD Bildung Opel GmbH), Essen, Germany		100.00
British Mining Consultants Ltd., Sutton, United Kingdom		100.00
DMT-KAI BATLA (Mozambique) Limitada, Maputo Cidade, Mozambique		51.00
DMT-Kai Batla Pty. Ltd., Bordeaux, South Africa		51.00
DMT Mining Consulting Ltd., Nottingham, United Kingdom		100.00
DMT Petrologic Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
DMT Verwaltungsgesellschaft mbH, Essen, Germany		100.00
ENCOS Verwaltungsgesellschaft mbH, Hamburg, Germany		100.00
FAHRZEUG-SERVICE Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
FORMATION SaarLor FSL EURL, Forbach, France		100.00
GWQ Verwaltungsgesellschaft mbH, Moers, Germany		100.00
Hundt & Partner Ingenieurgesellschaft mbH & Co . KG, Hanover, Germany		100.00
IMC Group Consulting Limited, Nottingham, United Kingdom		100.00

Name, location of registered office		Share of equity %
IMC Montan Consulting Limited, Nottingham, United Kingdom		100.00
IMC Montan Russia Limited, Nottingham, United Kingdom		100.00
Ingenieurbüro Hofmann Verwaltungsgesellschaft mbH, Bamberg, Germany		65.00
International Mining Consultants Ltd., Nottingham, United Kingdom		100.00
International Mining Consultants Pty Ltd., Brisbane, Australia		100.00
live-expert Geschäftsführungs GmbH, Schmelz, Germany		51.00
live-expert GmbH & Co. KG, Schmelz, Germany		51.00
MacKay & Schnellmann Ltd., Nottingham, United Kingdom		100.00
m.dudde hochfrequenz-technik GmbH & Co. KG, Bergisch Gladbach, Germany		100.00
m.dudde hochfrequenz-technik Verwaltungs-GmbH, Bergisch Gladbach, Germany		100.00
MEDITÜV Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
Montan Consulting Limited, Nottingham, United Kingdom		100.00
MONTAN RUSSIA Ltd., Nottingham, United Kingdom		100.00
Nord-Kurs Verwaltungsgesellschaft mbH, Hamburg, Germany		100.00
PT. DMT Exploration Engineering Consulting Indonesia, Jakarta, Indonesia		74.00
RP GmbH, Essen, Germany		100.00
RWTÜV Akademie GmbH, Essen, Germany		100.00
SEIQ – Serviços de Engenharia Industrial e Qualidade Ltda., Rio de Janeiro, Brazil		100.00
TN Portugal, Unipessoal Lda, Sines, Portugal		100.00
TÜ-Service Anlagentechnik Verwaltungsgesellschaft mbH, Berlin, Germany		100.00
TÜ Service Verwaltungsgesellschaft mbH, Potsdam, Germany		100.00
TÜV GmbH Hannover Hamburg Essen Berlin, Hanover, Germany		100.00
TÜV NORD Akademie Verwaltungsgesellschaft mbH, Hamburg, Germany		100.00
TÜV NORD ARGENTINA S.A., Buenos Aires, Argentina		100.00
TÜV NORD AUTO GmbH & Co. KG, Essen, Germany		100.00
TÜV NORD AUTO Verwaltungsgesellschaft mbH, Essen, Germany		100.00
TÜV NORD Bauqualität Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
TÜV NORD Bildung Verwaltungsgesellschaft mbH, Essen, Germany		100.00
TÜV NORD Certification (Tianjin) Co., Ltd., Tianjin, China		76.90
TÜV NORD EnSys Hannover Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
TÜV NORD FRANCE S.A.S., La Madeleine, France		100.00
TÜV NORD Immobilien Verwaltungsgesellschaft, Essen, Germany		100.00
TÜV NORD InfraChem Verwaltungsgesellschaft mbH, Marl, Germany		51.00
TÜV NORD International Verwaltungsgesellschaft mbH, Essen, Germany		100.00
TÜV NORD Luxembourg s.a.r.l., Luxembourg, Luxembourg		100.00
TUV NORD Mobility Inc., Vancouver, Canada		100.00
TÜV NORD MEXICO S.A. DE C.V., Querétaro, Mexico		100.00
TÜV NORD Mobilität Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
TÜV NORD MPA Verwaltungsgesellschaft mbH, Leuna, Germany		100.00
TÜV NORD Philippines, Inc., Manila, The Philippines		100.00
TÜV NORD ROMANIA S.R.L., Bucharest, Romania		100.00
TÜV NORD SafetyConsult GmbH & Co. KG, Hanover, Germany		100.00
TÜV NORD SafetyConsult Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
TÜV NORD Service Verwaltungsgesellschaft mbH, Hanover, Germany		100.00
TÜV NORD SofortGutachten GmbH & Co. KG, Hanover, Germany		51.00
TÜV NORD SysTec Verwaltungsgesellschaft mbH, Hamburg, Germany		100.00
TÜV NORD Systems Verwaltungsgesellschaft mbH, Hamburg, Germany		100.00
TÜV NORD Transfer Verwaltungsgesellschaft mbH, Essen, Germany		100.00
TÜV NORD TS Verwaltungsgesellschaft mbH, Hamburg, Germany		100.00
TÜV NORD Ukraina GmbH, Donetsk, Ukraine		100.00
TÜV NORD Umweltschutz Verwaltungsgesellschaft mbH, Hamburg, Germany		100.00
TÜV NORD VIETNAM LTD., Hanoi, Vietnam		100.00

Name, location of registered office		Share of equity %
TÜV Thüringen Anlagentechnik Verwaltungsgesellschaft mbH, Erfurt, Germany		99.60
TÜV Thüringen Fahrzeug Verwaltungsgesellschaft mbH, Erfurt, Germany		99.50
At equity accounted associates		
EnergieAgentur.NRW GmbH, Düsseldorf, Germany		50.00
National Inspection and Technical Testing Company Ltd. (FAHSS), Damman, Saudi Arabia		25.11
TÜV Middle East W.L.L., Manama, Bahrain		25.10
TUV NORD NTA Mobility (Shanghai) Co., Ltd., Shanghai, China		49.00
UAB TÜVLITA, Vilnius, Lithuania		50.00
Not at equity accounted associates (A) and joint ventures (JV)		
A&K Dienstleistungs- und Servicegesellschaft mbH, Bremerhaven, Germany (A)		25.10
ARGE "Technische Prüfstelle für den Kraftfahrzeugverkehr 21" GbR, Dresden, Germany (JV)		25.00
Energy Agency NRW GmbH, Düsseldorf, Germany (JV)		50.00
IMC MONTAN Ltd., Nottingham, United Kingdom (JV)		50.00
Radiologic Facility Services S.A., Tarragona, Spain (A)		20.00
TÜV NORD ENGINEERING SERVICES (M) SDN. BHD., Selangor, Malaysia (A)		30.00
TÜV NORD IRAN JOINT VENTURE CO., Tehran, Iran (A)		49.00
TÜV NORD PV Science and Technology Co., Ltd., Shanghai, China (A)		40.00
Other investments		
Engineering Financial Cooperative, Seoul, Korea		0.02
FSD Fahrzeugsystemdaten GmbH, Dresden, Germany		13.43
Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) gGmbH, Cologne, Germany		15.40
Korea Electric Engineers Association, Seoul, Korea		0.12
VIA Consult GmbH & Co. KG, Olpe, Germany		2.50
WINDTEST Grevenbroich GmbH, Grevenbroich, Germany		12.50

1) These trading partnerships take advantage of the exemption rule pursuant to Art. 264b HGB
2) These trading partnerships take advantage of the exemption rule pursuant to Art. 291 HGB

7.9. Governing Bodies

Members of the Board of Management:

Dr. rer. nat. Dirk Stenkamp, Bocholt
Chairman and CEO

Dipl.-Kfm. Jürgen Himmelsbach, Essen
CFO

Harald Reutter M.A., Berlin
Human Resources

Members of the Supervisory Board:

Dr. rer. nat. Georg Schöning, Rosengarten-Nenndorf
Chairman

Dipl.-Ing. Rüdiger Sparfeld*, Hanover
1st Vice Chairman
Vice Chairman of Group Staff Council
of TÜV NORD AG

Prof. Dr. Karl Friedrich Jakob, Dinslaken
Vice Chairman
Chairman of the Board of Directors of RWTÜV e. V.

Peter Bremme*, Hamburg
Vice Chairman
Regional representative of ver.di trade union,
Hamburg region

Dr.-Ing. Klaus-Dieter Beck, Dinslaken

Prof. Dr.-Ing. Hans-Jürgen Ebeling, Peine

Dipl.-Ing. Christine Flöter*, Detmold
Technical employee, TÜV NORD CERT GmbH

Dr. Wolfram von Fritsch, Hanover
until June 30 2017, Chairman of the Board
of Management of Deutsche Messe AG

Prof. Dr.-Ing. Heinz Jörg Fuhrmann, Salzgitter
Chairman of the Executive Board, Salzgitter AG

Dipl.-Ing. Raimund Gemballa*, Münster
Chairman of Group Staff Council of TÜV NORD AG

Ludger Halasz*, Duisburg
Human Resources Developer of TÜV NORD AG

* Employees representative

Kurt Hay*, Herne
Regional Director of IG BCE, Westphalia region

Dr. jur. Jürgen-Johann Rupp, Dinslaken
Member of the Executive Board,
RAG Aktiengesellschaft

Dipl.-Ing. Stephan Schaller, Munich
Head of Motorcycles, BMW Group

Barbara Schipp*, Dortmund
Secretary to the ver.di trade union

DV-Kfm. Michael Schnoor*, Itzehoe
Chairman of the Joint Staff Council of TÜV NORD
Systems GmbH & Co. KG/TÜV NORD EnSys GmbH &
Co. KG Augsburg-Berlin-Greifswald-Hamburg

Prof. Dr. Peter Schörner, Bochum
Lecturer at EBZ BUSINESS SCHOOL

Uwe Schulze*, Buchholz/Nordheide
Chairman of the Joint Staff Council
of TÜV NORD AG/TÜV NORD Service GmbH & Co. KG
Hamburg-Bremen-Kiel

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COVER PICTURE

Chips are submitted to various physical attacks in the hardware laboratory of TÜViT.



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