

# IN ACTION

Corporate Report 2017





# TÜV RHEINLAND AG GROUP FIGURES

in € million	2016	2017
<b>Revenues, by business stream, unconsolidated</b>		
Industrial Services	520	503
Mobility	486	508
Products	519	524
Academy & Life Care	219	226
ICT & Business Solutions	131	139
Systems	166	203
<b>Figures, consolidated (according to IFRS)</b>		
<b>Total Revenues</b>	<b>1,918</b>	<b>1,972</b>
Germany	1,018	1,077
Abroad	900	895
Earnings before interest and taxes (EBIT) (in € million)	122.6	130.6
EBIT margin (in %)	6.4	6.6
Cash flow from operating activities (in € million)	163.4	161.8
Equity (in € million)	346.2	358.9
Equity ratio (in %)	18.4	20.1
<b>Staff (average over the year, converted to full-time equivalents)</b>	<b>19,671</b>	<b>19,924</b>
Germany	8,286	8,504
Abroad	11,385	11,420

# TÜV RHEINLAND

## PROFILE

TÜV Rheinland is a worldwide leading independent provider of inspection and testing services with a tradition going back more than 145 years. Its independent specialists stand for quality and safety of people, technology and the environment in nearly all aspects of modern life. We inspect and test technical plants and equipment, products and services, provide project and process support, and ensure information security for companies. Our experts train people in many professions and industries. For that purpose, TÜV Rheinland has a global network of certified laboratories, testing facilities and training centers.

For an optimal, future-oriented development of the Group, TÜV Rheinland Berlin Brandenburg Pfalz e.V. focuses on its role as sole shareholder of TÜV Rheinland AG. All of TÜV Rheinland Group’s operations are united under the umbrella of TÜV Rheinland AG.

### INDUSTRIAL SERVICES

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- Pressure Equipment
- Lifting Equipment & Machinery
- Electrical Engineering & Automation
- Industrial Inspection
- Infrastructure & Civil Engineering
- Energy & Environment
- Project Management
- Materials Testing & Non-destructive Testing

### MOBILITY

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- Periodical Technical Inspection
- Driver’s License
- Car Services & Appraisal
- Engineering & Type Approval
- Rail

### PRODUCTS

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- Softlines
- Hardlines
- Electrical
- Commercial
- Medical
- Solar

### ACADEMY & LIFE CARE

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- Occupational Health & Safety
- Training & HR Development
- Labor Market Services & Private Schools

### ICT & BUSINESS SOLUTIONS

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- IT Services & Cyber Security
- Telco Solutions & Consulting

### SYSTEMS

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- Certification of Management Systems
- Customized Services
- Government Inspections & International Trade

IN TRUST

2015

2016

IN DIALOG

2017

IN ACTION

The world we live in is inundated with latent demands: New technologies are developed at unprecedented speeds, global value creation chains are more complex and more closely intertwined than ever before, and impenetrable streams of data make our actions transparent – notably to those who control that data. At the same time, technologies and networking afford tremendous opportunities. How about a few examples? Greater quality of life is possible for millions of people – and has already been achieved in many countries. Machines “think with us” and hold out the promise of preventing human error. Smartphones are indispensable aids in our everyday life. Clean energy production and mobility are no longer Utopian dreams.

Against this background, our commitment to greater safety and quality wherever man, the environment and technology interact is more important now than ever before. Because we foster innovations and developments in technology and business. And because we provide services that enhance safety and quality. As a result, we make our customers more successful and build trust in products and processes along global commerce streams and value creation chains. In doing so, we improve the quality of life. And that is precisely what our employees the world over are working to achieve, day in and day out – with independence, competence, and integrity.

For ease of reading, we consistently use the term “employees” with reference, of course, to all female and male colleagues.



# COO

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CSR FACTS

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HOME,  
SMART HOME



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CONNECTED  
TO THE TIMES

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*Dear Readers,*

Our commitment to greater safety and quality wherever man, the environment and technology interact is more important now than ever before. If we want to take full advantage of the tremendous opportunities that globalization and the new technologies offer us, then trust in safety and quality must be warranted.

The contribution that we, as TÜV Rheinland, are making toward an added level of trust, and how our more than 20,000 employees are working to achieve that, is described for you here in our Corporate Report. Data privacy in the smart home, natural gas supply in southern Peru, e-commerce in China, and the future of mobility are our topics. They clearly illustrate how we foster innovations and developments in technology and business in an extremely wide range of industries the world over, while using our testing and inspection services to build trust in products and processes along global commerce streams and value creation chains.

In so doing, many of our services themselves have become an indispensable part of value creation chains. This is clearly evident from the continued high demand for them, especially from economically strong industrial countries, but also increasingly from emerging countries. Against this background, we look back now over yet another successful business year. We were able to continue the course of growth of the past few years and make important investments in laboratories, testing sites and IT; the most important facts and figures are listed here in the report.



1 Dr.-Ing. Michael FÜbi  
Chief Executive Officer  
2 Ruth Werhahn  
3 Vincent Furnari  
4 Ralf Scheller

Along with business success, what also matters to us is our ambition to play a role in shaping a sustainable future that satisfies both mankind's and the environment's needs. Our commitment to sustainable action and to the principles of the UN Global Compact articulates that ambition. Concrete examples of that commitment can be found in our CSR activities, which we present to you here in compact form in this Corporate Report. Our CSR activities are described in detail in our Sustainability Report at [www.tuv.com/sustainability](http://www.tuv.com/sustainability).

For a successful 2017, I offer – also on behalf of my colleagues on the Executive Board – my special thanks to our employees. They make sure that we earn the trust of our customers, time and again.

Yours

Michael FÜbi

Dr.-Ing. Michael FÜbi  
Chief Executive Officer TÜV Rheinland





Prof. Dr.-Ing. habil.  
Bruno O. Braun  
Chairman of the Supervisory  
Board of TÜV Rheinland AG

*Dear Readers,*

Worldwide, 2017 was another year of solid, satisfactory growth, despite numerous political crises and threats of terrorism and war. The process of digitalization in all areas of economic life continued its advance and is also providing additional momentum to the market for neutral certification services. Within these global framework conditions, the TÜV Rheinland AG Group can look back to another very satisfactory business year. Sales grew by about 3%, finishing out the year just short of the 2-billion-euro mark. EBIT increased by 6.5% to 131 million euros, which represents a satisfactory level. We expect to see these figures continue to increase sustainably in the coming years. To that end, the Executive Board has successfully initiated a series of optimization projects. This also includes the reorganization with global business stream responsibility for earnings and customers. Started in 2016 and now essentially complete, that reorganization achieved good comparability and greater transparency. The reduction of overhead costs through more rational processing is another integral project currently in its implementation phase. It addresses and fosters once again our most vital resource by far: Our team, comprising more than 20,000 employees who act with competence and motivation from offices in over 500 locations worldwide. The international orientation of our business model is also borne out by the fact that almost a third of the members of our topmost leadership committees are now recruited internationally. Drawing on the solid foundation of a highly qualified workforce, our attribute for the 2018 business year remains: Confidence.

During the year under review, the Supervisory Board diligently and comprehensively fulfilled the duties incumbent upon it in accordance with the law and the articles of incorporation, regularly monitored the Executive Board with regard to the management of the company and provided it with advisory support relative to strategic development. The Executive Board reported regularly, promptly, and comprehensively – both verbally and in writing – about the overall situation of the company and the current business growth. In 2017, the Supervisory Board convened a total of four meetings. The activities of the Supervisory Board's committees made a significant contribution to the performance of the Supervisory Board.



In April 2017, Gerhard Meusel, a longstanding member of the Supervisory Board, passed away. We will keep Gerhard Meusel and his service to the company in reverent memory.

Due to domestic mandatory guidelines related to the co-determination act (having exceeded the threshold of 10,000 employees in Germany), the legally required number of members of the Supervisory Board increased from 12 to 16. Jan Bley, heretofore the representative of the senior executives, left the Supervisory Board. The Supervisory Board thanks Jan Bley for the many years of trusted collaboration. Björn Clüsserath was elected to the Supervisory Board as the new representative of the senior executives, while the newly elected Volker Lück, Beate Rieser and Thomas Wolkenstörfer joined the other re-elected employee representatives. Reiner Schon was confirmed as Vice Chairman of the Supervisory Board. On the side of the shareholder representatives, Prof. Dr.-Ing. Jürgen Brauckmann and Prof. Dr.-Ing. Dieter Spath were newly elected to the Supervisory Board. All other representatives of the shareholders were re-elected. For my own part, I was reelected in turn as Chairman of the Supervisory Board.

For Thomas Biedermann and Stephan Schmitt, their term of office as Members of the Executive Board has expired. After their mutually agreed departure, they will now pursue new objectives of their own outside of our Group. We thank Thomas Biedermann and Stephan Schmitt for their many years of service for our Group and wish them both all the best for the future.

At the meeting of the Supervisory Board in September 2017, Ruth Werhahn was appointed as a Member of the Executive Board of TÜV Rheinland AG with responsibility for Personnel and as Director of Labor Relations, effective April 1, 2018. In appointing a female board member for the first time, it is clear that we are establishing precedents with regard to diversity also on our top management level.

The auditing firm PricewaterhouseCoopers GmbH audited the annual financial statements dated December 31, 2017, including the management report and accounting, prepared by the Executive Board of TÜV Rheinland AG. The audit of the annual financial statements, the management report, and the proposed appropriation of profits produced no objections. The Supervisory Board has adopted the annual financial statements.

On behalf of the entire Supervisory Board, I would like to thank the Executive Board members, managers and all employees for their successful work. I wish TÜV Rheinland AG and all of the Group's companies great success as they continue to address future business challenges for the good of our customers and the company.



Prof. Dr.-Ing. habil. Bruno O. Braun  
Chairman of the Supervisory Board of TÜV Rheinland AG

**INTEGRITY** WE ARE INCORRUPTIBLE AND ACT WITH FAIRNESS. WE LIVE BY OUR VALUES ON A FOUNDATION OF TRUST AND TRANSPARENCY. WE BUILD TRUST. WE ALIGN ALL OF OUR EFFORTS WITH THE STANDARDS SET FOR US. WE MAKE OUR DECISIONS TRANSPARENT AND COMMUNICATE THEM CLEARLY.

**EXCELLENCE** WE ACHIEVE EXCELLENCE IN ALL OUR PROCESSES AND PRODUCTS. ONLY REALLY GOOD WORK SATISFIES US. OUR COMPREHENSIVE COMPETENCE IS A PREREQUISITE FOR THAT. WE CONTINUE TO FURTHER DEVELOP OUR PRODUCTS WITH FOCUSED INNOVATIONS. FOR US, SAFETY HAS THE HIGHEST PRIORITY.

**CUSTOMER ORIENTATION** WE PUT THE NEEDS OF OUR CUSTOMERS FIRST. WE PUT THE CUSTOMER FIRST IN HOW WE THINK AND HOW WE WORK. WE KEEP A SOUND BALANCE

BETWEEN COMMITTING TO OUR  
CUSTOMERS AND MAINTAINING OUR

# Our Values

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CHANGE –  
A QUESTION OF CULTURE

OPPORTUNITY. WE STAY FLEXIBLE  
AND KEEP EVOLVING WITH ENERGY.



INTEGRITY WE ARE INCORRUPTIBLE  
AND ACT WITH FAIRNESS. WE LIVE

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Corporate culture can be an impediment to strategic objectives. That's the bad news. The good news is: Culture is not cast in stone. It takes a lot of effort sometimes, but it's the only worthwhile way.

Corporate culture? In the business world, it's a rather vague term that causes trouble for some managers. Culture sounds neither like markets and strategies nor like growth and profit nor like innovation and future. Rather, it sounds hard to measure – and therefore hard to manage. But business leaders should not forget what management guru Peter Drucker once said: "Culture eats strategy for breakfast." In other words, if the corporate culture does not fit the corporate strategy, you might as well throw your strategic objectives out the window. That's why decision-makers in companies must step outside of the usual comfort zones of financial figures, KPIs and market analyses and pay close attention to corporate culture.

Change – A question of culture

IN HOW WE THINK AND HOW WE  
WORK. WE KEEP A SOUND BALANCE

# BETWEEN COMMITTING TO OUR CUSTOMERS AND MAINTAINING OUR

But what exactly is a corporate culture, really? How does it manifest itself? Both in small ways and in the overall picture. Does the boss also make a new pot of coffee sometimes? How open is communication about critical subjects? What sort of support is provided to colleagues confronting difficult circumstances? Professor Sonja Sackmann expresses it in broader terms. To this expert in occupational and organizational psychology, corporate culture comprises the firm principles shared by the members of a group. Those principles affect its perception, the way the entire group thinks, feels and acts. For employees and managers, they serve as a kind of road map, providing orientation for their actions. And those firm principles always apply – no matter whether the management actively intervenes or just lets things happen naturally.

Given this, it is clear that if a company really wants to change, its management is compelled to change the corporate culture, too. That's why we made cultural transformation at TÜV Rheinland one of the three mainstays of our change initiative Do it. Best!, which is designed to help us become the best independent provider of technical services for testing, inspection, certification, consultation and training (see pages 8–9). Because though our goal is quite clear, reorientations also always concern the human emotional level. Without a shared understanding of fundamental values, change projects risk ending up as mere paper tigers.

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Change – A question of culture

## OPPORTUNITY. WE STAY FLEXIBLE AND KEEP EVOLVING WITH ENERGY.

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## **Cultural transformation demands endurance**

When we launched Do it. Best! it was perfectly clear to us that a cultural transformation cannot be ordained from above, much less overnight. It takes more than just posting an updated list of principles or announcing our core values in the employee magazine. Rather, change only starts there. Attaining a common understanding of the values that make us who we are is a journey that demands endurance. And, we are bringing each and every employee along with us on that journey.

Over the course of the past year, we prepared ourselves very thoroughly for this journey. In a first step – in keeping with the image proposed by Sonja Sackmann – we created a road map that provides orientation to our employees. We call this road map our “Corporate Culture Framework.” Based on a comprehensive analysis, it specifies the fundamental principles that should be the hallmarks of our corporate culture for us to achieve our objectives. Our starting assumption was that, although our nearly 150-year corporate history has forged us in many ways that are worthy of preservation, a globalized and increasingly digitalized world also demands capabilities other than those that made us so successful in the past.

## **Values as the foundation**

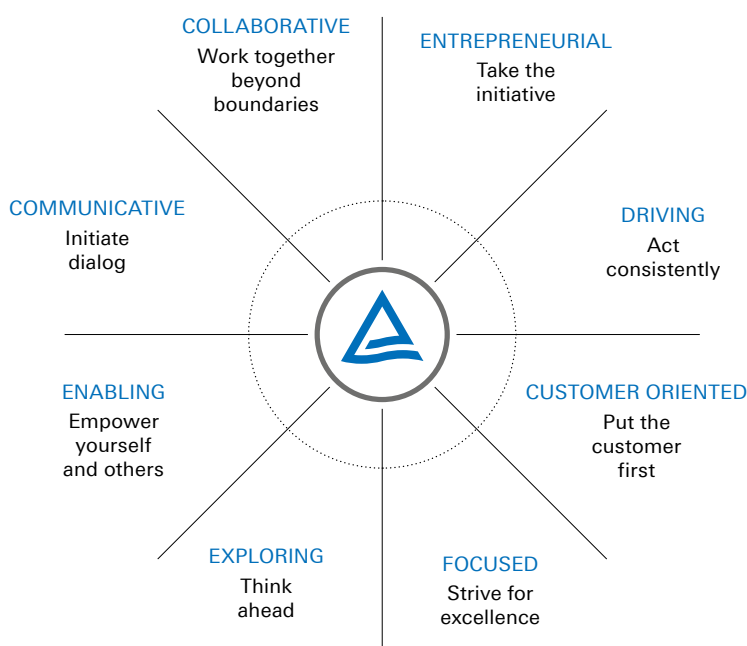
The foundation of our reoriented corporate culture comprises of five values: Integrity, Excellence, Customer Orientation, Performance and Agility. We used this as the basis for revising the culture-shaping documents and measures at TÜV Rhein-



# BETWEEN COMMITTING TO OUR CUSTOMERS AND MAINTAINING OUR

land: Our corporate vision, our management principles and our competence model, which describes in detail the capabilities we expect of our employees – in addition to their high level of technical expertise.

The competence model offers a tangible picture of our corporate culture as expressed through the actions of the employees. We are using it in our recruiting and in employee development.



Change – A question of culture

## OPPORTUNITY. WE STAY FLEXIBLE AND KEEP EVOLVING WITH ENERGY.

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## As easy as child's play, from theory to practice

So the first step toward cultural transformation was to draw up the road map. The second step on our journey: Communication. What do the values mean in everyday life? Why do they matter? How can we inform the greatest number of employees about the values as soon as possible? In an international group like TÜV Rheinland, how can we manage to actually create a shared understanding of values – and without interpretations that differ among colleagues from Germany and China, from the USA and Brazil, from India and Spain?

In response to these questions, we found an answer which – in our humble opinion – is rather innovative: Mission Future. That's what we call the computer game that we installed on all company computers worldwide in October 2017. Through play and video sequences, it enabled all employees to more closely examine what integrity and excellence mean in practice and to consider concrete examples of customer orientation and performance orientation or agility in the Group. And then in their teams, they discussed their status with regard to the five values and identified the ones they want to work on in the future.

IN HOW WE THINK AND HOW WE  
WORK. WE KEEP A SOUND BALANCE

# BETWEEN COMMITTING TO OUR CUSTOMERS AND MAINTAINING OUR

## Leadership must be a role model

But the communication of vision and values was just one step on our journey. In parallel, we set about strengthening the specific managerial skills that are crucial for achieving the change. Because the employees might know about the road map, and they might even read it, but if the managers don't change, their employees won't use it to start down the road. This observation is nothing new, and might even seem simple, but it remains no less important: As role models, managers live the corporate culture. That means a change in management behavior is a necessary precondition for a shared understanding.

Modified principles are now incorporated into programs and requirements at all levels of management. These include leadership training courses, individual development plans, and performance of managers is now evaluated by both their supervisor and their employees. In addition, at the end of 2017, we launched a completely redesigned personnel development program called "LeadX" for the top managers of our Group, including the Executive Board. Our journey of cultural change continues with every new employee. We know that the road to cultural change is a long one. We will continue to follow it with resolve, and to orient all training measures with regard to values, expertise and our leadership principles accordingly.

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Change – A question of culture

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WORK. WE KEEP A SOUND BALANCE

BETWEEN COMMITTING TO OUR CUSTOMERS AND MAINTAINING OUR INDEPENDENCE.

**PERFORMANCE** WE ARE PERFORMANCE ORIENTED AND ACCEPT RESPONSIBILITY. OUR PERFORMANCE ORIENTATION IS THE SOURCE FOR THE SATISFACTION OF OUR CUSTOMERS AND THE SUCCESS OF OUR WORK. WE ACT WITH DETERMINATION AND ALWAYS ACCEPT RESPONSIBILITY FOR OUR ACTIONS. WE CONSIDER MISTAKES OPPORTUNITIES FOR DOING IT BETTER.

**AGILITY** WE ARE AGILE, FLEXIBLE, AND RESPONSIVE IN A CHANGING WORLD. WE RESPOND IMMEDIATELY TO DEVELOPMENTS IN OUR MARKETS AND SOCIETY AT LARGE. WE MANAGE OUR OWN CHANGES ACTIVELY AND CONSIDER CHANGE AS AN OPPORTUNITY. WE STAY FLEXIBLE AND KEEP EVOLVING WITH ENERGY.

# STRATEGY

“Do it. Best!” – that’s our program for strategy, processes and corporate culture. Leveraging the synergistic interaction of our strategic initiatives and our sustainability work.

## HOW SUSTAINABLE ACTION CONTRIBUTES TO THE SUCCESS OF TÜV RHEINLAND

- Governance: Integrity and compliance ensure service quality
- Employees: Actions in the key areas of activity enhance our attractiveness in the labor market
- Environment: The consistent realization of potential savings promotes responsible use of non-renewable resources
- Society: Social commitment strengthens employee motivation and reputation
- Service responsibility: Innovative solutions promote sustainable development, common service standards protect brand and reputation

## UN GLOBAL COMPACT



We signed the Global Compact in 2006 and are committed to the Global Compact Network Germany (DGCN) – through participation in its various learning and exchange formats as well as our collaboration in the committees of the DGCN. Relying on commitment by the private sector, the UN Global Compact comprises ten principles calling for adherence to human rights and labor standards, environmental protection, and the fight against corruption.

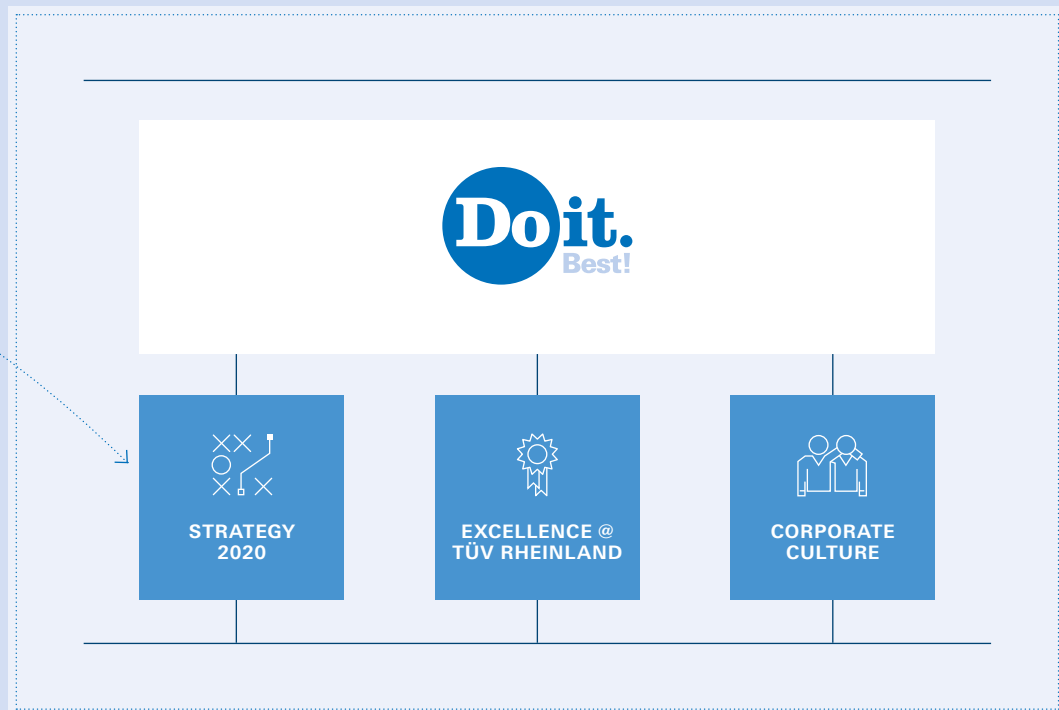




# GY

We stand for safety and quality wherever man,  
the environment and technology interact

Sustainability  
strategy supports  
all core  
objectives



- » Continuous and sustainable growth in all business streams
- » Investments in three key areas

- » Profound changes in organization and processes
- » Global and regional excellence projects
- » Organization project

- » Communicating principles and values in the Group and encouraging employees to identify with them
- » New managerial approach

## OUR INVESTMENT FOCUS

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### DIGITALIZATION

- » Internet of Things
- » IT security
- » Industry 4.0
- » Intelligent transport systems

One example: page 16



### SUPPLY CHAIN SERVICES

Qualification of the supply chain through:

- » System certification
- » Product testing
- » Inspections

One example: page 24



### ENERGY & INFRASTRUCTURE

- » Asset Integrity Management
- » Railway technology

One example: page 28

As a Group, we want to act sustainably – and we let the facts measure our performance. Here we report on progress we made in 2017 and about goals we have set for ourselves for the future. For complete information about our CSR activities, please refer to our Sustainability Report at [www.tuv.com/sustainability](http://www.tuv.com/sustainability)

To emphasize to all employees the importance of compliance, we have established Groupwide a compulsory e-learning program, which was updated in 2017.

**25,000**

EMPLOYEES HAVE COMPLETED A COMPLIANCE E-LEARNING COURSE SINCE THE PROGRAM WAS INTRODUCED IN THE GROUP

1,925 Employees completed the updated program worldwide in 2017

#### WE ACT WITH INTEGRITY –

#### AND ENSURE COMPLIANCE ACCORDINGLY

Compliance is essential for a globally active testing and inspection service provider such as TÜV Rheinland. Our daily compliance work is based on the principles of the IFIA (International Federation of Inspection Agencies) and the UN Global Compact. In doing so, we also uphold the values anchored in our own mission statement: integrity, excellence, customer-focus, performance and agility. A global compliance officer network ensures that integrity is securely anchored in the company.

**601**

COMPLIANCE CASES

Compliance issues fall into two categories: queries and cases of suspected misconduct.

#### MOST QUERIES SUBMITTED TO US CONCERNED

Donations and sponsoring



Personnel issues

Invitations and gifts



Conflicts of interest

**3,571**

COMPLIANCE AUDITS IN GREATER CHINA

In the Greater China region, compliance monitoring activities ("compliance audits") were expanded further. In those audits, the local compliance team makes sure that our service performance meets our compliance regulations.

#### COMPLIANCE PROGRAM

##### Values and rules

Specified in various guidelines, e.g. in the Code of Conduct and in the anti-corruption regulations

##### Awareness-raising and training programs

Compulsory compliance training courses for all employees and managers worldwide

##### Dialog, education and monitoring

Compliance consultation and consistent action in cases of potential violations along with compliance monitoring activities

## WE VALUE OUR STAFF – THAT'S WHY WE PROMOTE AND PROTECT OUR EMPLOYEES

We are convinced: Diverse teams have great potential. And there's every reason to take full advantage of this. That's why diversity plays a key role in our sustainability strategy – exactly like occupational health and safety does.



### Equality in the RACER benchmark

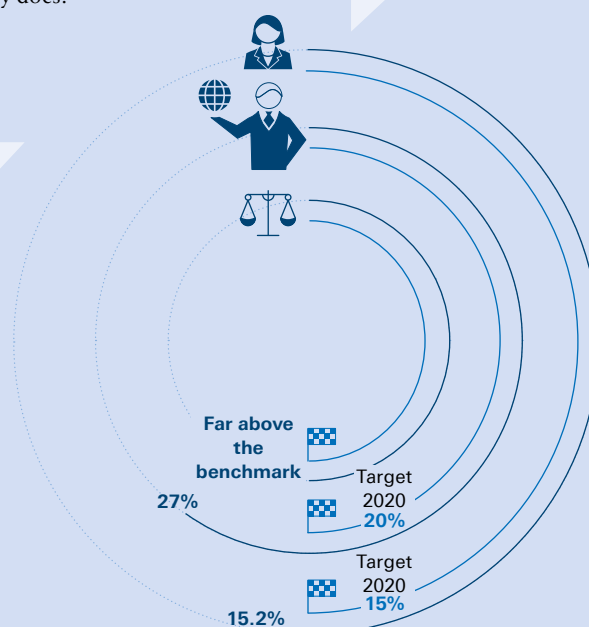
Our goal: Achieve an above-average score in the RACER benchmark in the area of equality in our employee survey "Together."

In the RACER group, twelve global corporations regularly exchange information concerning employee surveys and compare findings with one another.



### Women in management positions

Our goal: Raise the share of women in management positions to 15%



### Members of Group Executive Council from outside of Germany

Our goal: Staff 20% of our top management positions with a broad range of nationalities.

# 2.8

ACCIDENTS PER 200,000  
HOURS WORKED

### EVERY ACCIDENT IS ONE TOO MANY

To lower the accident rate even further, we established internal reporting channels, in order to inform everyone, up to and including – depending on severity – the Executive Board. With written safety instructions and measures, Safety Alerts help prevent accidents. With training courses and team-oriented discussions the world over, we are working to achieve our vision:  
**NO INCIDENTS. NO HARM.  
NO COMPROMISE.**

### NO COMPROMISES WITH THE PERSONAL COMMITMENT CARD

These handy ID cards authorize our employees, at all times, to refrain from engaging in dangerous activities and to stop their own work or that of others under unsafe conditions. This enables our employees to make it perfectly clear at all times, even to third parties: TÜV Rheinland accepts no compromises when it comes to work safety.

#### Personal Commitment Card

Your safety, health and wellbeing are the most important things to me. This Personal Commitment Card gives you the direct authority to stop any activity that cannot be carried out safely and to assist in correcting the situation.

Dr. Michael Fels  
Chairman of the Executive Board  
NO INCIDENTS. NO HARM. NO COMPROMISE.

TÜV Rheinland®  
Precisely Right.

NO INCIDENTS. NO HARM. NO COMPROMISE.

TÜV Rheinland®  
Precisely Right.

# Sustainable markets

**SOLUTION PROVIDER**

Our services should create value – and not just for our customers, but in the larger sense also for society and the environment. While the ten principles of the UN Global Compact shape our own actions as a Group, the Sustainable Development Goals (SDGs) make us aware of global challenges and highlight the impact we can have as a company with our services for a safe, sustainable world.

## WE ARE RELIABLE –

### OUR CUSTOMERS APPRECIATE THAT

TÜV Rheinland stands for safety and quality wherever man, the environment and technology interact. Our goal of making life safer and our commitment to sustainable action are reflected not only in how we work – which is to say, the way we perform our services – but also in the services themselves.

**CERTIPEDIA**

# Reputation Transparency

**BRAND RISK EVALUATOR**

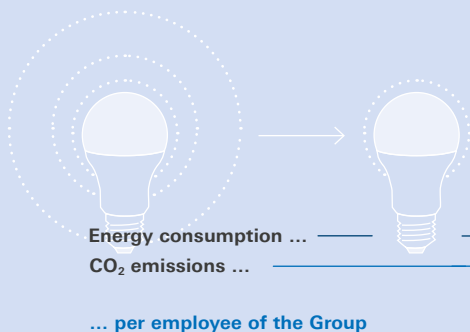
Our reputation is our greatest asset. And we protect it – with our “Brand Risk Evaluator” tool, for example, by means of which we identify and manage market risks. When potential conflicts arise in connection with our services, we apply appropriate countermeasures, adapt the service and/or its context – or, in case of doubt, decline the business opportunity entirely. Consumers must be confident that something labelled as TÜV Rheinland really is TÜV Rheinland. That’s why our certificates have a “copyright” – our “Certipedia” database.



### SUSTAINABILITY SERVICES TASK FORCE

The TÜV Rheinland Task Force reports directly to the Executive Board and is tasked with the following objectives:

- Set strategic priorities for sustainability services
- Determine possible synergies within the Group
- Identify target markets
- Create suitable organizational structures



## WE ACT CONSCIOUSLY – FOR AN INTACT ENVIRONMENT

We have initiated a wide range of actions and projects – sometimes at the Group level, but often also within regional or local frameworks. Specifically, these measures address ...



... using state-of-the-art technologies to operate our data centers, test labs, and facilities



... reducing fuel consumption and emissions through the use of more fuel-efficient company cars



... using efficient energy technology to run our buildings



... reducing the number of business trips through increased use of video conference technology

### SAFETY TAKES PRACTICE

At a refugee shelter in Cologne, our employees installed a traffic exercise area to help the residents become familiar with German traffic rules. For our many years of Volunteer Day commitment, Cologne's Mayor Henriette Reker honored us this year with the Volunteer Award of the City of Cologne.

### WE GIVE BACK – TO A COMMITTED SOCIETY

Volunteer work, charitable projects and donations – we get involved in an extremely wide variety of ways, all over the world.

### WALKATHON

After more than 3,000 employees in 55 teams took a total of 130 million steps, TÜV Rheinland donated 10,000 so-called "saxaul" bushes to slow the desertification of Inner Mongolia.

### HELPING CHILDREN, PROTECTING THE ENVIRONMENT

We donate the used paper from our office operations to the "Fundación San José para la adopción" – a foundation in Chile that supports pregnant women and adoptive parents and children in the process of adoption. They collect the used paper for a recycling company and receive materials such as diapers, toilet paper and milk bottles in return.

This benefits the orphanages of the foundation and also helps the environment at the same time.

**8**  
REGIONS WORLDWIDE –  
NUMEROUS PROJECTS

### TANDEM

As announced, in the year under review, we were able to welcome refugees as trainees once again. They work in food services, IT development, systems integration, and commerce. Experienced employees

from TÜV Rheinland provide support to them as mentors. At our locations in Cologne, Berlin and Nuremberg, we have formed several such "integration tandems."

**–23%**

ENERGY CONSUMPTION 2017

TARGET 2020: –20%

**–22%**

CO<sub>2</sub> EMISSIONS 2017

TARGET 2020: –25%

2014  
–14.7%

2015  
–15.8%

2016  
–17%

2014  
–15.3%

2015  
–16.2%

2016  
–17.5%

2017  
–23%

2017  
–22%



# FINANCIAL PERFORMANCE

We are on course to continue the successful growth of recent years and striving for profitable growth in all business streams.

REVENUES (INCL. INVENTORY CHANGES)

**1,971.9**  
MIL. €

+1.5%

REVENUES PER EMPLOYEE

**98,961** €

+2.8%

EBIT (EARNINGS BEFORE INTERESTS AND TAXES)

**130.6**  
MIL. €

+6.5%

EBIT MARGIN

**6.6%**

GROUP ANNUAL NET PROFIT

78.1

MIL. €

+18.3%

TOTAL INVESTMENTS

91.3

MIL. €

OF WHICH ...

... IN TEST LABORATORIES

9.5

MIL. €



... IN THE RENOVATION OF THE HEADQUARTERS

16.9

MIL. €

... IN DIGITALIZATION AND  
PIONEERING TECHNOLOGIES

17.0

MIL. €

CASH FLOW FROM  
OPERATING ACTIVITIES

161.8

MIL. €

Brimming with technology: Modern real estate offers plenty of residential comfort, but often puts its unwitting occupants and their living habits on display.



Never trust a light – at least not an untested one! With the Competence Center IoT-Privacy, Udo Scalla (left) and Günter Martin (above) have committed themselves entirely to privacy protection in smart homes.

# Home, Smart Home

The Internet of Things transforms the four walls we call home into a space teeming with unimagined possibilities. In most cases, however, what actually goes on behind the facades of modern smart homes is anything but smart. TÜV Rheinland has set out to change that.

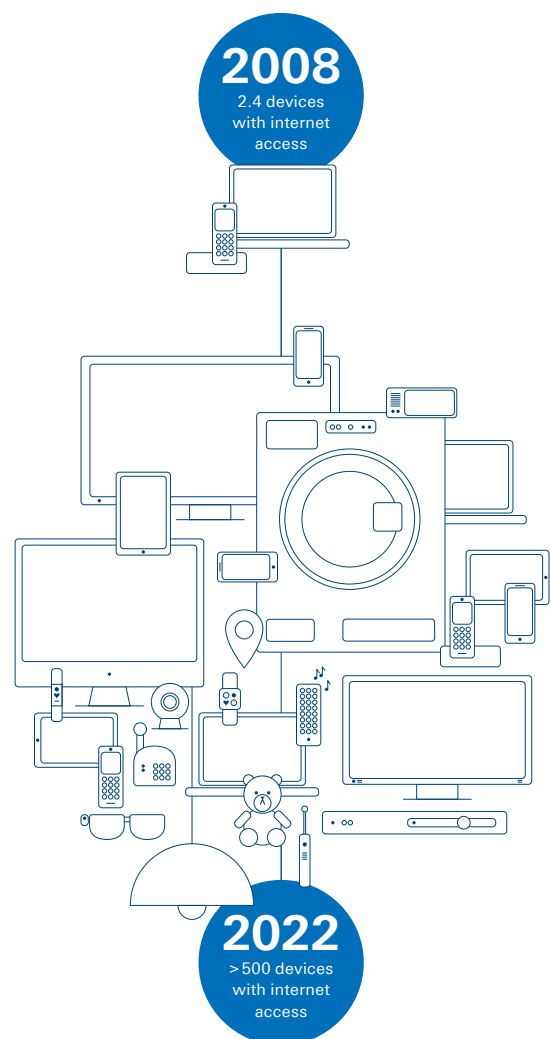
To most people old enough to use the internet, it is no longer any secret that surfing online leaves behind lots of commercially useful – and also extensively used – traces on the servers of a worldwide group from the little town of Mountain View, California. That an unassuming smoke detector from the same company is capable of identifying every person present in the room by their smell, however, is probably news to many; and probably rather disconcerting news at that. No less so than learning that the bulb advertised by the dealer for the trendy app-controlled ceiling lamp transmits more than a megabyte of usage data to its manufacturer every day without asking the user's permission to do so.

## For they know not what they do

According to a study by IT market research firm Gartner, in 2008 every household had an average of 2.4 devices with internet access. In 2022 that number is expected to exceed (this is not a typographical error) 500: Coffee machines, ovens, washing machines, heaters, electric toothbrushes – in the home of the not-so-distant-future, nearly everything will be connected to the network. Not all of the functions of a smart home are superfluous gimmicks, of course. Transmission of information in real time to a smartphone to indicate that the



## DRAMATIC GROWTH OF INTERNET-CAPABLE DEVICES



Smart? Maybe so. But clearly chaotic:  
In the Internet of Things, practically every-  
thing transmits information to the network.

Source: Gartner



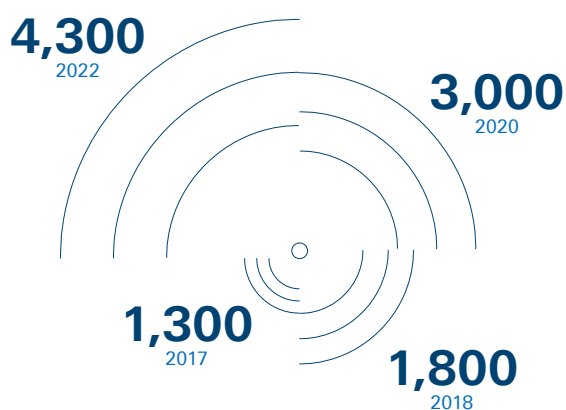


Delicious coffee: Great. The manufacturer knows when and how much coffee I drink: Not so great. Even smarter is data protection right from the start. Udo Scalla and Günter Martin call it "Privacy by Design".



## SALES GROWTH IN THE SMART HOME MARKET

in millions of euros



The smart home market is growing fast – but is the consumer's trust in these solutions growing too?

Source: Arthur D. Little and eco

smoke detector at home has been triggered can even save lives. The ability to lower the temperature set point of the heating system via an app when no one is home can be both ecological and sensible. So where is the problem then? Every device in the Internet of Things represents both an entrance and an exit for unwelcome agents. In some cases, very intimate conclusions concerning the occupants of a smart home can be drawn from the data that flows out unbeknownst to them. Similarly, hackers can use the oncoming lane of virtual traffic to gain undetected access to a smart home occupant's private affairs and cause considerable damage. The critical keywords in this case are "unbeknownst" and "undetected."

## Mission: Privacy

"Many smart home solution installers don't really understand what they're selling, nor are they fully apprised of the consequences – let alone of reasonable measures to raise their customers' awareness." says Udo Scalla. And he should know. For more than 20 years now, he has been professionally active in the field of information and communications



technology. He knows all the tricks and pitfalls. In 2015, together with longtime cohort Günter Martin, he established CorDev GmbH. Their mission: Ensuring the protection of privacy in smart homes. Their product: The Protected Privacy certificate. "Manufacturers can use it to show their customers that they guarantee data privacy and data security, already by reducing data collection to a specified minimum, for example," says Günter Martin, explaining the idea behind this product. An idea that clearly resonates: In May 2016, barely one year after it was established, CorDev is named best start-up in the industry by "Smart Home Deutschland Initiative." "By then, two things were clear to us. One: The certificate idea isn't just good, it's great. And Two: We need a partner to help us market this idea abroad," says Scalla. A series of

**Many installers don't really understand what they're selling – or the consequences.**

discussions with various testing organizations follows. When it's time to get down to business, TÜV Rheinland is the fastest: After a rather chance meeting at an event, the experts from the company immediately invite Scalla and Martin to present their topic. Scalla and Martin's counterpart on the TÜV Rheinland side becomes Dana Goldhammer, Head of Innovation & Digitalization.

### Think big, think fast

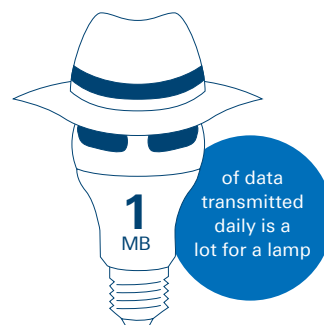
The chemistry works. Above all, because Dana Goldhammer also thinks big. It soon becomes clear that Protected Privacy is a playing field for the entire service expertise of TÜV Rheinland. Consulting and training offerings for equipment manufacturers and system integrators will first ensure the required visibility. Testing and inspection services and the Protected Privacy certificate will then separate the wheat from the chaff in the smart home market. All this is now happening at the newly established "Competence Center IoT-Privacy," led by Günter Martin and Udo Scalla since summer 2017. "We want to become the competence partner for protected privacy worldwide. That means not only for technical issues, but also the legal and marketing aspects. We support the development of "privacy by design," says Udo Scalla in sketching out the mission.



### THE UNWELCOME SPY IN THE HOME

Low trust: Household appliances with an internet connection provide personal data to third parties – four out of five Germans are convinced of this.

Source: Civey



Many Wi-Fi-capable lamps send usage data continuously.

Source: TÜV Rheinland



The mastermind: Within a few months, Dana Goldhammer created the Competence Center IoT-Privacy together with the two founders of CorDev.

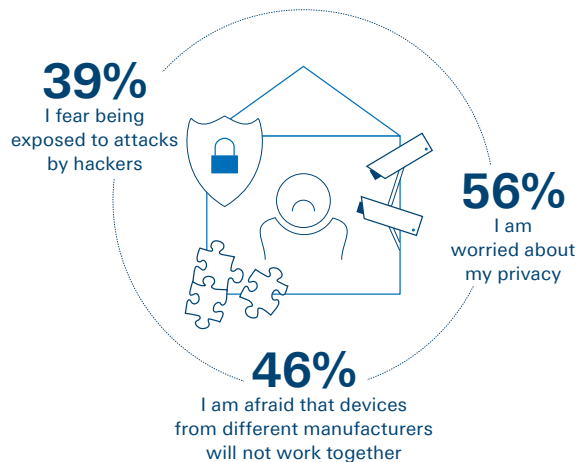
A mission whose time has come – and one that has none to lose. The new Competence Center felt that sense of urgency right from the start. Gooeee, a specialist for innovative lighting solutions in the IoT sector, is a good example. Shortly after the new Competence Center started up, it had already signed

It's no longer merely a question of whether a lamp works well and safely, but rather also whether and what it transmits about its user.

a multi-year agreement with the US company in collaboration with colleagues from TÜV Rheinland's product testing group. "The key thing here is that we test not only the devices, but also the associated services – thereby providing a unique package solution for data privacy in the Internet of Things," explains Dana Goldhammer. In other words: It's no longer merely a question of whether a lamp works well and safely, but rather also whether and what it transmits about its user.



### LOW TRUST IN DATA PRIVACY, SECURITY AND TECHNOLOGY



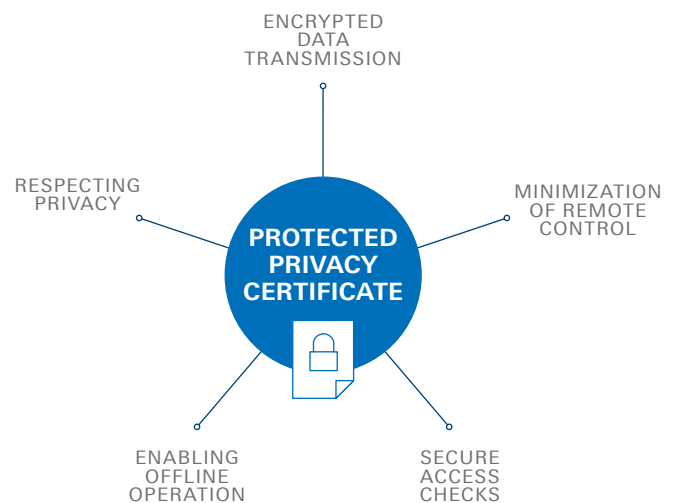
What smart home users worry about

Source: Splendid research

Appetizing? Whether dining habits or preferred bath temperature – many connected household devices are already poised to collect data, copiously and above all secretly.



Because one important catalyst in the development of the Protected Privacy business will take effect in all EU States in May 2018 with the European General Data Protection Regulation. Non-European manufacturers that supply products to Europe will also have to comply with this regulation. The law strengthens data privacy and foresees heavy penalties: Infractions will be subject to fines of up to 20 million euros or 4 percent of worldwide sales revenues. Along with Gooee, the two data protection experts Martin and Scalla now also have their sights set on signing further agreements as well as visiting potential customers in China. The reason is that the importance of privacy protection in the Internet of Things is gaining momentum, and the two certificates “Protected Privacy IoT Product” and “Protected Privacy IoT Service” are resonating with manufacturers and system integrators. Clearly, many companies have recognized that investing in Protected Privacy is pretty, well, smart.







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[HTTPS://WWW.TUV.COM/GERMANY/DE/](https://www.tuv.com/germany/de/)

ORDER

# E-COMMERCE IS TURNING CHINESE

COMPANY CODE

**TUEV – RHNLD**

STOCK CODE

**2017 – 100/44/0/0**

CONTENT:

Within the space of a few years, the Middle Kingdom has become the No. 1 e-commerce nation. Nowhere do consumers order more products online than in China.

On Singles Day, Alibaba alone – the country's leading shopping platform – recorded more than 25 million US dollars in sales. As with any boom, quality and reliability are still decisive criteria when purchasing products online.

And that also makes one thing sure about e-commerce in China:

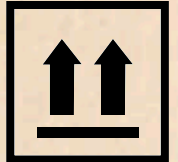
It's a growth market for TÜV Rheinland.

SIZE

**A4 / 297–210 x 4**

REF-CODE

**418–13–85**





# E-COMMERCE

2016  
**466**  
MILLION

The number of online purchasers has risen rapidly over the past ten years.

2006  
**34**  
MILLION

Some 30% of vendors are initially rejected because their self-disclosure does not hold up to scrutiny.

Every day, a 150-person team from TÜV Rheinland checks vendor profiles on leading e-commerce platforms.

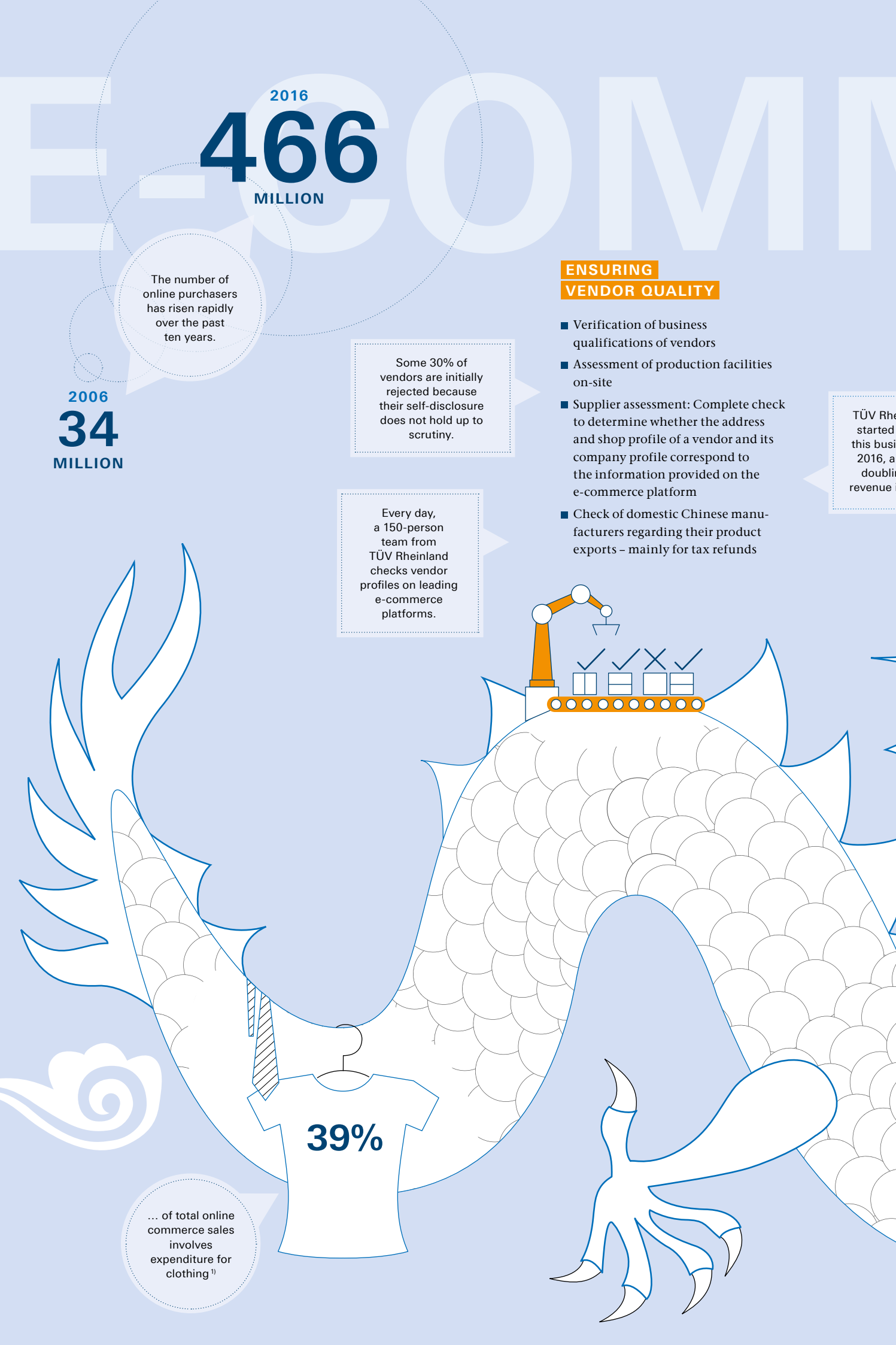
## ENSURING VENDOR QUALITY

- Verification of business qualifications of vendors
- Assessment of production facilities on-site
- Supplier assessment: Complete check to determine whether the address and shop profile of a vendor and its company profile correspond to the information provided on the e-commerce platform
- Check of domestic Chinese manufacturers regarding their product exports – mainly for tax refunds

TÜV Rheinland started this business in 2016, a doubling of revenue

**39%**

... of total online commerce sales involves expenditure for clothing <sup>1)</sup>



## QUALITY AND RELIABILITY OF PRODUCTS AND SERVICES

One of the biggest e-commerce platforms had TÜV Rheinland inspect more than 3,700 products in 2017 alone – an increase of more than 90% over 2016.

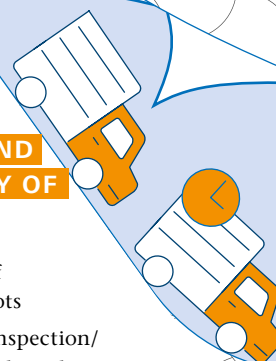
- Product inspection and testing for B2C e-commerce platforms according to Chinese standards ("GB" Guobiao)
- Integrated solutions for B2C e-commerce platforms according to applicable website standards, including inspection of product origin as well as the functional and performance testing of the website.
- Services for the domestic market: Certification of household appliances in accordance with China Compulsory Certification (CCC)

The product tests focus mainly on textiles, electrical equipment and electronic products – in alignment with the orientation of the inspection and testing laboratories of TÜV Rheinland in China.



## QUALITY AND RELIABILITY OF DELIVERY

- Certification of warehouse robots
- Pre-shipment inspection/ shipping controls in the logistics center









So the gas flows safely: By 2020, Peru intends to connect about 1 million homes to the network – homes like this one in Arequipa (small photo above), where Graciela Suarez is already enjoying the benefits of the more convenient, less expensive energy.







# Connected to the times

Peru is a natural gas producer – but its population has yet to see much benefit. Plans now call for connecting a million households to the gas network. Many of the laborers being hired for this work have no previous experience in gas pipeline construction. The specialists from TÜV Rheinland are monitoring the country's most important projects.



Six o'clock in the morning and the shower is ice cold. Lunch-time and the pot roast is sizzling in the oven, but then suddenly there's no more gas. An urgent call to dealer number one, no answer. Dealer number two? All out of gas cylinders. Nothing left to do but sigh.

That's the way things used to be without a gas line – Graciela Suarez remembers all too well. "There was always a faint smell of gas in the kitchen and you never knew how long the cylinder would last," says the homemaker. It even happened on her husband's birthday. "Fortunately, my sister lives nearby and she brought us her gas cylinder, otherwise we wouldn't have had a meal." The Suarez Family lives in a house on the outskirts of Arequipa, a jewel of a town from the colonial period situated between three volcanoes in southern Peru.

Of all places, in a country that produces gas. Of all places, in Peru, where pipelines carry gas across the country for thousands of kilometers – through jungles, over the Andes. Of all places, this is where just 200,000 households have been connected to the gas network so far. By 2020, that figure should reach one million.

## Quality of life from the pipeline

Juan Carlos Azuma, Head of the Industry Division at TÜV Rheinland Peru, is well aware of this. The 45-year-old engineer regularly visits infrastructure projects monitored by the specialists from TÜV Rheinland. Today, he also stops in to see the residents in Arequipa who are benefiting from the construction work: "Are all the houses on your street already connected?" he asks Graciela Suarez. The engineer travels throughout Peru regularly and visits projects monitored by the specialists from TÜV Rheinland. "We were the first in the area to have a gas connection, last November," answers Suarez, brushing her hand reflexively across her forehead, though her bangs are so short that no hair can fall in her eyes. She points to a thin, white pipe running along the kitchen ceiling. "The neighbors were skeptical at first, but then they saw here at our place that the installation of the piping isn't complicated. And the gas from the pipeline is so much more convenient – and also cheaper!" She hopes the natural gas will reduce her costs by up to two thirds.



Is this construction site perfectly safe? Juan Carlos Azuma and his colleagues monitor the infrastructure project.



“A gas connection means quality of life,” explains Azuma, after having bid goodbye to Suarez. He is wearing a blue coat with the TÜV Rheinland logo. In his hand he carries a backpack stuffed with a white hard hat, a pair of safety glasses and a pair of steel-toed safety shoes. “With this project, one main focus of our monitoring is on occupational health and safety. Which means we also have to climb down into construction pits from time to time,” explains the engineer, whose grandparents immigrated to Peru from Japan.

### Construction site safety: Hard hat and skin protection required!

A ten-minute drive from the Suarez family home, the installation of gas lines is still in high gear. The ground is shaking, several jackhammers are in operation. A narrow trench, about one and a half meters deep, runs through the street. The workers standing in it are almost completely masked. They are wearing gloves and face masks, and the back of their necks are covered with rags. The employer also provides sunscreen. “We require this at construction sites,” says Azuma. Peru is the country with the world’s highest exposure to ultraviolet radiation from the sun. Every year, there are 30% more cases of skin cancer in the Arequipa region, also in young people.

A little while later, Azuma is also standing there – with hard hat and safety glasses, of course! – in the freshly excavated trench where the gas pipeline will soon run. He speaks with the workers and evaluates the quality of the soil. A flexible, orange plastic pipe, soon to be laid in the streets of Arequipa, waits coiled on a large drum. First a bed of sand must be placed in the trench to protect the pipe. Then it will be covered with twenty centimeters of fine soil. On top of this, the workers place a plastic warning tape, so electrical or water technicians will notice before it’s too late: Attention,

a gas line runs here! Only then can the excavated soil be shoveled back into place and the trench filled with asphalt again.

Together with the regional project coordinator, Juan Carlos Azuma checks to make sure that the construction site really does comply with all safety measures. Along with the workers’ equipment, this also includes blocking the street off correctly: Cars have to be rerouted and one of the two sidewalks must be open for pedestrians. Arequipa lies in an active seismic zone, so each morning a new “safe assembly point” is established. Juan Carlos Azuma is satisfied: Everyone on the construction site is aware that the assembly point of the day is on a knoll without power lines or high buildings.

Azuma then greets the HSE Officer (Health Safety and Environment), who also happens to be the only woman on the construction site: She is an archaeologist. Construction site regulations prohibit excavation without an antiquity specialist on the team. Because archaeological treasures are not uncommon in Arequipa. In November 2017, for example, Peruvian newspapers reported that technicians working on the sewer system discovered the remains of a burial site dating back to the Churajón culture – it could be up to 10,000 years old.

The workers at the construction site all greet Azuma and his colleagues warmly: “Buenas tardes ingenieros!” The bad guys in the film – for a long time, that’s how people felt about inspectors, says Azuma. “We intend to change that. That’s why we always reach out to the workers. When there’s a problem, our approach is to talk it over and find a solution. And we explain that protection and safety measures are not meant to harass anyone. Your family needs you, and they need you to stay healthy!” He quickly adds, to avoid any misunderstanding: “We don’t tolerate deficiencies, however: We’re very strict. That reputation precedes us, and we stand by it!”

### Constant presence in a highly promising region

TÜV Rheinland’s Peruvian headquarters are located in the capital Lima, thousands of kilometers northwest of Arequipa. Melvy Diaz, Country Manager for Peru and Colombia, opened





High demands, innovative technology: Country Manager Melvy Diaz (right) knows how the experts from TÜV Rheinland can add value to Peru's major infrastructure projects.



From liquid to gas: Inspecting regasification plants just outside Arequipa is part of the job.

the office there in 2011. Since that time, TÜV Rheinland's Industrial Services group has monitored several of the biggest, most important construction and infrastructure projects in Peru – projects that can serve as reference projects worldwide. Examples include the major project Gasoducto del Sur, a natural gas pipeline more than 1000 kilometers long, regasification plants in various locations, compressor stations and mining projects. And then there's also the project that

**When there's a problem,  
our approach is to talk it over  
and find a solution. And we  
explain that protection and  
safety measures are not  
meant to harass anyone.**

provide project support and try to prevent problems – they really appreciate that," adds Diaz. High-tech equipment also helps here. TÜV Rheinland's corrosion scanner, for example, is currently the only one in Peru that analyzes the base of storage tanks and reveals the slightest problems. "To take full advantage of its potential, this technology requires highly qualified personnel," Azuma joins in, drawing the following comparison: "Just owning a Ferrari isn't enough. Without the right skills, the driver will crash it into the wall!"

South America is a continent with a bright economic future, in the energy sector, for example – including the gas, oil and renewable energies segments – or in mining. And that, says Country Manager Melvy Diaz, also spells opportunity for TÜV Rheinland. Along with its strong motor vehicle inspection business in neighboring Chile, TÜV Rheinland's South American operations boast a proven track record, especially in project management and industrial inspections. Diaz has set ambitious goals for her team: "As an international inspection and testing organization, we want to help raise monitoring in Peru to a higher level of quality," agrees Juan Carlos Azuma. He is happy to work for TÜV Rheinland: "I'm glad to work at a company whose values I share. For TÜV Rheinland, safety and quality come before commercial considerations."

is providing natural gas to the private homes in Arequipa, of course. It is being carried out by Gas Natural Fenosa, the Spanish company that acquired the gas supply concession in the southern Peruvian regions of Tacna, Arequipa and Moquegua for at least 21 years. The worldwide presence of TÜV Rheinland benefits the company in many projects: Components manufactured in the USA or Asia, for example, can be inspected already during the production phase.

"We demand a lot from ourselves, and also from our customers," explains Diaz. This comes as no surprise to clients – and is also implicitly intended during industrial inspections: "Anyone who requests TÜV Rheinland's services knows that certification includes a hard audit." TÜV Rheinland's technical expertise is also a decisive factor for many customers. "We







High-tech detectives:  
Corrosion scanners  
(small photo) track  
down even the slightest  
problems – to keep the  
oil tanks safe.



Meticulous methodo-  
logy: Whether it involves  
oil and gas or renewable  
energy – TÜV Rheinland  
wants to help improve  
the quality of monitoring  
in Peru.



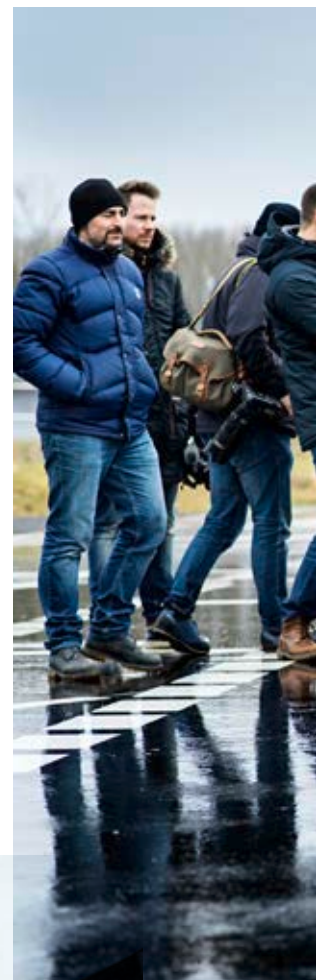
# Paving the road to tomorrow

Alternative drives, autonomous cars, new digital business models – our mobility is undergoing radical transformation. Along with it, a key business field of TÜV Rheinland is also in a state of change, and the recently formed “Future Mobility Solutions” team is an active participant in shaping that change. Through expertise, innovative ideas and customer focus.

Uwe Hild cannot disguise his pride. The Economic Development Officer for Friedrichsdorf, Germany, sits at the conference table in his office and turns his gaze toward Franziska Weiser’s laptop. On this cold, wet morning in late January, the Project Manager from TÜV Rheinland has a good report card to deliver to this town located in close proximity to Frankfurt am Main. “In terms of traffic safety and public transportation, Friedrichsdorf ranks above average,” says Franziska Weiser, pointing to the screen. She has been working together with the city for the past few months to prepare a complete assessment of the current mobility situation there – a “Future Readiness Check.”

The municipal authorities had to answer 120 questions ranging from traffic planning and public transportation to

pedestrian traffic. For example: Does your municipality actively engage in traffic-dependent traffic flow optimization? And is there an up-to-date traffic plan for sustainable mobility spanning all traffic platforms? For data acquisition and evaluation purposes, an online tool developed by TÜV Rheinland was used for the first time. “It was very useful to us for collecting all the information from the six offices involved,” says Uwe Hild. The benefits for Friedrichsdorf are considerable: “Now we have the very first comprehensive picture detailing the quality of our mobility offerings and the role that the individual traffic platforms play in it,” says Hild. It facilitates not only policy-making processes, but also discussions with interest groups such as the Senior Citizens’ Advisory Board.







Whether autonomous driving systems (above) or digital analyses for municipalities (left): The mobility of tomorrow demands innovative answers – also from TÜV Rheinland.

How to organize future-proof mobility in the age of climate change and environmental concerns? This question plays a very prominent role in this town of 25,000 residents. Since 2016, Friedrichsdorf has been running a pilot project for expansion of electric car-sharing under the auspices of the State of Hessen. Seven compact cars powered by green electricity are already silently plying the streets here, and e-bikes will also soon be available. A significant advantage when considering relocation to the town, as Uwe Hild is quick to point out. Franziska Weiser, too, acknowledges Friedrichsdorf's

pioneering approach: "Very few municipalities of this size are so advanced." The project manager is already in contact with more than 30 other cities regarding plans for their own Future Readiness Check. If she has her way, a potential analysis such as this is just the start of a more extensive collaboration. After all, TÜV Rheinland also helps municipalities expand their electromobility infrastructure, for example, and develop traffic routing plans – which is precisely what Friedrichsdorf is currently taking into consideration.



Identifying mobility trends and developing the appropriate services: The experts from the Future Mobility Solutions team.



## New team for innovative topics

"I'm convinced that we at TÜV Rheinland can help shape the mobility of tomorrow," says Franziska Weiser as she navigates the rush hour traffic. As is so often the case, the A5 autobahn toward Frankfurt am Main is heavily congested. But she can still make it to her next appointment. Franziska Weiser is constantly on the go, shuttling between customers, her office in Wiesbaden and the corporate headquarters in Cologne. The 25-year-old industrial engineer has been working for

In addition, she helps the TÜV Rheinland business streams understand and address changes in mobility imposed by digitalization and climate change. Only recently, two experts for autonomous driving and alternative drive technologies joined the now six-person team, with others to follow.

**What data will be detected?  
What is the technical effort  
required? Which regulatory  
steps should one pay  
attention to?**

TÜV Rheinland since 2014. Having started out as a Junior Consultant for Railway Technology Operation and Maintenance, she switched to the newly formed "Future Mobility Solutions" team in 2016. There she is tasked with identifying mobility trends and developing suitable, innovative products to address them – such as the Future Readiness Check.

The drive ends at Frankfurt Airport. Specifically, at the House of Logistics and Mobility (HOLM), a six-floor office building in the middle of a huge construction site next to the highway. The former military facility is being converted into a new commercial zone with ideal access to transportation infrastructure. TÜV Rheinland has been a HOLM tenant since 2015, taking advantage of the physical proximity to more than 40 representatives of business and science here for joint projects and initiatives.

And this morning is no different: The Fraunhofer Institute for Material Flow and Logistics (IML) has an office on the 5th floor. A bookcase separates the conference corner from the large open space adjoining it, and the brightly colored, plush seating invites visitors to get to business. Franziska Weiser and her colleagues meet with the scientists to discuss possibilities for a joint data-based service offering in the logistics sector. What data will be acquired, and how? How much





technical work is involved? What regulatory procedures must be followed? An hour later, there's no space left on the big white board on the wall. Franziska Weiser is satisfied: "Now we have a basic idea of how the project will work."

### Certifying safety, allaying fears

This also applies to another major pioneering project of the Future Mobility Solutions team: On 400,000 square meters of land in Aldenhoven, Germany, not far from the Dutch border, a consortium centered around RWTH Aachen University is building a testing area for autonomous driving. Before the end of the year, the first automakers and suppliers will be able to test their automated and networked driver assistance

systems under realistic conditions in urban traffic environments. As a project partner, TÜV Rheinland is developing and taking responsibility for the safety test scenarios and supporting the trials.

It's no longer any secret that autonomous driving is going to bring radical changes to the automotive industry over the next few decades. Not only will this technology give rise to new business models – based on new entertainment

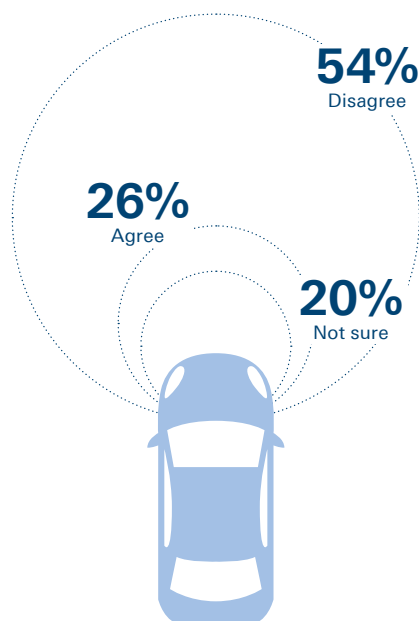
What makes autonomous test vehicle technology so beneficial? TÜV Rheinland and RWTH Aachen explain during a press conference.



Exciting insights for journalists: For the moment, the computer still practically fills the whole trunk.



## RELINQUISHING CONTROL TO AN AUTONOMOUS VEHICLE MAKES ME FEEL GOOD



Highly skeptical: More than half of all Germans feel uncomfortable about handing over control to an autonomous vehicle.

Source: TÜV Rheinland

offerings, for example – but it will also impact motor vehicle registration and maintenance as well as the logistics sector. Not least, city and traffic planners will have to adapt to self-driving cars. Rico Barth, development engineer and expert in the Future Mobility Solutions team, is convinced that “The technology has great potential to drastically reduce the number of road traffic accidents.” Experts say that roughly 95 percent of all traffic accidents can be attributed to human error. According to police records, vehicles collided 2.6 million times in Germany in 2016 alone.

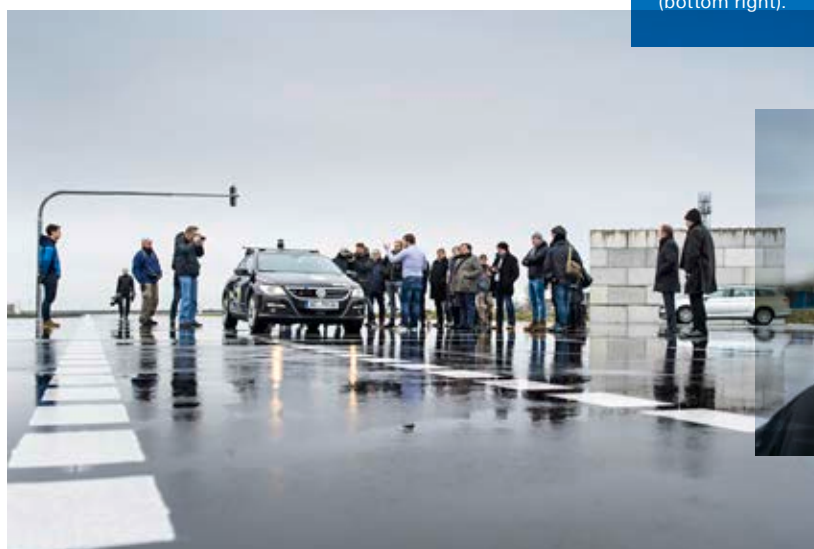
But the design and manufacturing engineer also knows about the reservations people have against autonomous vehicles – especially in Germany. In a representative study, TÜV Rheinland asked some 1,000 drivers in Germany, the U.S. and China how they rate the safety of autonomous vehicles. The findings show that a majority is open-minded about the technology. But while 63 percent of those surveyed in China believe that self-driving cars will improve traffic safety, that figure was only 34 percent in Germany and the US.





The underlying skepticism here relates less to the technology itself and more to factors such as ensuring data privacy, protecting against cyber attacks, and being able to choose freely between driving oneself or riding as a passenger in an autonomous vehicle. Rico Barth says: "Our job is to communicate the benefits of the technology and the safety of the vehicles much more clearly and to allay fears." Because for the mobility of tomorrow, trust is every bit as indispensable as innovative concepts.

Allaying fears and building trust – one of the tasks of TÜV Rheinland, says the expert Rico Barth (bottom right).



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## CSR MANAGEMENT

### NETWORKING CARRIES RESPONSIBILITY

We are a strong, well-networked Group: TÜV Rheinland offers services in many industries and markets, which impact the entire value creation chain. Nearly 20,000 dedicated employees the world over fulfill their mission with professionalism and a sense of responsibility. By maintaining a continuous dialog with our customers and actively promoting knowledge exchange, we help foster economic sustainability.

In that context, the ten principles of the UN Global Compact have already served for many years now as an essential guide for our business activities. Moreover, we operate in close alignment with the Sustainable Development Goals (SDGs) of the United Nations, a global agenda that formulates 17 sustainable development goals calling on everyone to act – governments, the private sector, and civil society. To our way of thinking, the SDGs do not represent burdensome obligations. Rather, they open up business opportunities for us by establishing a conceptual framework: They draw attention to global challenges that our core competences aim to address through new and existing service offerings. (For further information, see the “Service Responsibility” section.)

#### Acting in harmony with global principles

Relying on commitment by the private sector, the UN Global Compact comprises ten principles calling for adherence to human rights and labor standards, environmental protection, and the fight against corruption. We signed the UN Global Compact in 2006 and are committed to the Global Compact Network Germany (DGCN) – through participation in its various learning and exchange formats as well as our collaboration in the committees of the DGCN. We have been represented on the DGCN steering committee since 2007 and have been a member of the advisory board of the associated foundation since its establishment in 2009. Our collaboration on DGCN committees is important to us because it gives us a chance to interact extensively with companies and organizations from civil society, the scientific community and the public sector. In our opinion, sustainable development cannot be achieved through any one actor alone. Joint solutions

and partnerships are essential in order to address the challenges along the road to a sustainable future. To us, the DGCN represents a central platform that enables us all to learn from one another and to enter into collaborations and partnerships with other players, thereby making it possible to achieve joint objectives. In the DGCN, we also regularly hear TÜV Rheinland’s key stakeholders’ views on subjects of topical interest along with their expectations of us – an important prerequisite for good CSR management.

Serving as advisor for the topics “Environment and Climate” and “Corruption Prevention” on the DGCN steering committee, we focus on supporting the implementation of the DGCN’s work program in those two areas. As advisor, we inform the committee about new developments and issues, provide feedback from a practical business perspective, and actively support DGCN formats and events. Along with our committee work, the exchange within the Peer Learning Groups of the DGCN is also of keen interest to us. During the year under review, for example, we presented a case study on climate management in the private sector. Within the framework of the DGCN, we also explore questions such as how the SDGs



Exploring a diverse culture opens up a world of opportunity, better client relationships, and a better feedback culture as it includes everyone.

Samantha Jardim  
Marketing & Communications  
TÜV Rheinland Quality Services  
South Africa

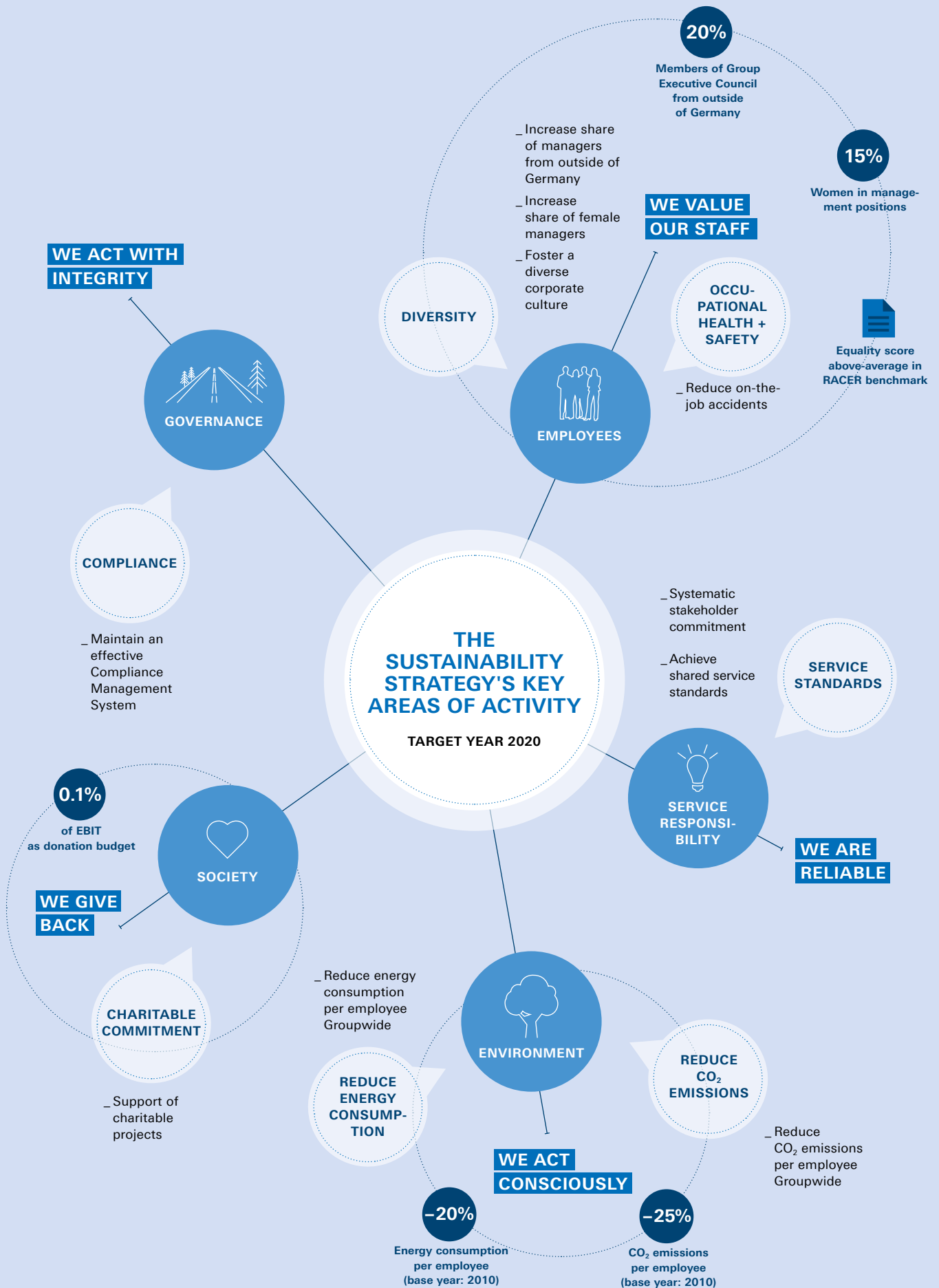




## STAKEHOLDERS

We define stakeholders as all persons, companies and institutions with whom we enter into a direct relationship in the course of providing services as well as those indirectly affected by our business activities. It is particularly important to us to provide our stakeholders

with a clear picture of who we are, how we work, what we inspect and test, and who monitors our work. We use a broad range of instruments and channels to exchange information with our stakeholders on a regular basis.



are interpreted by companies and how they can be implemented in everyday work.

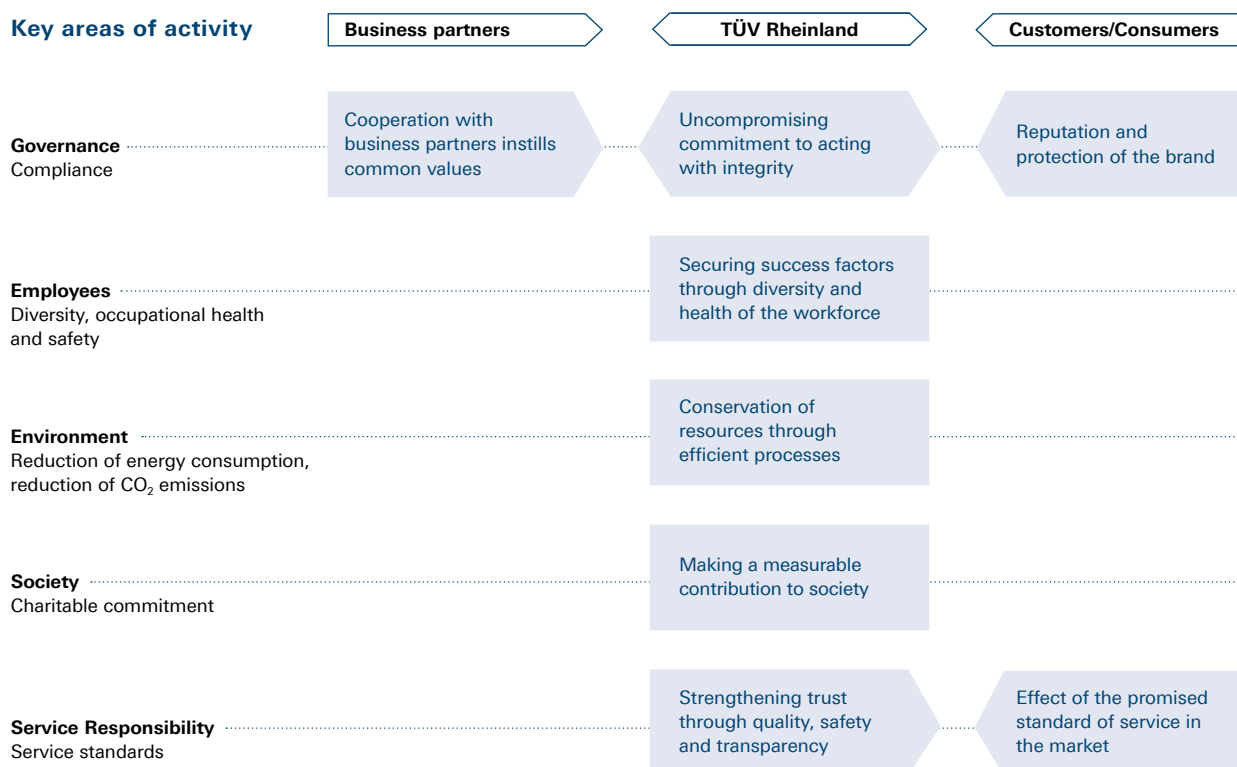
We are also involved in UN Global Compact activities and in discussions about the SDGs on an international level as well. At a Global Compact conference in April 2017 in New Delhi, for example, we reported on our humanitarian commitment to the integration of refugees in Germany and exchanged ideas on how to develop business models in keeping with the Global Compact and the SDGs. This subject matters to us because today our services are already helping to improve the world just a little in terms of the SDGs. Even though we have yet to take a binding decision on which SDGs we will focus on in the future, one thing is already clear: We affirm our solid commitment to the SDGs and want to provide even more sustainability services that help achieve the SDGs in the future. To that end, in November 2017 we established a task force to

develop a strategy for sustainability services. Representatives of all business streams and the relevant corporate service functions are defining priorities, target markets, possible synergies between business streams, suitable organizational structures and development prospects. The task force reports directly to our Executive Board Member Ralf Scheller (see the “Service Responsibility” section).

### STRATEGIC APPROACH FOR GREATER SUSTAINABILITY

At TÜV Rheinland, sustainability and business development are strategically linked (see the “Strategy” section). The sustainability strategy pays direct dividends to core objectives of the corporate strategy. This is also clearly apparent from our organization itself, however, inasmuch as the Corporate Development department is responsible

## CONNECTIONS BETWEEN KEY AREAS OF ACTIVITY AND THE BUSINESS MODEL



for formulating and implementing not only the corporate strategy, but also the sustainability strategy. That strategy is based on a stakeholder survey and a moderated discussion of the results at the Executive Board level, which also incorporates findings from regular dialogs with our stakeholders. The sustainability strategy was discussed extensively by the Executive Board and confirmed by the Supervisory Board. It covers the dimensions governance, employees, environment, society and service responsibility. For each of these five dimensions, we defined areas of activity and formulated objectives. Our Global Officer CSR reports to our Chairman of the Executive Board on progress toward achieving those objectives. The Global Officer is supported not only by the CSR team, which initiates and manages Groupwide projects, but also by local and regional contacts.

## NETWORKING AT WORK

Professional exchange within our own industry is also important to us. For that reason, we belong to various organizations that enable us to formulate and defend the interests of our Group and of inspection and testing service providers in general. We would like to mention a few of the most important memberships here.

- Since 2007, we have been a member of the International Federation of Inspection Agencies (IFIA), the umbrella organization for inspection service providers. Our Chairman of the Executive Board Dr. Michael Fübi is Vice President of IFIA, which, as the worldwide leading umbrella organization in this field, sets the standard for the entire industry and provides a forum for agreeing to scientific standards and methods as well as professional ethical principles. Our compliance management system follows the rules stipulated in the “IFIA Compliance Code” (see the “Governance” section).
- At the European level, the CEOC (International Confederation of Inspection and Certification Organizations) represents the interests of its members vis-à-vis the European Union and other associations. Our Executive Board Member Ralf Scheller serves on the Board of Directors of the CEOC. The CEOC is associated with the IFIA.
- The German technical inspection and certification organizations have joined together to form the TÜV Association (VdTÜV), which represents our interests within Germany. Our Chairman of the Executive Board Dr. Michael Fübi serves as Vice Chairman of the Executive Committee. Through its membership in, among other things, the CEOC, the VdTÜV also exerts influence on political developments at the European level.
- All technical inspection and certification organizations share an interest in a strong “TÜV” brand. For the purposes of protecting and maintaining that brand, they have joined together with the VdTÜV to form the “TÜV Markenverbund e.V.,” the TÜV Brand Association. Our Executive Board Member Ralf Scheller is the Vice Chairman of the Executive Board of that association.

# GOVERNANCE

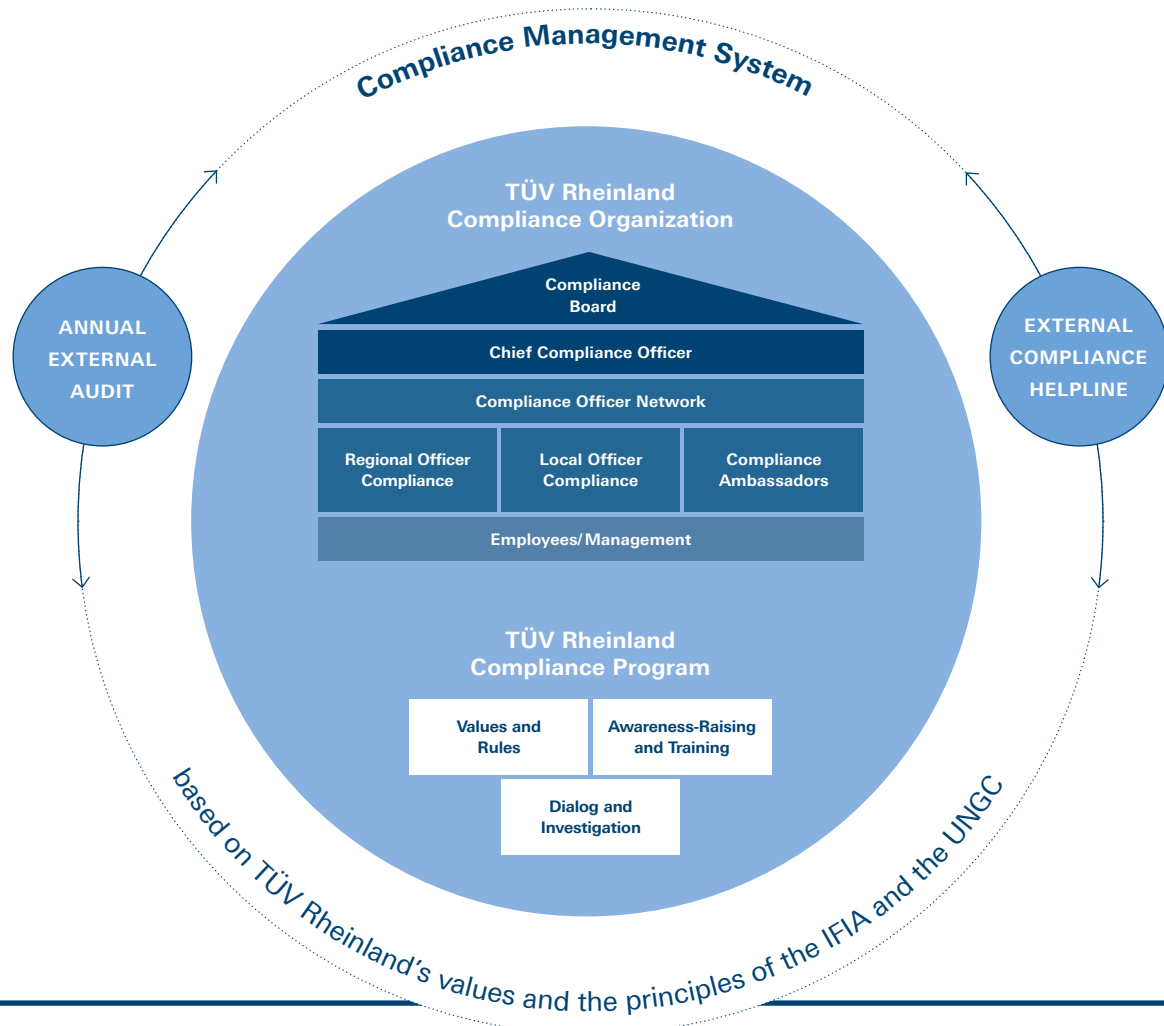
## THE FRAMEWORK FOR OUR DAILY ACTIONS

Good corporate governance is essential for a globally active testing and inspection service provider such as TÜV Rheinland. In this context, regulatory compliance in particular merits our full attention because, across the complete range of services that we offer, our customers and business partners expect us to demonstrate integrity, trust, security and objectivity. For us, compliance means that corporate management and the workforce always act in accordance with statutory regulations, in-house

requirements, and voluntary commitments. Once per year, the general managers of all of our subsidiaries, together with our managers the world over, must explicitly confirm that they have operated in accordance with our compliance program and reported any violations to the responsible compliance officer.

Our daily compliance work is based on the principles of the IFIA (International Federation of Inspection Agencies) and the UN Global Compact. As such, we also uphold the values anchored in our mission statement: Integrity, Excellence, Customer Orientation, Performance and Agility. We use our corporate compliance management System to help achieve that overarching vision.

## COMPLIANCE MANAGEMENT SYSTEM





## TÜV RHEINLAND COMPLIANCE ORGANIZATION

Our compliance organization is led by the Global Officer from Corporate Service Function Compliance (Chief Compliance Officer). Acting independently in that function, he reports directly to the Chairman of the Executive Board of TÜV Rheinland AG. In regular meetings with the Chief Executive Officer and the Chief Financial Officer, the Global Officer Compliance and the Central Officer Corporate Audit report on the work in their two areas, and relevant decisions are taken together. In addition, the Global Officer Compliance reports semi-annually to the Audit Committee of the Supervisory Board of TÜV Rheinland about current compliance-related matters, objectives, and risks, and on the status of the compliance management System. We have established an active worldwide network of compliance officers. During the year under review, we systematically professionalized that network. Besides full-time compliance officers in the Corporate Service Function, we now also employ full-time

legal and compliance staff in six regions. In other large subsidiaries (e.g. Japan and India), we named additional full-time local officers for legal and compliance matters. Together with numerous compliance ambassadors, they serve as competent compliance contacts for our employees worldwide. In order to ensure continuous interaction within the network, we have established a monthly experience exchange meeting where current topics and issues are discussed on a virtual platform. In June 2017, we organized a global meeting at the site in Cologne, Germany, for the regional and local compliance officers. In all, 28 participants attended the three-day conference and worked on current topics in workshops, presentations and breakout sessions (e.g. business partner management, training activities or collaboration with the business streams). We want to intensify cooperation in the compliance officer network even further in the future.



The big picture:  
Compliance is a  
key component  
of TÜV Rheinland's  
success.

Another important part of our compliance organization is the risk management function, which is managed from corporate headquarters. The Global Officer Compliance is a member of the corporate-wide risk unit, which also includes representatives from the Internal Services Corporate Audit, Quality Management and Finance & Accounting as well as from the Corporate Service Function Legal. The Corporate Compliance team works especially closely with Corporate Audit, consulting one another regularly and conducting joint internal investigations as necessary. Compliance issues form an integral part of Service Function Corporate Audit's current list of audit items. This helps to ensure that the implementation of compliance requirements which apply throughout the Group is also followed up on a local basis.

## TÜV RHEINLAND COMPLIANCE PROGRAM

Our compliance program comprises, among other things, several guidelines which apply throughout the Group. The most important compliance documents are:

- Code of Conduct of TÜV Rheinland
- Compliance Guideline
- Guideline for the Prevention of Conflicts of Interest and Corruption
- Business Partner Management Guideline
- Donation and Sponsoring Guideline

All of these documents are available to our employees on the intranet at all times in English and in German (and in some cases also in other local languages). Whenever new employees join the company in Germany, we immediately inform them about the relevant compliance documents. For interested business partners and third parties, the Code of Conduct and a compliance leaflet have also been published on our internet site.

To emphasize to all employees the importance of compliance, we have established a mandatory e-learning program throughout the Group. Revised during the year under review, it includes updated training material and is available in English and German for all employees. In 2017, a total of 1,925 employees completed the e-learning course for the first time. Altogether, more than 25,000 employees have received this training since it was first rolled out. Along with Groupwide training on the Code of Conduct of TÜV Rheinland, Corporate Service Function Compliance has also developed additional voluntary training courses for all employees. These informative training units cover

the compliance management System, anti-corruption, and how to handle invitations and gifts, as well as conflicts of interest. During the year under review, Corporate Service Function Compliance developed a refresher compliance course together with TÜV Rheinland Akademie GmbH. That course will be rolled out in 2018 and made available to every employee to take when three or more years have elapsed since he or she completed the mandatory training program. In the year under review, we also worked together with Corporate Service Function Human Resources on a training course for managers and developed the so-called "Compliance Fundamentals." It provides special instruction to managers about compliance. Roll-out of that training course is also scheduled for 2018. The crucial importance of compliance for our company and the associated organization are also, together with the Groupwide CSR management function, the subjects of the two-day orientation seminar entitled "New at TÜV Rheinland," which all newly hired employees in Germany can attend. Comparable classroom training courses on specific topics and local regulations are also held by our compliance officers in other countries and regions (e.g. in Brazil, Poland or China). In their daily work, they make a key contribution to anchoring compliance in the minds of our employees.

## Business partner management

Within the framework of initiating business with suppliers in Germany, TÜV Rheinland is working to achieve acceptance of our general purchasing terms and conditions. By accepting them, suppliers agree to adhere to applicable laws and ordinances and to the principles of the UN Global Compact in the areas of human rights, labor standards, environmental protection, and anti-corruption measures.

During the year under review, the compliance organization developed and adopted a binding global guideline on business partner management. Various risk factors are applied to classify business partners (e.g. joint venture partners, subcontractors or intermediaries) into different risk levels. Depending on the risk level, those business partners then undergo different approval processes and risk management measures. Accordingly, for example, collaboration with business partners from the highest risk level requires approval by the responsible Regional Executive Vice President, submission of a compliance commitment declaration and, in some cases, completion of a compliance training course. Cooperation with business partners in the medium or low risk levels is subject to suitably moderate risk management measures.

During the year under review, Corporate Service Function Compliance was also extensively involved in foreign trade law/export control. Corporate Service Function Compliance monitors various business activities in sanctioned countries for compliance with regulations under applicable export control law.

In another part of our compliance program, so-called “compliance monitoring” underwent further expansion in the Greater China region. In five business streams, the local compliance team supported a total of 3,571 of our services with so-called “compliance audits.”

Despite all preventive measures, we cannot completely exclude the possibility that TÜV Rheinland might violate compliance, or at least come under suspicion of such a violation. In the event of any compliance violations, we always react with the requisite consistency and resolve. The procedure here follows a standardized process which is likewise transparently specified in a guideline that applies throughout the Group. Within the scope of that guideline, we reserve the right to take legal action – under both criminal and labor law – in case of employee misconduct. In 2017 once again, no companies in the TÜV Rheinland Group were fined for non-compliance with laws and regulations nor were they sanctioned by any government.

In the year under review, the worldwide compliance officer network treated a total of 601 compliance issues. Corporate Service Function Compliance handled 164 of those issues. The compliance issues are divided into queries and cases of suspected misconduct.

The queries submitted to us involved the following specific topics:

- Acceptance of invitations and gifts
- Donations and sponsoring
- Conflicts of interest
- Personnel issues

The cases of suspected misconduct involving criminal law subject to review by Corporate Service Function Compliance could be classified mainly into the following subject areas:

- Corruption/Bribery
- Fraud
- Forgery of documents

The majority of compliance cases are reported to Corporate Service Function Compliance by the employees directly. In addition, there is a compliance helpline available to all employees, to which they can turn – also anonymously if they so wish – when they would like to notify the company of misconduct. The helpline is staffed by a law firm which has offices all over the world and is obliged to maintain confidentiality.

The TÜV Rheinland AG Group’s list of authorizations currently in force stipulates mandatory involvement of Corporate Service Function Compliance in various business transactions (e.g. when contracting consultants, establishing companies, making donations, or sponsoring).

#### Annual external compliance audit

Since 2009, our compliance management System has been audited annually at several locations by an external auditor. Along with two companies of the TÜV Rheinland AG Group in Germany, in 2017 we had the compliance management System of a foreign subsidiary in China (TÜV Rheinland (Shenzhen) Co., Ltd.) audited. The requirements of that audit follow IFIA guidelines (so-called “Agreed Upon Procedures”), and the results are also reported to the IFIA. Moreover, we improve our compliance management System on a continuous basis by applying the recommendations of the auditing firm contracted to perform the audit.

#### COMPLIANCE OBJECTIVES

We naturally intend to further develop our compliance management System again in 2018. That work will focus primarily on export controls/foreign trade law and on collaboration with the compliance officer network.



## EMPLOYEES

### TÜV RHEINLAND – ONE DIVERSE WORKFORCE, ONE SHARED CORPORATE CULTURE

As a service provider, we know: Our employees are the key to our success. Their performance, their dedication and their integrity determine our customers' perception of us – and whether they want to remain our customers. We will become the world's best sustainable and independent service company in the field of testing, inspection, certification, consulting and training only if we have the right experts on our team. And only if all of our employees support the changes at TÜV Rheinland. Our "Do it. Best!" program is helping us advance our strategy, organization, internal processes and corporate culture through an intensive transformation process.

Right from the outset of the year under review it was clear: TÜV Rheinland places priority on this new corporate culture. Because it was one of three topics on the agenda at our

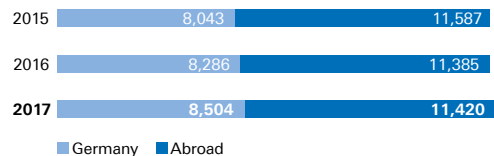
#### "MISSION FUTURE"



Mission Future is played in a team. To meet the challenges within the allotted time, employees have fun carefully examining our values.



#### EMPLOYEES IN GERMANY AND ABROAD



Group Management Meeting in Cologne, Germany, where 180 managers from around the world gathered in January. One finding from those discussions was: Our strategic objectives can be achieved only when we also actually give our corporate culture real substance and when it clearly impacts how we act at all of our locations worldwide.

Part of what made this a challenge in the past was that not all elements of our corporate culture reinforced one another as a coherent whole. This is why the "Culture Framework" we unveiled in 2016 was designed to resynchronize those elements. The framework comprises our mission statement, our values, the condensed management principles known as "Leadership Essentials" and our Code of Conduct, as well as our "Competency Model."

The Culture Framework applies to every TÜV Rheinland employee and can exert its full effect only when all colleagues take the time to consider it carefully – new graduates, young professionals and managers alike, as well as our top management. With this in mind, in the year under review, we designed appropriate measures for all of those employee groups – and as a result, we are now closer to achieving our goal of coherently implementing and actively implementing the Culture Framework.

#### Facilitating at every level

How do you strengthen a corporate culture? Through innovative approaches that combine teamwork, training and gameplay, for example: In the year under review, we provided a web-based professional learning tool to all employees throughout the Group – a so-called "serious learning game" we call "Mission Future."

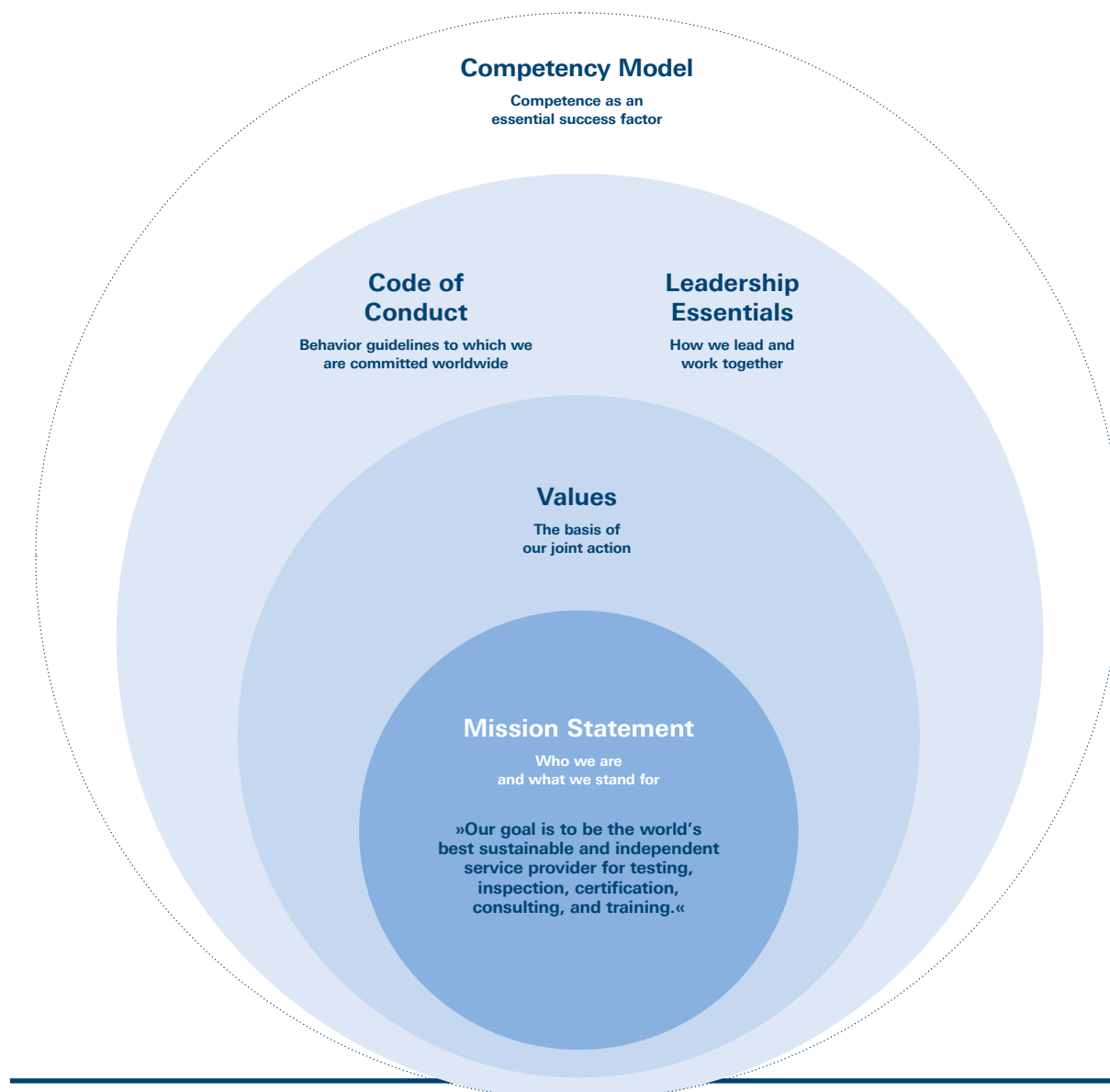
Moreover, in 2017 we started projects designed to strengthen corporate culture through personnel development – projects suited for all career stages, beginning with the identification of talents that lie dormant in our Group. In the future, we will assess our potential leaders in a



Groupwide standardized – and therefore transparent – process. To that end, we are drawing up plans for a “Talent Orientation Center.” The associated pilot project that we carried out in 2017 intentionally encompassed different regions and cultural groups around the world (Asia Pacific, China and Germany). To qualify for the Talent Orientation Center, nominated applicants must first pass an online test. Over the course of a day and a half at the Center itself, the candidates are tested not only on their

managerial skills, but also on their technical expertise – because our success ultimately depends just as much on experts as on managers. Upon completing their Talent Orientation Center examination, everyone receives advice on their future career path – in management or expert functions – and their continued personal development. The Groupwide roll-out of the Talent Orientation Center is scheduled for 2018. In the pilot region of Germany, we also want to test an option permitting employees

## OUR NEW CULTURE FRAMEWORK



to propose their own participation in the Talent Orientation Center. Employee eligibility currently requires a formal recommendation from a direct supervisor – but this procedure was not always applied consistently across all business streams in the past, sometimes biasing the results.

We also identify talent at our “Young Professional Conference” or YPC for short, which was held for the fifth time in 2017. The YPC is part innovation workshop, part talent show: Young professionals with development potential work on innovative business ideas under the watchful eye of Human Resources managers. This year’s YPC in Abu Dhabi was attended by 47 colleagues from 21 countries. One of the four business ideas considered there focused on societal challenges and sparked an intense discussion about values: “A case for corporate social impact innovation – Engineering meets humanitarian aid.” The underlying question here was how to use our technical expertise and our services to promote sustainable action and fight social problems (see also the section “Service Responsibility”).

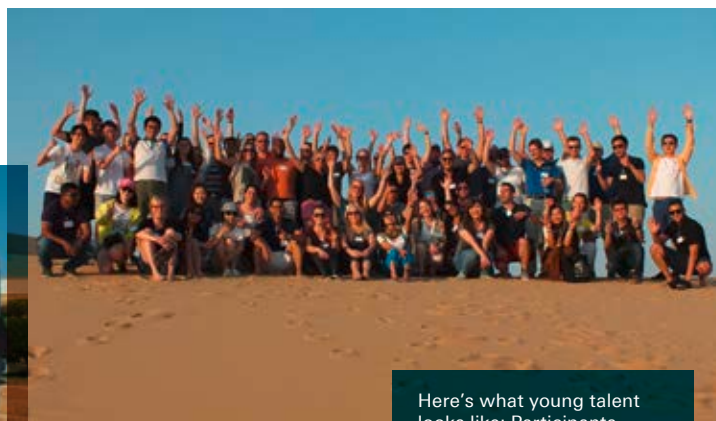
Anyone who attracts attention as a young professional – whether in the Talent Orientation Center, at the YPC, or through good performance in their own functional area – can chart their career path as technical expert or manager accordingly. The managers are especially important if we want to actively apply the Culture Framework. Because our mission statement – as a defining element of the Culture Framework – imparts standardized values to management style throughout the Group. How can we respect and strengthen those values in the leadership culture? We answer this question in the new training

#### DOCUMENTED TRAINING AND FURTHER EDUCATION DAYS IN GERMANY

	2016	2017
<b>Trained employees</b>	<b>4,494</b>	<b>4,438</b>
Training days for new experts	8,302	6,720
Seminar days for new employees	960	1,200
Further education days	15,254	14,645
<b>Total training and further education days</b>	<b>24,516</b>	<b>22,565</b>

program “Leadership Fundamentals” that addresses some 1,000 operative managers Groupwide. The ten-month program includes 180-degree feedback from employees and supervisors, a multi-day on-site seminar, accompanying e-learning modules, and ultimately an individual development plan for each participant. Having carried out pilot projects in Bangkok, Budapest and Shanghai, during the year under review, we successfully held initial sessions (“Leadership Fundamentals I”) in São Paulo, Bangalore and Milan. The general roll-out of the courses is scheduled for 2018. At present, we are developing pilot projects for a course designed for middle management: “Leadership Fundamentals II.”

The Culture Framework is also ushering in changes for members of our top management, specifically in the assessment of their management behavior and their individual personal development. Derived from the new Competency Model of the Culture Framework, worldwide harmonized assessment criteria now apply to top management. Based on the “Executive Review” introduced in 2017,



Here's what young talent looks like: Participants at the “Young Professional Conference” 2017 in Abu Dhabi.

**EMPLOYEE TURNOVER (GROUP)**

in % / per capita

**EMPLOYEE TURNOVER (GERMANY)**

in % / per capita



The employee turnover rate across the Group is 16.8%. At 11.8%, employee turnover in Germany is below the Group average. Group-wide, 63.3% of the people who left the company are men and 36.7% are women. Two companies in the Group region South America, which are essentially involved in project business, were omitted from the calculation of the "Employee turnover (Group)." The unadjusted employee turnover rate is 18%. Due to exceptional changes in processes and organization in all Group regions, the employee turnover rate was higher than in the previous year. The change processes are designed to prepare the company for the future.

these criteria give us a systematic summary of the performance, potential and skills of top management. Thereafter, we can define individual development measures.

**NEW HIRES AND NEW HIRE RATES**

	Group	Germany	Outside Germany
Average workforce	20,829	9,099	11,731
New hires	3,487	1,186	2,301
New hire rate	17%	13%	20%

To complement such measures, during the year under review, we launched "LeadX" – a training program for all members of top management. Configured as a series of modules, LeadX is designed to strengthen awareness for our Culture Framework and for the leadership culture at TÜV Rheinland, ultimately enabling program participants to improve their managerial skills and their managerial effectiveness in future Executive Reviews.

### What we have set out to accomplish – and where we stand today

We also want to be an attractive employer in the future – for career starters, recent graduates and experienced professionals – and one where people are glad to work for a long time (see diagrams "Employee turnover (Group)," "Employee turnover (Germany)," and "New hires and new hire rates"). In our previous Corporate Report, we stated that,

**AWARDS 2017**

For the tenth time in a row, we have earned the right to call ourselves a "Top Employer." This is the title that the international "Top Employers Institute" confers on employers that provide good career and work conditions, especially to young university graduates. Of 100 certified companies in Germany, we ranked 14th in this annual study.

For the second time now, we earned the TOTAL E-QUALITY award for equal opportunity and diversity in the workplace. Presented by the E-Quality association, this award recognizes our efforts to promote equal opportunity for men and women and to foster different cultures and qualifications.



With the "Human Resources Excellence Award 2017," we were one of the five best companies in the category "Diversity Management (Group)." That category recognizes companies that implement an innovative diversity strategy with commitment and professionalism. We were honored for our in-house diversity campaign "All different. All Precisely. Right." (More about that in the "Diversity" section in this chapter.)

among the areas of activity defined in our sustainability strategy, we wanted to focus even more on diversity and on occupational health and safety. Specifically, by 2020 we aim

- to staff 20% of our top management positions more internationally,
- to raise the share of women in management positions to 15%, and
- to achieve an above-average score in the RACER benchmark in the area of equality in our employee survey "Together" and
- to reduce the number of on-the-job accidents.

In the year under review, we made varying degrees of progress toward achieving those goals.

- Today 27 % of the positions in our top management ranks are held by non-Germans, which means that we have already exceeded our target for 2020. We do not intend to raise that target any further before 2020.
- At the end of the year under review, the share of management positions held by women was 15.2 %. This means we have achieved this goal as well (see diagram "Management by gender").
- In the current Groupwide employee survey "Together," we achieved an above-average score for equality in the RACER benchmark. In direct comparison with the other companies of the RACER group that surveyed their employees on equality, we actually achieved the best result in this area.
- The number of on-the-job accidents in Germany declined (see table "Occupational safety – Germany"). In the year under review, we also recorded the number of all accidents Groupwide for the first time. Inasmuch as they were calculated on a different basis, those Group figures cannot be compared yet with the values for Germany.

Our progress in the areas of action diversity and occupational health and safety beyond the points outlined above is described in the following sections.

## RACER GROUP

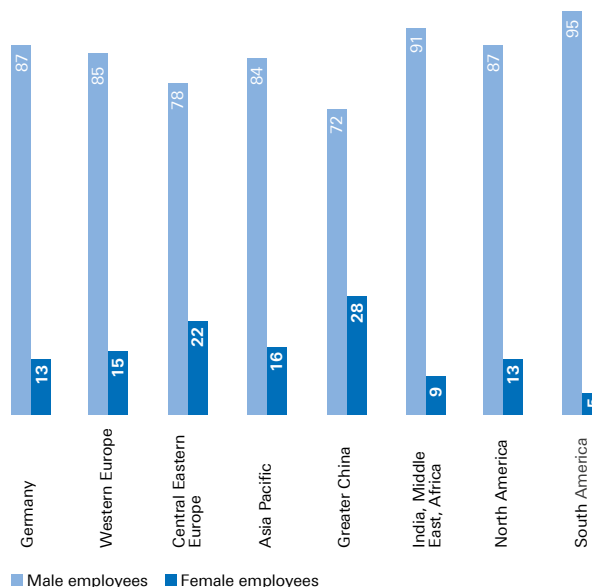
We are members of the so-called "RACER group". Twelve global corporations formed this group for the purpose of regularly exchanging employee surveys and comparing their findings with one another.

## DIVERSITY

Variety makes us more successful. When colleagues with different experience contribute their individual insights to projects and work together respectfully in teams, then everyone wins – our customers, our employees and our company. That's why diversity is an essential part of our corporate culture and a key element of our sustainability strategy. In 2013, we signed the "Diversity Charter" and thereby undertook to create a work environment that is free of prejudice to the greatest possible extent.

### MANAGEMENT BY GENDER\*

in %



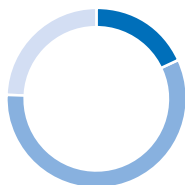
\* Across the Group, 14.9% of all management-level positions are held by women. This corresponds to a 15.2% share of women in management positions according to headcounts.



**AGE DISTRIBUTION OF TOTAL WORKFORCE**

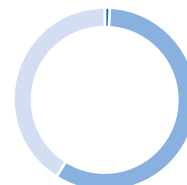
per capita

■ up to 30 years old	18%
■ 30 to 50 years old	57%
■ over 50 years old	24%

**AGE DISTRIBUTION OF MANAGEMENT**

per capita

■ up to 30 years old	1%
■ 30 to 50 years old	58%
■ over 50 years old	41%

**All different. All Precisely. Right.**

We cannot achieve that goal unless all employees reflect on their own behavior and their attitude. To that end, in 2017 we started a diversity campaign: “All different. All Precisely. Right.” The campaign includes, among other things, postcard and participation programs, the organization of a “Diversity Day,” and a diversity board game for teams, as well as our own app with information, online training and a chat function. This campaign does more than just show that diversity is important to us – it also draws attention to the specific aspects of diversity that matter to us, namely age (see diagram “Age distribution of total workforce” and “Age distribution of management”), gender, sexual orientation and identity, physical abilities, ethnic origins and nationality as well as religion and ideology.

**Achieving equality of opportunity between genders**

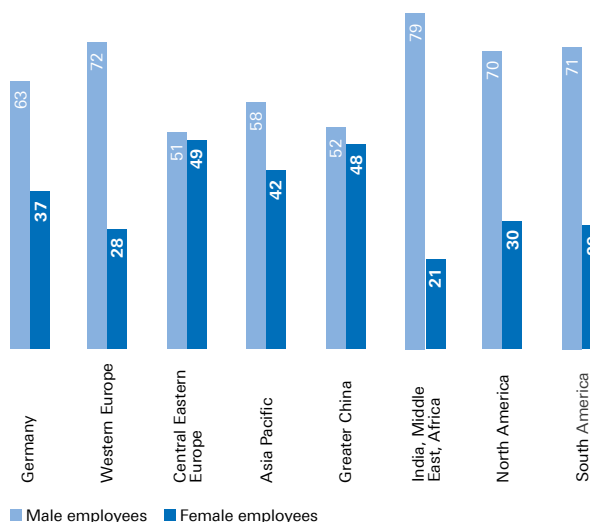
With regard to the composition of our workforce, we face the same situation that many other technically focused companies face: We employ more men than women (see “Total workforce by gender” diagram). We have set ourselves the goal of increasing the share of women, and of course we are committed to giving women the same advancement opportunities as men. That’s why, since 2016, we have been a member of the “Chefsache” initiative ([www.initiative-chefsache.de](http://www.initiative-chefsache.de)), which advocates for a balanced ratio of women to men in management positions. As part of the initiative, we work on, among other things, the question of how unconscious thought patterns affect HR processes. In the “Meetup” presentation series, in which we regularly participate, our Diversity & Inclusion area gave a talk on this topic together with the EWMD network (European Women’s Management Development) and another member company of the “Chefsache” initiative. With “Chefsache” we participate in the development

of an associated video series entitled “Deciding fairly – tips for HR officers.” Together with “Chefsache” member companies, we also conducted a series of three workshops on flexible work models for managers.

Through collaborative efforts such as these, we promote a fair gender distribution in management positions also within the company itself. For the fourth time now, we carried out our mentoring program TAFF (TÜV Rheinland Mentoring Program for Future Female Specialists and Managers). The program pairs female employees with members of upper management, who then meet regularly to discuss professional development topics. This year’s crop of participants comprised 13 such “tandems” at several German locations. In view of the positive experience

**TOTAL WORKFORCE BY GENDER\***

in %



\* The majority of our workforce is male; 37% of the Group’s employees are female. The share of full-time employees is nearly 88%. Throughout the Group, we employ people from at least 112 countries.

with TAFF in Germany, we decided to offer this program in other subsidiaries as well. One such pilot project with 20 applicants has already been launched in China. Despite promising results, mentoring is still rarely used in companies from the Asian cultural sphere. For the second time now, we conducted a live chat with our Chief Human Resources Officer on March 8, International Women's Day. This offering is intended for female employees of TÜV Rheinland and designed to help us identify ways we can improve our equality of opportunity. Female colleagues from six countries contributed their points of view to the discussion – with regard to career planning and offerings for part-time employees, for example, or work-life balance.

#### Fair to families

How can we create a flexible, family-conscious work culture that is both uniform worldwide and applicable in all countries? This question was considered not only during the live chat, but also in Talent Team Europe. The latter is a work group comprising young professionals from different business streams and European locations who spent nine months examining strategic questions for TÜV Rheinland. This year's Talent Team Europe analyzed the offerings for a flexible, family-conscious work culture that TÜV Rheinland is already making in the different regions, and identified the approaches that can qualify as best practices, in order to accord equal importance to the topic in all subsidiaries.

#### OCCUPATIONAL SAFETY – GERMANY

in terms of reportable accidents\*

	2016	2017
Number of employees covered in %	100	100
Reportable accidents	181	164
Reportable accidents per 1,000 employees	21.8	19.3
Lost workdays per 1,000 employees	346.1	324.3

\* Absence of more than 3 calendar days (not counting the day of the accident), including commuting accidents.

#### OCCUPATIONAL SAFETY – TOTAL GROUP

in terms of reported accidents

	2017
Number of employees covered in %	100
Reported accidents	483
Reported accidents per 200,000 hours worked	2.8
Lost workdays per 200,000 hours worked	7.8

One thing is sure: A family-conscious work culture respects the responsibility that our employees have for their relatives. At the Cologne site, for example, we opened the company childcare service "TÜVtel Kids" in 2015. Today it cares for 46 children – 15 of whom are less than three years old. What's more, TÜVtel Kids is supported by two retired employees of TÜV Rheinland, who volunteer to read stories to the children.

We also want to help our employees when their family finds itself needing to provide care. In 2016, we trained employees at two German locations so they could provide basic collegial advice and support when questions arise concerning care for relatives. This year, two more company "care pilots" at the Nuremberg location are now helping colleagues overcome caregiver challenges together. Care pilots mainly help colleagues navigate through the multitude of care options.

#### Blazing new trails in recruiting – and supporting diversity

In November 2016, we named LGBT contacts (LGBT: Lesbian, Gay, Bisexual, Transgender) for the first time. They organize regular gatherings and networking meetings, take questions from the workforce, and represent our company at topical events.

During the year under review, at the initiative of the LGBT network, we also participated in the "Sticks&Stones" career fair, which focuses on the LGBT community. We were represented there with a stand where we held more than 100 discussions. With our participation in the event, we sought not only to gain new employees and demonstrate our attractiveness as an employer, but also to send a conscious message about respect for others.

#### OCCUPATIONAL HEALTH AND SAFETY

The work of TÜV Rheinland takes many forms, and not all of it happens at a desk. Working on complex technical equipment, working in physically challenging locations, working with hazardous materials – all that is part of everyday life at TÜV Rheinland. As a responsible employer, we must ensure that our employees can work safely everywhere – whether it be in our buildings, or at our customers'

premises, at the office or out on the wind turbine – and that exercising their profession does not compromise their safety or health. That’s why our sustainability strategy emphasizes the importance of occupational health and safety.

#### Occupational safety – the message is clear

We have to create the right conditions for safe work throughout the Group. That’s why, with the support of the Executive Board, we further developed our organization, staffing, and expertise with regard to HSE (Health, Safety and Environment). The HSE regional officers completed a two-week training seminar, for example, in which they refreshed and improved their knowledge and further developed their occupational health and safety expertise on an international level.

In the year under review, the Corporate HSE team developed our “NO INCIDENTS. NO HARM. NO COMPROMISE” HSE vision. That vision asserts the HSE strategy that will be implemented in 2018 – and a global HSE manual based on that new strategy will also be published in 2018. It makes it perfectly clear: TÜV Rheinland cannot and will not accept incidents that cause injuries or impair the health of the employees. The key to achieving this goal lies in all colleagues looking out for one another and working safely with mutual support.

In order to ensure that the changes in our strategic HSE approach filter down effectively throughout the entire organization, the expanded corporate management (Group Executive Council) completed a training course in occupational health and safety. The content of that training

course is reinforced in regular meetings between Council members and the Global Officer HSE.

On-the-job accidents are always the result of unsafe conditions and decisions. With the help of all employees working together, we can eliminate accidents at work. Our employees should carry this knowledge along with them in their everyday work – and we mean that literally. Because we have issued “Personal Commitment Cards” to all employees in the Group. Our Chairman of the Executive Board Dr. Michael Fübi explicitly grants the cardholder “authority to stop any activity that cannot be carried out safely and to assist in correcting the situation.” This enables our employees to make it perfectly clear at all times, even to third parties: TÜV Rheinland accepts no compromises when it comes to work safety.

Another sign of a new HSE culture at TÜV Rheinland is the Quality, Health, Safety and Environment (QHSE) policy signed by our Chairman of the Executive Board Dr. Michael Fübi in November 2017. That policy obliges all employees of the TÜV Rheinland Group to act in a way that serves to eliminate quality defects and to prevent HSE incidents in equal measure.

If, despite all precautions, a work accident does occur, we must at least do everything we can to prevent something similar from ever happening again. That’s why, for one thing, we have established internal reporting chains, so that immediately following an accident, all appropriate decision-makers are informed, up to and including the



Well-equipped for safe work: A hard hat with our logo is part of many employees' equipment.

Executive Board. In addition, we have introduced so-called “Safety Alerts”: The Corporate Service Function HSE issues a written safety notice describing what caused the accident and indicating recommended actions. Supervisors whose employees could be exposed to comparable hazardous work situations discuss the Safety Alert with their teams and make sure that it is clearly displayed in the work area. Furthermore, in July 2017, the HSE team organized a “Health and Safety Stand Down” for the employees of all business streams. Several thousand employees participated in these in-house discussions about current HSE incidents, HSE policy and the “NO INCIDENTS. NO HARM. NO COMPROMISE” vision.

The new HSE culture led to an active integration of the Group Executive Council and a heightened awareness for occupational health and safety of our employees.

#### Why even get sick in the first place?

Stress, anxiety and depression can have serious negative effects on those who suffer from them, their colleagues and the work environment in general. In a global corporation with business operations conducted in different time zones and involving regular travel as well as language barriers and cultural differences, employees are subject to certain health risks. For this reason, we conducted a series of surveys using so-called “Mental Stress Questionnaires” (MSQs) and took decisive steps in areas where risks were identified by the workforce. For example, our Executive Board made it perfectly clear: We do not expect our employees to remain available around the clock. In February 2017, it issued guidelines with five recommendations regarding the conscientious use of digital media and smartphones.



The only way we can manage the change correctly is when each and every employee of TÜV Rheinland plays a role in it.

Miklós Novák  
Country Manager  
TÜV Rheinland InterCert Kft.  
Hungary

Occupational health concerns apply not only when handling hazardous materials or performing strenuous physical activities. Even office work can impair health over the long term, when no physical activity is there to compensate. That’s why – in Cologne and Berlin, for example – we offer prevention courses on back balance, yoga and running, in order to improve the health and fitness of our workforce. We hold health day events at several locations. Along with this, we also support independent health initiatives.

We also provide specific health protection to our employees in Germany through free-of-charge flu vaccinations. Our employees should know that their health and safety are extremely important to us. We create the necessary conditions for them to return home from work every evening unharmed.



## ENVIRONMENT

### ENVIRONMENTAL PROTECTION –

#### (ALSO) A QUESTION OF ORGANIZATION

As a global corporation with about 20,000 employees, our actions inevitably affect the environment. Even though we do not produce material goods, our company does consume resources – through operations at our offices and testing facilities, our employees' daily commute to their workplace, and travel to our customers. We want to keep the negative environmental impacts of our business activities to a minimum, however. To that end, we analyze our business and management processes for potential opportunities to improve efficiency – and we use eco-friendly technologies wherever it is reasonable to do so.

In our Quality, Health, Safety and Environment (QHSE) policy, we clearly state: The primary responsibility for the implementation of this policy rests with the managers. A global HSE manual supports them in this task. In the year under review, the members of our top management and other managers attended training seminars that raised their awareness about the policy. We also made organizational changes and implemented an HSE Main Process throughout the Group.

This shows that environmental protection is also a question of organization. Most TÜV Rheinland companies are covered under group certifications that audit management systems: ISO 9001 (Quality Management), ISO 14001 (Environmental Management) and OHSAS 18001 (Occupational Safety and Health). In the year under review, TÜV Rheinland LLC in Oman and TÜV Rheinland Middle East FZE in the United Arab Emirates Abu Dhabi and Dubai

obtained certifications according to ISO 14001. ISO 9001 and ISO 14001 have since formulated new requirements relative to consideration of the business environment and “interested parties.” With that in mind, we held workshops for our managers on the Executive Board, in the business streams and in the regions, in order to bring those modified requirements to their attention. We are having the degree of implementation of our management systems audited Groupwide according to the new standards. All companies of our Systems business stream are generally excluded from such group certifications because those companies provide certification services of their own.

Within the framework of our sustainability strategy, we set concrete objectives for ourselves regarding the dimension “Environment.” Taking the base year 2010 as a reference, we want to

- reduce energy consumption per employee by 20% and
- CO<sub>2</sub> emissions per employee by 25%

Groupwide by 2020. Already in the year under review, we achieved the former objective: We have reduced our energy consumption by 23% compared to 2010, thereby outperforming our own ambitions. And we are much closer to achieving the CO<sub>2</sub> objective now, too: In the year under review, we reduced the emissions by 22% compared to 2010. There are several explanations for these satisfying developments. For one thing, the information base for the calculations has improved. The figures were also affected by efficiency measures, such as conversion of the oil-fired heating system to the power station at our new headquarters in Cologne, as well as renovation measures at other German locations. In addition, the composition of energy providers in many countries has also improved.

#### TÜV RHEINLAND ENVIRONMENTAL PERFORMANCE PER EMPLOYEE\*

		Germany			Group		
		2015	2016	2017	2015	2016	2017
CO <sub>2</sub> **	t	6.34	6.04	5.19	5.39	5.28	4.97
Energy**	MWh	27.60	27.15	23.38	22.29	22.01	20.52
Business travel	km	12,935	12,630	12,747	11,706	11,315	11,916
Paper	kg		37.96	33.76		24.80	23.20
Water	l		24,663	18,260		19,796	16,819

\* Full-time equivalent.

\*\* Values resulting from all energy sources and business travel. In order to maintain comparability with previous years, this calculation excludes the district heating, natural gas and heating oil used by our foreign subsidiaries. Including that information in the calculation yields Group-level values for 2017 of 5.02 for CO<sub>2</sub> and 20.75 for energy.

## PROGRESS IN TARGET ACHIEVEMENT

		2010	2014	2015	2016	2017	Delta*	Target 2020*
CO <sub>2</sub> emissions per employee (Group)	t	6.4	5.42	5.39	5.28	4.97	-22%	-25%
Energy consumption per employee (Group)	MWh	26.6	22.68	22.29	22.01	20.52	-23%	-20%

\* Base year 2010.

For the Groupwide acquisition of these and other environmental data, we use the software solution “EtQ Sustainability Module.” Having implemented this solution in 2016, we covered 85% of our employees worldwide as of the balance sheet date of the year under review.

To achieve our environmental objectives, we specifically

- want to use efficient energy technology to run our buildings,
- reduce the number of business trips through increased use of video conferencing,
- favor fuel-efficient company cars over other models and
- use state-of-the-art technologies to operate our data centers, test labs, and facilities.

In every respect, one of the main places for achieving our environmental objectives is our Group headquarters, the TÜV Rheinland Tower in Cologne. Erected in 1975, the building underwent complete modernization and energy-based renovations over a period of two years. Over the long term, we expect energy savings and CO<sub>2</sub> reductions of around 30% as a result. Our colleagues from TÜV Rheinland Energy GmbH certified the building with the “TÜV Rheinland - Tested for harmful substances” certificate for healthy construction. The tower was also carefully scrutinized by several external auditors. It was awarded the LEED Certificate in Gold for its building services and a DGNB Certificate in Gold for its sustainability.

Beyond the investments in the Group headquarters, in the year under review we invested EUR 17.5 million (previous year: EUR 24.3 million) in resource-efficient new construction and energy-related renovations at German locations.

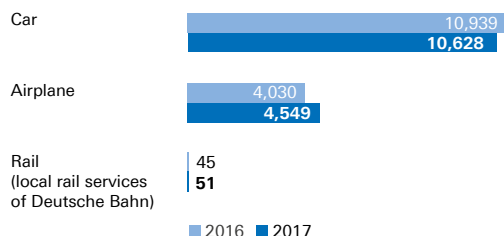
We also implemented measures at our locations outside of Germany to make them more energy-efficient and to conserve resources. In Hungary, for example, we completely modernized our office building, improving the insulation and installing new lamps. And in Chile, we donate used paper from our office operations to the “Fundación San José para la adopción” – a foundation that supports pregnant women and adoptive parents and children in the process of adoption. They collect the used paper for a recycling company and receive materials such as diapers, toilet paper and milk bottles in return. This benefits the orphanages of the foundation and also helps the environment at the same time.

ACTING RESPONSIBLY –  
STAYING MOBILE

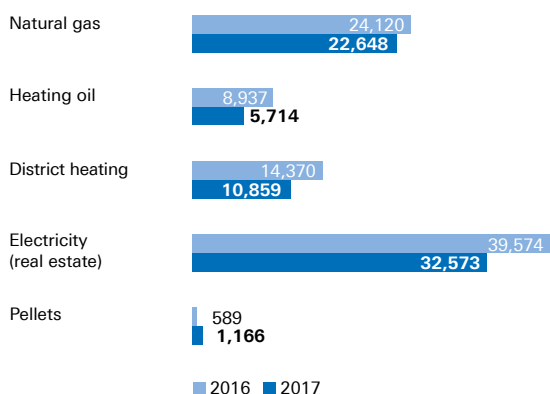
In the year under review, as part of the Peer Learning Group of the Global Compact Network Germany (DGCN), we worked on various aspects of climate management, such as the derivation of company-specific climate goals based on climate science findings (“Science Based Targets”) and the acquisition of Scope 3 emissions data according to GHG (Greenhouse Gas) Protocol standards. This concerns the parts of a company’s value creation process that generate emissions from “beyond the factory gates” so to speak – which means mainly activities related to the procurement of goods and services, to logistics and to travel. For us as a global service company, emissions generated by our employees’ commuting and by business trips play an especially important role. Because our business demands the personal presence of our experts and managers at the customer’s location – even if we rely on telephone and video conferences as often as possible.

**CO<sub>2</sub> EMISSIONS FROM BUSINESS TRAVEL (GERMANY)**

in metric tons

**ENERGY CONSUMPTION (GERMANY)**

in MWh

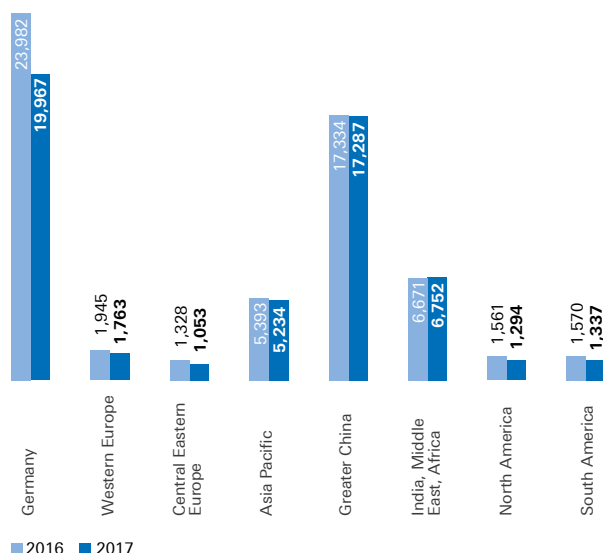


In the year under review, our employees in Germany logged about 66 million kilometers of business travel by company car, rental car or private car (previous year: 67 million kilometers). Of that total, our 1,811 leased vehicles (previous year: 1,634 leased vehicles) accounted for approximately 39.6 million kilometers (previous year: 39.4 million kilometers) and consumed 2.43 million liters of fuel (previous year: 2.45 million liters). That resulted in an average fuel consumption of 6.13 liters per 100 km (previous year: 6.21 liters per 100 km), which corresponds to a CO<sub>2</sub> emissions rate of 161 grams per kilometer (previous year: 163 g/km). These calculations are all based on the assumption that 70% of leased vehicle operation is for business purposes. By the way, employees who choose a low-emission company car with a CO<sub>2</sub> exhaust rating below a specified limit receive a bonus from us as a reward.

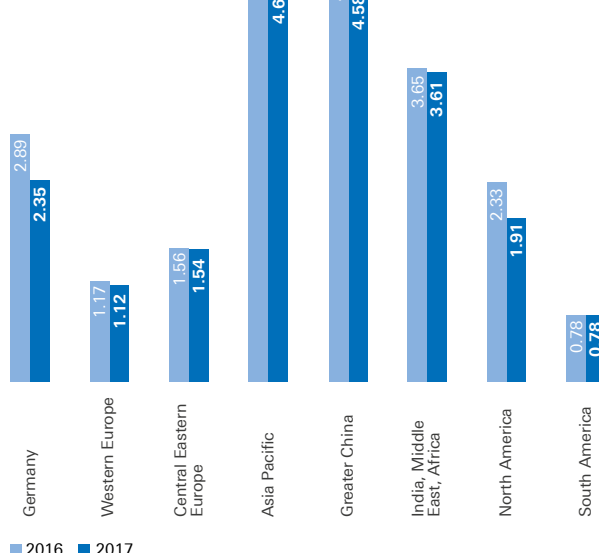
Business travel by air worldwide by our German employees in the year under review totaled 35 million kilometers (previous year: 31 million kilometers). When we include our non-German companies, the total comes to 125 million kilometers traveled by air (previous year: 111 million kilometers). Our internal calculations are based on a per capita jet fuel consumption rate of 0.05 liters per kilometer flown. This results in a Groupwide jet fuel consumption of 6.2 million liters (previous year: 5.5 million liters).

**CO<sub>2</sub> EMISSIONS FROM REAL ESTATE  
ELECTRICITY CONSUMPTION**

in metric tons

**CO<sub>2</sub> EMISSIONS FROM ELECTRICITY CONSUMPTION  
PER EMPLOYEE**

in metric tons



#### CO<sub>2</sub> EMISSIONS FROM ENERGY CONSUMPTION (GERMANY)

metric tons	2016	2017
from natural gas	4,824	4,530
from heating oil	2,357	1,507
from district heating	3,865	2,921
from electricity (real estate)	23,982	19,967

Energy production from wood pellets is considered as CO<sub>2</sub>-neutral.

Our employees traveled 7.2 million kilometers (previous year: 6.5 million kilometers) with the Deutsche Bahn rail service in the year under review. That corresponds to an electrical power consumption of 438 megawatt hours (previous year: 393 MWh). We use Deutsche Bahn's climate-neutral option on these long-distance trips.

#### OUR CONSUMPTION OF ENERGY, WATER AND MATERIALS

We use energy mainly for the heating and lighting of our properties as well as for the operation of technical equipment. In Germany, we rely on fuels, natural gas, heating oil and wood pellets as direct sources of energy. In addition, we buy district heating from local utility companies. Besides those direct sources, we also use electricity and heat as indirect sources of energy. For all German locations under consideration, that power consumption totaled 32,573 MWh (previous year: 39,574 MWh) in the year under review.

Even though our company does not produce any material goods, we consider water and materials as relevant environmental parameters in the context of ISO 14001 and report them accordingly. In the year under review, water consumption at our properties worldwide totaled 335,116 m<sup>3</sup> (previous year: 395,100 m<sup>3</sup>). Of that total, our German locations accounted for approximately 155,269 m<sup>3</sup> (previous year: 204,373 m<sup>3</sup>). Based on full-time equivalents, those figures result in a per capita consumption of 16,819 liters (previous year: 19,796 liters) worldwide and a per capita consumption of 18,260 liters (previous year: 24,663 liters) in Germany in the year under review. Because we do not procure or process any semi-finished products,

#### CO<sub>2</sub> EMISSIONS (DIRECT AND INDIRECT)

in 1,000 tons of CO <sub>2</sub>	2016	2017
<b>Total/Group*</b>	<b>105.5</b>	<b>99.1</b>
of which, direct	21.3	19.8
of which, indirect**	84.1	79.3
<b>Germany</b>	<b>50.0</b>	<b>44.1</b>
of which, direct	13.6	12.4
of which, indirect***	36.4	31.7

\* In order to maintain comparability with previous years, this calculation excludes the district heating, natural gas and heating oil used by our foreign subsidiaries. Including that information in the calculation yields Group-level values for 2017 of 20.5 (direct) and 79.6 (indirect).

\*\* CO<sub>2</sub> emissions from rail travel were taken into account in Germany only.

\*\*\* Including CO<sub>2</sub> emissions from rail travel.

we do not document the weights or volumes of the materials we use – with the exception of paper. We strive to reduce our use of paper – through digital archiving, for example, and SharePoint systems for the exchange and processing of files. Groupwide, we purchased 462 tons (previous year: 495 tons) of paper in the year under review. Of that total, our German locations – where we use FSC-certified paper from sustainable forestry as standard – accounted for 287 tons (previous year: 315 tons). The per capita consumption of paper was 23.20 kg (previous year: 24.80 kg) Groupwide and 33.76 kg (previous year: 37.96 kg) in Germany, in both cases on a full-time equivalent basis. With regard to the handling of waste paper and all other materials, our German locations were subject to new documentation obligations and expanded requirements relative to waste management pursuant to the new German Commercial Waste Ordinance (GewAbfV), which took effect on August 1, 2017.



## SOCIETY

### LIVING IN GOOD COMPANY MEANS GIVE AND TAKE

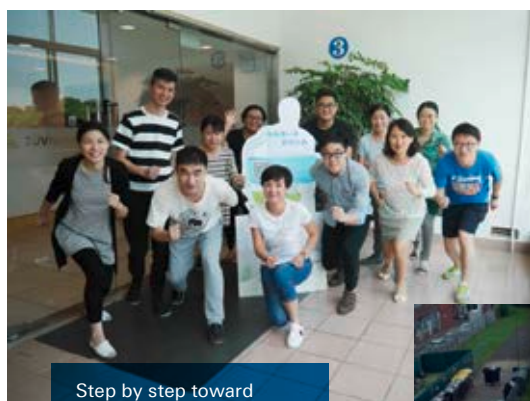
We know that our Group benefits from society in many ways. So when we support the volunteer actions of our employees, when we promote non-profit projects, or when we contribute to the solution of social problems, then we also give back to society – and do something for the sustainability of our Group at the same time.

For that reason, social commitment represents a dimension of its own in our sustainability strategy. We want to make a measurable contribution – even if personal commitment for other people is hard to express in numbers. At least we can set a concrete goal for our financial commitment: Our annual donation budget should represent 0.1 % of EBIT.

In keeping with our values and our core business operations, we particularly want to promote projects and activities that

- foster technical progress, education and science,
- protect people and the environment or
- support the principles of the UN Global Compact.

We prefer to support projects related to our business activities, our locations or our markets, and ones that also embody and strengthen the values we represent. Suitable opportunities often involve collaboration with aid organizations such as Engineers Without Borders, NGOs, government institutions or other companies. One current example of such cooperation: In the year under review, in Greater China, TÜV Rheinland entered into a collaboration with three Chinese companies, in order to improve the power supply in Yunnan province. The partners contributed their respective expertise to install photovoltaic systems for electrical power generation at seven schools in the province. Subsequently, they also prepared teachers and students to maintain the systems on their own – helping them to help themselves.



Step by step toward environmental protection: TÜV Rheinland Greater China's "Walkathon" competition.



Safety has the right of way: That's what these youngsters from a refugee shelter are learning at this traffic safety practice area.

### Volunteering speaks volumes

We openly support the volunteer work of our employees: Through time off, through the establishment of a volunteering platform on our in-house company portal “blueye,” and through Volunteer Days, that many of our companies offer. Employees at our Cologne location have already been supporting non-profit projects in the city on Volunteer Day since 2004. On August 2, 2017, fifteen employees renovated the courtyard of a refugee shelter. We carried out this action together with the partner organization that maintains that shelter. At the request of the residents – mainly women and children – we installed a traffic exercise area where they can playfully learn about German traffic rules. The square is now used as a training facility by a pedestrian safety organization and by the police. For our many years of Volunteer Day commitment, Cologne’s Mayor Henriette Reker honored us this year with the Volunteer Award of the City of Cologne.

Likewise, a matter of honor: The “Walkathon” by our colleagues at TÜV Rheinland Greater China. The CSR team there organized a contest that benefits both the health of all employees and the environment. All participants were asked to use a fitness app to count their steps from May 22 through the end of June. TÜV Rheinland’s promise: The more steps accumulated, the higher the company’s donation to a reforestation project. After more than 3,000 employees in 55 teams took a total of 130 million steps, TÜV Rheinland donated 10,000 so-called “saxaul bushes” to slow the desertification of Inner Mongolia. These bushes were used to plant an area of more than 13 hectares – the “TÜV Rheinland Saxaul Grove.”

### Providing opportunities through education

In our previous corporate report, we already stated that we want to make our contribution to the successful integration of refugees. As part of “wir zusammen – Integration initiatives of the German economy” ([www.wir-zusammen.de](http://www.wir-zusammen.de)), we are committed to concrete measures in this regard. In 2016, for example, we increased the number of vocational

### INTERNATIONAL TÜV RHEINLAND GLOBAL COMPACT AWARD

We adhere to the principles of the UN Global Compact – and we support, through the non-profit TÜV Rheinland Foundation, people whose work broadly promotes sustainability and

the goals of the UN Global Compact. Under the chairmanship of Prof. Dr.-Ing. Bruno O. Braun, the foundation awarded the International TÜV Rheinland Global Compact Award for the fourth time since 2008. The Kenyan sociologist and author Dr. Auma Obama earned the prize with its 25,000-euro endowment in recognition of her consistent efforts to achieve development cooperation that is sustainable and effective over the long term. Dr. Obama – incidentally, the older sister of Barack Obama – obtained her undergraduate and doctorate degrees in Germany. She is a member of the World Future Council and the initiator and chairwoman of the Sauti Kuu Foundation (English: Strong Voices). Sauti Kuu supports disadvantaged children and teenagers in Kenya through training courses, workshops and personal development programs, with the goal of autonomously creating a livable future.



The 4th International TÜV Rheinland Global Compact Award was presented to Dr. Auma Obama in October 2017 in the historic City Hall of Cologne, Germany.

training positions by nearly one third. This enabled us to offer concrete prospects for eight young refugees to enter the workforce. Specifically for these new trainees, we offered additional training and language courses, as well as support with administrative formalities. The most important offer, however, was the integration mentor we provided to each of these new colleagues during their first year of vocational training.

In 2017, that first round of the mentoring ended according to plan at the end of the first year of training. We honored the volunteer commitment of our mentors with a graduation ceremony, at which all participants voiced their positive final assessment of their integration tandem. The collaboration created connections and friendships that have also continued past the end of the formal mentor arrangement. That's why it was soon clear that the integration tandem concept – just like the overall commitment to vocational training for refugees – had proven itself and would be continued.

In the year under review, the second round of mentoring tandems began, and we were able to welcome refugees as new trainees at several German locations, once again providing mentors to them as well: In Cologne, two trainees are working in the food services area, and another colleague is being trained as an IT specialist for application development. A commercial trainee is working in Berlin, and in Nuremberg we are training a colleague as an IT specialist for system integration.

#### TÜV Rheinland – as easy as ABC to understand

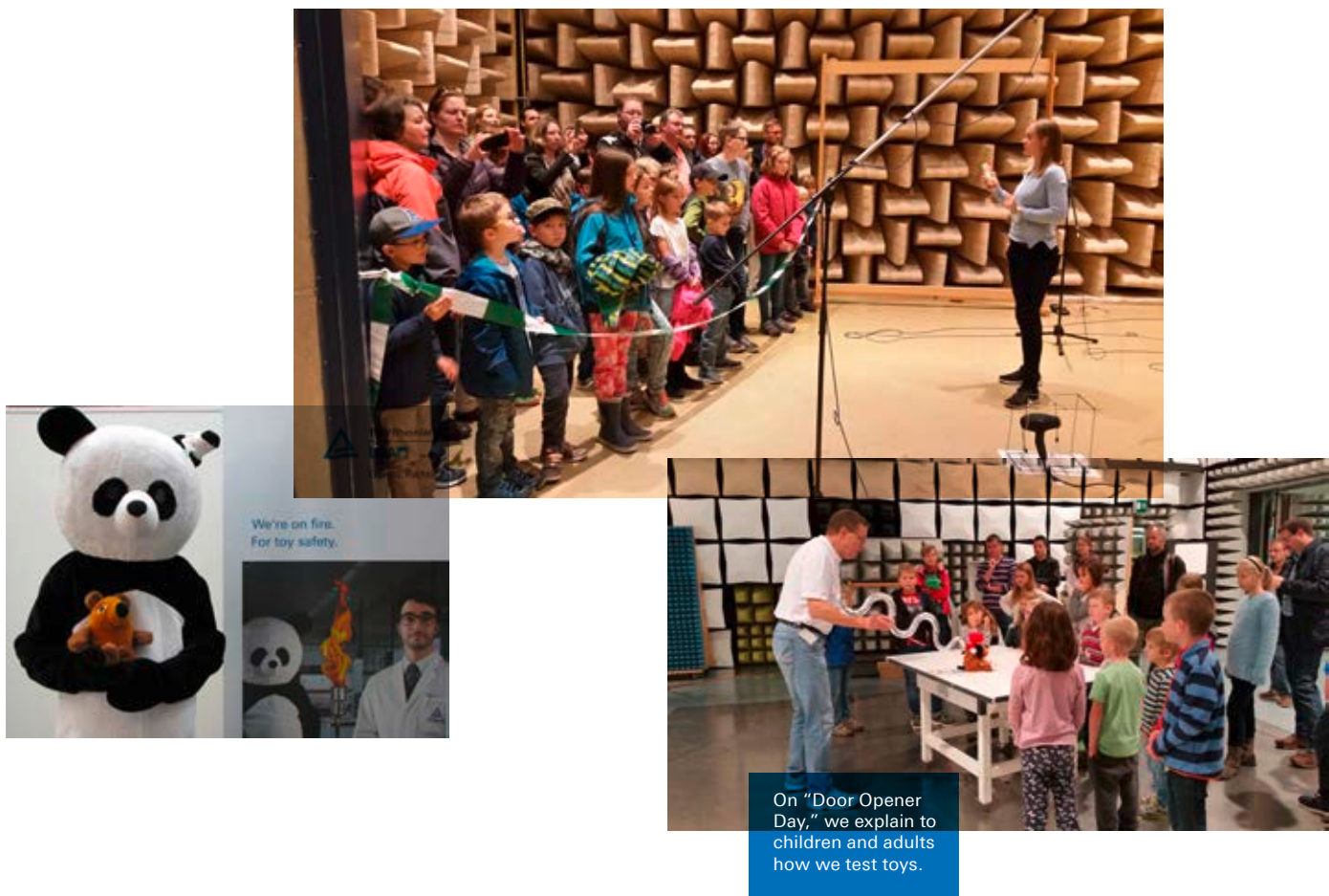
Communicating to as many people as possible about the tasks that a provider of inspection and testing services like TÜV Rheinland handles – this might be considered as basic ground work from the “Society” perspective. With our new online quiz “Test Yourself?!” we playfully communicate information about technology and business, safety and environmental protection – and about our role in society. Are baby strollers allowed on escalators? How often must a car be inspected? What is the most frequent cause of work-related accidents? There are 170 questions in six categories to answer. Available free of charge on [www.tuv.com/pruef-dich](http://www.tuv.com/pruef-dich), “Test Yourself?!” is optimized for all standard end devices and designed for all ages.



Late shift for discoverers: At the “Night of Technology,” some 3,000 visitors learned about security in the (digital) world.







Transmission of knowledge was also the goal of the 6th Technology Night in Cologne, which we supported as main sponsor. In the context of this event, we greeted some 3,000 visitors in our buildings. We hosted the night under the banner "Safety in the (digital) world" and explained this topic to the public in greater detail through presentations, round-table discussions and hands-on activities. The event also marked the premiere of the film "Count-down to the Future," which was created by the Academy & Life Care business stream together with students from the Cologne International School of Design (KISD). It documents the viewpoint of partners from business, culture and sports in interviews about the future as well as digital transformation.

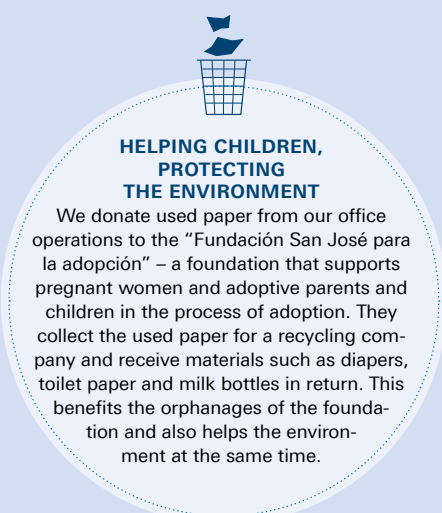
Other excitement for young and old: The "Door Opener Day" of the beloved German animated TV character "the Mouse," where children and adults get a peek behind normally closed doors. On October 3, 2017, we opened up

our toy-testing area at the Nuremberg location. More than 200 visitors visited places like the acoustic hall and the chemical laboratory, and learned how we test toys for hazardous materials or subject the eye of a stuffed toy rabbit to a pull test.

Exclusively for younger students, we conducted Girls' Day on April 27 at our Cologne and Nuremberg locations. Girls from the fifth to the tenth grade were exposed to topics such as traffic safety, materials testing and IT security, spoke with trainees and experts, and saw the multi-faceted world of STEM (Science, Technology, Engineering and Mathematics) professions first hand.



## WORLDWIDE COMMITMENT – AN ABBREVIATED LIST OF OUR DIVERSE ACTIVITIES





#### CHILD AND CAREER

We specifically supported young mothers with a significantly less expensive audit training program, so they can return to work more easily after their maternity leave. This helps not only the mothers, but us as well. Because we need good auditors.



#### EDUCATION IS THE CORNERSTONE

In Sichuan province, we sponsored a scholarship program for 47 students whose limited financial circumstances would otherwise have deprived them of this opportunity for an education.



#### WALKATHON

After more than 3,000 employees in 55 teams took a total of 130 million steps, TÜV Rheinland donated 10,000 so-called "saxaul bushes" to slow the desertification of Inner Mongolia.



#### FOOD DONATIONS

Together with customers, employees in Madrid donated 200 kg of food to the "Banco de Alimentos" foundation.



#### BLOOD DRIVE

In the year under review, a large number of employees in Saudi Arabia participated in a blood drive.



#### DONATION CAMPAIGN

TÜV Rheinland also provides support through material donations such as 1,000 coats for students in Yunnan and seven solar power plants for schools in very isolated rural areas, in order to ensure reliable electric power.

## SERVICE RESPONSIBILITY

### OUR SERVICES SHOULD MAKE THE WORLD A LITTLE BETTER EVERY DAY

TÜV Rheinland stands for safety and quality wherever man, the environment and technology interact. Our goal of making life safer and our commitment to sustainable action are reflected not only in how we work – which is to say, the way we perform our services – but also in the services themselves. In providing our services, we support our customers the world over, helping them make their products and processes more efficient, more sustainable, and therefore ultimately more future-proof. Our services should create value – and not just for our customers, but in the larger sense also for society and the environment. While the ten principles of the UN Global Compact shape our own actions as a Group, the United Nations' Sustainable Development Goals (SDGs) make us aware of global challenges and highlight the impact we can have as a company with our services for a safe, sustainable world. In adopting the SDGs, the Member States of the United Nations committed to 17 objectives for sustainable development, thereby also obliging companies to help achieve them. TÜV Rheinland can make a real contribution here because our core business addresses several SDGs at once.

#### SUSTAINABILITY IN SITU

With our services, we support sustainability efforts worldwide. We took over the safety management, for example, at the Zhuhai Guishan offshore wind farm in China, which will save more than 200,000 tons of CO<sub>2</sub> per year. For the construction of Africa's largest potable water treatment plant,

we are carrying out quality assurance measures. And since 2014, in cooperation with the International Labor Organization (ILO), we have been providing advanced training for small and medium-sized enterprises in China to improve work processes and labor conditions there.



Together we are strong,  
and to develop our business  
sustainably, we have  
to innovate continuously.

Dr. Shanmuga Sundaram  
Country Manager  
LSM Industrial Services  
South Africa

Today we already help safeguard water quality (SDG 6: Clean Water and Sanitation) and sustainable forestry (SDG 15: Life on Land), support the operation of wind farms (SDG 7: Affordable and Clean Energy), audit social standards (SDG 8: Decent Work and Economic Growth) and environmental compatibility (SDG 3: Good Health and Well-Being), offer numerous training courses and seminars (SDG 4: Quality Education) and certify eco-friendly and energy-efficient products with the "Green Product" mark (SDG 12: Responsible Consumption and Production). Right from the outset, all this puts us in a good position to meet the demand for SDG-based services.

#### Six business streams – one goal

Today under the heading of "Green Solutions," we already bundle all of the offerings we provide to help companies conserve resources and operate more economically. Those services are developed and performed, however, in the individual business streams. In the future, we want to adopt a more structured approach to developing new opportunities in the growing market for sustainability services. Integrated offerings should be developed through cross-business collaborations to take the place of separate solutions from the individual business streams. To that end, an 11-person strategic task force was launched during the year under review. It comprises representatives from all of the operative business streams and from the Corporate Service Functions Innovation, Strategy, Marketing & Sales and CSR. It reports directly to the Executive Board

and is tasked with setting strategic priorities for sustainability services, identifying target markets, determining possible synergies within the Group, and creating suitable organizational structures.

#### Services that are right for the job, not run-of-the-mill

Should we offer as many different services as possible, in order to generate the highest possible revenues? With regard to this question, our Chairman of the Executive Board Dr. Michael Fübi states our position succinctly: “We would rather lose business than risk damaging our brand.” Because we cannot achieve sustainable success unless we give the long-term value of our brand higher priority than short-term profit. Our reputation is our greatest asset. To help us identify potential risks in connection with our services, we have been using our “Brand Risk Evaluator” – an IT tool we developed in-house – already since 2016. It considers not only the service itself, but also the customer, their industry, and the country in which the service is performed. The tool evaluates whether the service carries risks for our brand – because it conflicts with our corporate values, for example, or might give the consumer the wrong impression, or serves a customer whose reputation is poor. Where we see risks, we apply appropriate countermeasures, adapt the service and/or its context – or, in case of doubt, decline the business opportunity entirely. Building on our initial practical experience with the Brand Risk Evaluator, we rolled out a new, enhanced version of the tool in 2017.

We are not the only ones who recognize that our reputation is a prized asset, by the way: Other actors also see the attraction. Unfortunately, that can also be a problem because we regularly have to protect our test mark against fraud. And we do so without hesitation because consumers must be sure that something labelled as TÜV Rheinland really is TÜV Rheinland. That’s why we have incorporated a “copyright” into our certificates: They include a prominently displayed ID number. Our “Certipedia” ([www.certipedia.com](http://www.certipedia.com)) certification database allows everyone to use that ID number to determine whether the certificate in question was actually issued by us and what we certified exactly – product characteristics, services, companies, systems or personnel qualifications. But it takes more than that to satisfy us. We monitor online marketplaces for possible trademark infringements, for example, and work with international law enforcement agencies – nor do we shy away from trademark-related administrative disputes or litigation. We also attend trade fairs, where we track down brand pirates – often in direct collaboration with customs

authorities, public prosecutors’ offices, and representatives of other TÜV companies that have joined us as members of the “TÜV Markenverbund e.V.” The customs office also helps us fight against the import of products bearing counterfeit TÜV Rheinland trademarks. The legal basis for this is the “Border Seizure Application” that we filed with the European customs authorities in 2010, which affects all imports that cross the EU’s external borders.

#### UN SUSTAINABLE DEVELOPMENT GOALS (SDGs)



In 2015, all Member States of the United Nations adopted Agenda 2030. The core component of this agenda is a list of 17 Sustainable Development Goals (SDGs). The 17 SDGs cover all three dimensions of sustainability – social, environmental and economic. They are preceded by five core messages intended to serve as guiding principles, also known as the Five P’s: People, Planet, Prosperity, Peace, Partnership.



# FINANCIAL REPORT

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# GROUP MANAGEMENT REPORT

OF TÜV RHEINLAND AKTIENGESELLSCHAFT FOR THE BUSINESS YEAR 2017

## THE RESULTS FOR 2017 AT A GLANCE

- The TÜV Rheinland AG Group concludes the 2017 business year in what is a demanding overall industry environment with revenue (incl. inventory changes) of €1,971.9 million (+2.8% year-over-year), continuing the successful growth trend seen in recent years. At constant exchange rates, the Group generated total revenue of €1,992.3 million, which corresponds to growth of 2.7%.
- The results for 2017 are as follows:
  - Earnings before interest, taxes, depreciation, and amortization (EBITDA) total to €206.5 million (previous year: €193.4 million), representing a change of +6.8%.
  - The operating result (EBIT) reached €130.6 million (previous year: €122.6 million), a change of +6.5%.
  - Consolidated net earnings total to €78.1 million (previous year: €66.0 million), a change of +18.3%.
  - The pre-tax return on sales is around 6.0% (previous year: 5.4%).
  - International sales account for 45.4% of overall revenue in 2017, employees abroad for around 57.3% of the Group's workforce.

## PRESENTATION OF THE BUSINESS STREAMS

As an independent testing company, for more than 140 years, TÜV Rheinland has stood for quality, efficiency and safety in the interaction between people, technology and the environment in almost all areas of the economy and life.

As a neutral and independent third party, TÜV Rheinland inspects and tests technical equipment, products, and services, and monitors projects and processes for companies. The Group does so on the basis of recognized standards as well as national and international legal provisions. Added to this are services relating to information security, occupational health and safety, as well as training and professional qualifications.

With new ideas, expertise, and a global network, this is how TÜV Rheinland contributes to making products, services, systems, and people safer and more competitive.

The work carried out by TÜV Rheinland is based on the conviction that societal and industrial development is not possible without technical progress. That is precisely the reason why the safe and responsible use of technical innovations, products, and systems is of decisive importance for future development. TÜV Rheinland monitors, develops, tests and certifies. This is how it helps build a future that sustainably does justice to the requirements of humankind and the environment.

The work of TÜV Rheinland is organized into six business streams: Industrial Services, Mobility, Products, Academy & Life Care, Systems and ICT & Business Solutions.

The **Industrial Services business stream** generated revenue of €503 million in 2017. This covers the business fields of pressure equipment & plant technology; elevator, conveyor & machine technology; electrical engineering & building technology; industrial inspection, infrastructure & civil engineering; energy & environment; as well as project management, materials testing and non-destructive testing. The services include, for example: testing of pressure vessels, elevators and lifts, and systems in building technology; monitoring of industrial and infrastructure projects; engineering and materials inspection and testing; and environmental and pollutant analysis.

The **Mobility business stream** achieved revenue of €508 million in 2017. In addition to periodical technical inspections and rail, the business stream is also responsible for driver's licenses in Germany, car services & appraisal, testing of eligibility of vehicle components and vehicles (homologation), intelligent transport systems, and logistics. The business stream is additionally involved in developing new services for safety in the networked mobility of the future.

The **Products business stream** generated revenue of €524 million in 2017. Among other things, the business stream performs testing for product functionality, serviceability, ergonomics and safety, as well as the certification of products. This is often a prerequisite to ensuring that manufacturers, importers or trading companies can offer their products in certain markets. The Products business stream tests everyday articles – such as consumer electronics, glass, furniture, textiles, toys, leisure articles or household appliances. Added to this, for instance, are tests in environmental and pollutant analysis; testing of the electromagnetic compatibility of electrical and electronic products, machinery and medical devices; as well as testing of solar modules, batteries or fuel cells.

The **Academy & Life Care business stream** combines the expertise and services of TÜV Rheinland applicable to the individual in his or her workplace and professional environment. This comprises topics in HR development and organizational change, further education and seminars, corporate health management, occupational health and safety, and certifications of individuals, labor market services & private schools. The business stream achieved revenue of €226 million in 2017.

TÜV Rheinland has bundled its Cyber Security and Telecommunications Services in the **ICT & Business Solutions business stream**. The business stream achieved revenue of €139 million in 2017. ICT is the abbreviation for “Information and Communication Technology.” In this business stream, specialists offer strategic consulting, conceptual design and process optimization, as well as implementation and certification of secure IT systems, cloud technologies and telecommunications networks, on an international scale. The aim is to support businesses as well as government agencies and institutions with effective strategies and solutions for information security and telecommunications within the context of digital transformation processes.

The **Systems business stream** generated revenue of €203 million in 2017. This business stream certifies management systems and processes, certain services or entire enterprises as an independent third party. These include, in particular, quality management systems (e.g. ISO 9001) and environmental management systems of numerous businesses (ISO 14001 and the European EMAS system), as well as service quality, compliance management and energy management.



## GENERAL CONDITIONS

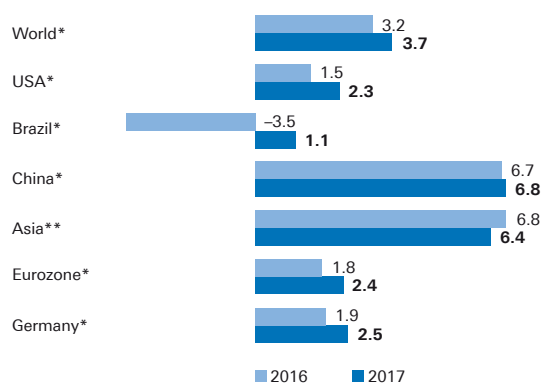
### General Economic Conditions

The expansion of the global economy increased significantly in 2017. Economic growth looks positive in nearly all of the world's major economies. The economic mood is still relatively dampened in the emerging economies but has improved significantly there, too. Averaged out through the year, global economic growth in 2017 was around 3.7% (previous year: 3.2%). Combined with favorable financing conditions, already high levels of capacity utilization in many places and stable oil prices, this led to greater levels of investment and, associated with these, an upturn in world trade. The increased expansion of foreign trade in Asia contributed considerably toward this expansion.

Risks, on the other hand, are more balanced than they have been in previous years. These include dangers in the form of protectionist trends, political risks in Europe such as those involved in a "hard Brexit," and the risk of a surprisingly significant decline in growth in China.

#### ECONOMIC GROWTH IN KEY MARKETS

of TÜV Rheinland AG Group  
in %



\* Source: IMF World Economic Outlook Update January 2017.

\*\* Source: IfW Kiel, Weltkonjunktur im Winter 2016.

**USA:** The gross domestic product of the US economy grew by an average of 2.3% in 2017, thus growing more steeply than it had the year previous (previous year: 1.5%). Household consumption was the greatest contributor in this regard. One factor involved here is the continued positive trend in the jobs market, which reported the lowest levels

of unemployment since 2001. At the same time, growth in investment by businesses gathered steam, thereby contributing to US economic growth. Exports made a positive contribution to growth, but the impact of government spending was slightly negative. To normalize monetary policy, the US central bank raised the target corridor for the federal funds rate.

**BRICS Countries:** The economic development of the BRICS countries is particularly important to the TÜV Rheinland AG Group due to its presence in these countries, particularly in Brazil and China. The economy continued to consolidate in 2017. This is mainly due to an upturn in production in commodity-exporting countries; this represented a move away from the situation in 2015 and 2016, when these countries suffered greatly from the collapse in commodity prices. The recession in Brazil came to an end in the reporting year. In Russia, despite the economic sanctions of western industrialized nations, production presents a much better picture than the previous year.

With an increase of 6.8% in gross domestic product (previous year: 6.7%), the Chinese economy still grew at a significantly stronger rate than the other emerging economies. Although monetary stimulus was scaled back and credit growth slowed, the rate of economic expansion was only slightly lower. In this regard, contributions to growth due to consumption are higher relative to those due to investment. As a result, the process of transformation in the Chinese economy, toward a consumption-oriented economy, is continuing. Monetary and fiscal policy is now less expansive.

The end of the recession in Brazil marked the beginning of a phase of recovery. With growth of 1.1%, the economic situation has improved significantly over the previous year (-3.5%). This may be due to improved export performance, the diminishing dynamics in domestic demand and the slight recovery in commodity prices.

**Eurozone:** The pace of growth in the eurozone is extremely high, and the economic recovery extends to all EU Member States. Gross domestic product was 2.4% higher in 2017 (previous year: 1.8%). The upturn is mainly driven by consumption. The sustained boost in jobs and moderate rates of inflation contribute to the rise in real incomes. The

alleviation of political uncertainty since the elections in the Netherlands and France is helping solidify optimism in terms of economic development in the eurozone. Exports and investments, likely a reflection of increased capacity utilization, also registered strong growth. The ECB's expansive monetary policy ensures continuation of exceptionally favorable financing conditions. Economic development is also characterized by a structural shift on the part of the Southern European Member States which were or still are particularly affected by the financial crisis and the crisis of sovereign debt. Despite the upturn, problems remain, such as the high level of non-performing loans and the divergence in per-capita incomes.

**Germany:** The German economy improved once again in 2017, and, at levels of capacity utilization that are already significantly higher than normal, is approaching an economic boom. Overall growth in 2017 stood at 2.5% (previous year: 1.9%). The recovery in the eurozone played a decisive role in this development. The revival of the global economy also led to an increase in export activity. As a consequence of increasing demand, companies are investing in added capacity as well as research and development. The favorable financing conditions present an advantage here, as key interest rates are expected to remain at their historically low levels. Increased private consumption is another reason for the higher rate of growth. The increase in employment continues, and the unemployment rate has fallen to its lowest level since German reunification.

#### Market-Specific Development

TÜV Rheinland offers its testing, inspection and certification services through companies on all five continents throughout the global TIC (Testing, Inspection, Certification) market. This gives the Group the ability to serve clients' often worldwide value chains. Demand for the testing, inspection, certification, consulting and training services of TÜV Rheinland is particularly high among clients in economically strong, industrialized countries. At the same time, new sales potential is developing in emerging markets. The global TIC market, and hence the business of TÜV Rheinland as well, are influenced by the following market factors and trends:

**Globalization:** Issues such as energy supply, infrastructure, international division of labor and mobilization are continuing to gain importance for our globalized society. For the TIC market, globalization entails opportunities and risks at the same time. Increasing liberalization efforts in markets strengthen global trade and open up opportunities to enter new markets. Worldwide supply chains render high-quality and globally uniform testing standards and certification services indispensable. On the other hand, the trend toward increasing regulation is continuing, and this includes the emerging economies. Already today, with its global orientation, TÜV Rheinland is very well positioned for increasing internationalization. Due to the elimination of barriers to entry, however, there is a risk of increasing competitive and margin pressure.

**Technologization and Digitalization:** The rise of new information technologies is changing society as well as the global markets and products. Against the backdrop of this digital transformation, TÜV Rheinland ensures the quality, safety, and controllability of the technologies involved. The following market trends are of particular importance here:

- **Internet of Things:** Through the networking of technologies of everyday life with the internet, in the area of smart home solutions, for instance, or in industrial components and products, the physical and online worlds are converging. This presents sweeping new opportunities but also challenges for providers and consumers.
- **Big Data:** Rapidly increasing use of the internet means that data providers are generating large volumes of data. The challenge is to make these quantities of data manageable while creating conditions that permit profitable use of them.
- **IT Security:** Round-the-clock availability and transmission of data – with mobile payments, for instance, or data storage in the cloud or in industrial plants – provide a textbook case of the growing importance of IT security.
- **Intelligent Transport Systems:** The vehicles of tomorrow will drive autonomously, permit remote diagnostics and offer a host of systems for safety and comfort. Mastering this communications infrastructure and ensuring transportation safety are central challenges for the mobility market.

**Industry 4.0:** The economy is on the verge of the next industrial revolution. In the future, the shape of industrial production will be characterized by strong customization of products under conditions of highly flexibilized production. Under this form of hybrid production, complex data networks will link customers and suppliers with production over the entire value chain. Labor-intensive and monotonous work steps in production are increasingly being taken over by robots, and the networking of machinery will increase. The requirements in which this results – in terms of availability, functionality and data and network security – will lead to additional potentials.

**Demographic Change:** TÜV Rheinland also views the demographic trend toward a globally aging population structure as an opportunity. In certain markets, such as health care and nursing care, an increase in demand for services in this portfolio can already be seen.

**Increasing M&A Activities/Consolidation in the Market:** In the market for technical services and particularly in the TIC market, a further trend toward consolidation can be seen as a result of major acquisitions or takeovers. This results in both opportunities and risks for companies based on their positioning in the changing TIC market. TÜV Rheinland has further strengthened its position through selective acquisitions made on a smaller scale.

The TÜV Rheinland AG Group provides products and services in the area of TIC for a variety of markets and industries worldwide. While global economic trends are important to TÜV Rheinland, they are not all-deciding, given the Group's diversification across industries and regional markets. In addition, the company is largely unaffected by specific developments in individual industries, particularly when it comes to mandatory inspections. At the same time, the following general economic and market-specific conditions in 2017 had an effect on TÜV Rheinland's business:

Overall economic conditions were upbeat in 2017. Due to the fact that in some cases the economy developed quite differently in the individual regional markets, the effects on the business of TÜV Rheinland must be analyzed by countries and regions.

In the business year 2017, the Greater China region with growth of 11.0% and business within Germany, which grew 5.8%, represented the main sources of revenue growth for the TÜV Rheinland Group. By contrast, revenue in South and North America was lower.

The European portion of TÜV Rheinland's business profited from the generally positive economic climate. The field of Electrical Engineering & Building Technology achieved an increase in revenue due mainly to stable growth in the construction sector. The increased number of inspections also had a positive effect on the driver's licenses business field as a result, among other things, of the fact that many of the refugees who had come to Germany took tests for driver's licenses. On the other hand, price pressures in the oil and gas sector, and a British economy weakened by "Brexit" had a negative effect on the business concentrated on the energy and oil sector in the UK. The Risktec Group nevertheless managed to stabilize itself despite a difficult market environment in the UK.

Despite increased economic growth in the United States, TÜV Rheinland's business had to cope with a slight decline in demand. The trend here was burdened, among other things, by a weak orders situation in the IT Services & Cyber Security business field. In contrast to the United States, the Mexican company reported increased revenue.

Against the backdrop of positive overall economic conditions in the regions of Greater China and Asia Pacific, TÜV Rheinland's business in those regions plays a growing role in the Group. The business there is resistant to the declining trends in growth in the Chinese markets. Market prices in the Electrical business field were lower in 2017. This field fell short of forecasts as a result. There was a significant increase in revenue and earnings in the Greater China region overall, however. In Japan, on the other hand, revenue was 11% lower. Total sales growth for the Asia Pacific region is relatively homogeneously distributed across the individual countries, even as the Electrical business field achieved particularly strong rates of growth in the countries of Indonesia, Korea, the Philippines and Taiwan.

With the first positive indications in the investment-driven business in Brazil, earnings in South America improved on a year-over-year basis. With demand in the Brazilian market slightly higher – albeit in a context of considerably lower price levels – there were positive signals from the markets in Argentina, Chile and Colombia. An upward trend was seen particularly in demand for services around electronic products, and in demand within the Systems business stream.

The recovery in the Russian economy also had a positive effect on business for TÜV Rheinland.

As a globalized service company, the goal of TÜV Rheinland is to systematically strengthen its operations worldwide. The focus at TÜV Rheinland in this regard is particularly on expanding its operations in the markets in which the company can make ideal use of its competitiveness and tap new markets as a result.

In its market position, the TÜV Rheinland AG Group ranks among the largest market participants in the TIC sector. Overall, the TÜV Rheinland AG Group views itself as extremely wellpositioned compared to the international competition, and is confident that it will succeed in further improving its position in the global TIC market. In this connection, the increasing liberalization of the markets and expanding international trade are both to be viewed as opportunities.

Consumers' increased demand for information – in relation to information about production conditions, for instance, or a responsible approach toward the environment – can be met through complete and credible transparency. In this connection, independent testing companies such as TÜV Rheinland play a crucial role, as they generate security, credibility and trust through certification and proof of testing. To maximize the comprehensibility of the testing approach, TÜV Rheinland provides the certificate database Certipedia, in which users can search for details such as testing criteria or methods. TÜV Rheinland also offers its customers a Customer Information System that they can use to manage all of the information associated with TÜV Rheinland. A web portal makes the certification process more transparent. This close communication between customers and TÜV Rheinland makes it possible to close vulnerability gaps and improve efficiency.

Further advances in digitalization increase the risks of hacker attacks and cyber crime. The IT security experts at TÜV Rheinland provide support predominantly for medium-sized entities with the “APT Defense Service,” which, for instance, contains a sensor-based review of network traffic. The Cyber-Security Division of TÜV Rheinland also develops solutions for the main security questions involved in networked production facilities, smart home systems or the increasing use of cloud data storage.

Legislatures have turned to measures such as the German IT Security Act or the EU Cybersecurity Directive in an attempt to counter the growing risk of cyber crime. These measures include obligations to comply with minimum standards with regard to IT security. In this context, TÜV Rheinland offers services worldwide, ranging from strategic consulting and process optimization to implementation or certification of secure IT systems and telecommunications networks.

In addition to the growth potential that presents itself through advances in digitalization, other positive effects are also expected for the original core business of TÜV Rheinland. Particularly the increased demands on the mobility market by intelligent transport systems present opportunities for expansion in TÜV Rheinland's business. TÜV Rheinland expects other growth opportunities through increasing demand for quality assurance along the supply chain, for example by means of system certification, product testing and inspections, as well as in the field of energy and infrastructure.



## CORPORATE MANAGEMENT – GROWTH AND LONG-TERM VALUE ENHANCEMENT AS TARGET

The business strategy of TÜV Rheinland defines the company's focus and goals for the coming years. The main pillars of the strategy are profitable growth, further internationalization, and a systematic focus on the Group's customers.

The area of corporate management relies on a Group-wide management information and controlling system that creates cost and income transparency in all areas, thus contributing to profitable earnings performance. Reporting is standardized worldwide and is based on the International Financial Reporting Standards (IFRS).

The focus is on the following financial target and management figures: revenue, earnings before interest and taxes (EBIT) as well as requirements for optimized working capital management. The Group's value-oriented management is further strengthened by making these performance and management figures a fixed component of the executive-level compensation structure.

Approved in 2015, the Business Strategy 2020 takes into account essential, sustainable changes that stem from the digital revolution and ongoing globalization. The aim is to ensure that TÜV Rheinland remains sustainable and successful in a TIC market characterized by continued consolidation.

The aim is to continue to achieve profitable growth in all business streams. Above-average long-term growth is expected particularly in the ICT & Business Solutions, Products and Industrial Services business streams.

The focus areas are clearly defined: The reputation and protection of the TÜV Rheinland brand continues to enjoy top priority. TÜV Rheinland has also made it its mission to reduce the number of accidents in the TÜV Rheinland Group even more significantly. The quality of the services and innovation in the products and services offered by the TÜV Rheinland AG Group also represent elements of sustained success. To ensure the Group's long-term investment capability, another focus for the years ahead is an increase in return.

Particular focus in investments continues on the work areas of digitalization (e.g. IT security, Industry 4.0 or intelligent transport systems), supply chain services (qualification of the supply chain through system certifications, product testing and inspection) as well as energy and infrastructure (e.g. railway technology, asset integrity management). Thus, TÜV Rheinland is concentrated on work areas that already belong to its core business or give rise to expectations of significant market growth.

## RESULTS OF OPERATIONS, FINANCIAL POSITION AND NET ASSETS

The consolidated financial statements of TÜV Rheinland AG are prepared in accordance with IFRS.

### Development of Revenues

Consolidated revenue (including inventory changes) of the TÜV Rheinland Group increased from €1,917.6 million in the previous year to a total of €1,971.9 million in the 2017 business year; this represents an increase of €54.3 million. €895.3 million of total revenue was generated abroad. Revenues by business stream break down worldwide as follows; due to fluctuations in exchange rates, what follows also contains the figures adjusted for exchange rates in the 2017 business year:

#### REVENUE BY BUSINESS STREAM

in € millions	2016	2017	2017*
Industrial Services	520	503	507
Mobility	486	508	510
Products	519	524	536
Academy & Life Care	219	226	227
ICT & Business Solutions	131	139	139
Systems	166	203	208
Other**	-123	-131	-135
<b>Total</b>	<b>1,918</b>	<b>1,972</b>	<b>1,992</b>

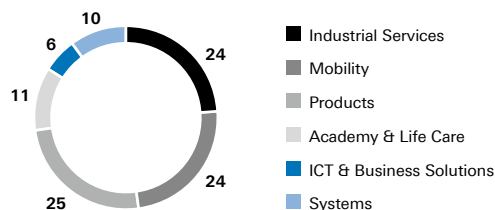
\* Revenues at constant exchange rates.

\*\* Intra-Group revenue and central functions.

The following graph shows the percentage of revenue generated by each business stream:

#### REVENUES BY BUSINESS STREAM

in %

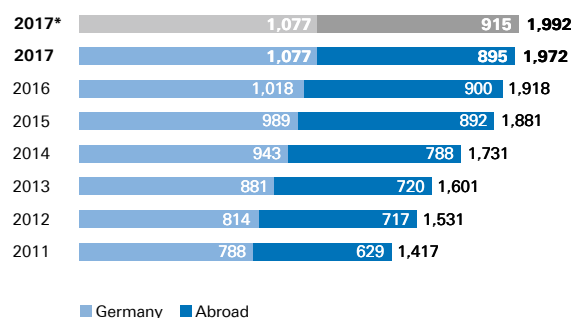


The €54.3 million increase in total revenue year-over-year corresponds to a 2.8% relative increase in revenue and is attributable mainly to domestic business. What follows is a diagram showing the revenue trend (including inventory changes, in € millions) for recent years, both domestically and abroad:

#### DEVELOPMENT OF REVENUES

(including inventory changes)

in € millions



\* Revenues at constant exchange rates.

In the 2017 business year, fluctuations in exchange rates, specifically further devaluations of the Chinese yuan and the Brazilian real, led to a reduction in revenue. Holding exchange rates constant, revenue was up by €20.4 million, resulting in currency-adjusted revenue totaling €1,992.3 million. This corresponds to additional revenue growth of 1.0%. The €54.3 million in additional revenue generated by the TÜV Rheinland Group in the 2017 business year contains a total of €3.9 million

in revenue owing to extension of the scope of consolidation. Domestic revenue growth was essentially organically based; worthy of particular note in this connection are the Mobility, Products, Academy & Life Care as well as the ICT & Business Solutions business streams, which contributed to single-digit percentage growth in revenue. At constant exchange rates, revenue growth abroad was chiefly the result of organic growth as well; the Greater China region in particular further increased its revenue year-over-year to make a significant contribution to revenue growth during the business year under review. Due to fluctuations in exchange rates, total revenue generated abroad is slightly lower than the previous year's level.

The **Industrial Services business stream** generated only the third-highest contribution to revenue for the TÜV Rheinland Group in the 2017 business year. By comparison, however, revenue was €17.6 million or 3.4% lower year-over-year; at constant exchange rates, the decline is not as pronounced and stands at just €13.7 million or 2.6%. The decline in revenue for the Industrial Services business stream is essentially related to the continuingly difficult project management business in Brazil. The continuing political and economic crisis in Brazil, which is accompanied by ongoing weak demand for services in the energy and infrastructure sectors, is the essential factor involved in the decline in revenue in this business stream. TÜV Rheinland was not yet in a position to benefit from the recovery in the prices of commodities such as iron ore and petroleum during the 2017 business year. The price pressure in the oil and gas sector that continued in spite of the recovery strained the inspections and materials testing business areas in the 2017 business year. On the other hand, the strong trend in the construction sector in Germany, coupled with accelerated growth in Asia, contributed to stable revenue. Noteworthy in this connection are China and Korea, which made positive contributions with revenue growth during the business year.

The **Mobility business stream** increased its revenue by €21.3 million or 4.4% to make the second-largest contribution to revenue. Decisive in this development, among other things, was very good growth in the business fields of Periodical Technical Inspections and driver's licenses. Growth in the domestic testing authorities' business was significantly driven by the franchise system. Revenue growth outside of Germany owes particularly to the Asia Pacific and Central and Eastern Europe regions. The driver's license business field continued to benefit from the increased number of tests, due in part to the fact that many of the refugees who have come to Germany took tests for driver's licenses. The longstanding positive trend in the Damage and Value Assessments business field continued. Continued internationalization of the business field is being pursued. In the 2017 reporting year, revenue was higher year-over-year across all of the business fields in the Mobility business stream.

The **Products business stream** also reported significant revenue growth in the business year completed, also compensating for relocation of the inspections business to the newly established Government Inspections and International Trade business field with a volume of €23 million and making the largest revenue contribution in the reporting year. Revenue for this business stream was €5.0 million higher year-over-year. A very solid revenue trend was reported in both Germany and China. Revenue for the Softlines (testing of toys, cosmetics and textiles, among other things) and Hardlines (testing of furniture and household goods as well as of mechanical products) business fields was higher once again. The Electrical business field (safety and quality testing of electronic products) also expanded due to the business acquisition of 4ffCom AG and the purchase of a laboratory in Sweden. The company 4ffCom AG, for instance, offers solutions for automating test procedures for wireless radio links of devices and can thus contribute to significant added value in the Products business stream.

In the **Academy & Life Care business stream**, revenue rose significantly by €6.9 million or 3.2% year-over-year. Some 85% of revenue continues to be generated in Germany. A positive development is reported in all business fields; of particular note is the strong development in the Further Training & HR Development business field, as restructuring of this business field, together with the expanded activities in India, largely exceeded ambitious forecasts. Solid business development in the countries of China, Mexico, Saudi Arabia and Luxembourg were also a source of the very good earnings in this business stream. In the 2017 business year, major market opportunities presented themselves in the areas of health, safety and environment (HSE) management, occupational integration management, personnel certification as well as technical & vocational education & training (TVET). In return, the difficulty of recruiting skilled employees in Germany (especially doctors and social education workers) is inhibiting growth, as has also been shown in the Academy & Life Care business stream.

The **Systems business stream** reports revenue growth of €37.3 million or 22.5%. Approximately €25 million of this amount is due to the above-referenced transfer of revenue from the Products and Mobility business streams to the newly established Government Inspections and International Trade business field. Profitability growth outperformed forecasts in nearly all markets, while revenue growth – in spite of the year-over-year revenue increase – fell somewhat short of expectations. Business in Germany, however, significantly recovered after the previous year's decline in revenue and earnings. Revenue in accredited business more than offset the shortfall in the non-accredited area. Growth impulses were seen once again in the 2017 business year in the Customized Services business field, in which the Group offers services, among others, related to sustainability, compliance and service quality. In addition, the reorganization of sales activities in Germany was an essential focus for the Systems business stream, creating the main basis for revenue expansion in subsequent years.

The **ICT & Business Solutions business stream** also reported an increase in revenue, in the amount of €7.6 million, or 5.8%. The Telco Solutions & Consulting business field reported encouraging development and was able to increase its revenue by 9.8%. The Telco IT Services and Cyber Security business field was able to increase revenue by only 2.2% year-over-year. The reason for this was the loss of a major customer in the United States and the shrinking project volume during the current business year. The effect of the change in sales structures in the United States took shape only slowly in the form of increased revenue. In return, the acquisition of 2M Consultancy Ltd. during the business year contributed an additional €3.3 million in revenue. Again in this year, the ICT & Business Solutions business stream outside of Germany was particularly active in the United States.

Domestic revenue was 5.8% higher in the 2017 business year. Foreign revenue, on the other hand, lost 0.5% year-over-year; at constant currency rates, the drop amounted to just 0.8%.

Foreign revenue was slightly below the previous year and stood at €895.3 million; on a currency-adjusted basis, this totaled to €921.0 million, which corresponds to 2.9% growth. Hence, 45.4% of the Group's revenue was earned internationally.

### Development of Income

#### EARNINGS BEFORE INTEREST AND TAXES (EBIT)

in € millions

2017	130.6
2016	122.6
2015	91.3
2014	110.2
2013	117.1
2012	113.2

in € millions	2016	2017
<b>Earnings before interest, taxes, depreciation, and amortization (EBITDA)</b>	<b>193.4</b>	<b>206.5</b>
Amortization of intangible assets and depreciation of property, plant, and equipment	-70.8	-75.9
<b>Earnings before interest and tax (EBIT)</b>	<b>122.6</b>	<b>130.6</b>
Financial result	-18.4	-12.2
<b>Earnings before tax (EBT)</b>	<b>104.2</b>	<b>118.4</b>
Taxes	-38.2	-40.3
<b>Consolidated net income</b>	<b>66.0</b>	<b>78.1</b>

At €206.5 million, earnings before interest, taxes, depreciation, and amortization (EBITDA) are 6.8% higher than the previous year's total of €193.4 million. Earnings before interest and taxes (EBIT) as well as earnings before tax (EBT) turned out higher than the previous year, improving year-over-year by 6.5% and 13.6%, respectively.

With the exception of the ICT & Business Solutions business stream, all other business streams exceeded prior-year values; the Systems business stream significantly bettered its prior-year values. Earnings before interest and tax (EBIT) exceeded the previous year's value by a total of €8.0 million and meets the expectations set for the business year.

In the **Industrial Services business stream**, the Project Management business field – despite the continuing difficult environment in Brazil – was able to hold or slightly improve upon the earnings level of the previous year. Earnings for the Pressure Equipment business field were also not significantly higher year-over-year, due particularly to stiffer competition accompanied by price and margin pressures. By contrast, the Electrical Engineering & Building Technology and the Lifting Equipment and Machinery business fields each managed to generate significant year-over-year earnings growth.



The **Mobility business stream** significantly exceeded its earnings targets. Earnings in the Mobility business stream was better in the Technical Inspections, driver's licenses and Engineering & Type Approval business fields. In the case of Technical Inspections, Spain and France developed very well despite the high competitive pressures and were able to slightly overcompensate for the slightly weaker trend within Germany. The turnaround in Chile was also successful and was reflected accordingly in EBIT. The Rail business field fell short of expectations, particularly in Greater China, North America and IMEA, due to postponed new projects or a lack thereof; still, the business field closed out 2017 with a year-over-year improvement in EBIT.

The **Products business stream** continues to experience increasing demand, even though the earnings targets were not met in all of the foreign markets. In Germany, real interest was evident in the Softlines and Hardlines business fields, particularly among our major customers in the retail sector. Following the very dynamic previous year, the Electrical business field remained below expectations. One reason for this was the declining level of market prices for services in China. The Medical business field continues to face the challenge of finding enough auditors in a very tight labor market. Finally, the sale of three specialized subsidiaries in Greater China in late September 2017 closed out the Foodstuffs business field.

Development in the **Academy & Life Care business stream** was very encouraging. The forecast revenue figures, and earnings in particular, were significantly exceeded. A positive highlight of the Occupational Health & Safety business field is the BMW project in Mexico. In the Further Training & HR Development business field, the earnings forecast for the business year under review were exceeded as a result of restructuring measures, despite the fact that the deviation in revenue in Germany was declining. The Labor Market Services & Private Schools business field additionally benefited from policies in the employment market.

To date, the **ICT & Business Solutions business stream** falls short of earnings expectations. A weak orders situation in the core markets of Germany and the United States is exerting downward pressure on the IT Services & Cyber Security business field. A positive contribution stemmed from acquisition in May of the 2M Consultancy Ltd, a company from the UK. Cost-cutting led to positive earnings in the Telco Solutions & Consulting business field. Both business fields are devoting extensive efforts to market positioning and future customer orientation.

In the **Systems business stream**, earnings in the area of Certification of Management Systems as well as Government Inspections & International Trade were significantly higher year-over-year. The Certification of Management Systems business field registered 77.1% earnings growth.

Earnings before interest and tax (EBIT) includes €1.8 million in expenses from currency translation, €11.2 million in restructuring expenses and income from final consolidation totaling €6.9 million in connection with the disposal of both the Foodstuffs area in China and Luxcontrol GmbH.

Purchased services expressed as a share of total revenue held steady year-over-year at 16.1%.

The share of personnel expenses declined, going from 55.7% the previous year to 54.9% in the current business year.

Expressed as a share of total revenue, other expenses are 0.8% higher than the previous year's value of 21.4%.

Other operating income also changed; the 3.3% share in 2016 has risen to 3.7% in the 2017 business year.

The financial result improved year-over-year by €6.2 million overall. The decline to 33.8% is due mainly to lower interest expenses to banks as a consequence of repayment of bank loans in the 2017 business year. A €1.7 million year-over-year decrease in interest on pension provisions also had a positive effect on the financial result. At €118.4 million in the reporting year, overall earnings before tax (EBT) are 13.7% higher than the previous year's amount.

Of the €40.3 million in income taxes (previous year: €38.2 million), domestic business accounted for €21.3 million. The tax rate fell once more, from 36.7% the previous year to 34.0% in the year under review.

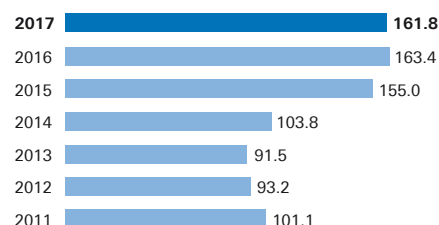
Consolidated net earnings increased by 18.4% and went from €66.0 million to €78.1 million.

### Financial Position

The cash flow statement was prepared on the basis of the consolidated financial statements.

#### CASH FLOW FROM OPERATING ACTIVITIES

in € millions



Cash flow from operating activities in the 2017 business year stood at €161.8 million and remained at the previous year's level. While consolidated net income was €12.1 million higher and the change in deferred tax assets and deferred tax liabilities also increased by €8.7 million, long-term pension provisions were €10.9 million lower, with current debt also lower. The decline in current debt is due to the fact that, owing to the positive trend in the cash net position, and, in contrast to the previous year, regular payment runs had been completed by the end of the year.

Cash flow from investment activities was €6.2 million lower year-over-year; the reduction in cash outflows owes particularly to lower payouts for corporate acquisitions and reduced investments in intangible assets and property, plant, and equipment.

In the area of financing activities, repayments of bank liabilities, the termination of factoring and, in particular, the reduction in the taking out of additional financial loans led to a reduction in cash flow from financing activities. Taking the payout of dividends to the shareholder into account, cash flow from financing activities was negative and totaled to €97.2 million.

Restrictions affecting the availability of capital total to €64 million in the 2017 reporting year.

Cash and cash equivalents as of the balance sheet date stood at €193.9 million; with financial liabilities reduced to €225.7 million, net financial liabilities were lower once more, totaling to €31.8 million (previous year: €38.5 million). This change year-over-year is primarily associated with the improved earnings and further optimized working capital management.

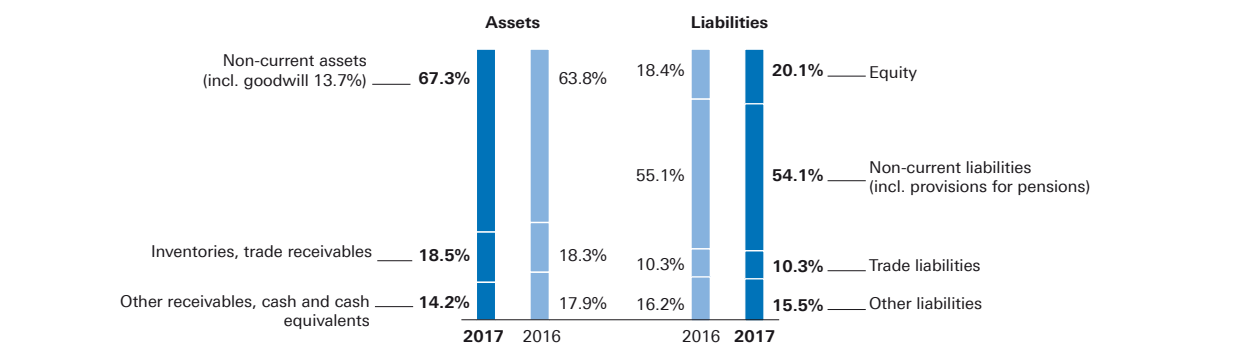
To ensure its ongoing solvency, the TÜV Rheinland AG Group maintains extensive current and non-current lines of credit. €238 million of this was used as of December 31, 2017.

### Balance Sheet and Capital Structure

The balance sheet total is 4.8% or €89.6 million lower, falling to €1,788.8 million.

Non-current assets grew by €6.3 million or 0.5% to €1,203.0 million. In the case of intangible assets, net investments of €20.3 million (€5.0 million of which in goodwill) led to an increase that contrasted with €20.9 million in depreciation and amortization and currency effects totaling €-10.8 million. €63.4 million in net investments in fixed assets as well as currency changes of €-7.3 million were accompanied by depreciation totaling €55.0 million. Deferred tax assets were €5.2 million lower on the year.

## BALANCE SHEET AND CAPITAL STRUCTURE



Current assets were €95.9 million lower, due mainly to lower cash and cash equivalents of €193.9 million (previous year: €237.3 million) as well as other receivables and other assets amounting to €54.3 million (previous year: €87.6 million). The sum of inventories and trade receivables was also €14.2 million lower year-over-year; income tax receivables were also €5.2 million or 41.0% lower.

Equity was €12.7 million higher and went from €346.2 million to a total of €358.9 million. The main factor in this was the positive addition from consolidated net income in the amount of €78.1 million. The dividend for the 2016 business year amounting to €25.0 million, which was distributed to the shareholder TÜV Rheinland Berlin Brandenburg Pfalz e.V., reduced equity, as did currency differences of €24.6 million.

This improved the equity ratio, companion to a balance sheet total that was 4.8% lower, from 18.4% to 20.1%.

Within non-current liabilities, among other things, pension provisions fell from the prior-year value of €742.4 million to €731.5 million. In addition, financial liabilities were €53.3 million lower as a result of the repayment of bank liabilities.

Current liabilities were €36.3 million lower as well, owing principally to a reduction in trade liabilities from €193.1 million in the previous year to €185.1 million as of the current balance sheet date, as well as the elimination of factoring at the end of the business year, with an impact of €15.0 million.

#### Investments

The volume of investments in the business year, not including corporate acquisitions, totaled €91.3 million.

The TÜV Rheinland AG Group is underscoring the importance of its largest location in Germany with continuation of the extensive new construction and refurbishing measures on the grounds of the Group's headquarters in Cologne. In 2017, this work particularly concerned the modernization of the main building. Among other things, the structural measures undertaken there include the renovation of the façade, fire protection, heating and air conditioning as well as electrical installations. Around €16.9 million was invested in refurbishment of the main building in the year under review. The main building was occupied in April 2017.

Furthermore, the Group made investments largely in laboratories, testing facilities and in software.

For testing laboratories, in particular in the work areas of energy efficiency, EMC (electromagnetic compatibility), photovoltaics and chemical inspections, substantial investments were made in the total amount of €9.5 million. Asia Pacific and Greater China were the regions of focus. Expansion of the laboratory network for Softlines, Chemicals and Electrical in the growth markets of the TÜV Rheinland Group is of particular strategic importance in this context.

In the Mobility business stream, there were also investments of around €4.7 million in expanding and improving the level of equipment in the network of motor-vehicle testing authorities.

With investments totaling €17.0 million in 2017, TÜV Rheinland stepped up its focus on its innovative capacity, investing in future- and digitalization-related areas (such as wireless, cyber security or autonomous driving). This also entails expanding and strengthening the IT infrastructure and procuring highly specialized testing software and technology. The performance of the IT infrastructure was strengthened, particularly through investments in improved hardware, targeted increases in server capacity and higher-performing telecommunications equipment. In the Mobility business stream, investments were made in implementing new testing and inspection software as well.

## EMPLOYEE REPORT

As of the end of the year 2017, a total of 20,139 employees (full-time) were employed at TÜV Rheinland AG Group. The average number in the reporting year was 19,924 employees; in a year-over-year comparison, this represents an increase of 253 employees or 1.3%.

The average workforce size abroad stood at 11,420, which corresponds to a share of 57.3%. Overall, the number of employees abroad held steady year-over-year (+35 employees or +0.3%). The average number of employees in Germany, by contrast, increased by 218 and went from 8,286 to 8,504 during the year under review (+2.6%).

In addition to the increase seen in Germany, the overall change in workforce size owes particularly to the workforce increase in Greater China. The workforce declined, on the other hand, in Brazil and the Gulf States.

### TOTAL STAFF (AVERAGE)

in FTE (full-time equivalent)



### Information in connection with the law mandating equal participation by men and women in management positions in the private sector and in the civil service

Diversity is a focus in the sustainability strategy of TÜV Rheinland. In concrete terms, this means increasing the share of women in management positions within the Group to 15% in 2020, with 20% of positions in top management bodies filled internationally. We achieved both targets during the reporting year. The share of women in management positions is 15.2% (previous year: 12.8%), and 27% of the positions in top management bodies have been filled internationally.

We had set ourselves a target for the proportion of women in the Supervisory Board of TÜV Rheinland AG at 3 of the then 12 posts. We successfully reached this target by the deadline of June 30, 2017. In fulfillment of statutory requirements, however, the total number of seats on the Supervisory Board now stands at 16. The Supervisory Board had specified 20% as the proportion of women in the Executive Board at TÜV Rheinland AG; this target could not be reached by the reporting deadline. It was, however, decided during the business year that a new female member would be appointed to the Executive Board in 2018. This achieves a rate of 25%.



The targets in the company's top level of management are 14% and 24%. The first target was to be reached by June 30, 2017, and was precisely met. The second target must be reached by December 31, 2020. There is no second level of management in place at TÜV Rheinland AG.

Targets have been defined for the five German subsidiaries subject to quotas under the law mandating equal participation by men and women in management positions. These are set forth on the website: [www.tuv.com](http://www.tuv.com).

## **RISK MANAGEMENT SYSTEM AND CORPORATE GOVERNANCE**

For a global company like TÜV Rheinland AG, a comprehensive internal control system (ICS) – in relation to IT-assisted business processes and paired with effective and efficient risk management – is an indispensable control element which defines the framework for management and monitoring. The ICS is mainly intended to ensure compliance with statutory requirements, TÜV Rheinland-specific guidelines, and TÜV Rheinland corporate objectives.

In addition, risk management aims to identify and evaluate risks at an early stage, so that suitable precautions, controls, and safeguards can be put in place and proactive countermeasures can be initiated. TÜV Rheinland AG's Executive Board is responsible for the Group's risk management system.

A detailed description in the quality management system and explicit treatment in the management framework manual define the risk management process of the TÜV Rheinland Group. These documents are available around the world on the company's intranet. An interdisciplinary risk unit has long been in place at TÜV Rheinland AG.

Multiple amendments to applicable laws and provisions were passed in recent years with the goal of further improving corporate governance. In keeping with international standards, the Corporate Sector Supervision and Transparency Act (KonTraG) requires the Executive Board to take suitable measures to ensure that developments which might pose a threat to the company's continued existence are made identifiable at an early stage. This requirement is taken into account by an effective ICS and TÜV Rheinland's early risk warning system. The Group's Corporate Audit Department also applies a risk-oriented audit approach to check the ICS of TÜV Rheinland companies around the world in accordance with international auditing standards.

In addition, information derived from quarterly risk reporting by the Executive Vice Presidents is subject to detailed analysis in connection with the regions involved. Based on the information obtained, all of this information is then aggregated into one report. This report is then appraised from portfolio and Group viewpoints. Risk determination is based on the areas of risk that are specific to TÜV Rheinland. These areas comprise the categories market/customer, processes, employees, finances, accreditations/standards/regulatory framework and miscellaneous. Risk quantification is based on the anticipated impact on earnings as well as the likelihood of the risk's occurrence. Additionally, the stating of planned countermeasures also represents a central component of the risk management process.

Dealing with risks is also a part of the ongoing reporting process. Reporting follows the requirements of the matrix structure and, in addition to regularly updating the economic outlook, also takes business-specific early indicators into account. This forms an essential foundation for recognizing risks as well as introducing and consistently pursuing specific efforts to avert possible damage to TÜV Rheinland. In addition, the Executive Board is informed of significant circumstances by means of ad hoc disclosures. In the case of transactions that may have a significant impact on the performance of a business stream or business field, an approval process established worldwide provides transparency and reduces risk.

Risk management thus forms an integral part of the Group's standard planning, reporting, and control processes and is incorporated into the information and communication system at TÜV Rheinland AG. It is continuously enhanced and adapted to changing framework conditions. Risk management is therefore suitable for identifying risks at an early stage that pose a threat to the Group's continued existence and for taking appropriate countermeasures.

The TÜV Rheinland Group abides by the basic principles of good corporate governance, which place a focus on the legal and practical framework of managing and monitoring the company. In particular, the Group utilizes a professional compliance management system that is designed with prevention in mind and sets the relevant framework for TÜV Rheinland. Specifically, this framework includes the Code of Conduct, a compliance guideline, a guideline for avoiding conflicts of interest and corruption, a guideline for donations and sponsoring, and an external helpline for matters concerning compliance. An active worldwide network of compliance officers has been established who are available to our employees as competent points of contact.

TÜV Rheinland is convinced that proper corporate governance is of great importance to its long-term success and that the implementation of and adherence to the corresponding guidelines play a key role in permanently strengthening the trust placed in the Group by all interest groups.

## VALUE MANAGEMENT AND BUSINESS-RELATED ENVIRONMENTAL AND SOCIAL FACTORS

The TÜV Rheinland AG Group is committed to conducting itself in accordance with the principles of the UN Global Compact and the IFIA (International Federation of Inspection Agencies). Specifically, this entails explicit consideration of human rights, labor standards, the concerns of environmental protection and the fight against corruption as well as the implementation of these in practice.

TÜV Rheinland systematically continued its activities in regard to social responsibility and sustainability during the 2017 business year. TÜV Rheinland manages the topics of CSR and compliance on the basis of sustainability management and a compliance management system. Here, the sustainability strategy, which is linked to the corporate strategy, forms the substantive framework; with its five areas – governance, sustainable human resource management, efficient energy and resource consumption, social commitment, and service responsibility – it helps strengthen the key factors for success, thereby helping achieve the goal of becoming the world's best sustainable and independent service company in the field of testing, inspection, certification, consulting and training. The targets set for TÜV Rheinland in the areas of compliance, energy consumption, emissions, diversity, workplace health and safety, and society were at the root of the substantive continuation of the program for CSR and sustainability again in 2017. One new element, for example, is the Task Force for Sustainability Services, which deals with the systematic, cross-business stream definition and development of sustainability services.

Within the framework of a Group-wide change program, beginning in late 2016, TÜV Rheinland revised its own mission statement along with other central documents and measures that influence corporate culture. Still articulated in the mission statement is this central goal: TÜV Rheinland intends to be the best sustainable and independent service provider for testing, inspection, certification, consulting, and training. New are five values defined by TÜV Rheinland and highlighted in the mission statement: Integrity, Excellence, Customer Orientation, Performance Orientation, and Agility. These values will be considered as principles within the company. Important steps were taken in 2017 to anchor these values among the employees of TÜV Rheinland. In addition to a large number of communication measures, these steps included, among other things, consideration of the values in the competence model for employees as well as the redesign of programs for manager development rooted in these values.

## OPPORTUNITY AND RISK REPORT

In connection with risk management, special attention is paid to opportunities and risks that are not explicit elements of planning. Important aspects result from TÜV Rheinland's global orientation and primarily relate to customers and markets as well as to legal and political framework conditions.

Opportunities are mainly associated with service innovations in individual business streams and business fields. Prominent examples of this are applications in the field of the biocompatibility of medical products. Increased acquisition of major contracts, such as the monitoring of infrastructure projects together with the relevant delivery chains, offers further potential. Major opportunities also exist in the continued significant growth of international markets. These markets include the Gulf region, where additional potential is tapped through the continuously expanded presence as well as a continuous diversification of the spectrum of services offered. The resulting network, which will follow globalized value chains and client demand even more closely, forms one of the most important strategic pillars of TÜV Rheinland. The institutionalized, close coordination between business-specific and regional expertise results in additional opportunities – for example, in identifying new fields of activity as well as the effective and efficient handling of cross-border projects. Furthermore, reducing complexity and increasing standardization in all business streams open up areas of potential. In addition to optimizations in sales and administration, this includes pooling operations across national borders and the use of innovative IT applications according to customer wishes.

The opportunities presented by digitalization or Industry 4.0 are presented in the "Market-Specific Development" section (page 77 ff.).

Major items arise out of the global orientation of TÜV Rheinland, specifically concerning customers and markets, the stability of political and social conditions, as well as international trade and financial systems together with their potential impact on the economy. In this regard, the continued increase in geographical and service-related diversification has a risk-reducing overall effect. This makes it possible to cushion accelerated growth in China, or continuing challenges of the kind witnessed in Brazil. Changes in regulatory framework can result in a liberalization of markets. This can produce opportunities, but also risks, such as for the Governmental Inspections business field. Late issuance of accreditation, or its possible withdrawal, poses a risk as well. Measures for risk management focus on the quality of services, which forms a central element of corporate strategy. The point here is also to prevent negative repercussions for the reputation of the TÜV Rheinland brand.

Possible strains can also stem from regulatory changes as well as sector-specific developments, such as changes in customer requirements and demand in the oil and gas sector, or in renewable energies. In addition to this, in various markets, there is also the challenge of finding skilled workers in numbers sufficient to enable further innovation and growth or qualifying personnel while avoiding high rates of turnover. This applies to specialized engineers and qualified IT personnel, among others. Continued consolidation in the TIC industry, combined with price and margin pressure as well as increasingly fierce competition, poses an ongoing challenge.

Risks may arise both from the company's own business activities and from external factors; in the case of breast implants of the French company Poly Implant Prothèse (PIP), for example, TÜV Rheinland is mentioned as the Notified Body in connection with conformity assessment procedures conducted pursuant to the European Medical Devices Directive. PIP continuously deceived the Notified Body TÜV Rheinland LGA Products GmbH (TRLP) by using, in some cases, a silicone gel for the production of the implants which was not approved for this purpose and was not covered by the certification by TRLP.

To date, the German courts have consistently confirmed that TRLP fulfilled the duties of a Notified Body responsibly and in compliance with all laws and legal norms applicable in Europe. In one case, the German Federal Court of Justice [Bundesgerichtshof – BGH] referred questions regarding the interpretation of the Medical Devices Directive to the European Court of Justice (ECJ) for a preliminary ruling. In its judgment of February 16, 2017, the ECJ essentially confirmed the legal position of TÜV Rheinland and found that a Notified Body does not have a general obligation to carry out unannounced inspections, to examine products and/or to view a manufacturer's business records. Only if there are indications that a medical device does not meet the requirements set out in the Directive must the Notified Body follow up upon these indications. In the case of "PIP," to date the German courts of fact have always found that the Notified Body had not been presented with such evidence. On the basis of the ECJ's replies, in its judgment of June 22, 2017, the German Federal Court of Justice [BGH] finally rejected the appeal. The judgment of the BGH is final. As a result, a number of other German courts of first and second instance have issued rulings in favor of TRLP.

TÜV Rheinland's legal view was also declared correct in a judgment of the appellate court in Aix-en-Provence, France. The appellate court found that TRLP fulfilled its duties as the Notified Body in line with the applicable laws and norms and that the Notified Body had no indications of a lack of conformity. Only the commercial court in Toulon has repeatedly taken a divergent opinion in isolated rulings in first instance, granting plaintiffs' preliminary claims for damages. TÜV Rheinland has also lodged an appeal before the appellate court in Aix-en-Provence in response to the most recent rulings rendered in Toulon. The matter is also under consideration by the top French civil court. TÜV Rheinland is confident that the current line of case law will be confirmed before these courts as well.

Using systematic risk management, the aforementioned risks can be made more manageable or the undesirable effects thereof weakened. Due to the integration of risk management into TÜV Rheinland's management information system, risk is controlled by appropriate weighting consistently in all business streams and companies as well as at the Group level.

Targeted countermeasures are undertaken comprehensively at an early stage to minimize risks. This applies not only to market, customer and competition issues but also to internal processes in particular, such as systematic integration following M&A transactions. Continuous tracking of measures and updating of risk reports in the course of the year are obligatory. The Executive Board has set up a risk unit to which the Compliance, Controlling, Finance, Quality Management, Legal, Corporate Audit, and Insurance departments belong. Its task is to analyze and evaluate risks.

TÜV Rheinland counteracts liquidity risk by means of active financial management, the overriding objective of which is to ensure solvency at all times. Specifically, this includes systematic working capital and treasury management. The latter particularly includes implementing cash pooling and in-house banking. Financial derivatives are used to hedge currency and interest-rate risks. As of the reporting date, derivative financial instruments are of rather subordinate importance in terms of their volume and risk potential; a shift in the yield curve of +100 (–100) base points would change the market value of the interest-rate swaps by €607 thousand (€–607 thousand). Currency risks do not, for the most part, exist within the TÜV Rheinland AG Group because individual Group companies largely conduct their operational activities in their respective functional currencies. Any major currency risks resulting from operational business may be hedged by the use of financial derivatives. In addition, loans granted to subsidiaries and denominated in foreign currency are secured by currency derivatives. As of the reporting date, TÜV Rheinland AG held currency derivatives with a nominal volume of €33,500 thousand.

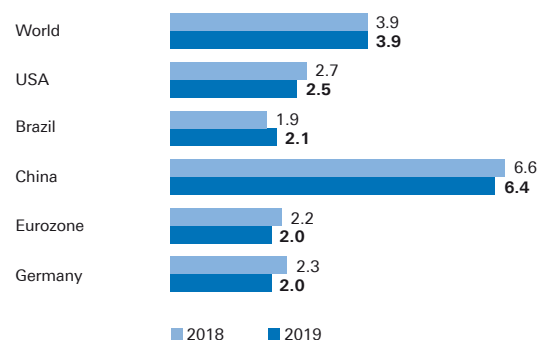
As far as possible, risks are hedged by taking out specific insurance coverage to minimize their financial consequences up to a defined deductible.



## OUTLOOK

### FUTURE ECONOMIC OUTLOOK

Forecast 2018 to 2019 (in %)



Source: IMF World Economic Outlook Update January 2018.

The global economy is projected to expand in 2018 and 2019. The economic experts at the International Monetary Fund forecast an overall increase in global gross domestic product of 3.9% for 2018. Against the backdrop of a slow limitation in expansive monetary policy, increasing stimulus on the part of fiscal policy and a resumption of stronger growth in demand in developing and emerging countries, the increase in production seen in the advanced economies is expected not to lose much momentum in the two years to come.

The United States is expected to achieve stable growth on the basis of the positive situation in the labor market as well as the plans of the new US administration with regard to lowering corporate and personal income tax. The economic recovery in the eurozone is expected to continue. Thanks to the ECB's highly expansive policy and lowered tensions in the financial sector, financing conditions are favorable. A risk exists, however, in the form of Brexit-related uncertainty. Efforts toward independence in Catalonia have also shown that centrifugal forces in Europe continue to

pose a threat. Chinese economic performance will continue to grow sharply, but the expansion there will gradually slow. Economists are forecasting sustained high economic dynamics for India, on the other hand. Given the slightly positive trend in commodity prices, the economic situation is improving in Brazil and Russia. Still, the rates of growth there are expected to be moderate initially.

Assessments of developments in the global and country-specific economies are, however, based on a series of key factors. Risks are seen particularly when unexpected developments occur. Consequently, political uncertainties in the United States and Europe, an unexpected deterioration in the Chinese economy or upheavals in global financial markets could lead to a lowering of expectations. Sustained geopolitical tensions or an existing threat of terror could hamper the global economy as well.

### TÜV Rheinland AG Group Outlook

All in all, the TÜV Rheinland AG Group anticipates organic revenue growth in the mid-single-digit percentage range in the 2018 business year. Germany's share in this development will total to around 52%. The following, in some cases macroeconomic, assumptions have been factored into planning for 2018:

- Global economy continued positive, but partial weakening expected
- Global central banks slightly more restrictive (Fed with interest-rate step; ECB neutral)
- Political realignment in Europe following elections (and: Italy 2018 a new risk factor!)
- Geopolitical risks at increased levels/"Trump" as risk factor (North Korea)
- Trend toward slightly higher oil and commodity prices

The number of employees is expected to increase only slightly in 2018 compared with 2017. Workforce reductions will depend on the Group's business success, and on the launched excellence projects, and will be disproportionately low compared to the increase in revenue.

The outlays approved by the Group Executive Board and Supervisory Board, beginning in 2017, around the issues of innovation and digitalization will also place a significant strain on expenditures in 2018. This will strengthen and secure the sustainability of the TÜV Rheinland AG Group. Against this backdrop, a stable to moderately upward-trending EBIT margin is expected for 2018, up to a value of 7.0%.

Following a decline in revenue in the [Industrial Services business stream](#) in 2017, a positive revenue trend is forecast for 2018. For Brazil, stabilization of business at a low level seems a realistic forecast; as a result, no further revenue decreases are expected here. By contrast, all other relevant global markets are bolstered by positive macroeconomic development. Although there is still considerable price pressure in the oil and gas market, the first positive signals of recovery are visible here.

Moderate revenue growth in 2018 is forecast for the [Mobility business stream](#). Particular contributors to this are the business fields of Car Services & Appraisal as well as Rail, which is also developing positively internationally.

The [Products business stream](#) anticipates a significant increase across all business fields again in 2018. This applies to business in Germany as well as the international regions. Growth will increase in nearly all of the business fields, particularly in Softlines, Solar and Medical. Expansion in the capacity for the testing of wireless communications technologies will move forward as planned, with a focus on Asia and Europe.

The [Academy & Life Care business stream](#) expects moderate growth in revenue volume in 2018. Focuses for growth are the areas of personnel certification, digital learning formats, and occupational health and integration management. In addition to revenue growth, the freelance training business in Germany is forecast to contribute significantly to earnings as well.

Following a year of consolidation and operating in a continued positive environment, the [ICT & Business Solutions business stream](#) expects revenue growth for 2018 in the upper single-digit percentage range. Growth in the IT Services & Cyber Security business field continues to suffer from the high demand for IT experts by industry and the competition.

Against the backdrop of an upwards trend in all regions and business fields, planning for 2018 in the [Systems business stream](#) assumes double-digit revenue growth. The greatest absolute growth is expected in Germany and Greater China. As in the previous year, the new Government Inspections & International Trade business field will make a significant contribution toward an increase in revenue and earnings in the Systems business stream.

Cologne, March 16, 2018

Executive Board

[Dr.-Ing. Michael Fübi](#)  
Chief Executive Officer

[Vincent Giesue Furnari](#)  
Chief Financial Officer

[Ralf Scheller](#)  
Chief Operating Officer

## INCOME STATEMENT

in € thousands	2016	2017
<b>Revenue</b>	<b>1,917,886</b>	<b>1,971,698</b>
Inventory changes	-286	244
Cost of purchased services	-309,180	-317,625
<b>Operating services</b>	<b>1,608,420</b>	<b>1,654,316</b>
Personnel expenses	-1,067,871	-1,083,554
Amortization of intangible assets and depreciation of property, plant, and equipment	-70,821	-75,925
Other expenses	-410,901	-437,974
Other income	63,738	73,735
<b>Operating result</b>	<b>122,564</b>	<b>130,598</b>
Interest income	9,902	9,290
Interest expenses	-28,035	-19,073
Other financial result	-227	-2,377
<b>Financial result</b>	<b>-18,360</b>	<b>-12,160</b>
<b>Earnings before income tax</b>	<b>104,204</b>	<b>118,438</b>
Income taxes	-38,197	-40,303
<b>Consolidated net income</b>	<b>66,007</b>	<b>78,135</b>
Thereof attributable to:		
TÜV Rheinland Aktiengesellschaft equity holders	57,216	67,527
Non-controlling interests	8,791	10,608
<b>Earnings per share (in €)</b>	<b>1,635</b>	<b>1,929</b>

## BALANCE SHEET

in € thousands	12-31-2016	12-31-2017
<b>Assets</b>		
Intangible assets	327,749	316,337
Property, plant, and equipment	471,716	472,830
Investments accounted for using the equity method	2,302	2,350
Other financial assets	289,314	291,715
Other non-current assets	12,322	31,719
Deferred tax assets	93,328	88,089
<b>Non-current assets</b>	<b>1,196,731</b>	<b>1,203,040</b>
Inventories	3,742	3,212
Trade receivables	340,522	326,865
Income tax receivables	12,631	7,453
Other receivables and other current assets	87,561	54,339
Liquid assets	237,252	193,926
<b>Current assets</b>	<b>681,708</b>	<b>585,796</b>
<b>Total Assets</b>	<b>1,878,439</b>	<b>1,788,836</b>
<b>Equity and Liabilities</b>		
Issued capital	35,000	35,000
Capital reserves	23,802	23,802
Other reserves	260,677	273,331
Non-controlling interests	26,762	26,722
<b>Equity</b>	<b>346,241</b>	<b>358,855</b>
Provisions for pensions and similar obligations	742,418	731,525
Other non-current provisions	17,159	19,236
Non-current liabilities	257,403	200,845
Deferred tax liabilities	17,056	16,544
<b>Non-current debt</b>	<b>1,034,036</b>	<b>968,149</b>
Current provisions	89,590	89,665
Income tax liabilities	9,862	9,022
Trade liabilities	193,018	185,122
Other current liabilities	205,692	178,023
<b>Current liabilities</b>	<b>498,162</b>	<b>461,831</b>
<b>Total Equity and Liabilities</b>	<b>1,878,439</b>	<b>1,788,836</b>

## INDEPENDENT ASSURANCE REPORT\*

To the Executive Board of TÜV Rheinland AG, Cologne

We have been engaged to perform an independent limited assurance engagement on selected qualitative and quantitative sustainability disclosures in the chapter “Corporate Social Responsibility” in the Corporate Report 2017 (further: “Report”) for the business year 2017 of TÜV Rheinland AG, Cologne (further: “TÜV Rheinland”).

It was not part of our engagement to review service related information, references to external information sources, expert opinions and future-related statements in the Report.

### MANAGEMENT’S RESPONSIBILITY FOR THE REPORT

The legal representatives of TÜV Rheinland are responsible for the preparation of the Report in accordance with the principles and standard disclosures of the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative, in combination with internal guidelines, as described in the section “About this report” (further: “Reporting Criteria”). The responsibility includes the selection and application of appropriate methods to prepare the Report and the use of assumptions and estimates for individual qualitative and quantitative sustainability disclosures which are reasonable under the circumstances. Furthermore, this responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Report in a way that is free of – intended or unintended – material misstatements.

### INDEPENDENCE AND QUALITY ASSURANCE ON THE PART OF THE AUDITING FIRM

We are independent from the company in accordance with the requirements of independence and quality assurance set out in legal provisions and professional pronouncements and have fulfilled our additional professional obligations in accordance with these requirements.

Our audit firm applies the legal provisions and professional pronouncements for quality assurance, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

### PRACTITIONER’S RESPONSIBILITY

Our responsibility is to express a conclusion based on our work performed and the evidence obtained on the qualitative and quantitative sustainability disclosures included in the scope of our engagement. We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): “Assurance Engagements other than Audits or Reviews of Historical Financial Information” and the International Standard on Assurance Engagements (ISAE) 3410: “Assurance Engagements on Greenhouse Gas Statements” of the International Auditing and Assurance Standards Board (IAASB). These standards require that we comply with our professional duties and plan and perform the assurance engagement to obtain a limited level of assurance to preclude that the information above is not in accordance, in all material respects, with the aforementioned Reporting Criteria. In a limited assurance engagement the evidence gathering procedures are more limited than in a reasonable assurance engagement and therefore less assurance is obtained than in a reasonable assurance engagement. The choice of audit activities is subject to the auditor’s own judgement. This includes the assessment of the risk of material misstatement in the Report under consideration of the Reporting Criteria.

\* Translation of the independent assurance report, authoritative in German language.



Within the scope of our work, we performed amongst others the following procedures:

- A risk analysis, including a media search, to identify relevant sustainability aspects for TÜV Rheinland in the reporting period.
- Evaluation of the design and implementation of the systems and processes for the collection, processing and control of qualitative and quantitative sustainability disclosures included in the scope of this engagement, including the consolidation of the data.
- Inquiries of personnel on group level responsible for providing the data and information, carrying out internal control procedures and consolidating the data and information.
- Evaluation of selected internal and external documents.
- An analytical review of the data and trend explanations submitted by all subsidiaries for consolidation at group level.
- Assessment of local data collection and reporting processes and reliability of reported data via a sampling survey at the corporate headquarters in Cologne (Germany) as well as via video conference with the subsidiaries TÜV Rheinland Shanghai Co., Ltd. (China) and TR de Mexico S.A. (Mexico).
- An evaluation of the overall presentation of the selected qualitative and quantitative sustainability disclosures included in the scope of this engagement.

## CONCLUSION

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the selected qualitative and quantitative sustainability disclosures in the chapter “Corporate Social Responsibility” for the business year 2017, published in the Report, are in all material respects not prepared in accordance with the Reporting Criteria.

## RESTRICTION OF USE / AAB CLAUSE

This report is issued for purposes of the Executive Board of TÜV Rheinland AG, Cologne, only. We assume no responsibility with regard to any third parties.

Our assignment for the Executive Board of TÜV Rheinland AG, Cologne, and professional liability is governed by the General Conditions of Assignment for Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 ([https://www.kpmg.de/bescheinigungen/lib/aab\\_english.pdf](https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf)). By reading and using the information contained in this report, each recipient confirms notice of provisions of the General Conditions of Assignment (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the General Conditions of Assignment with respect to us.

Frankfurt am Main, 4. April 2018

KPMG AG  
Wirtschaftsprüfungsgesellschaft  
[Original German version signed by:]

Laue  
Wirtschaftsprüfer  
[German Public Auditor]

Glöckner  
Wirtschaftsprüfer  
[German Public Auditor]

## ABOUT THIS REPORT

In 2017, the TÜV Rheinland Corporate Report once again contains the Financial Report and the Sustainability Report. The Corporate Report is based on the internationally recognized IFRS and Global Reporting Initiative (GRI) reporting standards, the principles of the UN Global Compact, as well as the anti-corruption guidelines of the UN and Transparency International, and encompasses the consolidated companies that are also included in the consolidated financial statements.

The present TÜV Rheinland Sustainability Report was compiled in accordance with the GRI Standards: Core option. The GRI Content Index lists which GRI guideline criteria were used in TÜV Rheinland's 2017 Corporate Report. Our reporting activities are also carried out in accordance with the COP Advanced Level of the UN Global Compact.

The most recent previous Corporate Report was published in April 2017. The Corporate Report will continue to be published on an annual basis in the future.

### METHODOLOGY USED IN THE REPORT

The reporting period is the 2017 business year. If, at the time of publication (deadline: April 3, 2018), certain final figures for 2017 were not yet available, comparable annual figures from 2016 were used.

For computational reasons, values listed in tables are subject to rounding differences of  $\pm$  one unit (€, %, etc.).

### ENVIRONMENTAL INDICATORS

#### German companies:

The data set in Germany grew considerably during the reporting year, going from nearly 30 reporting locations to more than 90. Approximately 78% of the employees were thus recorded in 2017. The data collected were then projected for the entire workforce in Germany, and the figures were rounded up or down. Headcount-based figures were applied for this purpose. Other bases for calculation are stated separately. Several figures were newly aggregated and calculated with average figures for the year. Although some details are lost in the process, this permits reliable long-term comparisons and goals to be formulated. Estimates and assumptions are identified as such.

#### Foreign subsidiaries:

To achieve global coverage of key figures relevant to environmental impact, data were collected from all seven TÜV Rheinland regions. Each of the foreign subsidiaries with an environmental management system or more than 50 employees was considered at the company level. This resulted in data collection that allowed us to cover at least 53% (passenger car utilization) for our foreign subsidiaries. With regard to key environmental figures (such as air travel and electricity consumption), the figures even cover 87% and 91% of employees, respectively. The data collected were then projected for the entire workforce of the foreign subsidiaries, and the figures were rounded up or down accordingly. In this context, the annual average FTE (fulltime equivalent) value was used. Other bases for calculation are stated separately.

### KEY EMPLOYEE FIGURES

Unless identified as headcount-based figures, all disclosures on employee structure are based on FTE (full-time equivalent) figures. Both types of disclosure represent closing-date disclosures (December 31, 2017), unless otherwise stated. The data collected covers more than 90% of the total.

The table on training and further education days in Germany shows reported data for 2017 compiled within the Group through January 31, 2018. The training and further education days do not include e-learning programs.

## GRI CONTENT INDEX

GRI Standard and description		Corporate Report and Web References	Comments
<a href="#">GRI 100 Universal Standards</a>			
<a href="#">GRI 101: Foundation</a>		98	
<a href="#">GRI 102: General Disclosures</a>			
<b>Organizational Profile</b>			
102-01	Name of the organization		TÜV Rheinland AG
102-02	Primary brands, products and services	K2, 74–75, <a href="http://www.tuv.com">www.tuv.com</a>	
102-03	Location of organization's headquarters		Am Grauen Stein, 51105 Cologne, Germany
102-04	Countries where the organization operates	76–77, <a href="http://www.tuv.com">www.tuv.com</a>	
102-05	Nature of ownership and legal form	104	
102-06	Markets	74–79, <a href="http://www.tuv.com">www.tuv.com</a>	
102-07	Size of the organization	K1, 4, 14–15, 51, 94–95	
102-08	Total workforce	51, 55–56, 98	The workforce figures are not subject to seasonal variations. 82 percent of our workforce comprises permanent employees. Of those, 65 percent are men. Of the employees working under temporary employment contract, the share of men is 56 percent. The share of permanent employment contracts in each region is as follows: D–86%; WE–93%; CEE–99%; AP–98%; GC–50%; NA–100%; SA–90%; IMEA–97%. 93 % of men and 80% of women in the Group work on a full-time basis.
102-09	Description of supply chain	49	A complete description of the supply chain is available in Corporate Report 2016, page 34.
102-10	Significant changes in the organization's size, structure or ownership	9, 84	Changes were made to the organizational structure during the reporting year.
102-11	Explanation of how the precautionary principle is addressed	42, 60–61, 88–91	
102-12	Participation in and endorsement of externally developed charters, principles and initiatives	8, 42, 45, 89	
102-13	Important memberships	42, 46	
<b>Strategy</b>			
102-14	Foreword by the Chairman of the Board of Management	2–3	
102-15	Key impacts, risks and opportunities	42, 44–46, 55–59, 60–63, 88–91	

GRI Standard and description		Corporate Report and Web References	Comments
<b>Ethics and integrity</b>			
102-16	Values, principles and code of conduct	6–7, 42, 47–49, 88–91	
<b>Governance</b>			
102-18	Governance structure of the organization	3, 45–49, 104–106	
<b>Stakeholder engagement</b>			
102-40	Overview of stakeholder groups	43	
102-41	Employees covered by collective bargaining agreements		The compensation for about 72 percent (per-capita disclosures as of the reporting date on December 31, 2017) of our employees in Germany is subject to a collective bargaining agreement.
102-42	Basis for identification of stakeholder groups	43	
102-43	Engagement of stakeholder groups	43, 45–46	
102-44	Consideration of key concerns raised by stakeholder groups	43, 45–46	
<b>Reporting practice</b>			
102-45	All entities included in the organization's consolidated financial statements	www.tuv.com/sustainability	
102-46	Process for defining report content	42–46	For guidance in defining the report content, we relied on the key areas of activity of the Sustainability Strategy 2020, which is based on a stakeholder survey.
102-47	Material aspects	44	
102-48	Effects of any re-statements of information	98	
102-49	Changes in the scope, boundary or measurement methods	98	
102-50	Reporting period	98	
102-51	Date of most recent previous report	98	
102-52	Reporting cycle	98	
102-53	Contact point	Editorial Information	
102-54	Claims of reporting in accordance with the GRI Standards	98	
102-55	GRI content index	99–103	
102-56	External assurance for the report	96–97	
<b>GRI 200 Economics</b>			As a service provider, the procurement of products is less relevant to us and primarily concerns office supplies. For this reason, we do not report on Standard "GRI 204: Procurement practices 2016".
103-1	Explanation of the material topic and its boundary	44–45	
103-2	The management approach and its components	8–9, 42, 44–45, 47–49, 70–71	The references relate to the management approaches to CSR, compliance and service responsibility.
103-3	Evaluation of the management approach	42, 44–46, 47–49, 70–71	The references relate to the management approaches to CSR, compliance and service responsibility.
<b>GRI 201: Economic Performance</b>			
201-1	Direct economic value generated and distributed	64–69, 74, 80–83, 86–87, 94	
201-3	Coverage of the organization's defined-benefit plan obligations	86, 95	

GRI Standard and description		Corporate Report and Web References	Comments
<b>GRI 202: Market Presence</b>			
202-2	Proportion of senior management hired from the local community		Due to insufficient data, we are unable to provide this information at this time.
<b>GRI 203: Indirect Economic Impacts</b>			
203-2	Significant indirect economic impacts, including the extent of impacts	42, 44–45	
<b>GRI 205: Anti-corruption</b>			
205-1	Business units analyzed for risks related to corruption	48–50	
205-2	Percentage of employees trained in anti-corruption policies and procedures	10, 49	
205-3	Incidents of corruption and actions taken	10, 50	
<b>GRI 206: Anti-competitive Behavior</b>			
206-1	Legal actions for anti-competitive behavior		To our knowledge, there were no known significant legal actions for anti-competitive behavior during the reporting year.
<b>GRI 300 Environment</b>			<p>As a service provider our business activities do not harm the environment any more than other urban development areas. For this reason, we do not report on Standard “GRI 304: Biodiversity”.</p> <p>When compared with classical industrial companies, we only produce negligible quantities of wastewater and waste in the provision of our services; that waste and wastewater is properly removed and disposed of. For this reason, we do not report on Standard “GRI 306: Effluents and Waste”.</p> <p>As a service provider, the procurement of products is of minor significance. Accordingly, supplier management was assessed as less relevant. For this reason, we do not report on Standard “GRI 308: Supplier Environmental Assessment”.</p>
103-1	Explanation of the material topic and its boundary	44–45	
103-2	The management approach and its components	60–61	The references relate to the environmental management approach.
103-3	Evaluation of the management approach	12–13, 60–61	The references relate to the environmental management approach.
<b>GRI 301: Materials</b>			
301-1	Materials used	60, 63	
<b>GRI 302: Energy</b>			
302-1	Energy consumption within the organization	60, 62	We do not indicate any differentiation between renewable and non-renewable sources.
302-3	Energy intensity	60–61	
302-4	Reduction of energy consumption	12–13, 60–63	



GRI Standard and description		Corporate Report and Web References	Comments
<b>GRI 303: Water</b>			
303-1	Total water withdrawal	60, 63	Specific information on water sources is not available. However, we assume that the total volume of water used by TÜV Rheinland AG was drawn from the water system of the local water supplier and therefore cannot be classified more specifically.
<b>GRI 305: Emissions</b>			
305-1	Direct greenhouse gas emissions – Scope 1	63	The GWP factors for 305-1, 305-2 and 305-3 are derived from: <a href="http://ow.ly/ZgdPG">http://ow.ly/ZgdPG</a> Our business activities produce only CO <sub>2</sub> emissions but no other relevant greenhouse gas emissions.
305-2	Indirect greenhouse gas emissions – Scope 2	62–63	Our business activities produce only CO <sub>2</sub> emissions but no other relevant greenhouse gas emissions. Scope 2 emissions: See the diagram “CO <sub>2</sub> EMISSIONS FROM ELECTRICITY CONSUMPTION” and the diagram “CO <sub>2</sub> EMISSIONS (DIRECT AND INDIRECT)”  A more detailed breakdown is not possible at this time.
305-3	Other indirect greenhouse gas emissions – Scope 3	61–63	Our business activities produce only CO <sub>2</sub> emissions but no other relevant greenhouse gas emissions. Scope 3 emissions: See the diagram “CO <sub>2</sub> EMISSIONS FROM BUSINESS TRAVEL (GERMANY)” and the diagram “CO <sub>2</sub> EMISSIONS (DIRECT AND INDIRECT)”.  International: aircraft–11,680t; car–7,428t; rail– at this time cannot be reported on an international basis yet  A more detailed breakdown is not possible at this time.
305-4	Greenhouse gas emissions intensity	60–61	
305-5	Reduction of greenhouse gas emissions	60–63	
<b>GRI 307: Environmental Compliance</b>			
307-1	Fines for non-compliance with environmental laws and regulations		To our knowledge, there were no such significant breaches and resulting fines across the entire Group in the reporting year.

GRI Standard and description		Corporate Report and Web References	Comments
<b>GRI 400 Social</b>			Human rights issues are relevant for only a small portion of our business activities. For this reason, we do not report on Standards GRI 407-412. Nonetheless, human rights are an integral part of our internal guidelines.
			As a service provider, purchasing products is of minor significance. For that reason, supplier management was assessed as less relevant. For this reason, we do not report on Standard GRI 414: "Supplier Social Assessment".
103-1	Explanation of the material topic and its boundary	44–45	
103-2	The management approach and its components	51–52, 55–59	The references relate to the employee management approach.
103-3	Evaluation of the management approach	10–11, 51–52, 55–59	The references relate to the employee management approach.
<b>GRI 401: Employment</b>			
401-1	Employee turnover	54	We do not calculate regional turnover rates.
<b>GRI 402: Labor/Management Relations</b>			
402-1	Minimum notice periods regarding operational changes		Pursuant to statutory regulations (§§ 111, 112 German Labor-Management Relations Act [BetrVG]), in Germany the responsible works council is fully informed on a timely basis about planned operational changes which might result in significant disadvantages for the workforce or for significant parts of the workforce, and the works council is consulted regarding the planned operational changes.
<b>GRI 403: Occupational Health and Safety</b>			
403-1	Workforce representation in health and safety committees		We monitor the effectiveness of our occupational safety measures through, among other things, a network of business unit-related safety committees in Germany and abroad through safety committees at the corporate subsidiary level. All of our employees in Germany are represented by these safety committees. By the end of 2018, a responsible safety committee will be established for each subsidiary.
403-2	Injuries, occupational diseases and work-related accidents	57	In the reporting year, no occupational diseases were reported in Germany. Records do not differentiate between men and women.

GRI Standard and description		Corporate Report and Web References	Comments
<b>GRI 404: Training and Education</b>			
404-1	Training and Education	53	All of our employees have access to training and continuing education. Differentiation between men and women or between employee categories is of no relevance.  In addition, days of training and education outside of Germany are not systematically recorded. For that reason, the average number of training and education hours per employee Groupwide cannot be determined.
404-2	Programs for skills management and lifelong learning	51–55	
404-3	Regular performance and career development reviews	51–55	Our employees worldwide have the opportunity to discuss their career development and collaboration in a structured employee review with their supervisor – sometimes complemented by a target agreement/performance assessment review.
<b>GRI 405: Diversity and Equal Opportunity</b>			
405-1	Composition of governance bodies	3, 55–56	All members of the Executive Committee are male and German. Two members are between 30 and 50 years old, one member is over 50 years of age.
405-2	Equal remuneration for Women and Men		At TÜV Rheinland, an employee's wage is oriented on the employee's work activities, qualifications, and professional experience.
<b>GRI 406: Non-Discrimination</b>			
406-1	Incidents of discrimination and corrective actions taken		There were no allegations of discrimination in Germany during the reporting year.
<b>GRI 413: Local Communities</b>			
413-1	Measures for local community engagement, impact assessments and development programs		To date, we have not conducted any impact analyses or environmental impact assessments.
<b>GRI 415: Public Policy</b>			
415-1	Political contributions		According to our donation and sponsoring guidelines, political parties may not be supported without the prior written authorization of the Executive Board. Corporate GO Compliance must be informed about political contributions. We are unaware of any contributions made to political parties during the year under review.
<b>GRI 416: Customer Health and Safety</b>			
416-1	Significant product and service categories for which health and safety impacts are assessed		Analyzing products and services with regard to their effects on health, safety, and the environment is TÜV Rheinland's core area of expertise. An overview of our services can be found at <a href="http://www.tuv.com">www.tuv.com</a> .
<b>GRI 417: Marketing and Labeling</b>			

GRI Standard and description		Corporate Report and Web References	Comments
417-2	Incidents of non-compliance with regulations and voluntary codes concerning product and service information		We are not aware of any significant violations during the reporting year.
<b>GRI 418: Customer Privacy and Data Protection</b>			
418-1	Complaints regarding customer data privacy		There were no legitimate complaints relevant to breaches of customer privacy or losses of customer data during the period under review. Our Group quality management system includes a data privacy management system. In that context, the first Group companies are already certified according to ISO 27001 (information security).
<b>GRI 419: Socioeconomic Compliance</b>			
419-1	Non-compliance with laws and regulations in the social and economic area	90–91	

We publish the UNGC/TI reporting guidance on anti-corruption on our website under the rubric Sustainability.

## ORGANIZATION OF TÜV RHEINLAND

TÜV Rheinland is organized in the form of a matrix with six global business areas and regionally in eight regions. The responsibility for results lies with the global heads of the Business Streams. The regional heads are the top representatives of TÜV Rheinland in the respective regions and coordinate activities there which concern all Business Streams. The heads of the Business Streams and of the regions prepare the content of important decisions of the Executive Board together; they reach agreement in the

Group Executive Council, the top operative management team of TÜV Rheinland AG under the Executive Board. The operational parent company is TÜV Rheinland AG, the shares of which are entirely in the possession of TÜV Rheinland Berlin Brandenburg Pfalz e. V. In accordance with Germany's right of co-determination, employees are represented by staff representatives on the Supervisory and Management Boards.

### BUSINESS STREAMS



**Industrial Services**  
Dr. Hans Berg



**Mobility**  
Dr. Matthias Schubert



**Products**  
Holger Kunz



**Academy & Life Care**  
Markus Dohm



**ICT & Business Solutions**  
Frank Luzsicza



**Systems**  
Michael Wepler

Version: April 1, 2018



## REGIONS



**Western Europe  
Central Eastern Europe**  
Petr Lahner



**Asia Pacific  
India, Middle East, Africa**  
Andreas Höfer



**Greater China**  
Yushun Wong



**North America**  
David Leers (prov.)



**South America**  
Martin Klaus Kunze

Version: April 1, 2018



# SUPERVISORY BOARD OF TÜV RHEINLAND AG

## SHAREHOLDER REPRESENTATIVES ON THE SUPERVISORY BOARD

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Dipl.-Wirtsch.-Ing. Heinz-Werner Binzel, Langenselbold	Managing Director, Densys GmbH
Prof. Dr.-Ing. Jürgen Brauckmann, Kehlen, Luxembourg (from June 20, 2017)	Former Member of the Executive Board of Management, TÜV Rheinland Berlin Brandenburg Pfalz e.V.
Dr. jur. Hermann H. Hollmann, Cologne	Attorney
Prof. Dr. Michael Hüther, Cologne	Director and member of the Presidium, Cologne Institute for Economic Research
Dr. jur. Gerd Schäfer, Tribsees/Landsdorf	Attorney
Dr.-Ing. Rolf Martin Schmitz, Essen	CEO, RWE AG
Univ.-Prof. Dr.-Ing. Dr.-Ing. E.h. Dr. h.c. Dieter Spath (from June 20, 2017)	Director, Fraunhofer Institute for Industrial Engineering IAO and Director, Institute for Human Factors and Technology Management IAT at the University of Stuttgart

## SHAREHOLDER REPRESENTATIVES ON THE SUPERVISORY BOARD

Dipl.-Ing. Reiner Schon, Berlin, Acting Chairman	Qualified Expert, TÜV Rheinland Industrie Service GmbH
Andrea Becker, Düsseldorf	Regional Unit Officer for Special Services, ver.di Landesbezirk NRW
Attorney Jan Bley, St. Augustin (until June 20, 2017)	Divisional Director, TÜV Rheinland Aktiengesellschaft
Attorney Björn Clüsserath, Bonn (from June 20, 2017)	Divisional Director, TÜV Rheinland Aktiengesellschaft
Birgit Ladwig, Berlin	Director of the Office of the Chairman, ver.di Bundesverwaltung
Volker Lück, Münchenbernsdorf (from April 29, 2017)	Instructor, TÜV Rheinland Akademie GmbH
Dipl.-Pädagoge Gerhard Meusel, Cologne († April 29, 2017)	Consultant, TÜV Rheinland Consulting GmbH
Beate Rieser, Berlin (from June 20, 2017)	Key Account Manager, TÜV Arbeitsmedizinische Dienste GmbH
Dipl.-Ing. Johannes Scholz, Frechen	Qualified Expert, TÜV Rheinland Kraftfahrt GmbH
Dipl.-Geograph Thomas Wolkenstörfer, Leinburg (from June 20, 2017)	Department Head, TÜV Rheinland LGA Products GmbH

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