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Genau. Richtig.

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Note:

In our publications, we use gender-neutral language. In the interest of consistently smooth reading flow, we dispense with cumbersome “he or she” formulations and use neutral language instead to address all genders wherever possible.

Short cuts

APA – Asia Pacific
CEE – Central / Eastern Europe
GCN – Greater China
IMEA – India, Middle East, Africa
NAM – North America
SAM – South America
WEU – Western Europe

Dear Readers,

In the 2022 reporting year, TÜV Rheinland celebrated its 150th birthday. This successful tradition derives first and foremost from our employees. With their competent and independent testing, inspections and certifications, they have been reliably satisfying a basic human need since 1872: the need for safety. Without safety, technological innovations have no future. At the same time, our employees played a crucial part in helping us continue to write our success story from a business perspective in 2022. I really want to thank our entire workforce for that! We are on the right track. Thanks also go to our customers for their consistent trust in our independent professional expertise. Without them, we wouldn’t be where we are today.

We believe in “Today for tomorrow.” Now more than ever, our future viability depends not only on innovation, but also on our awareness of sustainability issues. Sustainability is a driver for permanent value creation. As a testing and inspection company, we take on a vital role: With our sustainability services, we deliver genuine added value. We help our customers achieve their own objectives. The demand for these services is constantly growing. As a result, they are also becoming a more and more important mainstay of our business. Five years from now, in 2028, we want to generate one billion euros of revenue from sustainability-related services.

Our commitment to a sustainable future expresses itself in our pledge to uphold the principles of the UN Global Compact. Through our own activities, we strengthen the idea of sustainability in-house. In that regard, we have set an ambitious goal for ourselves: We intend to achieve our own net zero CO_2 emissions worldwide by the 2028 reporting year – and in Germany already by 2025.

This Corporate Report provides more information about our goals and programs, the successes we’ve already achieved, and also the challenges still ahead of us.

Join us as we continue along this successful path together!

Yours,
Dr.-Ing. Michael Fübi
Chief Executive Officer of TÜV Rheinland AG

We put our future viability to the test

Ever since its establishment more than 150 years ago, TÜV Rheinland's business purpose has been marked by one ambition: to ensure safety in the interaction between technology, people and the environment. Our sustainability strategy adds essential sustainability elements to that mission, for today and tomorrow. Through the implementation of this sustainability strategy, we aim to create lasting added value for the company as a whole and especially for our stakeholders.

With a view to the future development of TÜV Rheinland, we are focusing our attention even more consistently on the topic of sustainability. Following the implementation of our Sustainability Strategy 2025 over the course of 2021, our corporate Sustainability Program 2022 concentrated on the sustainability services, sustainability management and sustainability reporting of TÜV Rheinland overall. Our goal was to manage our contribution to sustainability in a focused and successful manner and to create clear structures and processes to achieve that end. One result is the analysis of sustainability services, which also helps us measure our contribution to better environmental, social and corporate governance, or ESG for short. Another result is our commitment to climate neutrality with a road map and a corporate project team. One of our objectives for 2023 is to adopt the key performance indicators of the ten essential categories into Group Controlling's standard systems.

"We aim to increase our revenues with existing and new services that contribute to sustainable development. And we intend to develop even more sustainable ways to deliver our services," announces Dr. Michael Fübi, Chief Executive Officer of TÜV Rheinland AG.

SUSTAINABILITY STRATEGY 2025

In developing our Sustainability Strategy 2025, we conducted a comprehensive stakeholder survey and identified the topics of essential importance to TÜV Rheinland. The graphics present the findings of our materiality analysis, i.e. the essential topics and what our stakeholders expect of TÜV Rheinland. The ten categories shown constitute the main focus of our internal strategic direction in the area of sustainability. We have laid out our detailed ambitions in objectives for 2025 and set clearly defined targets for them.

We measure our progress in these categories by means of key performance indicators, or KPIs for short, which have been formulated for each individual topic. In the following chapters, we will report on those KPIs and the status in 2022. We have assigned the ten categories to the dimensions People, Planet and Profession.

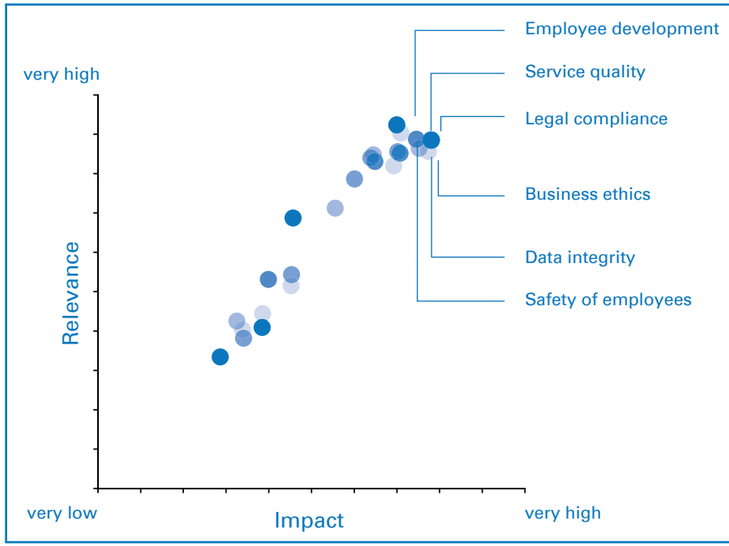
ENGAGED IN DIALOG WITH OUR STAKEHOLDER GROUPS

We converse regularly with all stakeholder groups and take new requirements into account in the context of our areas of activity. One important network that enables us to exchange information and ideas concerning sustainable and responsible corporate governance is the UN Global Compact with the UN Global Compact Network Germany. Through this multi-stakeholder organization, we can interact not only with other companies, but also with NGOs, government agencies and the scientific community. TÜV Rheinland is represented in the advisory board of the associated foundation and is a member of the steering committee of the UN Global Compact Network Germany. Both the TÜV Association and the TIC Council are our central industrial associations, where sustainability and responsible action are regular topics of discussion focusing on our industry. Dialog within the company is no less important, of course. Through the employee survey, for example, we learn more about our employees' expectations of us as an employer. Our customer feedback is obtained through an annual customer survey. And last but not least, the General Meeting of our sole shareholder, TÜV Rheinland Berlin Brandenburg Pfalz e.V., serves as a further stakeholder forum.

In the reporting year 2022, the following thematic priorities were addressed and submitted to us as expectations or framework conditions:

- New German and European regulatory requirements for due diligence and reporting in the area of sustainability
- Newly defined voluntary commitments under discussion and commitments to responsible action in the major industry associations
- Increasing demand from customers for sustainability services and the sustainability direction of TÜV Rheinland
- The previous year's addition of sustainability to the articles of incorporation of our sole shareholder TÜV Rheinland Berlin Brandenburg Pfalz e.V.

TÜV Rheinland materiality matrix and essential categories



Ranking according to the final materiality matrix

- Legal compliance
- Service quality
- Business ethics
- Employee development
- Data integrity
- Safety of employees

Four other categories prioritized as essential

- Non-discrimination
- Labor rights
- Greenhouse gas emissions
- Diversity

To ensure that our sustainability strategy meets the new requirements, during the year under review we critically examined our objectives for 2025 and our measurement parameters and upgraded them wherever necessary. In addition, we analyzed our service portfolio against ESG criteria and harmonized it with the global Sustainable Development Goals (SDGs) of the United Nations.

OUR OVERARCHING SUSTAINABILITY OBJECTIVES

With regard to its sustainability performance, TÜV Rheinland undergoes an annual external assessment by EcoVadis, the internationally recognized global provider of business sustainability ratings. In accordance with the increasingly strict requirements of sustainability standards, EcoVadis' rating system also incorporates annually updated assessment parameters. As in the previous year, we earned a Gold rating in the year under review. TÜV Rheinland intends to maintain its EcoVadis Gold level.

HELPING TO COUNTER CLIMATE CHANGE

Our goal is for all TÜV Rheinland companies to be climate neutral by 2028. The German companies of the TÜV Rheinland Group aim to achieve climate neutrality already by 2025. TÜV Rheinland has invested considerable time and effort in its climate strategy, specifically prioritizing the documentation of greenhouse gas emissions in Scopes 1 and 2 while also continuing to refine the documentation of Scope 3 emissions. As a result, we have raised our performance level from "intermediate" to "leader" on the separate EcoVadis carbon scorecard.

WE OFFER SUSTAINABILITY SERVICES WORLDWIDE

We want to increase the revenues we generate from sustainability services to 1 billion euros by 2028. Examples of already successfully implemented sustainability services are listed in the Sustainability Services pie chart and in the "Best Practice" box in this report.

HOW WE MANAGE SUSTAINABILITY

Sustainability governance falls under the purview of Dr. Achim Ernst, Global Officer Corporate Development, who reports directly to the Chief Executive Officer and keeps the Executive Board and the extended Group management informed on a regular basis. The departmental heads who serve as "Category Owners" of the individual materiality categories are responsible for monitoring, managing and reporting on sustainability-related projects and key performance indicators.

In 2021, a sustainability strategy steering committee was established to achieve the sustainability goals. It meets quarterly and took up its work for the first time in the year under review. In consultation with the Executive Board, the committee manages the implementation of the strategy in the individual categories. It is comprised of the Global Officer Corporate Development, the Category Owners, the Global Officer Finance & Accounting and the Global Officer Communications.
Along with the update of the Sustainability Strategy 2025, the Executive Board adopted a new organizational form for the successful management of sustainability issues: accordingly, sustainability activities within Corporate Development will be led in the future by the Head of Corporate Sustainability. A Sustainability Committee comprised of the senior Group management was also established. Convening for the first time in 2023, it will serve in an advisory role with regard to strategic direction and will take decisions as necessary.

WE ARE COMMITTED TO FULFILLING OUR RESPONSIBILITIES

With its sustainability goals, TÜV Rheinland declares its commitment to the sustainability principles of global and national organizations.

- As a signatory of the UN Global Compact, we are a member of the UN Global Compact Network Germany and share the ten principles for sustainable and responsible business practices formulated by the United Nations. Katharina Riese, Head of Corporate Sustainability, represents TÜV Rheinland on the foundation advisory board and steering committee of the network.
- Our sustainability strategy is designed to help achieve the Sustainable Development Goals formulated by the United Nations.
- We actively support the sustainable corporate governance principles of the TIC Council – the global association of the testing, inspection and certification industry, for which Dr. Michael Fübi, Chief Executive Officer of TÜV Rheinland, serves as president – along with those of the TÜV Association, the umbrella organization of German TÜV companies, where Dr. Michael Fübi also serves on the Executive Committee.
- We actively support the Global Reporting Initiative. Our Business Officer Global Sales, Marketing & Communication, Fallight Xu, serves on the Stakeholder Council as the Sustainability Expert for the Greater China region.
- Rakesh Vazirani is a member of the Technical Advisory Board for Product Environmental Footprint of the European Commission as well as chairman of the Product Sustainability working group in the TIC Council.
- At the same time, we participate in the International Social and Environmental Accreditation and Labeling Alliance, which has set itself the goal of developing binding global sustainability standards. Fallight Xu also represents TÜV Rheinland in this Alliance and on the board of the Global Ecolabelling Network.

Our sustainability approach

SUSTAINABLE ENERGY
- Green Hydrogen
- Renewable Energies
- Grid & Storage

SUSTAINABLE INFRASTRUCTURE
- Green Buildings & Healthy Materials
- Environmental Protection & Carbon Footprint
- Mitigation of Health & Safety Risks
- IT Infrastructure Protection

SUSTAINABLE MOBILITY
- Sustainable Urban Transport
- Sustainable Powertrain Solutions
- Sustainable Rail Transport

SUSTAINABLE CONSUMPTION
- Sustainable Products
- Sustainable Packaging
- Resource Consciousness & Circularity
- Sustainable Materials

SUSTAINABLE WORK EXCELLENCE
- Sustainable Competences
- Sustainable Transformation
- Preventive Health & Safety

SUSTAINABLE BUSINESS PRACTICES
- Environment, Social & Governance (ESG) Certifications
- Sustainable Supply Chains
- Sustainable Solutions & Assurance Services

PEOPLE
- Employee Safety
- Employee Development
- Labor Rights
- Non-Discrimination
- Diversity

PLANET
- Greenhouse Gas Emissions

PROFESSION
- Service Quality
- Data Integrity
- Legal Compliance
- Corporate Ethics

Katharina Riese and Dr. Achim Ernst

We maintain dialog with our stakeholders. This is how we harmonize our goals with the expectations placed on our actions in the materiality categories and in the sustainability area overall. As a provider of inspection, testing and certification services, we understand the importance of a service's transparency and measurability. That is why we have defined our topics and also make our ambitions clear with quantitative targets. The necessary measures to achieve targets are reestablished every year.

Dr. Achim Ernst,
Global Officer Corporate Development

Sustainability is not a status that can be completed or achieved on a certain date – not even with the implementation of all the goals of our Sustainability Strategy 2025. We can never stop developing along the way and must continuously monitor our progress. That means TÜV Rheinland, as a learning organization, is undergoing a process that concerns the entire economy and society as a whole. We are confident that we can rely on the dedication and knowledge of our more than 20,000 employees in around 50 countries. For TÜV Rheinland, sustainable services and our own sustainable actions, quality and integrity, responsibility for the environment, development of talent, and a diverse, open corporate culture are key components of sustainably oriented growth.

Katharina Riese,
Head of Corporate Sustainability

People

Focus on people: TÜV Rheinland earns its livelihood from the expertise and dedication of its more than 20,000 employees. We take responsibility for everyone who works for our company the world over, and that also includes more and more of our value creation chains. Safety and fair opportunities, development of talent and lifelong learning, a diverse corporate culture that is open to the world: Our activities in these areas contribute to sustainably successful business growth – while supporting the Sustainable Development Goals of the United Nations at the same time, including SDG 4 Quality Education, SDG 5 Gender Equality, SDG 8 Decent Work and Economic Growth and SDG 10 Reduced Inequalities.

Our main topics

- Employee safety | 12
- Employee development | 15
- Labor rights | 18
- Anti-discrimination | 21
- Diversity | 24

No incidents. No harm. No compromise: Protecting health and safety with conviction

Ever since its founding 150 years ago, reducing safety risks has been one of TÜV Rheinland's core competences. But our ambition to maximize safety also applies to our own company. That is why health, safety, and the well-being of our employees are top priorities.

No incidents. No harm. No compromise: For our workforce, we want to create a safe work environment, reduce injuries and hazards in the workplace, and promote a culture of mutual care and consideration. These are core elements of our Sustainability Strategy 2025, for which we have also set goals.

We achieve our goals with the help of a Health, Safety and Environment (HSE) Management system, which operates under the responsibility of Tim Baumgarten, Head of Corporate Health, Safety and Environment. It is based on the international standards ISO 14001 for environmental management and ISO 45001 for occupational health and safety management.

Key components of the HSE management system include the HSE strategy, the QHSE policy (Quality, Health, Safety and Environment) and the definitive Standard Operating Procedure "HSE Main Process."

TAKING RESPONSIBILITY EVEN BEYOND STATUTORY REQUIREMENTS

In creating work conditions for our employees, we are mindful of the United Nations' SDG 8: "Decent Work and Economic Growth." TÜV Rheinland's HSE management system enables us to systematically identify and minimize the associated risks. The HSE management system covers all legal entities in which TÜV Rheinland, as corporate parent company, holds a stake of fifty percent or more. In this way, we want to ensure that our responsibility in the areas of health, well-being, safety, and environmental protection extends beyond the applicable statutory requirements wherever reasonable.

SAFER TOGETHER

All managers worldwide and the Executive Board have committed to the effective implementation and continuous improvement of the HSE management system. At the same time, regular on-site inspections monitor the status of the implementation at all our locations. Reporting requirements in the regional HSE organizations ensure that target achievements and improvement potentials are documented. The cross-business and cross-region HSE Performance Dashboard also provides transparency with regard to the implementation. As a result, all relevant records are collected and then reviewed and communicated in monthly regional HSE manager meetings. The Executive Board is informed about the results and the monitoring at regular intervals.

> The Executive Board and all managers work hand in hand and take their role model function seriously. We are committed to the effective implementation and continuous improvement of the HSE management system.
>
> Tim Baumgarten, Head of Corporate Health, Safety and Environment

Group safety performance

relative to reported lost time injuries*

	2020	2021	2022
Number of employees covered in percent	100	100	**100**
Total work-related injuries	304	330	**275**
Workplace accidents resulting in absence (lost time injuries)	77	105	**85**
Work-related injuries in total per million hours worked	8.21	9.21	**7.74**
Reported Lost Time Injuries per million hours worked	2.08	2.93	**2.39**
Lost workdays	1,277	1,329	**1,085**
Total hours worked during the year under review	37,030,417	35,817,936	**35,546,952**

Regional safety performance

Lost Time Injury frequency rate – reported lost time injuries per million hours worked*

	2020	2021	2022
Asia Pacific	0.00	0.00	**0.00**
Greater China	0.00	0.15	**0.28**
Western Europe	2.91	3.66	**2.73**
Central Eastern Europe	0.00	0.52	**0.00**
India, Middle East, Africa	0.00	0.00	**0.00**
North America	0.98	0.00	**1.06**
South America	2.26	8.85	**1.18**
Germany	3.70	4.33	**4.96**

* Workplace accidents relate only to TÜV Rheinland employees and exclude commuting accidents. Lost time injuries are all accidents that occur at work and result in one or more lost workdays (calendar days) starting from the day after the accident. The number of hours worked is calculated on the basis of 7.7-hour days and 220 workdays per year. The occupational safety data relate to all employees (permanent employees, trainees and temporary workers), while the other data relate only to permanent employees.

Within the framework of the sustainability strategy, TÜV Rheinland has set a number of targets for 2025, including:

- Reduction of the lost time injury frequency rate by 40 percent versus 2019
- 100% workplace inspections
- 420 Senior Management Engagement Tours
- HSE training for 100 percent of all managers worldwide
- Continuation of the "zero fatalities strategy"

PREVENTIVE HEALTH AND SAFETY AND RISK PREVENTION IN ACTION

As we implemented our strategy in the year under review, we also initiated and expanded projects in the area of occupational health and safety. HSE training for managers and employees was further developed, for example. Not least as a result of our experiences during the worldwide coronavirus pandemic combined with the professional and personal challenges in our everyday work, we focused more attention on the issue of mental health. Together with the Group Works Council, Steve Vogel, Regional Officer Germany Quality, Health, Safety & Environment, established the "Mental Health" initiative. This concerns key aspects of mental health such as stress management and time management. During the online event held in conjunction with this project, industrial psychologists gave lectures and then remained available to employees for advice and personal consultations; subsequent employee feedback on the event was very positive.

In 2022, TÜV Rheinland also introduced the PERMIT program: PERMIT stands for our Prevention Employee Risk Management Information Tool. The program enables documentation of risk assessment at the employee level together with the resulting measures such as necessary training courses, occupational healthcare and personal protective equipment.

BEST PRACTICE:
INCIDENT MANAGEMENT PROGRAM (IMP)

New tool for documenting and preventing workplace accidents

Integrated within the internet platform blueye, the online tool "Incident Management Program" (IMP) improves transparency Groupwide with regard to accidents and the reporting of lost time injuries, unsafe conditions and environmental incidents. The information obtained in this way provides valuable insights for the improvement of employee health and safety and environmental protection.

EASY, FAST, CLEAR

IMP offers:

- User-friendly interface
- Automated transmission of all important data (TÜV Rheinland locations, Business Streams, personal data, responsible HSE experts)
- Simplified input screens: A limited number of mandatory fields ensures that all vital information is provided.
- Assessment at the press of a button
- Classification of HSE incidents according to standard operating procedures within the Group

DEFINED WORKFLOW AND RELIABLE INFORMATION ABOUT THOSE INVOLVED

After the initial report of the incident, the supervisor of the person concerned, responsible HSE experts and local authorities are automatically informed and therefore actively involved in processing the incident. The tool also handles all reporting and documentation duties.

FOCUS ON HAZARDOUS SITUATIONS

A root cause analysis enables an anonymized assessment of the causes that led to an incident. The findings and the appropriate measures make it possible to prevent most incidents. IMP's simplified documentation of near-miss incidents and unsafe conditions is also intended to encourage employees to report their observations.

OPTIMIZING RISK ANALYSES FOR GREATER SAFETY

In the past financial year, the reporting system for HSE incidents was substantially improved through the development of an Incident Management Program. This is a special Health, Safety and Environment reporting tool that optimizes the documentation and evaluation of lost time injuries, near-miss incidents, unsafe conditions and environmental incidents, thereby providing, among other things, valuable insights for the improvement of employee safety and health (see box "Best Practice", on this page). Launched in April 2022 as a pilot project in the IMEA region, its phased worldwide rollout began in January 2023.

To further encourage employees to report incidents and observations, employees in Germany will also be able to communicate near-miss incidents and unsafe conditions by e-mail in the future. The information will be funneled to the Corporate HSE team, where individuals tasked with specific issues will take the appropriate actions.

> Overall, the use of the Incident Management Program will play a key role in preventing HSE incidents and help make working at TÜV Rheinland substantially safer.
>
> Nishani Jayawardhana,
> Regional Officer QHSE for the region IMEA

Realizing potentials, seizing opportunities

TÜV Rheinland earns its livelihood from the expertise and dedication of more than 20,000 employees. By helping them develop their individual skills, we are ensuring our sustained business success.

Security and fair opportunities, the targeted development of talent, and a diverse, open corporate culture are key elements of TÜV Rheinland's sustained, successful business growth. In an increasingly complex work world, cultural and organizational development play a vital role in the successful implementation of our business strategy. We support our employees with innovative programs and precisely tailored offerings that enable them to reach their full performance potential.

TÜV Rheinland has implemented a personnel management system that, among other things, aims to promote the knowledge, skills and talents of all employees in a way that helps them become more effective and supports personal development. It takes a highly qualified, motivated and dedicated workforce to fulfill our quality ambition to be a worldwide successful, sustainable and independent provider of technical services. We believe that the knowledge of our experts, their effectiveness and motivation, and their diverse personal strengths make a key contribution to our business success. At the same time, their conduct should shape our corporate culture.

OUR TRAINING COURSES – CONSISTENTLY HIGH STANDARDS

We reach our employees Groupwide via a standardized training system that offers continuing education and qualification courses. Harmonized in 2021 and applicable to all locations, the manager development curricula have also been implemented for various levels of experience and other specific job families. That brings TÜV Rheinland's total standard curricula to more than 60 courses Groupwide.

One of the key components of the continuing education program is the myHR online portal with its "Learning" module. It is available at all locations. In the year under review, training course offerings were expanded and technical training and continuing education courses were added.

Additional continuing education projects were also implemented (see also the box "Mentoring: Who shares, wins" on the next page).

In reporting year 2022, a total of 1,339 courses were available through the learning platform (as of Dec. 9, 2022). These include e-learning courses, virtual classrooms and in-person training on topics ranging from communication and customer orientation to agile working, as well as English courses and further qualifications in various languages.

> We can look back over a successful 150-year history that has always been marked by our employees' willingness to learn new things.
> Lifelong learning, especially in a team of experts, is a basic prerequisite for continuing to shape the future successfully.
> Diverse learning programs and an optimal learning culture are the key to TÜV Rheinland's success.
>
> Ruth Werhahn,
> Member of the Executive Board

MENTORING: WHO SHARES, WINS

In May 2022, the myHR platform was used to launch the mentoring program "Mentoring@TÜV Rheinland" worldwide. Here, experienced employees who want to support colleagues can declare their interest in serving as a mentor by setting up their personal profile. Interested parties can then access the platform to compare those profiles with their own interests and identify a suitable colleague as their mentor. When the match fits both parties, they can set the time period for the mentoring on their own, along with the topics and content that they want to discuss during the process. The global orientation has already resulted in international and cross-cultural tandems. Since the start of the program in February 2022, nearly 100 people have registered as mentors and 88 have signed up as mentees. Currently there are 40 active tandems.

MANAGING YOUR OWN PERSONAL DEVELOPMENT

In the myHR module "My Profile," employees can add their professional qualifications and career preferences. Education, language skills, career goals and mobility are particularly important here. This improves their career opportunities within the company, because it makes them visible to TÜV Rheinland recruiters worldwide.

And the open mentoring program in myHR offers the opportunity for further personal development.

"I decided to participate in the mentoring program because I had perceived things from an operational perspective and lacked the big picture."

Corinna Reget, mentee, Program Manager for International Mark Approval, Electrical

"For the mentor and the mentee, 'Mentoring@TÜV Rheinland' is a win-win situation: You can give a lot, but you also learn a lot yourself. I'm glad to share my experience with younger employees and help them up the career ladder."

Wilfried Kienzle, Mentor, Head of Corporate Strategy and Organization in the Corporate Development Department

The mentoring team in the Innovation Space Chalet (from left): Corinna Reget and Dr. Wilfried Kienzle

> Derived from our business strategy and the needs of the Business Fields and regions, we provide a broad portfolio of continuing education offerings and personal development options. We help our employees develop their personal potential and support them with a wide range of future-oriented career development and training programs.
>
> Dr. Silke Wechsung,
> Global Officer HR Solutions

EMPLOYEES NEED OPPORTUNITIES – WE PROVIDE THEM

TÜV Rheinland provides advanced training and coaching offerings to encourage and help employees take on new challenges. Wherever possible, we would like to fill general vacancies and leadership positions with employees and talented individuals from our own ranks. That is why we instituted a "Talent First Policy" that favors TÜV Rheinland employees for in-house job openings (see also in the "Managing your own personal development" box on page 16).

These career development offerings are intended to increase our employees' satisfaction and loyalty and to make us more attractive as an employer. This is evident not only from the number and quality of applicants, but also from the employee turnover. Our goal is to reduce the share of employees who voluntarily leave the company to 11 percent or less per year by 2025. We have already achieved that target in the year under review with a voluntary turnover of ten percent.

GENERATING ENTHUSIASM FOR LEARNING

The "Fit for Future Learning Journey" introduced a new format during the year under review. "Fit for Future" is a virtual and interactive journey into the future, designed for all employees worldwide. It presents future global trends such as the sustainable energy supply of tomorrow and future work and office environments. Here TÜV Rheinland employees present innovative in-house projects, supplemented by specialized input from external experts.

OUR GOAL IS TO REACH ALL EMPLOYEES

We believe in the importance and effectiveness of the continuing education programs. That is why we aim to have all employees complete at least 2.3 training days per year by 2025.

In addition, we want to ensure that all employees complete 100 percent of the compulsory continuing education courses by 2025. The myHR portal helps us evaluate our performance. It enables us to compare actual vs. target learning progress and track the planning targets within our workforce. In this way, we can undertake targeted actions, such as the implementation of standardized employee performance reviews via the myHR system starting from 2023 – reviews in which objectives, career preferences and continuing education needs are discussed and documented.

Employee development falls under the purview of Dr. Silke Wechsung, Global Officer HR Solutions. Complaints can be addressed directly to personnel managers or submitted to myHR through the ticket system.

At a glance: facts and figures

EMPLOYEE DEVELOPMENT	GOAL	PERFORMANCE INDICATORS	TARGET 2025	STATUS
Training and career development	Develop and retain employees through business-oriented HR work	Average annual training days per employee	> 2.3	= 2.3
		Percentage of employees that annually receive a development dialog	100 %	n. a.* The rollout of the Development Dialog in myHR has been postponed to 2023 and in the first phase will be implemented in the regions GC, APA, IMEA, NAM, SAM, WEU and CEE.
Re-education and training of workers for new job descriptions	Prepare employees for new requirements	Prepare employees for new requirements	100 %	93 %
Employee experience	Reduce self-initiated turnover rate to retain the experience of employees	Self-initiated yearly employee turnover rate	11 %	10 %

Fairness ensures shared success

Our employees are key to the success of TÜV Rheinland. Their professional expertise, experience and dedication earn the trust of businesses and private individuals the world over, year after year. As a company, we shoulder a high level of responsibility, with regard to both our customers and our employees.

To promote collective collaboration, TÜV Rheinland has defined values and principles. Reasonable and fair remuneration structures, appreciation, respectful interactions with one another and a communication culture characterized by trust are our goal. We have also signed the UN Global Compact, thereby committing ourselves to, among other things, human rights and core international labor standards.

OUR AMBITION: FAIR REMUNERATION FOR EVERYONE

We base the design of our fair remuneration structures on the findings of the Global Living Wage Coalition, the assessment of living wage guideline values and benchmarks for individual countries and regions, using an established methodology: These findings indicate that the applicable statutory minimum wages in a number of countries do not suffice for the employees there to maintain a reasonable standard of living. Our goal is to configure our remuneration system in a way that provides a living wage to all employees by 2025. In doing so, we exceed the target minimum of 90 percent established in 2021. TÜV Rheinland is committed to Article 23 of the Universal Declaration of Human Rights (see box).

EQUALITY ALSO APPLIES TO REMUNERATION

Equal pay for equal work: In our remuneration, we do not differentiate among genders – and for that reason, we are actively working to close the gender pay gap. For 2025, we have set ourselves the goal of achieving fair remuneration with regard to genders at all our locations. Our goal is that by 2025, 100 percent of employees will receive the same compensation for the same or equivalent work, irrespective of gender. That means we raised our previously formulated target of 90 percent during the year under review.

DEMONSTRATING APPRECIATION AND OPEN COMMUNICATION

A sense of belonging derives from trust, and trust is based on appreciation. We demonstrate that appreciation to our employees. Open and transparent communication plays an important role here. Not only do we inform our employees on topics of relevance to the company, but we also use targeted actions to promote a communication culture that gives every employee the opportunity to provide feedback and participate in exchange.

EMPLOYEES SHARE THEIR POINTS OF VIEW

One example of our communication culture is our employee survey "Together." It gives each and every employee of the Group a chance to provide feedback on topics concerning the daily work routine. Conducted worldwide at three-year intervals, the highly successful "Together Survey" examines central questions relative to motivation, work satisfaction, communication, collaboration and equality: In 2022, the participation rate was 73 percent worldwide. That exceeded the target rate of 70 percent set for 2025. This shows the extent to which our employees everywhere feel empowered to actively participate, how dedicated they are, and the high value they place on our commitment to constructive dialog.

Moreover, the survey also indicates the issues that we have to work on in the future. Accordingly, the Together results have served as the basis for establishing Groupwide improvement measures together with the Executive Board. The management in each of the regions, Business Streams and Service Functions were also encouraged to develop concrete actions in the teams to maintain the results achieved through the survey and to implement improvement measures.

According to Article 23 (3) of the Universal Declaration of Human Rights of the United Nations: "Everyone who works has the right to just and favorable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection."
United Nations General Assembly, 1948

Living wages make a significant contribution to several Sustainable Development Goals, including the elimination of poverty (Goal 1) and hunger (Goal 2), and ensuring a healthy life for all people (Goal 3), as well as inclusive, equitable and high-quality education (Goal 4), access to water and sanitation (Goal 6), and the promotion of full employment and decent work (Goal 8).

> Particularly against the background of huge geopolitical changes, as a company with international operations, TÜV Rheinland has a special responsibility to its employees. To ensure that we also remain a good employer in the future, we make certain that living wage, equal pay for equal work, and constructive dialog with our employees worldwide are on the agenda.
>
> Nadine van der Heusen,
> Head of Reward

HR PLATFORM ENABLES FAIR PAY REMUNERATION AUDIT

The foundation of fair, living wage remuneration structures and equal pay for women and men is good, solid data. Our digital HR platform "myHR" is an important tool in this regard. It enables us to harmonize HR processes across all locations where it has been implemented. The platform also provides uniform documentation of employees' wage and salary data at the individual locations and can be used to audit fair pay remuneration. Future plans call for the global rollout of myHR. In some countries, the minimum wage is below the living wage. Especially in those countries, we will complete our analyses and implement corrective measures as needed. With the launch of myHR in all regions, we will review the wage and salary data for each country and – with the support of relevant market data and taking market-economy developments into consideration – we will determine where gaps exist in the payment of a living wage. Our labor law regulations and standards are the responsibility of the Global Officer HR Performance, Pamela Pfeiffer.

At a glance: facts and figures

LABOR RIGHTS	GOAL	PERFORMANCE INDICATORS	TARGET	STATUS
Employee Pay (Living Wage)	Pay employees in all TÜV Rheinland countries not only the minimum wage but the "Living Wage"	Total Compensation per employee in country divided by Living Wage per employee in country	100 %	Initial investigation indicates that we are already close to our target of paying a living wage in those countries where we were able to do a first analysis. Nevertheless, additional analysis is required and we will need to review the market data constantly (e.g. due to volatile economic developments). In some countries the minimum Wage is below the living wage. Especially in these countries, we will complete the further analysis and take corrective measures as needed. As myHR (HR System) is implemented in all regions, we will review the salary data for each country and identify – supported by relevant market data and considering economic market developments – where there are gaps in paying a living wage.
Labor / Management Relations	Enhance an open communication and speak-up culture by giving employees regularly and anonymously the opportunity to provide feedback.	Percentage of employees participating in global employee survey "Together"	> 70 %	The 2022 global employee survey "Together" had a participation rate of 73 %.
Equal Pay	Achieve equal pay regardless of gender.	Average Total Compensation Females divided by Average Total Compensation Males	100 %	Initial investigation indicates that we may have some areas where salary adjustments will be required, but additional work is required in order to clearly identify and analyze like roles and their values and comparability. Gender pay equality may likely vary by country, business stream and region. As myHR (HR System) is implemented in all regions, a process will be developed to further identify roles and analyze salary data. Based on the analysis, we will define measures and any concrete need for action to reach our target.

Diverse teams at TÜV Rheinland

We stand for diversity and against marginalization and exclusion. The diversity of our international group of companies is our strength. In our workforce, no one should ever fear reprisals due to their personality, sexual orientation or identity. At our workplaces and in our teams, we foster tolerance and mutual appreciation.

With the signing of the "Diversity Charter" in 2013, we committed to creating a work environment that is free of prejudice and discrimination. For us, respect, tolerance and equal opportunity are essential aspects of appreciative togetherness and fundamental to our leadership culture. This is laid out in our Code of Conduct and applies at all locations where TÜV Rheinland operates the world over. The interaction of people from different cultural groups and nations and from different socio-cultural backgrounds drives innovation forward and enables us to be successful in an increasingly complex business environment. The only way we can achieve this is to create a work environment for our employees that lets them experience appreciation and is free of discrimination – in all countries. That is why we have set appropriate targets that we aim to achieve by 2025. Dr. Silke Wechsung, Global Officer HR Solutions, is responsible for implementing the necessary programs.

EMPLOYEES ACKNOWLEDGE EQUAL TREATMENT

The fact that we at TÜV Rheinland work together on a large scale to promote an open corporate culture is borne out by our global survey "Together." Among other things, it asks our employees whether or not, in their opinion, everyone on their teams and in their company is treated equally irrespective of age, gender, culture, ethnic origin, nationality, religion, disability or sexual orientation. The rate of agreement, which was 81 percent in 2019, was around 85 percent in the latest survey during the year under review. That means we have achieved our target for 2025, which was to improve the 81-percent rate of agreement even further.

Discrimination and prejudice must not be met with silence or indifference. A stance takes a voice to make its case. In 2022, we initiated and supported many internal and external actions that made our stance clear for all to see. And that is another reason why everyone in our company can feel appreciated and accepted.

Ruth Werhahn,
Member of the Executive Board

A CULTURE THAT VALUES APPRECIATION NEEDS TO BE NURTURED: MANY SUSTAINABLE PROJECTS

We are well aware that everyone in our workforce can be affected by prejudice and discrimination. Through numerous projects, we draw attention to these issues and show how we can work together to reinforce a respectful and appreciative culture in all Business Streams.

DIVERSITY TRAINING AVAILABLE ONLINE

As part of rolling out our Groupwide digital myHR learning offering, global e-learning courses on "Diversity and Unconscious Bias" were implemented during the year under review. In the context of the People Lead program, these digital training courses are specifically designed to teach managers to recognize and avoid unconscious biases and stereotypes. The e-learning courses are available in English and German and also with subtitles in other languages and can be accessed in myHR by all employees.

WE SET STANDARDS

Furthermore, diversity and respect for differences are already part of our daily work routine at our company – and that characterizes our global TÜV Rheinland family. A few examples:

- In connection with a campaign on our social media channels, Executive Vice Presidents from all Business Streams and regional Executive Vice Presidents participated in the International Day Against Homophobia, Biphobia, Interphobia and Transphobia (IDAHOBIT) by submitting clear declarations against discrimination and for diversity, thereby demonstrating their position.
- A discussion with Ruth Werhahn, Member of the Executive Board, and Wolfgang Schwarz-Heim, Senior Project Manager and spokesperson of the intra-group LGBT network, was broadcast globally as a video stream. Their overall message was that there is no place for any kind of discrimination whatsoever.
- TÜV Rheinland took part in Christopher Street Day (CSD) in Cologne and Berlin and encouraged employees to participate actively: "Join in! Show solidarity with your colleagues, locally and globally, and stand up against discrimination and for diversity and respect." Rainbow flags were also raised in front of the head office and at the Berlin and Nuremberg locations.
- For the workforce, the company has created an internet information platform that examines the issue of sexism in the workplace. It includes explanatory videos that raise awareness of the topic and not only help employees recognize and identify sexual harassment in the workplace, but also show how they should respond to it. It also provides guidelines, contacts, a definition and legal principles.

The prohibition against unequal treatment in the workplace also constitutes a human right. In December 2022, we published a declaration of principle on duties of care related to human rights and the environment. Duties of care related to human rights and the environment are fundamental principles undergirding our responsible business practices. With our commitment to the UN Global Compact, we have been communicating and emphasizing that core value since 2006. In our declaration of principle, we explicitly acknowledge our responsibility to respect human rights and prevent human rights violations – not only in our business activity, but also in our supply chain.

DISCRIMINATION WILL NOT BE TOLERATED

Even though much progress has been achieved already, we still have a long way to go before discrimination becomes a thing of the past. All the more reason to continue working consistently to eliminate bias all around us. We urge our employees to report any such indications or incidents. Our global whistleblower platform is available for this purpose and accessible not only to our employees, but also to outsiders. In Germany, we also have our General Equal Treatment Act (AGG) officers in the Business Streams who serve as contact persons for our employees.

In the year under review, we received a total of two confirmed cases of discrimination, both of which were comprehensively followed up. Our ambition in this regard, of course, can only be that we want to reach the point in our company where no cases of discrimination occur. However, rather than solely measuring our performance by that, we do so by how we deal with reports and cases. Our goal for 2025 is a follow-up rate of 100 percent for reported cases; we achieved this in 2022.

At a glance: facts and figures

NON-DISCRIMINATION	GOAL	PERFORMANCE INDICATORS	TARGET	STATUS
Equal opportunities	Job applicants are treated the same independent of their background	Proportion of newly recruited women	Share newly recruited women > Share women in the workforce *	33 % 33 %
Non-discrimination because of gender, race, cultural identity or ethnic origin		Number of confirmed cases of discrimination	0	2
		Follow-up rate on reported complaints	100 %	100 %
		Approval rate of the diversity item in the Together survey	≥ 81 %	85 %

We live diversity

Innovative, effective and international: More than 20,000 employees from some 100 countries contribute to TÜV Rheinland's successful diversity. And we value that diversity. That is why all of TÜV Rheinland's locations foster open and respectful interaction, mutual tolerance and equal opportunity for all.

As a company with international operations, our ability to employ people of various nationalities, cultural backgrounds, experience and identities is very important to us because it gives rise to wide-ranging potentials and perspectives that drive our innovative force and empower TÜV Rheinland's success in the different national markets we serve. The key here is to see ourselves as a team and pursue shared objectives.

A mindful approach to diversity is of central importance to TÜV Rheinland. We maintain a corporate culture characterized by mutual respect and appreciation – irrespective of gender, age, nationality, sexual orientation, religion, ideology or disabilities. We have guaranteed this by signing the Diversity Charter, the UN Global Compact and the Group's own Code of Conduct, and by publishing a declaration of principle on human rights- and environment-related duties of care in December 2022. Our freely accessible whistleblower platform can be used to report information or violations of our values. Anybody potentially affected can access the platform from our website. Information and complaints can be reported anonymously and openly, but all reports, anonymous or otherwise, are handled confidentially.

TÜV Rheinland opposes all forms of discrimination (for further details, refer to the chapter "Non-discrimination") and works continuously to ensure that supervisors and employees recognize, share and live the value of diversity. Diversity Management is part of Global Office HR Solutions, which reports to the Chief Human Resources Officer. Our diversity efforts focus on ensuring equal opportunity for women and men as well as filling management positions with people represented in the local workforce.

SHARE OF WOMEN IN MANAGEMENT POSITIONS INCREASED SIGNIFICANTLY

We want to increase the share of women in management positions throughout the Group to at least 30 percent by the end of 2025 – that is our goal. Within the same time frame, we aim to have women occupy at least 25 percent of the positions on the Executive Board.

In Germany, we are working to achieve compliance with the Law on the Equal Participation of Women and Men in Management Positions, and have set appropriate targets in this respect for women in the following six companies: AMD TÜV Arbeitsmedizinische Dienste GmbH, TÜV Rheinland Akademie GmbH, TÜV Rheinland AG, TÜV Rheinland Industrie Service GmbH, TÜV Rheinland Kraftfahrt GmbH, TÜV Rheinland LGA Products GmbH.

Where the general management level of these companies comprises three or more persons, at least 30 percent of those positions are to be filled by women by the end of 2025.

In the year under review, one third of the positions on our Group Executive Board were held by women: One member of the Executive Board is a woman, Ruth Werhahn, and two members of the Executive Board are men, Dr. Michael Fübi and Philipp Kortüm. We have also achieved progress with regard to management positions: 29 percent of management positions with supervisory responsibility are currently held by women, and that figure is already close to the target set for 2025.

WE WORK ACTIVELY TO PROVIDE EQUAL OPPORTUNITY

TÜV Rheinland uses a recruiting procedure for top management positions, which also takes the gender ratio into account. Where women are underrepresented, the last round with three candidates must include at least one woman. With effect from the year under review, the share of newly hired female candidates must be greater than the current share of women in the entire workforce by no later than 2025. This rule is designed to further increase the share of female employees in all Business Streams. In the year under review, we already managed to achieve reasonably satisfactory results in this regard: 33% of new hires were women, and that figure is equal to the share of women in the workforce in 2022. At the same time, the share of people whose gender is listed as "unknown" also rose: men 61.6%; women 33.2%; unknown 5.2% – the latter figure was 2.8% in the previous year.

To monitor target achievement, we established annual reporting of gender-specific target values and actual values to the Executive Board. That Gender Report and the findings from the employee survey "Together" provide insight into areas and regions in need of improvement.

> Valuing a diverse workforce is an important element of our corporate culture. TÜV Rheinland not only lives diversity from within, it also demonstrates it to the outside world. Experiencing this enriches us all and also makes us more attractive as an employer.
>
> Sabine Hager,
> Global Expert Diversity

One key aspect of equal opportunity also involves helping women and men return to professional life or management positions following parental leave. Our "Work & Family" program provides employees with offerings such as parental leave consultation, partnerships with company-sponsored childcare providers, and the company's own "TÜVtel Kids" kindergarten at our Cologne site.

In 2022, we also continued to expand the global women's network "women@TÜV Rheinland." More than 60 women with managerial responsibility used International Women's Day, together with HR Director Ruth Werhahn, for a cross-regional exchange about important factors in career development. Furthermore, "TOUGH" mentoring supports aspiring professional women – specialists and managers alike – with a one-year program. The annual evaluation shows that once again in 2022 nearly 100% of the mentees and mentors who participate in the program recommend it to others. In addition, targeted business workshops are conducted for all female employees, for example in cooperation with the European Woman Management Development Network (EWMD).

TÜV Rheinland also participates in initiatives dedicated to promoting diversity as well as ones specifically dedicated to supporting women in leadership positions. That includes, for example, the Rhine-Ruhr Diversity Network and the "Chefsache" initiative, a network that seeks to balance the ratio of women to men in management positions. Moreover, TÜV Rheinland held a number of events once again in 2022, for example an intercultural workshop in conjunction with the International Employee Network and an online conference on the occasion of German Diversity Day under the slo-gan "Diversity beats simplicity – it all starts with a point of view."

But for us, diversity also means developing and supporting employee organizations such as the Father Network and the LGBT* Network of TÜV Rheinland.

OUR ADVANTAGE: GLOBAL PERSPECTIVE, LOCAL FOCUS

As a company with global operations, our success depends on our ability to integrate local talent, recruit professionals regionally and fill leadership positions from the local workforce.

By 2025, we want to fill 75 percent of all leadership positions with local managers. Because we would like our management, too, to be a melting pot comprising people of

different nationalities, and we want to encourage the formation of international teams.

To achieve that goal consistently, we will continue to
- train more local employees in more in-house management training courses;
- favor local candidates more frequently when filling management positions;
- use mentoring programs to promote the development of local managers.

In the year under review, these measures have already produced results: With 92 % of all newly filled leadership positions held by local managers, we are significantly outpacing our target – which means that our management recruitment efforts are more often favoring the local workforce. To support the diversity of nationalities and cultures, we are striving for 75 %.

At a glance: facts and figures

DIVERSITY	GOAL	PERFORMANCE INDICATORS	TARGET 2025	STATUS
Gender balance in decision-making positions	Increase the proportion of women in management positions	Proportion of women in Disciplinary Leadership Roles (Span of control ≥ 1)	≥ 30 %	29 %
		Proportion of women in the Executive Board	≥ 25 %	33 %
Alternation of generations	Job satisfaction across generations is comparable and shows little variation	The overall satisfaction index ("Together" item) has no greater difference than 0.3 comparing the age groups	< 0.3	= 0.3
Local communities and local workforce	Management positions are mainly staffed from the local workforce	Proportion of local managers in the regions	Ø 75 %	Ø 92 %

Introducing: TOUGH mentoring participant Katharina Alamo Alonso, General Manager of Battery Quick Check GmbH, a joint venture of TÜV Rheinland and TWAICE Technologies GmbH

Sabine Hager, you are our Global Expert Diversity & Inclusion and you have gotten to know Katharina Alonso.

"In 2021, she was a mentee in the TOUGH mentoring program, which we established as part of the Women & Career Program. That makes her one of 125 women who have formed a tandem with an experienced manager under the auspices of TOUGH since it started in 2013. In 2022, 19 new tandems were created. The mentoring program runs for one year. The meetings between mentees and their mentors are also accompanied by experience-sharing meetings and a workshop on self-efficacy and career advancement skills. We also anticipate offering international TOUGH mentoring opportunities in 2023."

Ms. Alonso, how has your career at TÜV Rheinland developed so far?

"During my university studies, I earned Bachelor's and Master's degrees in Business Administration and then a degree in Mechanical Engineering while working part-time. At TÜV Rheinland, I started out on the Global Business Improvement Management Team, where I was primarily responsible for the Mobility Business Stream; my first day on the job there was in January 2020. During the Covid pandemic, we developed and rolled out a worldwide training program on financial ratios. I'm really pleased that I was able to participate in some development programs for future managers already early on – including leadership training courses and the TOUGH mentoring program. After completing the mentoring program, in early 2022 I received the offer to serve as co-general manager of the start-up Battery Quick Check GmbH – an exciting challenge. Now I can develop and expand this business involving mobility and sustainability – vital topics with a promising future – and take over managerial responsibility for a business and a team. In the course of all this, a personal matter played an important role for me: I had just become pregnant at the time, and I wanted to be sure that I would be able to balance the professional demands with my future family life. I discussed this with my mentor, among others, and was very pleased with all the encouragement and support I received. Our HR Director also helped me decide on this career step, reassuring me with her own experience and promising me the support of the company. I would return to the job after my maternity leave and a short parental leave, that was never in question."

And are you able to balance work and family now?

"Many Women & Career and employee development offerings have been helpful to me. Even before my pregnancy, I had already carefully examined them and picked out the programs and training courses that suited my needs.
There are two offerings that I'd particularly like to mention: The TOUGH mentoring program enabled me to engage in detailed discussions with a Business Executive Vice President for one year and above all to learn soft skills required for a leadership role. And TÜV Rheinland's coaching offerings for female employees who return to a management function after their parental leave also helped me. That coaching is even open to couples. Those individual coaching sessions focused on how we as parents share the mental load. That change in perspective from just me as a woman to us as parents provided us with many new ideas and planning options. A great experience that I wish all expectant parents could have."

Do you have any other personal advice to offer on how to balance work and family – especially at TÜV Rheinland?

"Be self-confident and dare to make changes. Take advantage of the many development programs for managers and also ask for help and support when you need it. For me, that's the key to success in personal and professional life."

Planet

As a provider of testing and inspection services, we help companies and organizations worldwide transition to climate-neutral business practices that conserve resources to protect our planet. In the future we will apply our expertise in even more targeted ways to reduce our own ecological footprint as well. We are actively fighting against climate change. TÜV Rheinland has set the goal for itself to be climate neutral starting from 2028 – and TÜV Rheinland's German companies even intend to be climate neutral already starting from 2025. That is our contribution to the United Nations' SDG 13 Climate Action.

13 CLIMATE ACTION

Our main topics

- Finite resources – plenty of possibilities | 29
- Reducing greenhouse gas emissions: Our path forward | 30
- GHG balance sheet 2018-2022 | 32
- What we achieved | 32
- We are working to achieve climate neutrality: New milestones for 2025 and 2028 | 34

On the way to climate neutrality

For 150 years now, TÜV Rheinland has been engaged in responsible action for the safety of people, technology, and the environment. Not only with our services, but also within our own company, we want to make measurable contributions to preserving our planet. In doing so, we focus on reducing climate-damaging emissions generated directly and indirectly by our building services, testing facility operations, and business travel. Strategically, we aim to eliminate emissions to the greatest possible extent primarily where we can achieve a leveraging effect.

TÜV Rheinland operates from locations on nearly every continent. The effects of climate change are also likely to impact us directly where we are located. That makes climate protection a global challenge for us – one that requires a long-term perspective.
That is why, in addition to the 2025 greenhouse gas reduction targets included in our sustainability strategy in alignment with the Paris Climate Accords, at the end of reporting year 2022 we resolved to make all of our subsidiaries worldwide climate neutral by 2028 – and our German operations climate neutral even by 2025. This more recently formulated goal has yet to be incorporated into the calculation of greenhouse gas reduction targets for 2025, however.
The present Sustainability Report details our target achievement status along the target path of the reporting year's sustainability strategy and examines the findings of our 2022 greenhouse gas balance sheet along with some programs that have successfully reduced our resource consumption and greenhouse gas emissions.

FINITE RESOURCES – PLENTY OF POSSIBILITIES

TÜV Rheinland has been systematically documenting essential resource consumption rates in all Group regions and for its companies since 2015. Key performance indicators recorded here include paper and water consumption. In the year under review, our global water consumption was reduced again, this time by more than 22 percent versus the level in 2018. Global paper consumption rose again slightly, but per capita consumption continued to fall (cf. table below).

Evolution of resource consumption, TR Group, global (paper, water) since 2018

	Water consumption, global [m³]	Water consumption per FTE, global [liters/FTE]	Paper consumption, global [kg]	Paper consumption per FTE, global [kg/FTE]
2018	393,613	19,274	405,892	19.9
2019	377,599	17,700	381,182	17.9
2020	337,172	16,275	243,952	11.8
2021	313,287	15,436	222,231	11.0
2022	306,575	14,072	229,338	10.5
Reduction 2018 through 2022	–22.11 %	–26.99 %	–43.50 %	–47.10 %

> The new car policy for Germany lays the foundation for e-mobility. The goal is to convert entirely to e-mobility by 2028 if possible through routine vehicle replacement. For conventional vehicles, the new car policy reduces the maximum allowable CO_2eq emissions by up to 20 percent in the highest group. According to our estimates, these measures will enable us to reduce the annual CO_2eq emissions of our vehicle fleet by up to 20 percent.
>
> Werner Kreuzer,
> Head of Corporate Fleet Management

In 2022, with the implementation of a global process procedure for waste management, we laid the foundation for an even more systematic analysis of our waste streams and the further reduction of waste generation. Starting from 2023, all TÜV Rheinland subsidiaries are required to set measurable targets for reducing their resource consumption.

With the entry into force of Germany's Supply Chain Due Diligence Act (Lieferkettensorgfaltspflichtengesetz), companies like TÜV Rheinland are required to set up a risk management system in both their internal and external supply chains. In future, the existing internal risk analyses in environmental management according to ISO 14001 as well as regular risk assessments by our subsidiaries worldwide will come into effect here. Key aspects include not only prohibitions against the use of certain hazardous materials and the transfer of hazardous wastes, but also the prohibition against causing soil contamination, for example.

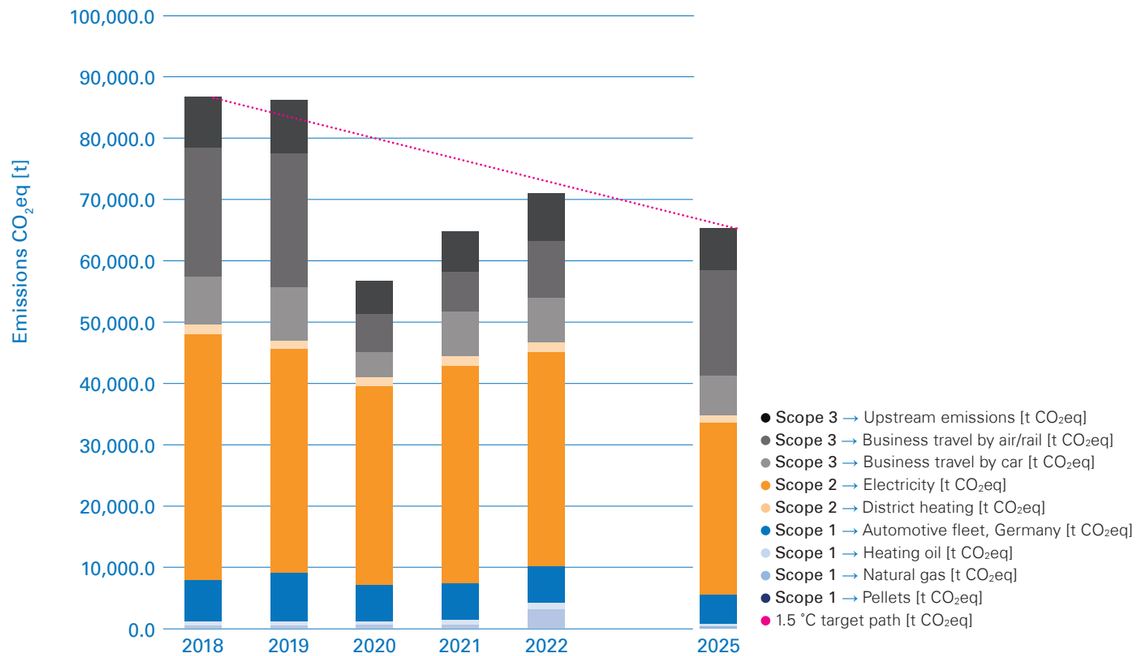
REDUCING GREENHOUSE GAS EMISSIONS: OUR PATH FORWARD

Our goal is to be climate neutral by 2028. Along the way, we want to reduce our greenhouse gas emissions – measurably, transparently, and verifiably. That is why, in defining our 2025 emissions reduction targets as specified in the sustainability strategy, we are following the requirements of the Science Based Targets initiative (SBTi), a partnership between Carbon Disclosure Project (CDP), the UN Global Compact, the World Resources Institute and the World Wide Fund for Nature.
On that basis, we quantified exactly how our greenhouse gas emissions must trend downward in absolute figures to conform to the 1.5-degree Celsius goal. According to the current version of the SBTi, the following values apply for TÜV Rheinland: By 2025, we must reduce CO_2eq emissions in Scope 1 and 2 by 29.4 percent relative to the reference year 2018. Scope 3 emissions must be reduced by 17.5 percent by 2025. Our intermediate status along the path to that target is presented below in conjunction with the greenhouse gas balance sheet.
Also in the reporting year 2022 we agreed on binding CO_2eq emissions reduction targets for individual regions and companies of TÜV Rheinland, and used our HSE management system to cascade those targets according to ISO 14001. To that end, in early 2022 we developed a tool that enables the companies to regularly report relevant parameters such

Accounting of emissions in t CO_2eq 2018-2022 and targets for 2025 (TR Group global)

	2018	2019	2020	2021	2022	2025 (Targets)
Scope 3 – WTT [t CO_2eq]	8,277.9	8,640.3	5,433.4	6,544.6	8,064.7	6,829.3
Scope 3 – Business travel, by rail [t CO_2eq]	22.3	10.3	2.8	3.1	45.4	18.4
Scope 3 – Business travel, by air [t CO_2eq]	20,985.9	21,698.7	6,142.0	6,484.6	9,358.9	17,313.4
Scope 3 – Business travel, by car [t CO_2eq]	7,844.7	8,692.0	4,145.5	7,273.8	8,079.4	6,471.9
Total Scope 3	37,130.8	39,041.3	15,723.7	20,306.1	25,548.5	30,633.0
Scope 2 – District heating [t CO_2eq]	1,632.3	1,413.5	1,452.6	1,524.2	1,729.5	1,152.4
Scope 2 – Electricity [t CO_2eq]	39,656.6	36,403.0	32,310.6	35,613.0	33,883.7	27,997.5
Total Scope 2	41,288.9	37,816.5	33,763.2	37,137.2	35,613.2	29,149.9
Scope 1 – Pellets [t CO_2eq]	0.0	0.0	0.0	0.0	4.7	–
Scope 1 – Automotive fleet, Germany [t CO_2eq]	6,810.6	7,044.5	6,080.1	5,901.9	6,025.7	4,808.3
Scope 1 – Heating oil [t CO_2eq]	599.9	694.8	567.8	681.6	752.6	423.5
Scope 1 – Natural gas [t CO_2eq]	598.5	545.9	601.6	731.6	3,453.8	422.6
Total Scope 1	8,009.0	8,285.2	7,249.5	7,315.1	10,236.8	5,654.4
Total Scope 1–3 [t CO_2eq]	86,428.7	85,143.0	56,736.4	64,758.4	71,398.4	
Target path [t CO_2eq]	86,428.6	83,429.9	80,431.1	77,432.4	74,433.6	65,437.2

Evolution of CO_2eq emissions 2018-2022 for Scope 1-3 (direct/indirect) and target path through 2025



Notes on table page 30 and graphic page 31:
– Scope 1: Direct emissions in CO_2eq from the use of natural gas, heating oil, pellets and fuels (fleet of own company cars in Germany)
– Scope 2: Indirect emissions in CO_2eq from the use of electricity and district heating in real-estate properties
– Scope 3: Indirect emissions in CO_2eq from the use of fuels for business travel (car, air, rail) and from upstream emissions (well-to-tank / WTT)
– The conversion to CO_2eq is based on country-specific/local emissions factors (electricity) and internationally set conversion factors (gas, district heating, heating oil, fuels) taking upstream emissions into account.
– Share of green electricity in Germany = 97.5 percent (certified/confirmed origin)
– Share of green gas in Germany = 85.9 percent (compensated by suppliers)
– Share of climate-neutral kilometers by rail (Germany) = 100 percent (confirmed by DB)

> The management of TÜV Rheinland Spain recognized the need to react to the climate crisis and help reduce greenhouse gas emissions. At the end of 2022, we applied for approval of a project plan to erect some 1,400 photovoltaic modules on a total of 36 of our vehicle inspection centers. Each of the modules can generate more than 620 kWp, which would provide enough renewable energy to cover nearly 50% of the electricity consumed at those locations. That would represent an annual reduction of about 200 tons of CO_2eq emissions. In this way, we underscore the sustainability approach in our corporate development and reduce the environmental impact of our activities.
>
> Anna Gil,
> Regional Officer QHSE Office, WEU/CEE

as energy consumption and business mileage, and makes it possible to track target achievement throughout the year.

2018-2022 GHG BALANCE SHEET

For the GHG balance sheet analysis (based on the Greenhouse Gas Protocol) along our target path for 2018 through 2025, we recorded, validated, and accounted for the following parameters worldwide for all companies in the reporting scope of the Sustainability Report (see "About this report," page 84):

- Consumption, electricity (kWh/year)
- Consumption, natural gas (kWh/year)
- Consumption, heating oil (kWh/year)
- Consumption, district heating (kWh/year)
- Business travel, by air (km/year)
- Business travel, by car (km/year)
- Business travel, by rail (km/year)

The greenhouse gas balance sheet for the period from 2018 through 2022 lists absolute emissions in t CO_2eq for Scopes 1 through 3.

In calculating the consumption of energy and resources, we rely solely on original data from reporting TÜV Rheinland companies, i.e. consolidated companies outside of Germany, which have also implemented the Health Safety Environment (HSE) Management System and the QHSE (Quality HSE) policy. These sources of data include invoices from energy providers, suppliers, and Travel Management. For the non-reporting companies, the data were extrapolated, where it was meaningful to do so, using appropriate variables such as headcount, so all TÜV Rheinland employees could be included.

In Germany, the consumption data for electricity, natural gas, heating oil, district heating, and water were obtained from

- Real-Estate Management,
- Travel Management (business travel by air and rail, use of rental cars; use of personal car for business travel),
- Fleet Management (company cars) and
- Procurement (paper consumption).

Where consumption data from real-estate properties were not available or not completely available, as in the case of water consumption – from smaller leases, for example – those data were extrapolated using appropriate variables such as headcount, so that 100 percent of the real-estate consumption could be documented accordingly.

WHAT WE ACHIEVED

For the reporting year 2022, the greenhouse gas balance sheet for 2018 through 2022 shows a significant rebound in Scope 1 emissions (natural gas, heating oil, pellets, company cars Germany) following a decrease in emissions during 2020 and 2021 due to the COVID-19 pandemic. Whereas the fleet consumption in Germany showed only a slight rebound, exclusively European heating oil consumption figures were above those of the previous year. For this reason, we want to further reduce that heating oil consumption and replace it with other energy carriers.

Natural gas consumption has increased significantly. This is attributable, however, to detailed recordkeeping in the USA and Latvia for the first time; natural gas consumption has declined in most of the other reporting countries.
Scope 2 essentially records the global electricity consumption plus a small share related to district heating (mainly in Germany and Eastern Europe). On a positive note, CO_2eq emissions from electricity consumption have declined versus 2021. These are the first signs of the successful use of electricity from renewable sources (e.g. solar electricity in India and China), even if improvements in all regions and real-estate properties are required in order to achieve the 2025 target.
In Scope 3, after a significant pandemic-related decrease in 2021, we see an increased level of business travel again, especially in the air and rail categories. While improved recordkeeping in China and Japan now also accounts for the latter increase, business travel by air remains far below pre-pandemic levels. Nevertheless, we want to continue promoting the switch to rail and the reduction of air travel. We also have our eye on commercial flights that use fuels produced from regenerative energy sources.

The company car fleet in Germany will be gradually converted to electric vehicles over the course of the next few years. With that in mind, company car regulations have already been modified and the charging infrastructure has been further expanded.

The TÜV Rheinland companies also implemented many measurable improvements in 2022, the positive impacts of which are reflected in the greenhouse gas balance sheet. Here are two examples:

- In Germany, fuel consumption and resulting CO_2eq emissions per kilometer traveled by company car were verifiably reduced further. Along with more fuel-efficient vehicles in the fleet, a campaign already launched in 2021 to promote more fuel-efficient driving practices also contributed to this result.
- A power purchase agreement was signed with a private energy provider to supply green electricity to our largest site in Bangalore, India, and a total of 2,270,000 kWh of electricity were converted from conventional to green energy. Furthermore, 224,520 kWh of electricity were generated in Bangalore by PV modules installed at various sites. In 2022, these initiatives reduced CO_2eq emissions by about 2,740 metric tons, which represents about 36% of the CO_2eq emitted by all TÜV Rheinland companies in India and 23% of the total CO_2eq emissions of the IMEA region.

Greenhouse gas balance reduction (from left):
Werner Kreuzer, Markus Hintzen, Miguel Angel Contreras y Schaffeld, Felix Ricke and Ralf Schiermeyer

> When it comes to saving energy, it's not just the big one-time steps that make a difference: The frequent small ones do too. In the fight to slow climate change and in the face of the current energy supply situation, we shoulder responsibility and do our part. Real Estate and Health, Safety and Environment, for example, gave all employees a list of easily implemented energy-saving tips they can use every day. We also implemented temporary and sometimes permanent temperature reductions in our large buildings.
>
> Ralf Schiermeyer,
> Head of International Facility Management
>
> Felix Ricke,
> Corporate HSE – Environmental Manager

We also continued to launch many more initiatives, which these pages summarize in brief statements.

WE ARE WORKING TO ACHIEVE CLIMATE NEUTRALITY: NEW MILESTONES FOR 2025 AND 2028

In our Sustainability Strategy, we formulated the goal of helping to limit global warming to 1.5 degrees Celsius. With the long-term goal of net zero emissions (Net Zero Target), which was set at the end of 2022, two new medium-term milestones were established: All German companies aim to achieve an initial target of net zero greenhouse gas emissions by 2025 and all other consolidated companies worldwide intend to achieve this by 2028. This is based on TÜV Rheinland's first model calculation to date, which is in turn based on the emissions data since 2018 listed above. The model now also considers business growth and emission trends and incorporates regionally standardized programs relative to real estate, business travel and the use of regenerative energy carriers.

To balance their greenhouse gas emissions to net zero and achieve adjusted climate neutrality, the companies will eventually offset the rest of their unavoidable emissions starting from no later than the relevant target year. In that context, we strive to use verifiable and certifiably sustainable offset methods. The serious nature and long-term effectiveness of those methods are particularly important to us as we maintain transparency in aligning our greenhouse gas balance with our corporate and sustainability values.

> By the end of 2023, all major TÜV Rheinland locations in Germany are to be equipped with charging station infrastructure. Meanwhile, we are already developing a strategy for the next phase detailing how we retrofit all of the company's real estate by 2025.
>
> Markus Hintzen,
> Head of Global Building & Construction

At a glance: facts and figures

GREENHOUSE GAS EMISSIONS	GOAL	PERFORMANCE INDICATORS	TARGET 2022	TARGET 2025	STATUS 2022
Scope 1 GHG emissions (direct)	Reduce absolute Scope 1 emissions of TR Group compared to base year	CO_2eq emissions in tons (base year 2018) (related to consumption of natural gas, fleet Germany, pellets and heating oil)	–16.8 %	–29.4 %	+27.8 %
Scope 2 GHG emissions (indirect)	Reduce absolute Scope 2 emissions of TR Group compared to base year	CO_2eq emissions in metric tons (base year 2018) (related to consumption of electricity and district heating)	–16.8 %	–29.4 %	–13.7 %
Scope 3 GHG emissions (indirect)	Reduce absolute Scope 3 emissions of TR Group compared to base year	CO_2eq emissions in metric tons (base year 2018) (related to travel by car excluding fleet Germany, air, rail and upstream emissions from Scope 1 emission sources.	–10 %	–17.5 %	–32.4 %

Profession

In keeping with our mission statement, we want to be the world's best sustainable and independent provider of testing and inspection services. With our services, the experts from TÜV Rheinland contribute to sustainable development. Moreover, we are working every day to continue improving our service quality, act with integrity and transparency, and fulfill our service promise to our stakeholders in a professional manner. With our strategic direction in this area, we are helping to achieve SDGs 12 Responsible Consumption and Production and 16 Peace, Justice and Strong Institutions.

Our main topics

- Service quality | 36
- Data integrity | 39
- Legal compliance and business ethics | 41

Our ambition: Never stop improving

TÜV Rheinland's performance can be measured by the satisfaction of its customers and by its own success. Reliability, integrity, and excellence are basic prerequisites undergirding that performance. To further improve our performance, our processes and products are subject to continuous improvement, thereby enabling us to achieve our goal of sustainable value creation.

High service quality is one of the most important things our customers expect of us. This was also a finding of our materiality analysis in connection with the development of our sustainability strategy. Development of our Quality, Health, Safety and Environment (QHSE) Management System, which was completed in 2021, and the establishment of the Corporate Process Management System as a new unit are driving the improvement of our service quality. Michael Schneider, Global Officer QHSE, is responsible for this area.

ORGANIZING SUSTAINABLE PROCUREMENT PROCESSES

The quality of our service delivery and its sustainable value creation are also affected by our upstream processes. Therefore, to achieve our 2025 goals, it is important that our suppliers share our sustainability ambitions and help us implement them. In the year under review, we focused our efforts in this regard primarily on the development of global digital processes used to evaluate suppliers and identify ways to improve the supply chain. As a result, TÜV Rheinland is continuously introducing and optimizing new tools such as SAP Supplier Risk Management, SAP Supplier Lifecycle and Performance Management, and SAP Supplier Contract Management. These measures help us manage the associated supplier relations issues. Furthermore, we developed and rolled out additional processes and standard operating procedures that promote sustainable value creation in the company.

The goal is to continuously grow the number of suppliers who accept the TÜV Rheinland Supplier Code of Conduct (SCOC) and who thereby commit to its values and standards.

Our approach is to initially have suppliers with a volume of more than 100,000 euros sign the TÜV Rheinland SCOC. By the end of 2025, all companies serving as direct suppliers under the responsibility of corporate procurement management with a procurement volume of over 1,000 euros must sign the SCOC.

Tjeert Wories, Global Officer Procurement, is responsible for procurement management.

Evaluation of supply chains (from left): Manjunatha Swamy Mahalingappa Saroja, Tjeert Mechiel Wories and Daria Pollack

> It is very important to me that our suppliers reliably guarantee the values and standards of TÜV Rheinland. Our global tools and the present contract management system have enabled us to close the gaps in the evaluation of our supply chains.
>
> Tjeert Wories,
> Global Officer Procurement Management

REDUCING RISKS – IMPROVING SAFETY FOR EVERYONE

The proactive identification and assessment of risks can, where necessary, enable the implementation of risk minimization measures. That makes conditions safer and more secure – for employees, customers, the environment, and our company. In 2022, TÜV Rheinland further improved its Operational Risk Management system: Following system development and a successful subsequent one-year test phase with pilot projects, the initial situation was established as a baseline and a new infrastructure for the operational risk management system was implemented worldwide. Any anomalies identified will be reevaluated in 2023.

TÜV Rheinland currently offers some 2,000 services. Due to the diversity of the Business Streams, a process was developed that uses standardized criteria and comparable results to identify and assess risks. That means TÜV Rheinland's risk assessment process goes beyond the standards required by ISO 9001. Already in the year under review, we assessed 1,159 operational risks within the services classified under the service categories, providing 99 percent coverage). The process was audited by DQS.

The development and implementation of risk reduction measures is planned for 2023. Plans also call for a reevaluation in 2023 as a standard operating procedure for certain risk classes. Moreover, DQS will conduct regular external audits.

ORM Approach

Standardized definition of assessment parameters and standardized risk assessment procedures

Based on operational risk criteria (e.g. from ISO 9001, 31000 and industry requirements), the risk types (quality, safety, processes, performance, and liability) are assessed according to the factors detection, severity, and occurrence.

ORM Risk Classes

Standardized Risk Classes for all Business Streams

	RISK LEVEL	RISK SCORING
5	very high	800 to 1,000
4	high	600 to 799
3	moderate to high	400 to 599
2	moderate	200 to 399
1	low	1 to 199

Each Risk Assessment is classified into one of five Risk Levels based on its Risk Scoring.

> Our ambition is to never stop improving. As a result, we have also established a central unit for Operational Risk Management within Corporate Process Management and implemented ORM scoring as a key performance indicator worldwide. That puts us in a better position to identify, assess, and prevent possible dangers across all Business Streams.
>
> Anastasios Michailidis,
> Head of Corporate Process Management

The primary objective is to eliminate or minimize risk factors to improve service quality and increase customer satisfaction. Using the Operational Risk Management system, TÜV Rheinland aims to reduce the Risk Scoring of all services classified under Risk Classes 4 and 5 to the Risk Scoring level of Risk Class 3 or below by 2025.

CONTINUING TO RAISE CUSTOMER SATISFACTION

With the 2022 launch of the "Salesforce" database and analytical reports, now it is easier to register and follow up on customer complaints and to implement specific corrective measures. Complaint handling focuses on solving the customer's problem rapidly. Moreover, the digital technologies provide greater transparency and enable better system fault analyses. In this way, overall service quality is optimized.

Having successfully developed its complaint management system, TÜV Rheinland is setting new goals for itself: By 2025, the complaint rate will be reduced by 20 percent and customer satisfaction increased by at least 10 percent. We measure the latter parameter in customer satisfaction surveys using the Net Promoter Score (NPS).
Overall, our complaint rate is already excellent (< 1%). In 2022, we received approximately one valid service complaint or objection per 2,000 invoices issued.

The Complaint Management Standard Operating Process defines a Groupwide procedure for handling service complaints.

Protection of sensitive and personal data

With its international commitment, TÜV Rheinland supports security in many areas of life the world over. That's why, as an international supplier of inspection and testing services, we can ensure that our stakeholders' data are in good hands, in the digital world as well.

TÜV Rheinland enables security the world over, in all regions and on every continent. We apply the data protection guidelines in force throughout the Group under all circumstances and follow the basic principles of processing data responsibly, and identifying and minimizing security risks. For TÜV Rheinland, all processes involving data protection are an integral part of value creation.

In our business activity, we gather data of various relevance to data protection. In the assessment and handling of data, TÜV Rheinland adheres to the German constitution (the "Grundgesetz", or Basic Law of the Federal Republic of Germany), and the Charter of Fundamental Rights of the European Union. The attendant right of business partners and employees to informational self-determination is a top priority.
TÜV Rheinland has a mandatory Groupwide data protection management system. Through established technical and organizational processes, we assure, fulfill and document our compliance with data protection regulations as well as with duties of accountability and record-keeping pursuant to relevant national and local data protection laws.

A DATA PROTECTION MANAGEMENT SYSTEM – GLOBAL AND REGIONAL DUTIES OF ACCOUNTABILITY

Kai Rabenschlag, Corporate Data Protection Officer, is responsible for the data protection management system and the implementation and monitoring of the global data protection strategy. He is supported by Regional Data Protection Officers along with the Data Protection Officers of each TÜV Rheinland company subject to the duty of accountability. Even where not required by national provisions, additional Data Protection Coordinators are assigned on a voluntary basis. With this structure, TÜV Rheinland goes beyond the minimum statutory requirements and can put action in conformance with international law to the test at all times within the framework of Groupwide data protection guidelines.

AUDITS ATTEST TO HIGH DATA PROTECTION STANDARDS

The sustainability strategy calls for the 100-percent successful completion of all internal data protection audits conducted by 2025. These strict data protection requirements also apply to business partners and subcontractors that process personal data for TÜV Rheinland. That is why we intend to conduct data protection audits of at least 50 percent of the external service providers we use to process personal data.

To optimize our standards, we started preparing an interactive data protection portal in the year under review. The goal is to provide interested parties with more transparent, more comprehensible and easier access to data protection-related topics, so they can exercise the data protection rights granted to them.

WE FOLLOW UP ON EVERY COMPLAINT

TÜV Rheinland has about 60 national subsidiaries and is present on every continent. The national case law of each country presents us with a challenge: how to reconcile the processing of personal data on a global basis with the requirements of different national legal contexts? Many data protection laws explicitly grant the affected individuals the right to file a complaint when they believe that the processing of their data violates data protection regulations. We use the Group's own complaint management system to follow up on every notification and engage in proactive and open discussion. The goal is always to minimize the risks of a possible data protection violation to the greatest possible extent. We also require our suppliers to do the same. For TÜV Rheinland, this process has paid dividends: In the year under review, rights of affected individuals and inquiries by

data protection regulatory authorities were clarified and concluded in due time, and as a result, regulatory authorities initiated no actions against the company.

BINDING CORPORATE RULES – PROTECTION STANDARDS FOR ALL LOCATIONS

With the upcoming implementation of Binding Corporate Rules (BCR), TÜV Rheinland's mandatory regulations will soon guarantee a level of data protection that meets the strict European requirements of the EU General Data Protection Regulation (GDPR) at all TÜV Rheinland locations. This underscores our ambition to offer high data protection standards to our customers, business partners and employees worldwide.

Initiated in 2021, BCR's multi-step development and approval process continued during the reporting year. A first draft of the regulations has been prepared for submission to the responsible data protection regulatory authorities for review. We intend to complete the procedure and obtain regulatory approval as soon as possible.

> Data protection is dialog. We encourage our colleagues to contact us to discuss any suspected data protection violations. Then we can provide adequate solutions. We've done this successfully in the past. Another important step is a Groupwide, centralized reporting system. We're currently working to put that in place.
>
> Kai Rabenschlag,
> Corporate Data Protection Officer

We stand for clear rules and values

Legally compliant action and integrity are the pillars of our business activity. Everywhere we operate around the world, we expect all of our employees to act in accordance with our Code of Conduct.

TÜV Rheinland's reputation is essential to our success as a company. Accordingly, we are committed to complying with laws and regulations. Moreover, we are convinced that in order to remain highly competitive and achieve sustainable growth, it is important to orient our actions in line with our values and voluntary commitments. They serve as the foundation for our guidelines, which specify both the expectations of our own actions and those of our suppliers and business partners (see info boxes on this page and the next).

Along with our stakeholders' expectations, legal compliance and business ethics are essential categories of our sustainability approach.

RAISING AWARENESS THROUGH MORE TRAINING

Raising employees' awareness of legal compliance and business ethics is of fundamental importance to collaborating with TÜV Rheinland in compliance with regulations. In order to raise awareness of the importance of acting with personal integrity and in compliance with regulations, suitable compulsory training courses have been implemented. In the year under review, the content and technical aspects of these training programs were further developed. Additional rollouts extended the range of the myHR digital platform and the learning program, which has been translated into seven languages, was expanded. Moreover, additional training offerings were organized for employees without the technical ability to access myHR, including supplementary digital offerings (TÜVaccess) and many classroom training courses. The goal is to have all employees worldwide complete the annual training courses by 2025. In 2022, we already reached 91 percent of our workforce, up 5 percentage points from the previous year.

These compulsory training courses were supplemented by further practical learning courses on a voluntary basis. Examples include introductory courses on the in-house compliance management system, anti-corruption, and legal compliance regulations relative to the handling of invitations and gifts.

STRONG IDENTIFICATION WITH OUR VALUE SYSTEM

Legal compliance and integrity issues have been added to our annual employee survey "Together". The survey helps us determine how well-informed the employees are about these topics and the importance they place on TÜV Rheinland's values. The positive findings from the "together" survey are presented in the following four graphics on Diversity and Compliance. As measured by the employees' responses, Compliance has a very high priority. In 2022, 73 percent of the workforce participated in this survey. That result and the broad approval of our corporate culture indicate that a large

COMPLIANCE GUIDELINES OF TÜV RHEINLAND

- Code of Conduct
- Compliance Guideline
- Guideline for the Prevention of Conflicts of Interest and Corruption
- Business Partner Management Guideline
- Guideline on Donations and Sponsoring
- General Terms and Conditions of Procurement and Business
- Compulsory agreement of suppliers 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
- Sustainable Procurement Policy
- Annual audit of the compliance management system through the TIC Council and an external auditing firm

TÜV RHEINLAND'S CORPORATE ETHICAL VALUES

- Code of Conduct
- Alignment with the UN Global Compact and the principles of the TIC Council
- Sustainability strategy with Corporate Ethics as an essential category
- Compliance management system
- Our guiding principles: integrity, excellence, customer orientation, performance and agility

majority of the employees throughout the Group already share our values.

NO TOLERANCE FOR VIOLATIONS

TÜV Rheinland has had a whistleblower management system in place since 2007. Employees and external stakeholders can use it to report cases of suspected misconduct involving criminal offenses such as corruption, bribery, and fraud as well as other violations of our corporate values. Moreover, a digital platform for the confidential submission of tips and complaints of possible misconduct was established in 2018. And information can also be reported via other channels, such as the corporate Compliance e-mail address. This whistleblower system is subject to continuous improvement and expansion through adaptations to current statutory requirements, such as the German Supply Chain Due Diligence Act (Lieferkettensorgfaltspflichtengesetz).

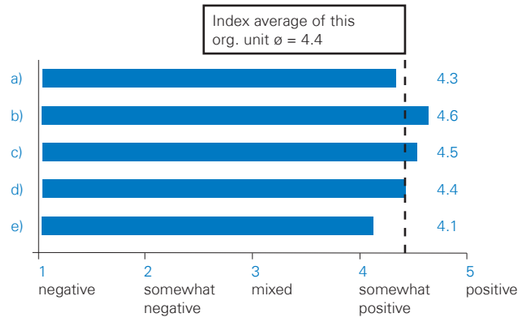
TÜV Rheinland strives to rigorously investigate each reported case of suspected misconduct. That's why we set a target of 100-percent follow-up by 2025. Our target relative to Compliance cases is set to zero percent.
In all, the whistleblower management system received notification of 144 issues in 2022.

INTEGRITY FOLLOWS STRICT GOVERNANCE

In the context of revising the sustainability strategy, in 2023 it was agreed to conduct regular Integrity Board meetings, in which the Executive Board participates together with senior management. The Board's agenda items include, among other things, verification of the compliance strategy, questions of implementation and transparent communication, as well as the identification of possible areas of action. These meetings will be held at least twice per year starting from 2023.

Results on the item level (mean values)
Index: Diversity and Compliance

a) In my opinion, all employees in my company are treated equally (irrespective of age, gender, culture, ethnic origin, nationality, religion, disability or sexual orientation).
b) I know the compliance rules and regulations (e.g. the Code of Conduct) related to my tasks.
c) My company places high priority on complying with laws, internal regulations and compliance requirements.
d) I believe that I am well informed about how I can report compliance violations.
e) When I report compliance violations in my work environment/team, appropriate action is taken.



The Compliance Committee, which includes a member of the Executive Board, currently monitors Compliance activities on a monthly basis. In addition, the Global Officer Legal and Compliance reports annually to the Audit Committee of the Supervisory Board. This enables us to maintain transparency about the current situation as well as further developments concerning the compliance management system.

The high priority placed on legally compliant behavior and the Code of Conduct is also reflected in the fact that the managers of the Group and the general managers of the subsidiaries renew their personal pledge to comply with these regulations by signing individual management declarations every year. Since that signature is an integral part of the "tone from the top," we have set the reaffirmation of our Code of Conduct by all managers and general management as a target indicator for 2025.

Results on the item level (frequencies)
Index: Diversity and Compliance

a) In my opinion, all employees in my company are treated equally (irrespective of age, gender, culture, ethnic origin, nationality, religion, disability or sexual orientation).
b) I know the compliance rules and regulations (e.g. the Code of Conduct) related to my tasks.
c) My company places high priority on complying with laws, internal regulations and compliance requirements.
d) I believe that I am well informed about how I can report compliance violations.
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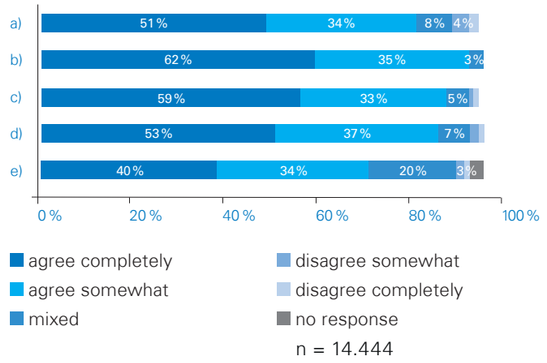


SYSTEMATICALLY MONITORING COMPLIANCE WITH RULES

Björn Clüsserath, Global Officer Legal and Compliance, serves as the head of TÜV Rheinland's Compliance organization, which is responsible for corporate compliance.
In that function, he acts independently and is a member of a Groupwide risk-management unit. Joining him in the worldwide TÜV Rheinland Compliance Network is André Friede, Global Expert Compliance in the Corporate Service Function Compliance. The network also includes Compliance Officers and Compliance Experts in other countries and regions, who promote the guidance and further

"By acting with integrity and in compliance with the law in the context of our daily work situations, we live our business ethics together. That applies in equal measure to internal work procedures and external collaboration with our customers and business partners. In this way, behaving with integrity contributes to our business success. Thanks in part to our transparent internal communication and systematic compliance training courses, the employees of TÜV Rheinland place a high value on compliance. The high ethical demands placed on us and our partners together with our binding voluntary commitments to legal compliance support the positive market perception that our customers and potential customers have of us."

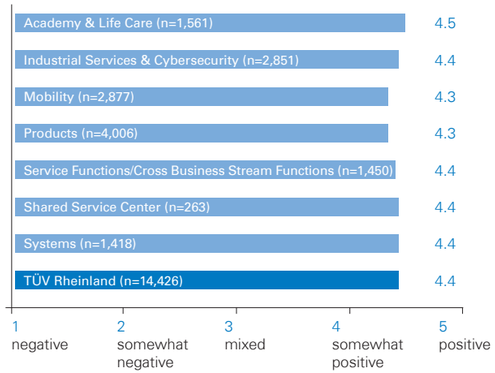
Björn Clüsserath,
Global Officer Legal & Compliance

development of our compliance management system, along with Compliance Ambassadors.

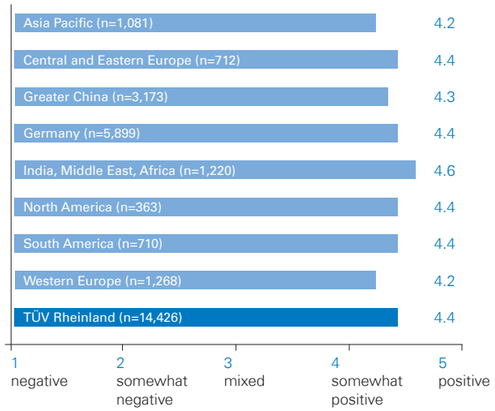
To identify possible improvement potentials, TÜV Rheinland has the compliance management system audited annually.

These external audits are carried out through the global association TIC Council and independent auditors.

Best-Practice Benchmark – Global Business Streams Diversity and Compliance



Best Practice Benchmark – World Regions Diversity and Compliance



At a glance: facts and figures

LEGAL COMPLIANCE AND CORPORATE ETHICS	GOAL	PERFORMANCE INDICATORS	TARGET 2025	STATUS
Corporate ethical values	Corporate ethical values	Share of TÜV Rheinland employees trained annually in basic compliance requirements	100 %	91 %
Employee honesty and integrity	Integrate integrity questions in "Together"	KPI to be defined in Q1/2023	KPI to be defined in Q1/2023	Questions in "Together" done
	Establish "Integrity Board"	Number of Integrity Board meetings held per year	2	Integrity Board starts in 2023
Corruption and bribery	Confirmed cases and follow-up	Number of confirmed cases	0	0
		Follow-up rate on reported complaints	100 %	100 %
Local laws and regulations	Coverage of management declarations	Percentage of senior management that have signed management declarations annually	100 %	Will be determined in Q1/2023

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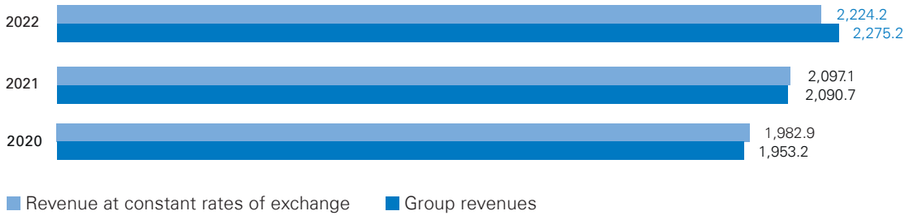
TÜV Rheinland at a glance

GROUP REVENUES

- Despite the Russia-Ukraine conflict, the energy crisis and the high rate of inflation in the 2022 financial year, TÜV Rheinland AG Group (hereinafter referred to as "TÜV Rheinland") managed to remain on course for growth and achieve group revenues (incl. changes in inventories) totaling to €2,275.2 million; this represents a year-over-year increase of 8.8%. TÜV Rheinland thus considerably outperformed the goal it set for itself in 2021 of achieving revenue growth in the low single-digit percentage range. Viewed in adjusted terms – i.e. revenue at constant rates of exchange – group revenues totaled to €2,224.2 million, which corresponds to a rate of growth of 6.1%.
- The €184.5 million year-over-year upturn in total revenue was attributable to both domestic and international business. Revenue for domestic business was 5.3% higher. €1,123.7 million of total revenue was ascribable to the international regions. This corresponded to a total revenue share of 49.4% (previous year: 47.7%) Overall, all of the regions reported an upturn in revenue in the 2022 financial year.

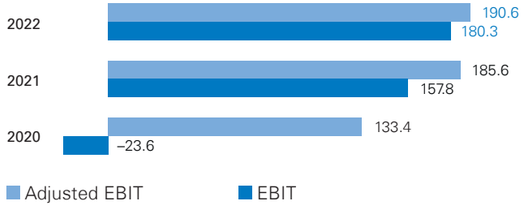
Group revenues in € millions



OPERATING RESULT (EBIT)

- The operating result (EBIT) in the 2022 financial year totaled to €180.3 million, which was €22.5 million more than the previous year's figure.
- After adjusting for special effects totaling € -10.5 million, EBIT stood at €190.8 million. The special items included € -9.8 million in effects from past purchase-price allocations (PPAs), along with € -0.7 million in effects from the change in the scope of consolidation.
- Amortization of intangible assets and depreciation of property, plant and equipment was €8.4 million lower year-over-year and stood at €144.6 million.
- With investments of €90.8 million in intangible assets and property, plant and equipment in the 2022 financial year, the investment volume was significantly higher than the previous year's volume of €57.7 million.
- The EBIT margin in the 2022 financial year was 7.9%, up 0.4% compared to the previous year. TÜV Rheinland thus outperformed the target it had set for itself in 2021, which was to achieve an EBIT margin of 7.5%. Taking special items into account, this resulted in an adjusted EBIT margin of 8.4% (previous year: 8.9%).

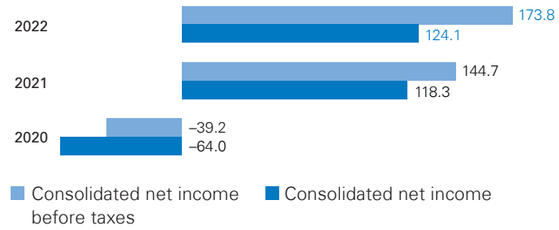
EBIT in € millions



CONSOLIDATED NET INCOME

- TÜV Rheinland generated a total of €124.1 million in consolidated net income for the 2022 financial year; this was 4.9% or €5.8 million higher than the previous year's value.
- Income tax expenses were €23.3 million higher year-over-year and totaled to €49.7 million, but the tax rate approximated the levels seen in financial years prior to 2020.
- The negative financial result was 50.2% higher year-over-year and stood at € -6.5 million in the 2022 financial year. One reason for this change, among other things, can be explained through repayments of promissory notes in the 2022 financial year at a nominal value totaling €193.0 million.
- The consolidated net income attributable to non-controlling interests totaled to €8.3 million in the 2022 financial year (previous year: €10.6 million).

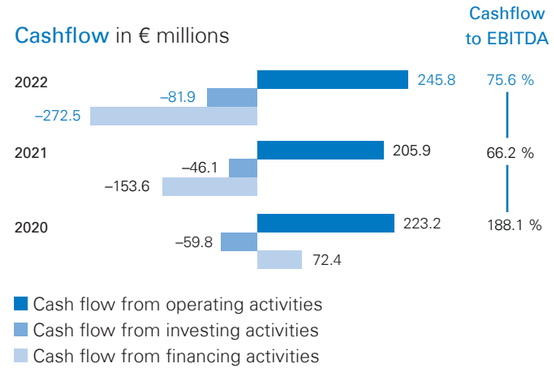
Consolidated net income in € millions



CASHFLOW

- The positive cash flow from operating activities amounted to €245.8 million in the 2022 financial year (previous year: €205.9 million); this represents a 19.4% increase.
- The consolidated net income of €124.1 million contrasted with non-cash depreciation and amortization of €144.6 million (previous year: €153.1 million).
- The ratio between cash flow from operating activities and earnings before interest, taxes, depreciation, and amortization (EBITDA) increased from 66.2% to 75.6%.
- The negative cash flow from investing activities was €35.8 million higher year-over-year, due largely to investments in property, plant and equipment.
- The negative cash flow from financing activities in the 2022 financial year stood at €272.5 million (previous year: negative cash flow of €153.6 million). This negative cash flow was mainly the consequence of repayment of the promissory notes with a nominal value of €193.0 million (of which €130.0 million was repaid ahead of schedule) and €62.7 million in lease payments within the scope of IFRS 16 (previous year: €60.3 million).

Cashflow in € millions



Presentation of the Business Streams

As an independent testing company, for 150 years, TÜV Rheinland has stood for safety and quality in the interactions among people, technology and the environment. The company's mission meets a basic societal need and will remain relevant into the future.

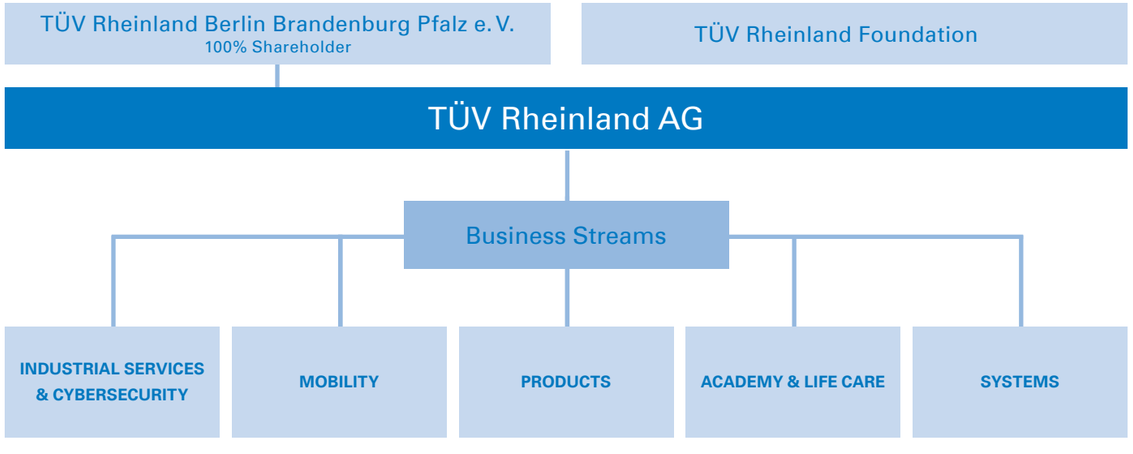
As a neutral and independent third party, TÜV Rheinland inspects and tests technical equipment, processes, products and services, and monitors projects for companies. The Group does so on the basis of recognized standards as well as national and international legal provisions. Added to this are services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

With ideas, expertise and a worldwide network of employees, facilities and locations, TÜV Rheinland helps its clients make products, services, systems and processes safer, more competitive and more sustainable. These activities are in line with the corporate purpose: "We make the world safer and more sustainable."

The work of TÜV Rheinland proceeds from the conviction that societal and technological progress – both guided by protection of the environment – are inextricably linked. This modern notion of progress manifests itself through the safe and responsible use of technical innovations, services, products and systems. The aim is to build a future that sustainably does justice to the requirements of humankind and the environment. To carry out this aim of building the future, TÜV Rheinland is organized into five Business Streams:

INDUSTRIAL SERVICES & CYBERSECURITY

This Business Stream comprises the Business Fields of Pressure Equipment, Elevators & Lifting Equipment, Electrical Engineering & Building Technology, Industrial Inspection & Materials Testing, Infrastructure & Project Supervision, Energy & Environment and Cybersecurity & Functional Safety. The services include, for example, the testing of vessels, elevators and lifts, and systems in building technology; monitoring of industrial and infrastructure projects; and building technology. Moreover, the aim of our services in protection of the climate – including materials inspection and testing and environmental and pollutant analysis – is to help our clients reduce their CO_2 footprint. The verification of greenhouse-gas emissions, and the certification of green gas, electricity and hydrogen are among the services of our Business Stream. Finally, we also provide testing, audit and certification services in the field of industrial automation, and functional security and cybersecurity in particular, as well as consulting, testing and administrative services in information technology (IT) and operational technology (OT) for companies.



MOBILITY

In the Business Field of Periodical Technical Inspection, this Business Stream consists of classical motor-vehicle inspection, with its network of testing centers in Germany, Spain, France, Latvia, Chile and China. The Driver's Licenses Business Field offers theoretical and practical testing for driver's licenses. Damage and valuation reports, car services and after-sales services are part of the Car Service & Appraisal Business Field, whereas testing of road eligibility and vehicle components can be found in the Engineering & Type Approval Business Field. The Rail Business Field (expertise in the field of railway technology) comprises technical and economic consulting, test execution and monitoring, and assessments including independent safety assessments. This Business Stream views itself as an "enabler of better mobility" and is involved in developing new services for safety and the conservation of resources in the networked mobility of the future.

PRODUCTS

This Business Stream conducts testing for product safety, functionality, serviceability, ergonomics and lifecycle assessments, as well as product certification. This is often a prerequisite to ensuring that manufacturers, importers or trading companies can offer their products in certain markets. Among other things, in its Softlines Business Field, the Products Business Stream inspects toys, cosmetics and textiles; in the Hardlines Business Field, it offers inspections of furniture and household goods as well as mechanical products. The Electrical Business Field provides inspections of consumer electronics, among other things, along with tests of the electromagnetic compatibility (EMC) of electrical and electronic products. The Solar and Commercial Products Business Field concentrates on the testing of components, solar systems and modules, batteries and machinery. Added to this is the auditing and certification of medical products and manufacturers of medical devices; this is the work of the Medical Business Field.

ACADEMY & LIFE CARE

This Business Stream combines the expertise and services of TÜV Rheinland applicable to the field of "individuals and organizations" in the setting of digital transformation. This Business Stream combines the technical skills of TÜV Rheinland with expertise in the Occupational Health & Safety Business Field as well as the execution of online and face-to-face business with seminars and further education and training sessions, including contemporary learning solutions and competence development in the Training & HR Development Business Field. Services in the labor market are included in the Labour Market Services Business Field. Our consulting and project services, which include the topic of "sustainable organization," among other things, can be found in the Digital Transformation Business Field.

SYSTEMS

In its Certification of Management Systems Business Field, the Systems Business Stream acts as an independent third party and applies internationally recognized standards to the certification of management systems as well as processes, services and businesses. These include, in particular, quality management systems (ISO 9001) and environmental management systems of numerous businesses (ISO 14001 and the European EMAS system). Audits in risk management, compliance, service quality, sustainability, quality in commercial business processes, data protection, and in social or technical requirements are the work of the Customized Services Business Field. Energy management and services in supply chains, particularly in the field of corporate social responsibility (CSR), are an additional focus. TÜV Rheinland acts as an independent body to provide conformity assessments for international movements of goods within the scope of government programs. This ensures that imported goods and the related documentation are in compliance with national regulations and any requirements stipulated by contract. These services are bundled in the Business Field for Government Inspections & International Trade.

General Conditions

GENERAL ECONOMIC CONDITIONS

Influenced by high energy prices and great levels of uncertainty, the global economy weakened significantly over the course of the year under report. Nevertheless, global economic activity as a whole increased at a moderate rate. The economy grew by 3.4% during the year under report (previous year: 6.2%). After global production rose steeply during the second half of 2021, the recovery from the coronavirus crisis stalled after the turn of the year 2021/2022. In the wake of recent negative shocks, global production barely managed to climb during the first half of 2022. Worldwide production even declined somewhat in the second quarter. The corona pandemic had a significant impact in this connection, particularly as a result of the strict zero-COVID policy and associated lockdowns in China, the impact of the Russia-Ukraine conflict and significantly higher prices for raw materials. As a result of this, already-strong inflation intensified even further as bottlenecks in the supply chain tightened. Pressure on supply chains had begun to ease somewhat early in the financial year, in spite of a temporary resurgence in spring of 2022. Quicker delivery times were recorded beginning early in the third quarter, especially in China, where lockdowns in many places were lifted at that time. Global production continued its upward trend into the autumn months, due to impetus from easing supply bottlenecks and continued normalization of activity in sectors that had been particularly hard-hit by the coronavirus pandemic. The situation on commodity markets gradually eased beginning in the spring, as commodities prices declined. Still, there was a marked downturn in economic momentum toward the end of the year. In spite of significant fiscal measures to shore things up, the large, developed economies in particular are currently facing a period of weak economic activity. At the same time, the problems facing the Chinese economy remained considerable. In addition to increases in the prices of raw materials and energy, real wages in many countries were also significantly lower, and this put a damper on household consumption. Consumer prices were 9.4% higher worldwide in 2022. Given the high inflationary pressure, the large central banks in the advanced economies were late to respond, but they did so, with a historically very steep rise in key rates of interest.

USA

The US economy grew by around 2.0% in 2022 (previous year: 5.9%); although it remained on track for growth in spite of high inflation and rising interest rates, growth there fell short of expectations. Growth in the US economy still stood at 3.2% in the summer of 2022. In the fourth quarter, the US economy reported growth of 2.9%. Consumer spending was 2.1% higher in the fourth quarter of 2022, up from 2.3% in the summer; this contributed to growth. The US labor market continued to recover and was holding nearly steady. The US economy recorded average inflation of 8.3% during the first half of the year in comparison to the same period the year prior. The average rate of inflation dropped to 7.7% in the second half of the year.

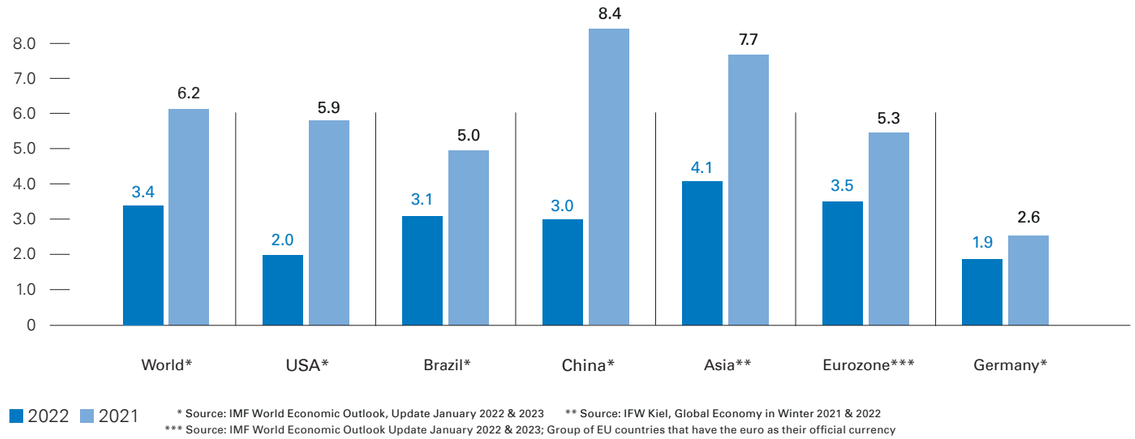
China

The Chinese economy reported 3.0% overall growth in its economy in 2022 (previous year: 8.4%). Pandemic-related regional lockdowns were increasingly imposed in China beginning in early 2022, with the government maintaining long adherence to its strict zero-COVID policy. Production in China initially rose during the first quarter. With time, however, the rigid measures to contain the pandemic grew increasingly discernible. The extensive steps taken to control the rate of infection there lasted for weeks and severely hampered economic activity across large parts of the country during the second quarter, leading to a steep decline in gross domestic product. The growing crisis in the real-estate sector, together with scarcity-driven constraints on the energy supply, also decelerated growth there. In the third quarter, once the Chinese economy had recovered from the lockdowns instituted in the spring, toward the end of the year a rise in the numbers of cases threatened a renewed economic slowdown. In December, however, the government there decided to largely suspend the sweeping quarantine measures and restrictions on mobility. Consumer prices have also risen recently in China, a trend that was accelerated by rising prices of food and commodities. The rate of overall inflation in China in 2022 stood at around 2.0%; this was higher than early in the year, when the rate was 0.9%. In China, the central bank eased its fiscal policies in an effort to boost the economy, and specifically to cushion the crisis in the real-estate sector.

Asia

In addition to countries such as Indonesia, Thailand, Malaysia, Japan and the Philippines, the Kiel Institute for the World Economy also subsumes large emerging markets such as China and India under the Asia region. Economic growth in the region fell to 4.1% during the current year under report. China managed to contribute just 3.0% toward this figure. In India, where overall economic output had suffered due to a historic heatwave, gross domestic product nevertheless increased by 6.5%. The other emerging markets of Asia also contributed significantly toward economic growth, reporting total growth of 5.0%. This owed not only to the fact that production in emerging Asian economies was higher but also to the recovery seen in the tourism sector on which countries such as Thailand and Malaysia in particular are heavily dependent economically. The economic trends in the emerging markets were robust. In Asia, consumer prices were 3.6% higher. Economic growth in Japan remained subdued and stood at 1.4%.

Development of the global economy in 2022 and 2021 (in %)



* Source: IMF World Economic Outlook, Update January 2022 & 2023 ** Source: IFW Kiel, Global Economy in Winter 2021 & 2022
*** Source: IMF World Economic Outlook Update January 2022 & 2023; Group of EU countries that have the euro as their official currency

Eurozone

Economic performance in the Eurozone managed to return to pre-pandemic levels for the first time during the financial year under report. In spite of the high number of infections since the beginning of the year, consumption-related mobility was only slightly affected. The impacts of the conflict in Ukraine placed restrictions on the economy in the first half of 2022. As the recovery from the economic effects of the coronavirus pandemic continued until mid-2022 and into the third quarter, initially the economy continued to expand in spite of the upheavals issuing from the conflict in Ukraine. High energy prices, however – combined with continued disruptions to supply chains, rising interest rates, less trading activity, particularly in the first half of the year and pronounced uncertainty – dampened economic activity. Driven by lower energy prices, the economic outlook had improved slightly by the fourth quarter. Still, the energy crisis weighed heavily on purchasing power. Overall, gross domestic product in the Eurozone was 3.5% higher in the reporting year (previous year: 5.3%). The heterogeneity across Eurozone Member States remained high. Nevertheless, low growth in economic output can still be observed in the majority of the countries of the Eurozone, as is the case in France (2.5%; previous year: 6.3%), in Italy (3.8%; previous year: 6.7%) and in Spain (4.6%; previous year: 5.5%). Consumer prices continued to rise at a rate of 8.3% during the financial year under report – more than they ever had since the advent of the Monetary Union. Economic policy in Europe sought to soften the impact of the energy crisis on households and businesses, at times incurring considerable fiscal burdens in the process. The European Central Bank (ECB) began its reversal of interest-rate policies during the year under report, raising the key rate of interest several times until it stood at 2.5% at year's end following years of unchanged, low levels. Unemployment continued to drop year-over-year, and declined to 6.7% (previous year: 7.8%).

Germany

At the outset of the reporting year, the German economy was in a phase in which the dampening effects of the pandemic had begun to subside and the German economy

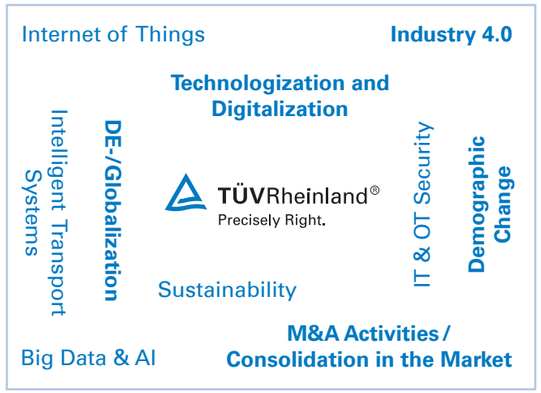
was readying for a robust recovery. The German economy faced brisk headwinds once again during the first quarter of 2022, however. The conflict between Russia and Ukraine resulted in high commodity prices, fresh supply-chain bottlenecks and dwindling sales opportunities. The significant curtailment in shipments of Russian natural gas during the summer of 2022 exacerbated the energy crisis, further driving the inflation that had already risen in 2021. Making matters worse, the negative economic impacts of the coronavirus pandemic had not yet been completely overcome. Bottlenecks in global supply and capacity continued to hit German industry, which continues to play a strong role in worldwide value chains. The energy crisis also placed a particularly great strain on energy-intensive sectors of industry. High energy prices and record-high rates of inflation dampened household consumption and ran counter to more vigorous overall consumption. Wholesale prices for gas and electricity have fallen significantly in recent months – even though they remain at a high level. Germany achieved overall economic growth of 1.9% during the reporting year (previous year: 2.6%). Consumer prices continued to rise very significantly, by 7.0%, over the course of the year. The trend in the jobs market remained an upward one from the outset of 2022; the unemployment rate fell to 5.3% (previous year: 5.7%).

MARKET-SPECIFIC DEVELOPMENT

TÜV Rheinland offers its testing, inspection, certification and training services through numerous companies on six continents operating in the global TIC (Testing, Inspection, Certification) market. This gives the Group the ability to fully serve clients' often worldwide value chains. Clients from economically strong industrialized countries continue to exhibit high demand for services by TÜV Rheinland, accompanied by growing demand in the emerging markets. By and large, the global TIC market, and hence the business of TÜV Rheinland as well, are influenced by the following market factors and trends:

DE-/Globalization

Issues such as energy supply, infrastructure, international division of labor and mobilization are of major importance to a globalized society. In spite of occasionally clear protectionist tendencies, globalization continues to present the TIC market with opportunities and risks at the same time. Liberalization efforts in individual markets are strengthening global trade and opening up opportunities to enter new markets. Worldwide supply chains and their ongoing transformations and shifts call for uniform testing standards and



certification services. Due to its strong international orientation and worldwide presence, TÜV Rheinland is very well positioned in this regard and can thus offer, among other things, product approvals for most of the world's markets.

Technologization and Digitalization

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

- Intelligent transport systems
  The vehicles of tomorrow will drive autonomously in some instances, permitting remote diagnostics and offering a host of systems for safety and comfort. These increasingly complex components and systems, along with the communication infrastructure they require, pose key challenges for the mobility market and offer opportunities for expanding TÜV Rheinland's business.
- Industry 4.0
  The new shape of industrial production will be characterized by strong customization of products under conditions of highly flexibilized production. In production systems like these, complex data networks will link customers and suppliers over the entire value chain. Labor-intensive and monotonous activities in production are being taken over by robots, and networking of machinery will increase. The resulting requirements in terms of the availability, functionality and cybersecurity of data and networks will be systemically essential.
- Big Data & AI
  The collection, analysis and use of vast amounts of data is an important prerequisite for efficient business today. What matters is to identify data, understand the data correctly, evaluate them accordingly and put them to profitable use. The application of artificial intelligence (AI) in particular facilitates the use of large amounts of data in an effort to identify patterns and achieve performance targets. Users of AI-supported systems must be in a position to have faith that the risks involved – owing to factors such as faulty AI applications or intrusions into privacy – will be kept to a minimum. TÜV Rheinland is committed to establishing verifiable security standards that will make AI applications transparent and secure at the same time.
- Internet of Things
  Through the networking of technologies of everyday life with the internet, in the area of smart home solutions or industrial components and products, for instance, the physical and online worlds are converging. This gives rise not just to far-reaching new opportunities for providers and consumers, but to security risks as well.
- IT & OT Security
  The availability and transmission of data at all times, whether in mobile payment processes or data storage in the cloud, offer examples of the importance of IT security. The risk of hacker attacks and cybercrime is constantly on the rise – as are the requirements for information technology (IT) and the security of IT in the business setting. Incidents in modern plant and process control systems in operational technology (OT) have increased in recent years as well. A holistic approach to security design is required here to ensure not only that accidental or systematic technical failures can be avoided, but also that cyber attacks on networked production facilities can be fended off. As a pioneer in functional safety, TÜV Rheinland's OT security combines this expertise with decades of cybersecurity competence in the fields of consulting, architectural design, managed service and penetration testing.

Demographic Change

TÜV Rheinland also views the demographic trend toward a globally aging population structure as an opportunity. There is an increased demand for TIC services in markets such as those for healthcare and nursing.

Sustainability

For 150 years, TÜV Rheinland has stood for quality, efficiency and safety in the interaction between people, technology and the environment. Our core business has always comprised services that today are undoubtedly a part of what we understand by "sustainability."

In our view, sustainability comprises the contents of the ESG categories (Environment, Social, Governance) in conjunction with sufficient economic profitability. This ensures long-term continuity and business success while at the same time helping achieve the United Nations Sustainable Development Goals (SDGs).
Many of the developments throughout the world demonstrate that taking all aspects of sustainability into account is more important today than it has ever been before. This is particularly true with regard to the steps taken to protect the climate. We leverage our services in the effort to actively help clients achieve their sustainability goals. Through our own activities, we also strengthen the idea of sustainability in-house.

M&A Activities / Consolidation in the Market

Trends toward consolidation continue in the market for technical services, and in the TIC market in particular. These are speeding up the transformation in the TIC market, offering companies an opportunity to acquire enterprises that match up with their core business.
TÜV Rheinland provides TIC services in and for different markets and industries all over the world. The macroeconomic trend in these markets is fundamentally important for TÜV Rheinland; due to cross-sector and regional diversification, however, this has only an indirect and delayed impact on business success.

European Business

The trend in TÜV Rheinland's European business (incl. Germany) was a positive one in the financial year under report, with a 6.4% upturn in revenue that outpaced the general economic environment, which registered 3.5% growth in gross domestic product. Central and Eastern Europe generated sales growth of 37.4% compared to the previous year. Western Europe also recorded an encouraging 6.3% growth in revenue. The Netherlands, Sweden and Spain were the only countries to record slight declines in revenue. German business, on the other hand, was 5.3% higher during the financial year under report. This increase is mainly due to the **Mobility** and **Academy & Life Care** Business Streams.

Greater China

Even though China's economy grew by just around 3.0% during the past financial year and thus posted its weakest growth in decades, business there for TÜV Rheinland continues to play an important role within the Group.
TÜV Rheinland reported a revenue increase of 12.5% in

the region, driven particularly by the PRODUCTS Business Stream at the locations in Shenzhen, Guangdong and Shanghai.

Asia Pacific

While general economic growth in the Asia Pacific region was around 4.1%, TÜV Rheinland recorded 7.5% in revenue growth there. The positive year-over-year revenue trend in Vietnam (40.4%) and Indonesia (26.5%), together with the 24.7% rise in revenue in Malaysia, contributed to the encouraging revenue trend seen in the Asia Pacific region. After adjustments for exchange rates, revenue in the region rose by approx. 8.0%.

IMEA

TÜV Rheinland's IMEA business reported a 16.7% increase in revenue during the financial year under report. Among other factors, a strong and significant driver there was the trend in Saudi Arabia and India in the SYSTEMS Business Stream. TÜV Rheinland managed to significantly boost its year-over-year revenue figures in Saudi Arabia. After currency adjustments, revenue for the region was around 7.0% higher.

North America

Economic growth in the US stood at around 2.0% during the reporting year; for TÜV Rheinland, however, total revenue growth in the region stood at 15.1%. After currency adjustments, on the other hand, the growth in revenue there was around 1.7%.

South America

South America experienced average economic growth of just 3.5% in the 2022 financial year, but TÜV Rheinland recorded a 20.8% total upturn in revenue in the region. Brazil was by far the biggest contributor to this trend. The positive trend was attributable to good results on the part of all the Business Streams. The locations in Peru and Colombia were discontinued during the last quarter of 2022.

As a globalized service company, the goal of TÜV Rheinland is to systematically strengthen business operations worldwide. TÜV Rheinland focuses its efforts in this regard on expanding operations in the markets in which the company can optimally develop its competitiveness. Overall, TÜV Rheinland views itself as very well-positioned compared to the international competition and is confident that it will continue to expand its position in the global TIC market.

Corporate Management

Corporate management entails a Group-wide management information and controlling system, creating cost and income transparency in all areas and thus contributing to a profitable earnings performance. Reporting is standardized worldwide and is based on the International Financial Reporting Standards (IFRS).
The focus is on annual financial targets and control parameters such as revenue, earnings before interest and taxes (EBIT) as well as specifications for optimized working capital management and cash development. In addition to this, workflows are managed based on key process indicators. 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.

The company's long-term objectives and its strategic alignment are laid out in the TÜV Rheinland **TR+ Strategy**. Profitable growth, reduced complexity, expansion in scalable businesses, accelerating digitalization and maintaining quality leadership are core elements of the current Group strategy.
The development of the Group TR+ strategy consisted of several stages. Working from field and strategy scenarios, a strategic direction was developed that defines the Group's basic strategic logic and comprises multiple guidelines designed to promote success. A portfolio analysis was also carried out in which the economic setting in the service segments was analyzed, with trends and risk profiles examined and growth forecasts derived. Based on this, the businesses in which TÜV Rheinland wants to operate were identified, along with the ways in which these businesses should develop, both in detail and as a bundle, and over both the short and long terms.
The strategies of all the Business Streams and Business Fields are regularly reviewed and, if necessary, revised in terms of the strategic logic and portfolio decisions involved. This ensures that TÜV Rheinland will remain sustainable and successful in a dynamic TIC market characterized by continued consolidation and will reach the target image set for itself.
The **target image** defines the level of future aspirations. With this in mind, TÜV Rheinland will remain a dependable and integral partner for safety, quality, new technologies and sustainability for its clients, even in 2030 – a professional, sustainably positioned and economically successful company with highly satisfied customers and employees. By providing excellent services, the Group will continue to operate profitably, shaping its own future, retaining its independence and thus positioning itself as a major global provider in the sector. Investments will be made in expanding its business and in digitalization, in the Group's own employees, and in measures to increase process quality and efficiency. Global expansion will be driven subject to the condition that it does not grow too dependent on individual markets (countries or services) while avoiding the emergence of complexity and a small-scale approach. Building on the strong technological expertise of its workforce, TÜV Rheinland will also continue consistently establishing itself as the preferred TIC partner for selected new technologies.

The effort to protect the TÜV Rheinland brand and its reputation will remain a top priority. In addition, it remains the ambition to further reduce the number of accidents.
Where sustainability is concerned, the goal at TÜV Rheinland is to effectively help clients achieve their sustainability goals while doubling revenue through ESG services over the coming five years. When it comes to providing its own services, the goal is to achieve climate neutrality by 2028 – and, to the extent possible, to reach this goal in Germany by 2025. These targets relate to what are known as Scope 1 and 2 emissions, as well as the share of Scope 3 emissions attributable to business travel. This will mainly be accomplished through emission avoidance, and to a lesser extent through offsets.
In the effort to achieve this target image, TÜV Rheinland's **strategic logic** defines key levers for growth. There are four strategic guidelines that should be highlighted:

Simplify!
Scale!
Digitalize!
Quality!

Simplify!

This guideline has multiple facets, all of them dedicated to the goal of reducing complexity. **Simplify!** thus defines the focus of its activities around the service categories of testing, inspection, certification, consulting and training.

Simplify! also includes a regular review of services with the goal of keeping the complexity of the service portfolio narrow and manageable. Services that generate losses, are not promising in the long term or are not part of the core business will be discontinued or sold in an effort to consistently focus on services from a single source that are sustainably profitable and ideally scalable.
Simplify! also stands for simplifying the internal organizational structure and harmonizing processes. This applies not just to processes in the IT system landscape but to all of the Group's structures and processes – in the Business Streams, in the regions and in the service functions.

Scale!

Scaling is an approach or a basic strategic principle designed to increase returns with increasing business volume, particularly in areas with high levels of investment. Expanding scalable services is an essential lever to help place us among the leading providers in the world in our Business Fields. Investments are made primarily in businesses that offer the greatest scaling potential. These potentials are identified across Business Streams, particularly in the case of inspections and laboratory testing. Significant acquisitions are a tried-and-tested means of consistently pursuing economies of scale, provided the relevant opportunities present themselves in the market.

Digitalize!

Three levers can be distinguished in the effort to accelerate the digital transformation within TÜV Rheinland:

- Transferring analog and physical processes into digital processes. This applies specifically to communication with clients, which grow more efficient and customer-friendly through innovations such as digital test reports and invoices. The goal is to achieve standardized data management that uses only a single central source for important customer or material data while also enabling operation of shared service centers at the Group level.
- Effective evaluation of existing data and the derivation of information in order to generate added benefits, e.g. in the form of customer benchmarks.
- Expansion and development of new digital business models and services. One offer here is the successful "myCompetence" platform for online training for use not just by TÜV Rheinland but by third-party providers as well.

Quality!

TÜV Rheinland's positioning as a leading provider of high-quality services will be maintained and expanded. The goal is to consistently meet the requirements of clients, standard-setters and regulators as well as strict internal requirements. To this end, processes in service provision are standardized and automated wherever possible, advancing the understanding of the quality standard in service provision and with quality indicators – if not yet put in place – systematically introduced, recorded and used for control. These measures will also contribute to a reduction in risk.

Earnings Situation

GROUP REVENUES

Consolidated revenue (including inventory changes) of TÜV Rheinland rose from €2,090.7 million in the previous year to €2,275.2 million in the 2022 financial year; this represented an increase of €184.5 million or 8.8%. TÜV Rheinland thus considerably outpaced the goal it set for itself in 2021 of achieving revenue growth in the low single-digit percentage range. Of the total revenue, €1,123.7 million was attributable to foreign countries; this accounted for a 49.4% share of total revenue. Due to fluctuations in exchange rates, currency-adjusted values are shown below in addition to non-consolidated revenues per Business Stream, as well as intra-group revenues and the central functions in a separate item:

Group Revenues by Business Streams

in € millions	2022	2022*	2021
Industrial Services & Cybersecurity	614.2	594.7	560.7
Mobility	633.6	627.3	595.4
Products	657.2	623.3	604.1
Academy & Life Care	274.5	271.4	244.7
Systems	263.1	250.1	239.9
Other (Intra-group revenues and central functions)	–167.4	–142.6	–154.1
Consolidated revenue	2,275.2	2,224.2	2,090.7

* Revenue at constant rates of exchange

All Business Streams have revenue growth to report in the financial year under report. The 8.8% year-over-year increase in total revenue was achieved in part through a lowering of the restrictions instituted in connection with the coronavirus pandemic. The ACADEMY & LIFE CARE Business Stream in particular managed to significantly increase its face-to-face business with seminars and further education and training sessions, in contrast to the difficulties of the two preceding financial years, in which lockdowns made it difficult to carry out face-to-face events. The pre-tax return on sales in the 2022 business year stood at 7.6% (previous year: 6.9%).

Germany

Germany had a 50.6% share of total revenue and was in a position to increase its revenue over the previous year. The year-over-year increase in domestic revenue, from €58.3 million to €1,151.5 million, was mainly attributable to the **Mobility** Business Stream, which contributed €26.4 million. With the exception of the **Systems** Business Stream, which recorded a 1.5% downturn in revenue, all other Business Streams increased their year-over-year revenue figures by double-digit percentages.

International

International revenue totaled to €1,123.7 million and was 12.6% higher than the previous year (previous year: €997.5 million). The Greater China region accounted for 20.2% of total Group revenues, followed by the regions of Western Europe (9.1%) and Asia Pacific (6.1%). Each of the remaining regions achieved less than 6.0% of revenue. There were marked revenue increases, ranging from 6.3% to 37.4%, across all of the Business Streams. During the 2022 financial year, changes in currency exchange rates resulted in a €51.0 million increase in overall Group revenues. Significant currencies with a considerable positive effect on Group revenues included the Chinese yuan and the US dollar in particular. What follows is a global overview of revenue by region in € millions.

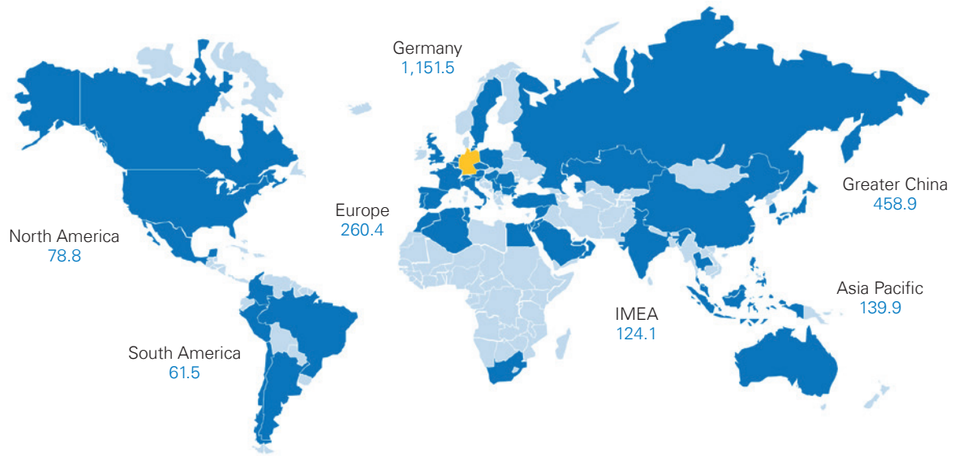
Industrial Services & Cybersecurity

This Business Stream reported a 9.6% year-over-year increase in revenue. While the regulated testing and certification business in Germany was not in a position to reach its full potential due to high rates of absenteeism in connection with the coronavirus pandemic, the Business Stream reported solid growth in non-regulated testing and certification business. The Energy & Environment Business Field generated the largest share of sales growth in absolute terms. Non-regulated business exhibited strong revenue growth in the international regions as well. The Industrial Inspection & Materials Testing Business Field also recorded a high share of sales growth, due among other things to high-volume projects in Saudi Arabia and major project activities in Eastern Europe and Greater China. In addition to Cybersecurity & Functional Safety, Infrastructure & Project Supervision also contributed to the Business Field's sales growth, due in particular to intensive expansion of business activities in Greater China and Brazil. The remaining Business Fields, which are part of the regulated testing and certification business, including Electrical Engineering & Building Technology, Elevators & Lifting Equipment and Pressure Equipment, accounted for a small share of the Business Field's absolute sales growth.

Mobility

The revenue trend for this Business Stream remained under the influence of the coronavirus pandemic again in the 2022 financial year. Nevertheless, it managed to

Overview of revenue by region in € millions



register solid year-over-year growth. Despite total revenue of €633.6 million and 6.4% growth, however, performance fell short of the annual target. The Periodical Technical Inspection Business Field generated €365.4 million in revenue, thus contributing the absolute largest share of growth within that Business Stream. For the most part, this growth was achieved in Germany, on the one hand, through very successful further expansion of the partner network in the franchise organization – and in the Latvian market on the other hand. TÜV Rheinland also grew its vehicle inspection business on the Asian continent for the first time through the successful opening of a testing center in Beijing. The Rail Business Field generated the second-largest share of sales growth, with sales up €7.6 million on the previous year. Successful order acquisition generated the second-largest share of sales growth, with sales up €7.6 million on the previous year. The Car Services & Appraisal Business Field recorded an increase in revenue but fell significantly short of both the annual target set as well as its pre-pandemic level. The market indicators once again showed no signs of easing. The number of new registrations was +1.1% higher than the previous year's value. By contrast, the number of changes in motor-vehicle ownership was a considerable -14.7% lower than it had been in the previous year. A still-low volume of traffic also kept the numbers of claims considerably lower than they had been prior to the coronavirus pandemic. The Engineering & Type Approval Business Field generated a small share of the absolute growth. Despite a mounting backlog of orders, material bottlenecks and disrupted supply chains led to lost revenues, particularly in Europe and Asia. While general conditions were more difficult, the modern and independent test center for traction batteries in electric vehicles that newly opened in the 2022 financial year commenced testing activities in Avantis, the Dutch-German innovation park, and stood as an essential pillar of the future orientation of the Business Field. Last but not least, the Driver's License Business Field faced major challenges for test subjects, driving instructors and examiners in light of short-term absenteeism due to illness in connection with the coronavirus pandemic. Revenue in this field was slightly higher nevertheless. The volume of practical examinations for driver's licenses in the financial year under report was significantly higher than their pre-pandemic level of 2019. To help ameliorate the long lead times involved, examinations were also extended to Saturdays.

Products

In spite of specific economic conditions such as the Russia-Ukraine conflict and the ongoing coronavirus pandemic, rising inflation and delivery-chain difficulties across all areas, this Business Stream managed to register year-over-year revenue growth of 8.8% in the financial year completed. Across all Business Streams, the **Products** Business Stream is the largest, with revenue of €657.2 million. The Europe and Greater China regions were key growth drivers in the financial year under report. The Solar & Commercial Products Business Field, which includes the testing of machines, components and solar modules, achieved the largest percentage of revenue growth, followed by the Electrical Business Field, which also achieved high sales growth in spite of difficult market conditions and declining consumer demand. The Medical Business Fields Medical and Softlines, which offer inspections of toys, cosmetics and textiles, among other things contributed to the sales growth of the Business Stream with sales increases of €10.2 million and €10.7 million. The Hardlines Business Field, comprising furniture and household goods as well as the inspection of mechanical products, experienced a slight year-over-year downturn in revenue.

Academy & Life Care

The ongoing development of this Business Stream successfully continued once again in the past financial year, although the trend in individual countries was still influenced by the coronavirus pandemic. The training business in Greater China and in India merits particular mention, while the domestic market of Germany in particular reported significant growth. Investments in the digitalization strategy paid off positively once again in the financial year under report. Leading the way in this respect in the past financial year was the Training & HR Development Business Field, with significant year-over-year growth in revenue. Lockdowns in the previous year had in some cases prevented the implementation of face-to-face events with seminars, training and further education, but increased demand for face-to-face seminars and digital offerings returned during the first half of the financial year under report, particularly in the core market of Germany and Europe. During the second half of the year, this exceptional demand softened somewhat in the wake of the Russia-Ukraine conflict, the inflation tied in with the conflict and rising economic uncertainties. The Occupational Health & Safety Business Field was the second strongest Business Field in this area, registering moderate growth in demand in spite of the significant weakening in the business with coronavirus vaccinations in the previous year. In the Digital Transformation Business Field, the Research Management segment benefited from the extension or commissioning of large-scale projects, as seen in the federal and state programs to fund expansion of digital infrastructures in Germany. Additional consulting contracts in the fields of "infrastructure management" or "systems & processes" are also helping ensure a positive business trend. The Digital Transformation Business Field reported a slight increase in revenue compared to the previous year. The internationalization of the Business Stream also advanced successfully, thanks to the first larger-scale consulting mandates in the IMEA region. All in all, these developments led to €274.5 million in total revenue. This corresponds to year-over-year growth of 12.2%. Still, the shortage of skilled workers and the resulting challenges in recruitment prevented even more robust growth in many areas. The conditions facing the Labor Market Services Business Field remain comparatively difficult as a result of the reduced volume of tenders from employment agencies. The Business Field can successfully hold its own in the face of competition, however. The rate of success of TÜV Rheinland Academy in tenders in which it has participated increased significantly, and revenue held steady year-over-year as a result.

Systems

Although economic conditions deteriorated as a result of the Russia-Ukraine conflict, with an exacerbation of the associated uncertainties, the Business Stream managed to exceed its growth targets and recorded a 9.7% year-over-year increase in total revenue. The Customized Services Business Field – i.e. audits based on companies' internal regulations and individual requirements relative to suppliers and business partners – recorded the highest increase in sales in absolute terms and benefited from a gradual easing of pandemic-related restrictions and the associated resumption of business. The IMEA region, in which new major projects in Saudi Arabia were successfully brought to completion, emerged as the most significant contributor to growth in this respect. Despite a large number of pandemic-related lockdowns, the Greater China region once again exhibited significant growth dynamics, driven by sustainability services in the area of CO_2 services and supply-chain audits, coupled with robust growth in the eCommerce sector. Revenue growth in the Certification of Management Systems Business Field was lower than it had been in the previous year, as a result of the cyclical high proportion of surveillance audits conducted. Nevertheless, by attracting new clients and developing existing ones, the largest Business Field managed to partially offset the cyclical softening in existing business, boosting revenue in spite of forecasts to the contrary. Drivers of revenue included certifications in the strategic segments of food and IT certifications, together with sustainability services in the areas of environment, energy and occupational health and safety. As in previous years, the Government Inspections & International Trade Business Field held its ground superbly to generate revenue growth against a

backdrop of increased competition and a downturn in general economic conditions worldwide achieving sales growth of €5.2 million. In keeping with the strategic objective of regional diversification, the target markets of Greater China, Asia and Europe made the largest contributions toward revenue growth.

OPERATING RESULT (EBIT)

The operating result totaled to €180.3 million in the 2022 financial year. After adjusting for special items, which particularly included € -0.7 million due to the change in the scope of consolidation and a total of € -9.8 million in effects from past purchase-price allocations (PPA), adjusted EBIT stood at €190.8 million (previous year: €185.6 million). The EBIT margin in the 2022 financial year was 7.9%, up 0.4% compared to the previous year. TÜV Rheinland thus exceeded the target it had set for itself in 2021, which was to achieve an EBIT margin at the previous year's level.

The following is a presentation of the year-over-year trend in operating result:

Operating Result

in € millions	2022	2021
Earnings before interest, taxes, depreciation, and amortization (EBITDA)	**324.9**	**310.9**
Amortization of intangible assets and depreciation of property, plant and equipment	–144.6	–153.1
Operating result (EBIT)	**180.3**	**157.8**
Financial result	–6.5	–13.1
Earnings before income taxes	**173.8**	**144.7**
Taxes	–49.7	–26.4
Consolidated net income	**124.1**	**118.3**

At €324.9 million, earnings before interest, taxes, depreciation, and amortization (EBITDA) for the financial year were 4.5% higher than the previous year's total of €310.9 million.

The operating result and earnings before taxes were 14.3% and 20.1%, respectively, higher year-over-year. The following presentation of earnings (EBIT) by Business Stream or by region does not take consolidation and special effects into account.

Industrial Services & Cybersecurity

This Business Stream met the projected EBIT target for the financial year, even taking into account significant investments in business and service development, and thus fell slightly short of the previous year's result, which contained a considerable gain on disposal due to the sale of a company in Germany. All of the regions with the exception of North America achieved a positive result. The Business Stream generated earnings of €71.4 million, which is 3.0% below the previous year's figure. The trend in the Energy & Environment Business Field was particularly positive. That Business Field managed to boost its earnings very significantly year-over-year. The Elevators & Lifting Equipment, Cybersecurity & Functional Safety, and Electrical Engineering & Building Technology Business Fields were also in a position to slightly increase their earnings compared to the previous year. The Industrial Inspection & Material Testing, Pressure Equipment and Infrastructure & Project Supervision Business Fields, on the other hand, suffered a downturn.

Mobility

The mobility ecosystem is undergoing a radical shift in the direction of electrification and connectivity. The coronavirus pandemic, the chip crisis and the Russia-Ukraine conflict have led not only to disrupted supply chains, but also to deep restructuring in supply routes, product programs and opportunities for added value. Inflation-driven cost increases further increased margin pressures during the second half of the financial year. Innovation projects advanced apace nonetheless. Earnings in this Business Stream totaled to €36.9 million in the financial year under report; this is €5.7 million lower than the previous year's figure, even as earnings in the Periodical Technical Inspection, Driver's License, Periodical Technical Inspection and Rail Business Fields exceeded the previous year's level. The Car Services & Appraisal and Engineering & Type Approval Business Fields, on the other hand, suffered the most from the effects indicated above and faced considerably lower earnings in the reporting year.

Products

All in all, this Business Stream continued to report sound demand, although difficult economic conditions meant that the earnings targets set were not fully reached. The Business Stream generated earnings of €118.8 million, which was 2.9% higher year-over-year. Thus, once again, the PRODUCTS Business Stream made by far the largest contribution to earnings at TÜV Rheinland. All of the other Business Fields reported year-over-year improvement in earnings, with the exception of the Hardlines Business Field.

Academy & Life Care

This Business Stream deployed extensive countermeasures and cost controls to cushion the past two financial years' impacts of the coronavirus pandemic. The focus during the reporting year was on the implementation of regional strategy. Important digitalization projects, particularly in the Occupational Health & Safety and Training & HR Development Business Fields, retain their high priority and have been supplemented by business-development projects to grow international presence and the product portfolio. The strong business trend seen in the first half of the reporting year provided support for needed expenses and investments in strategic projects. All in all, earnings of €15.8 million were generated; this corresponds to a 51.2% increase in earnings. The Occupational Health & Safety Business Field made the highest contribution to earnings and managed to significantly increase the previous year's figure. Year-over-year, the Training & HR Development Business Field more than doubled its contribution to earnings.

Systems

This Business Stream reported earnings of €38.0 million; this was 5.4% lower than the previous year's earnings. The decline in earnings is due primarily to the trend in the Certification of Management Systems Business Field. The Customized Services Business Field increased its earnings slightly, benefiting mainly from the encouraging trend in the IMEA region. Earnings reports for Germany and Asia Pacific were lower, while the Greater China region made a consistently high contribution to earnings. The Government Inspections & International Trade Business Field also recorded a slight improvement in earnings compared to the previous year.

Regions

All regions, with the exception of the IMEA, Central and Eastern Europe and North and South America regions, increased or improved earnings before interest and taxes year-over-year.

Third-Party Services

Third-party services totaled to €379.7 million in the 2022 financial year; this was €55.2 million higher than in the previous year. The third-party services ratio was 16.7% and thus 1.2 percentage points higher than the previous year's level of 15.5%.

Personal Expenses

Personnel expenses were 6.8% higher year-over-year and totaled to €1,247.2 million. The personnel expense ratio was 54.8% and fell by 1.0 percentage point in comparison to the previous year. The average number of (full-time) employees on payroll increased to a total of 20,870 employees in the 2022 reporting year, representing a 3.1% year-over-year increase.

Amortization and Depreciation

Amortization of intangible assets and depreciation of property, plant, and equipment totaled to €144.6 million and were 5.6% lower than the previous year. Not taking amortization of right-of-use assets under IFRS 16 into account, depreciation and amortization stood at €84.5 million (previous year: €94.4 million).

Expenses

Other expenses were 18.3% higher year-over-year in the 2022 reporting year and totaled to €433.7 million. The increase was due, among other things, to a €13.9 million increase in travel expenses, €6.9 million growth in vehicle expenses, €4.4 million higher rental and leasing costs and €3.8 million higher advertising costs. Exchange-rate losses were higher year-over-year by a total of €11.1 million and stood at €23.4 million in the financial year under report.

Income

Other income was €31.5 million higher and stood at €110.4 million. Exchange-rate gains were €10.1 million higher in the reporting year. The increase in other income is due to €7.4 million growth in income from the disposal of assets and a €6.0 million increase in government grants.

Financial Result

The negative financial result amounted to €6.5 million in the 2022 reporting year; this represented a considerable improvement of €6.6 million year-over-year, because promissory notes of €193.0 million were repaid during the reporting year, resulting in lower interest charges. Interest expenses from financial liabilities amounted to €9.7 million, with €4.0 million of this amount related to leasing. Interest income increased by €3.2 million year-over-year.

Taxes

Earnings before income taxes stood at €173.8 million,

which was €29.1 million higher than the previous year's figure of €144.7 million. Income tax expenses amounted to €49.7 million, which was €23.3 million higher than in the previous financial year. The tax rate was 28.6% and is again close to the level seen in financial years prior to 2020.

Consolidated Net Income

Consolidated net income totaled to €124.1 million (previous year: €118.3 million).

Financial Position

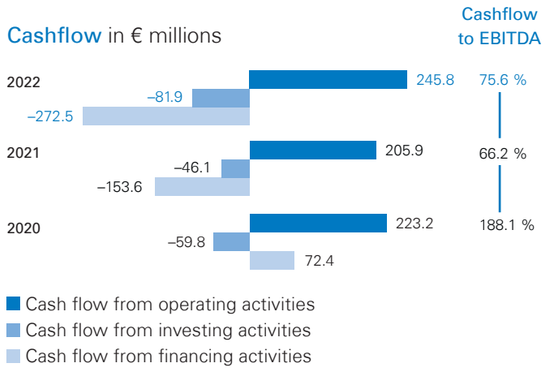
The financing activities of TÜV Rheinland are designed in such a way as to provide sufficient liquidity at all times and to permit all payment obligations to be met. In this connection, TÜV Rheinland continued its concerted effort toward continuous effective management of currency risk and interest-rate optimization in the 2022 financial year. One reason for this was, among other things, long-term and sustainable coverage of pension obligations, which totaled to €526.5 million as of December 31, 2022, thus representing 22.2% of total assets.
What follows is a presentation of the trend in cash flow from operating activities and from investing and financing activities.

Cash flow from Operating Activities

At €245.8 million, the positive cash flow from operating activities in the financial year was higher than the previous year's figure of €205.9 million, corresponding to growth of €39.9 million. Consolidated net income of €124.1 million was 4.9% higher than the previous year's figure. Non-cash depreciation and amortization decreased during the reporting year and went from €153.1 million to €144.6 million. At the same time, the increase in other liabilities had a positive effect on cash flow from operating activities. The ratio between cash flow from operating activities and earnings before interest, taxes, depreciation, and amortization (EBITDA) increased from 66.2% to 75.6%.

Cash Flow from Investing Activities

The negative cash flow from investing activities increased by €35.8 million year-over-year. In the wake of subdued investing activities in the previous year – due to the coronavirus pandemic, among other things – investments in property, plant and equipment and intangible assets were €33.1 higher year-over-year (see Investment Report).



Cash Flow from Financing Activities

Cash flow from financing activities was negative again in this financial year; it amounted to €272.5 million, which was €118.9 million higher than the previous year. The change was mainly due to partial early repayments of promissory notes with a nominal value of €193.0 million.

Cash and Cash Equivalents

Cash and cash equivalents amounted to €344.1 million as of the balance sheet date; this figure was €107.8 million lower due to the repayment of promissory notes. Restrictions affecting the availability of capital totaled to €181.4 million as of the balance sheet date of December 31, 2022. These mainly involved cash and cash equivalents subject to restrictions on movements of capital in China and the United Arab Emirates.
To ensure ongoing solvency, TÜV Rheinland also has a line of credit of €155.0 million syndicated for five years. This line of credit was signed in March 2020, was extended by one year in 2021 and 2022, respectively, and is granted until 2027. The line of credit had not been used as of the balance sheet date.

Results of Operations

Non-current Assets

Total assets were €96.9 million or 3.9% lower in the 2022 financial year and stood at €2,371.5 million (previous year: €2,468.4 million). Non-current assets (excluding goodwill) were €63.6 million lower and totaled to €1,059.3 million. €49.4 million of the decline can be attributed mainly to the decrease in deferred tax assets and €31.3 million to the actuarial reserve quota in the form of reinsurance. Property, plant and equipment, by contrast, increased by €25.9 million. Goodwill as of the balance sheet date of December 31, 2022, amounted to €265.4 million (previous year: €251.2 million) and accounted for 20.0% of non-current assets. The year-over-year change in goodwill was mainly due to the first-time consolidation of D/Gauge Ltd., the British firm for railway metrology, following which €9.1 million in provisional goodwill was recognized, and due as well to currency translation.

Current Assets

Inventories and customer receivables increased by a total of 11.3% year-over-year, particularly as a result of a €35.4 million upturn in trade receivables. The contract assets reported above within customer receivables amounted to €108.7 million (previous year: €103.1 million) and thus exceeded the previous year's level. Other current assets were reduced by a total of €85.2 million year-over-year. Other current assets increased by a total of € 19.2 million compared with the previous year, mainly due to higher receivables from other taxes. Assets classified as held for sale, which are also reported under other current assets, were €3.4 million lower year-over-year. Cash and cash equivalents totaled to €344.1 million as of December 31, 2022; this was lower than the previous year's figure of €451.9 million due to the repayment of promissory notes.

Equity

Equity was €205.1 million higher and totaled to €641.3 million. This increase was the result not only of the positive consolidated net income of €124.1 million but also of a total of €94.2 million in actuarial gains from the valuation of pension obligations. €1.8 million in exchange-rate gains also boosted the level of equity. The dividend payment of €7.0 million to the shareholder, on the other hand, led to a reduction in equity. The equity ratio rose from 17.7% in the 2021 financial year to 27.0% in the reporting year.

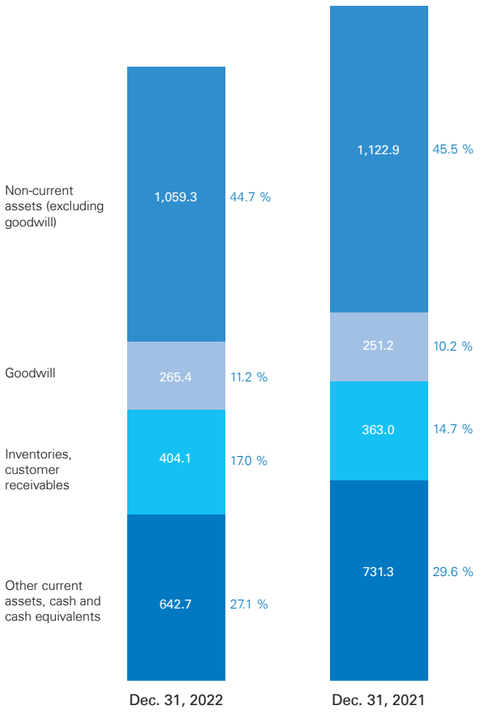
Non-current Liabilities

Within non-current liabilities, pension provisions were down from the prior-year value of €714.4 million and stood at €526.5 million in the current financial year. Pension provisions thus accounted for 22.2% of total assets. Pension provisions were offset by an actuarial reserve quota in the form of reinsurance policies with a total value of €256.8 million and stated under non-current assets. The decrease in pension obligations is attributable, among other things, to an increase in the interest rate, which went from 1.00% in the previous year to 3.80% as of the balance sheet date of December 31, 2022. There were non-current financial liabilities totaling €27.3 million as of the balance sheet date of December 31, 2022, representing a decrease of €61.5 million due to early repayment of a promissory note. Changes in pension provisions and financial liabilities were the main drivers of the 24.9% year-over-year decrease in non-current debt.

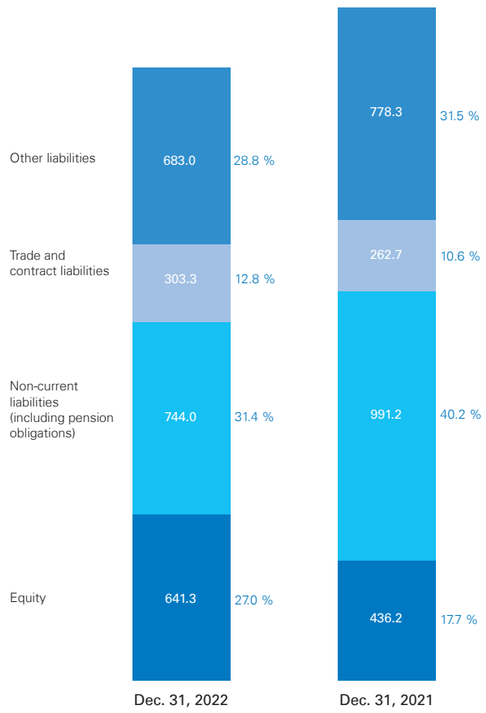
Current Liabilities

Current liabilities were lower year-over-year, by a total of €54.8 million. The decrease was mainly due to the decline in current financial liabilities, which went from €156.0 million to €20.9 million in the current reporting year as a result of further repayments of promissory notes. Contract liabilities and trade payables increased by a total of €40.5 million.

The assets of TÜV Rheinland at a glance
(in € millions)



The liabilities and equity of TÜV Rheinland at a glance (in € millions)



Investments

Total investment volume in intangible assets and property, plant and equipment in the 2022 financial year stood at €90.8 million, representing 57.4% growth over the previous year.

TÜV Rheinland increased its investment volume once again in the 2022 financial year, following cautious investing activities in the previous year in light of the coronavirus pandemic. TÜV Rheinland continues its increased focus on innovative capacity and is investing in future- and digitalization-related topics such as electromobility or autonomous driving.

Compared to the other Business Streams, the **MOBILITY** and **PRODUCTS** Business Streams exhibit the strongest investments in intangible assets and property, plant and equipment.

Among other developments, on December 16, 2022, TÜV Rheinland officially opened the Yangtze River Delta Operation Hub in Taicang, China. The first phase of the Yangtze River Delta Operation Hub comprises a laboratory for photovoltaic modules spanning more than 5,000 square meters; an EMC (electromagnetic compatibility) laboratory of more than 2,000 square meters featuring a 10-meter-high anechoic chamber and high-performance capabilities; and a 4,000-square-meter EMC laboratory for automotive electronics and auto parts. With our advanced testing capabilities, our laboratories create opportunities for even better service to our clients while providing support for future requirements and technologies. The investment costs amounted to €10.0 million in the 2022 financial year.

In other developments, in the 2022 financial year our **MOBILITY** Business Stream opened a new, modern and independent test center for traction batteries in electric vehicles in Avantis, the Dutch-German innovation park. Spanning an area of around 2,200 square meters, this testing laboratory ranks among the largest of its kind. The estimated investment volume is more than €24.0 million and will be concluded in the 2023 financial year. In the future, vehicle batteries ranging up to 800 kg in size will be tested in the testing laboratory. Investments of €7.1 million were made for the testing laboratory in the 2022 financial year. TÜV Rheinland has invested €2.3 million in the new construction/conversion of testing centers in Chile. During the financial year under report, the MOBILITY Business Stream invested €8.3 million in additional testing equipment, in fixed installations of testing facilities and for operating and office equipment.

The **PRODUCTS** Business Stream invested €1.3 million in the expansion of wireless capacities in Taiwan to cover 5G technology. These investments are designed to satisfy the increasing testing requirements and state-of-the-art testing standards. The expansion and modernization of the chemical laboratories at locations in China, including in Ningbo and Shanghai, as well as in Germany, led to an overall increase in investment costs during the financial year.

The Business Stream also invested €9.9 million in additional testing equipment and fixed installations of testing facilities; these are recurring standard replacement investments in light of wear and tear or technical progress.

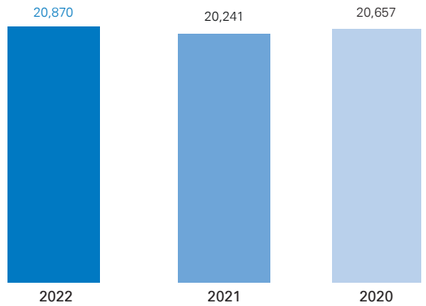
Construction of a new office building in Belval (Luxembourg) was approved in the 2019 financial year. The investment volume is projected to total to €34.0 million. An additional €11.2 million was invested for this purpose during the 2022 financial year. The project is set for completion in early 2024. Additionally, €3.6 million in investments were made for the expansion of the chemical laboratory in Bentonville, USA.

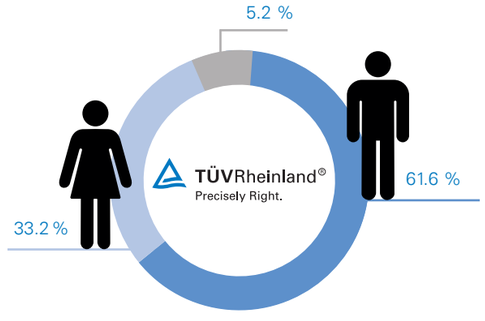
As in the previous reporting year, TÜV Rheinland strengthened the performance of the IT infrastructure, particularly through investments in improved hardware, targeted increases in server capacity and higher-performing telecommunications equipment. These investments were further accelerated by the developments of the preceding two financial years, which were marked by the coronavirus pandemic. The expansion and strengthening of IT infrastructure, and the acquisition of highly specialized testing software and technology, led to investments of €4.7 million.

Employees

As of the balance sheet date of December 31, 2022, a total of 21,149 employees (full-time) or 21,800 employees (headcount) were employed at TÜV Rheinland. The average number of employees (full-time) in the reporting year was 20,870; in a year-over-year comparison, this represented an increase of 629 employees or 3.1%.

Total staff (average) FTE





While 61.6% of the employees at TÜV Rheinland were male, the share of women was 33.2%, with the remaining 5.2% of employees not reporting a gender.

Abroad, there were an average of 12,547 employees (full-time); this represented a share of approx. 60.1% and a year-over-year increase of 6.7%. The average number of employees in Germany was lower and went from 8,486 to 8,323; this represented a decline of 1.9%.

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, employee development & non-discrimination are focal points of TÜV Rheinland's sustainability strategy. This also means that, by 2025, we intend to fill at least 30.0% of the management positions in the Group, and 20.0% of the top management positions internationally, with candidates who are women. The share of women in management positions across the entire TÜV Rheinland Group already stood at 29.0% during the reporting year. 33.0% of top management positions were staffed by executives from outside of Germany. In the future, TÜV Rheinland intends to focus even more on filling local management positions in the regions and seeks to increase the share of managers drawn from the local workforce to an average of 75.0% by 2025.

A quota of 30.0% by the end of 2025 was set for the proportion of women on the Supervisory Board of TÜV Rheinland AG. With four out of 16 positions filled by women, this quota had not yet been met in the financial year under report. The Supervisory Board had set a quota of 25.0% for the proportion of women on the Executive Board of TÜV Rheinland AG by the end of 2025. The structure of the Executive Board was modified during the first half of the financial year. Effective April 1, 2022, the Executive Board consists of the three areas of Chairmanship, Finance and Controlling as well as Human Resources and Legal Affairs. As a result of this structural change, the proportion of women on the Executive Board now stands at 33.3% as of the balance sheet date.

The target for the share of women in the top level of management at TÜV Rheinland AG totals to 30.0% by December 31, 2025. We achieved 19.0% at this level during the current reporting year. There is no second level of management set up at TÜV Rheinland AG.

Targets have been defined to take effect by December 31, 2025, for the five German Group companies 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.

Risk Management System and Corporate Governance

For a globally active company like TÜV Rheinland, a comprehensive internal control system (ICS) in relation to IT-assisted business processes, paired with effective and efficient risk management, are indispensable control elements that define the framework for management and monitoring. The ICS is mainly intended to ensure compliance with statutory requirements, TÜV Rheinland-specific guidelines, and its corporate objectives. The goal of risk management is for the Executive Board to take appropriate measures to identify and evaluate, at an early stage, potential threats to the companies, to permit initiation of suitable precautionary, control and protection measures as well as proactive countermeasures. A detailed description in the quality management system and explicit treatment in the management framework manual define the risk management process of TÜV Rheinland. In addition, risks are recorded as process characteristics in the sense of quality-management documents (Standard Operating Procedure (SOP)) in the Group-wide quality-management system "EtQ." These documents are available around the world on the company's intranet. Risk assessments of our service are conducted based on uniform criteria and give the Business Fields an opportunity to develop targeted risk-reducing measures in the provision of services. In addition, TÜV Rheinland has a long-standing interdisciplinary risk-management unit consisting of the service functions of Corporate Audit, Corporate Controlling, Finance & Accounting (including Insurance), Legal & Compliance, QHSE (Quality Management, Health, Safety and Environment as well as Accreditation & Certification), Human Resources (HR) and IT.

The Coronavirus Crisis Team constituted at the outset of the 2020 financial year remained important in the current reporting year 2022, but not at the same level of intensity seen in the two preceding financial years. In the crisis team, German managers remained regularly informed about legal regulations in effect, based on the SARS-CoV2 occupational safety and health standards issued by the German Federal Ministry of Labour and Social Affairs for the various fields, and about overall numbers of cases of infection and suspected infection at TÜV Rheinland. This crisis team also has the role of issuing instructions on the current protective measures for daily operations and consistently observing these for the protection of our employees and clients. The team helped organize vaccinations for TÜV Rheinland employees again in 2022. There is also a corresponding crisis team in place in each region abroad, regularly analyzing the situation and defining, coordinating and communicating any necessary measures internally.

In keeping with international standards, the Corporate Sector Supervision and Transparency Act (KonTraG) requires the Executive Board to take suitable steps 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 in the companies and Business Fields by an effective ICS and TÜV Rheinland's early risk warning system. The Group's Corporate Audit Department also works on the basis of a risk-oriented audit approach and based on internationally recognized auditing standards to check ICS and risk management at TÜV Rheinland companies around the world. In addition, information derived from semiannual risk reporting by the executives in charge of the Business Streams (Executive Vice Presidents) is subject to detailed analysis in connection with the regions involved. Material risks are also reported to the Executive Board on an ad hoc basis. Based on the information obtained, all of this information is then aggregated into a single risk report. This report is then appraised from portfolio and Group viewpoints. Risk determination is based on areas of risk specific to TÜV Rheinland. These include the categories of market/customers, processes, personnel, finances, accreditations/standards/legal cases and others; in addition, a specific category was recently included to map risks in connection with the coronavirus pandemic. In short- and medium-term views, risks are quantified based on the anticipated impact on earnings as well as the associated likelihood that a risk will occur. Designating planned countermeasures and assigning monitoring and implementation responsibility are also central elements 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 pursuing specific efforts to avert possible damage to TÜV Rheinland. 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 thus tightly incorporated into TÜV Rheinland's information

and communication system. It is continuously enhanced and adapted to changing general 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.
TÜV Rheinland 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 qualified 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 stakeholders.

VALUE MANAGEMENT AND BUSINESS-RELATED ENVIRONMENTAL AND SOCIAL FACTORS

TÜV Rheinland is committed to conducting itself in accordance with the principles of the UN Global Compact and the world group for testing, inspection and certification service providers, the TIC Council. These principles specifically entail 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 2022 financial year. TÜV Rheinland manages the topics of "Corporate Social Responsibility (CSR)" and compliance on the basis of sustainability management and a compliance management system. With its three dimensions of "People, Profession & Planet," the sustainability strategy for 2025, which was developed and adopted in 2020 on the basis of an extensive materiality analysis, helps strengthen key success factors and thus meet the goal of becoming the world's best sustainable and independent service company in the fields of testing, inspection, certification, consulting and training. The targets set for TÜV Rheinland – in the areas of employee safety, labor law, non-discrimination, diversity, employee development, legal compliance, business ethics, data integrity, service quality and greenhouse-gas emissions – were at the root of the substantive continuation of the program for CSR and sustainability again in 2022. The Sustainability Report provides detailed information on this.

Opportunities and Risks

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.
As part of our strategic planning, we regularly identify and evaluate the opportunities and risks that arise in our numerous Business Fields and take actions accordingly. Below is a description of our material opportunities and risks. Unless indicated otherwise, the opportunities and risks relate to all of our Business Streams.

OPPORTUNITIES

The sequence of the opportunities presented reflects the current assessment of the relative extent for TÜV Rheinland and therefore provides an indication of the current significance of these opportunities for us. The opportunities described are not necessarily the only ones we have. Moreover, our assessment of opportunities is subject to change, as TÜV Rheinland, our markets and technologies are constantly evolving. It is also possible that some of the opportunities we see today will not materialize.
TÜV Rheinland continues to see its opportunities in service innovations, in international growth, in the regulatory environment and in M&A activities.

Service Innovations

Opportunities are mainly associated with service innovations, as in the case of automation and digitalization, for instance. We continue to drive innovation by investing in new technologies, particularly to develop sustainable solutions for our clients while strengthening our own competitiveness at the same time.
As part of our services, we leverage our expertise and experience to make plants, products and processes safer for the sake of people and the environment, and to dedicate our services to facilitating the transformation into a sustainable economy and society. Climate protection and sustainable business management are the decisive issues for the coming years and will determine the future viability of TÜV Rheinland. We align our business activities and services around social and environmental standards.
One of our goals is to be an innovative corporate group that continuously offers new service technologies that meet our clients' current and future requirements. The expansion of our digital client platforms will improve the availability of digital products and systems for our clients, further boosting their productivity and efficiency in the process. Investments in new laboratories, in energy, environmental and sustainability services, and in digital data security will continue unchanged from previous years. 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 (e.g. innovative IT applications based on customer requests). The opportunities through digitalization or Industry 4.0 are presented in the "Market-Specific Development" section.
A positive effect of the coronavirus pandemic was the demand for new services in which it resulted. The digitalization strategy in the ACADEMY & LIFE CARE Business Stream, for instance, was given a significant boost, and clients are exhibiting unprecedented acceptance of digital services, formats and service models. New consulting services for the implementation of occupational safety and health standards or for the expansion of digital networks have also been successfully placed and will continue to offer opportunities in the future. In the SYSTEMS Business Stream, a trend toward digital audit procedures emerged in the accredited area and was put to successful use through the offer of remote audits.

International Growth

Through sales initiatives and client-oriented support, we continuously strive to expand our services in established markets. We are also opening up new markets in an effort to generate long-term growth potential in our core business. We also see great potential in the increased acquisition of large orders in international markets, such as support for infrastructure projects. A continuous effort is made to expand the presence in the Greater China region – for local markets in particular – parallel to diversification in the range of services offered.

Regulatory Environment

A calming in the geopolitical environment can quickly contribute to a more positive climate for investment in industry, thus driving demand for our inspection and testing services. State initiatives – for example in the area of infrastructure, energy (e.g. hydrogen) or digitalization and sustainability in particular – will generate demand potential as well.

M&A Activities

As TÜV Rheinland, we continuously monitor our current and potential markets with an eye to opportunities for stra-

tegic mergers, acquisitions, shareholdings and partnerships with which we can complement our organic growth. Activities like these can help us strengthen our position in our markets, develop new or under-served markets, or complement our service portfolio in strategic areas.

RISKS

Below, we describe risks that may have an adverse impact on our business, assets, financial position, profitability and reputation. The sequence of the risks presented within the four categories reflects the current assessment of the relative extent for TÜV Rheinland and therefore provides an indication of the current significance of these risks for us. Additional risks of which we are not yet aware, or risks that we currently consider to be insignificant, may also negatively impact our business activities and objectives. Unless indicated otherwise, the following risks apply to all TÜV Rheinland companies.

STRATEGIC RISKS

We continue to see considerable uncertainties surrounding the global economic outlook. The ongoing events that surround the Russia-Ukraine conflict continue to pose a significant increase in global and geopolitical risk, particularly with regard to the resulting trend in energy costs. Due to the comparatively low level of business in energy-intensive testing services and existing supply contracts at TÜV Rheinland, this risk was manageable during the reporting year.
As predicted by economic research institutes, increasing rates of inflation can also be expected in subsequent years. As was already the case during the past two financial years, another major risk to the global economic cycle lies in the further course of the coronavirus pandemic. What remains is a risk of further lockdowns that can have a direct impact on our business in terms of the demand for our services, but an indirect impact as well, including production bottlenecks or higher levels of absenteeism due to illness (see, among other things, the Outlook on page 74 et seqq.).
There are also geopolitical risks associated with a further increase in tensions in areas of the South China Sea. While China continues to regard Taiwan as part of the People's Republic of China, Taiwan seeks to retain political autonomy and democratic freedoms and receives support in this effort from Western states, including the United States. Additional tensions between the United States and China have arisen in the wake of US allegations of Chinese espionage in connection with a balloon deployed by China over US territory. Further intensification of ongoing tensions between the major powers can have a significant impact on the global economy and thus on TÜV Rheinland as well, for which the Chinese market is essential.
Demographic change represents another dimension of concern to TÜV Rheinland. A study by the Nuremberg Institute for Employment Research (IAB) for instance found that the German labor market in particular will lose seven million workers – one-seventh of the labor market – by 2035 due to demographic change. The principal backdrop for this forecast is the fact that many employees born during what are referred to as the "baby boomer years" (1955 to 1969) will soon retire from the job market. Given its employee structure, this development also poses a risk for TÜV Rheinland.
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. German engineering is held in high regard worldwide for its quality and innovation. According to a recent study by the Federal Statistical Office of Germany, the number of young people who elect to pursue studies in STEM subjects – in short, science, technology, engineering and mathematics – has fallen by 6.0% in just one year. The situation on the labor market and the search for qualified personnel also pose challenges for TÜV Rheinland.
We also identify risks associated with significant changes in the structures, policies, or management of the company in an effort to improve our speed, agility or corporate culture. This includes increased costs, missed financial or performance targets, loss of qualified personnel, loss of synergy effects and the loss of trust on the part of our clients. We see a risk that we might not be flexible enough to adapt our organization and testing laboratories to changing market conditions in a timely manner. Necessary developments and adaptations might fail to be carried out to the extent and within the time frame planned; this could delay optimizations on the cost side and lead to a loss of qualified personnel. We minimize risks like these by planning and monitoring the implementation of such measures in detail, maintaining strict cost management and conducting ongoing discussions with all stakeholders concerned. Late issuance of accreditation, or its possible withdrawal, poses a risk for business activities as well.

FINANCIAL RISKS

At TÜV Rheinland, the financial risks are broken down into foreign-currency, interest-rate, translation and liquidity risks.

Foreign-Currency Risk

TÜV Rheinland is exposed to risks arising from fluctuations in exchange rates if a TÜV Rheinland company concludes transactions with international contractual partners, if loans are made within the Group, or if profit distributions are collected and will result in future cash flows in foreign currencies that do not correspond to the functional currency of the respective TÜV Rheinland operating company. Foreign-currency risk is largely considered to be low, as the individual Group companies carry out their operating activities predominantly in their respective functional currency. Operating companies are not permitted to accept or invest funds in foreign currencies for speculative reasons. Intra-group financing or investments by the TÜV Rheinland companies are preferably carried out in the respective functional currency, or on a currency-hedged basis. Sensitivity analyses are always performed as of the reporting date in an effort to identify possible risks at an early stage. In trade receivables and liabilities, an appreciation of the euro by 10.0%, for example, against all currencies as of the end of the reporting period would have only a minor effect on the result for the year and on equity capital.

Interest-Rate Risk

Interest-rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in the market rate of interest. The risk always occurs when the conditions governing the rate of interest differ from financial assets and liabilities.
A risk of a decrease in interest rates exists particularly with regard to pension obligations, which constitute the largest item in the consolidated balance sheet.
Using derivative financial instruments where appropriate, we perform comprehensive, group-wide management of interest rate risks with the goal of managing the company's interest rate risk, interest income and interest expense. In the absence of country-specific regulations to the contrary, intra-group financing takes the form of loans or intra-group fixed income clearing accounts. As of the reporting date, derivative financial instruments are of minor importance in terms of their volume and potential for risk.

Translation Risk

Many TÜV Rheinland companies are located outside the Eurozone. Because the reporting currency at TÜV Rheinland is the euro, when it draws up its consolidated financial statements, TÜV Rheinland converts the financial statements of these companies into euros. In order to take translation-related foreign currency risks into account in risk management, the general assumption is that investments in foreign companies are long-term, and that the earnings will be continuously reinvested. The effects of fluctuations of exchange rate in the translation of net asset positions into euros are stated in the Equity item and/or the Other comprehensive income item of the consolidated financial statements of TÜV Rheinland.

Liquidity Risk

The liquidity risk for TÜV Rheinland is the risk that it might be unable to meet its financial obligations. As TÜV Rheinland, we follow a well-considered financing policy that is geared towards a balanced financing portfolio, a diversified maturity profile and a comfortable buffer of liquidity. We circumscribe liquidity risk through effective management of net current assets and cash and cash equivalents and through lines of credit agreed with financial institutions with high ratings. Supplemental to this, we continuously monitor the financing opportunities that present themselves in the financial markets and monitor trends in the availability and costs of these financing opportunities. An essential goal is to secure the financial flexibility of TÜV Rheinland. Financing within TÜV Rheinland is provided by means of cash pooling and in-house banking.

Compliance Risks

As TÜV Rheinland, our global business has an obligation to comply with a variety of service- and country-specific regulations, laws and policies that have an impact on our business activities and processes. We monitor the political and regulatory situation in all our important markets in order to anticipate potential problem areas with the aim of quickly tailoring our business activities and processes to changes in framework conditions. Nevertheless, changes in regulations, laws and policies can adversely affect our business activities and processes as well as our assets, financial position and profitability. TÜV Rheinland now faces, and may continue to face, legal disputes; after all, risk can arise from one's own entrepreneurial actions and from external factors as well.
For example, in the case of breast implants by the French manufacturer Poly Implant Prothèse (PIP), TÜV Rheinland is mentioned as a notified body in connection with conformity-assessment procedures under the now-superseded European Medical Devices Directive. PIP intentionally 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. The German courts consistently confirm that TRLP fulfilled the duties of a notified body responsibly and in compliance with applicable laws and legal norms. A number of other German courts issued rulings in favor of TRLP in the first and second instances again in 2022.
TÜV Rheinland's legal view was also declared correct in a judgment of the appellate court in Aix-en-Provence, France, handed down in 2015. The appellate court found that TRLP fulfills the tasks as Notified Body in keeping with applicable law and standards. This judgment was overturned on appeal in 2018. Decisions by appellate courts in France since that time have been inconsistent, with courts of appeal in Aix-en-Provence and Paris in particular granting plaintiffs' compensation claims. Once again, there are currently several cases pending on appeal before the French Court of Cassation. The Court of Cassation is expected to issue rulings on these in the course of 2023. This case law could require reassessment of opportunities and risks in the context of this damages case. On January 13, 2022, and January 19, 2023, the Toulon Commercial Court of First Instance sentenced TÜV Rheinland once again to make advance payments for damages to a total of approx. 8,000 plaintiffs. TÜV Rheinland has lodged an appeal before the Court of Appeals in Aix-en-Provence in these proceedings as well.

Because a future burden on TÜV Rheinland was highly probable as a result of the judgments issued to date in the judicial districts of the Courts of Appeals in Aix-en-Provence and Paris, provisions for ongoing legal proceedings were constituted in the consolidated financial statements as of December 31, 2020. Taking the latest developments in the case into account, these provisions were remeasured and maintained in consolidated net income in the context of the consolidated financial statements as of December 31, 2022.
These provisions total to €245.5 million as of December 31, 2022. This stands over against €161.2 million in recourse claims against insurance companies that have not yet come into existence as a matter of law. These are virtually certain to come about, in our opinion, if the stated charges from pending legal proceedings should materialize. Further possible recourse claims within the meaning of IAS 37.53 were not recognized, as they cannot be considered as practically certain at this point in time. There is no spillover effect on other cases in other countries or other court jurisdictions (e.g. due to statutes of limitations), or such an effect is unlikely.

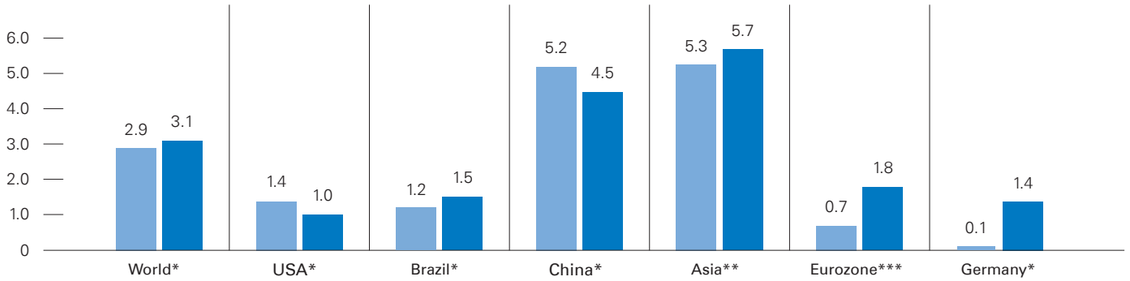
Material uncertainties affect the effort to determine the risk position of the TÜV Rheinland companies involved, as this is a function of the total number of claims made, the amount of damages awarded and existing recourse claims. Meanwhile, due to a lack of inhibition on enforcement and the de facto consequences, any advance payments made in the interim can lead to an economic burden, even in the event of victory.
In a worst-case scenario, TÜV Rheinland could be facing a burden in the mid-triple-digit million range. Conversely, however, it is also possible that TÜV Rheinland will not incur any burden – or, if so, only a very modest one. In the event of the theoretical worst-case scenario, the funds currently available and additional opportunities for financing are such that the liquidity of TÜV Rheinland would not be in jeopardy.

OVERALL ASSESSMENT

Due to the integration of risk management into the management information system of TÜV Rheinland, 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. Focusing measures for risk management on the quality of the services forms a central element of corporate strategy. The point, not least, is to prevent negative repercussions for the reputation of the TÜV brand. This applies not only to market, client 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 installed a risk-management unit that covers the Corporate Audit, Corporate Controlling, Finance & Accounting (including Insurance), Legal & Compliance, QHSE (Quality Management, Health, Safety and Environment as well as Accreditation & Certification), Human Resources (HR) and Information Technology (IT) functions. Its task is to analyze and evaluate risks. In summary, it can be observed that all of the above-mentioned risks can have an impact on the company's goals, and thus accordingly on the TR+ corporate strategy, and are thus continuously analyzed and evaluated by the Executive Board with the aid of the risk-management unit.
The overall risk situation of TÜV Rheinland has altered slightly for the worse compared to the previous year, especially where geopolitical risks are concerned (Russia-Ukraine conflict, tension in the relationship with China). While the assessment of liability risks in conjunction with the PIP litigation remains unchanged, the risks from the coronavirus pandemic are expected to diminish. The Group responded to a potential liquidity risk – due in particular to the persistent pandemic situation in the reporting year and to further geopolitical uncertainties as well – by selectively reducing expenditures and tightening control of the trend in cash and cash equivalents in the individual countries and regions and for the Group as a whole. TÜV Rheinland remains financially sound and well-positioned. An important key figure in the context of capital management at TÜV Rheinland AG Group is the net financial position. This compares cash and cash equivalents and current financial assets to financial liabilities, totaling to €295.9 million as of the balance sheet date (previous year: €207.1 million). TÜV Rheinland also has firm commitments for lines of credit that have not yet been utilized. Notwithstanding the Russia-Ukraine conflict, the energy crisis – which is actually now abating – and the stronger inflation, we continue to see no risks that could jeopardize TÜV Rheinland's ability to continue operating as a going concern.

Outlook

Future Economic Outlook: Outlook 2023 to 2024 in %



* Source: IMF World Economic Outlook Update January 2022
** Source: ifW Kiel, Global Economy in Winter 2021
*** Source: IMF World Economic Outlook Update January 2023; Group of EU countries that have the euro as their official currency

For the time being, the global economy will continue to weaken, with global economic expansion declining significantly across the forecast period. In its IMF World Economic Outlook in January 2023, the International Monetary Fund forecast economic growth of 2.9% in 2023 and 3.1% in 2024. Global economic activity to date has been underpinned by a number of factors that will now increasingly decline in significance. The potential for a normalization of production in the wake of the coronavirus-related losses previously recorded in some contact-intensive sectors of the economy will gradually be exhausted. The extra savings accumulated during the pandemic, which helped maintain consumption levels in the face of declining real incomes, are increasingly melting away. With the high backlog of industry orders increasingly being filled, declining levels of incoming orders will have a greater impact on production in the future. The rise in central-bank interest rates in an effort to combat inflation, together with the Russia-Ukraine conflict, are a source of continued strain on economic activity. Persistently high core inflation may require an increase in key rates of interest sooner than currently expected; this, in turn, may fuel worsening global financing conditions and deterioration in the dynamics of investment and consumption. After a long phase of steep increases, real-estate prices are softening. Global inflation is expected to be around 6.6% in 2023 and 4.3% in 2024. Fiscal policy is currently supportive. While high expenditures to cushion the economic impacts of the pandemic have placed a heavy burden on the public coffers not just of advanced economies but of many emerging markets as well, there are no robust consolidation efforts in place at this point in time. Fiscal stimulus efforts worldwide will diminish over the coming year. The still-robust job markets are a lagging indicator of economic conditions, and their supporting influence on consumer behavior and incomes is likely to diminish in importance.

The supply and pricing of energy continue to pose risks to the forecast. Global inflation may not fade as expected and could also be driven up by renewed disruptions to supply chains. But the unmet demand across many economies also translates into opportunities to boost economic output, and for inflation to fall faster and more steeply than expected.

USA

Economic output in the United States will dampen during the forecast period, mainly as a result of significant slowing in the industrial sector. The strongest support of the economy to date, household consumption, is also likely to come under increasing pressure. Rising rates of interest will continue to afflict the real-estate sector. Economic growth is projected to decline to 1.4% in 2023 and to 1.0% in 2024. Unemployment is expected to rise from its current low level to around 5.0% in 2023 and 2024. The rise in consumer prices is expected to fall significantly – to 4.1% in 2023 and 3.3% in 2024.

China

The current opening-up and the prospect of an end to the zero-COVID policy have paved the way for a faster recovery than expected. On the other hand, high rates of infection will reduce economic activity, even in the absence of a government order. Household consumption in particular is likely to be affected by consumers' efforts to avoid the risk of contagion. A massive wave of infections could also hinder production and place excessive strain on the healthcare system, and there have probably already been bottlenecks in the supply of medicines. Overall, however, gross domestic product is expected to increase at a significantly higher rate than in 2022 over the two years to come – by 5.2% and 4.5%, respectively. The crisis in the real-estate sector remains a slowing factor and has yet to be overcome. Consumer prices will continue to rise by an annual rate of 3.0% over the forecast period.

Asia

The forecast for Asia envisions an upward trend in the region in the years to come, once again specifically on the strength of the significant driving forces of China and India. Economic growth is forecast at 5.3% in 2023 and 5.7% in 2024. At 4.8% in 2023 and 5.2% in 2024, gross domestic product in Indonesia, Thailand, Malaysia and the Philippines will maintain the robust level of growth seen there in 2022. Consumer prices throughout the Asia region will settle at a constant level over time, as in 2022. Economic growth in Japan is forecast to be just 1.8% in 2023 and 0.9% in 2024.

Eurozone

According to forecasts, economic growth in the Eurozone will reach a low of just 0.7% in 2023 before recovering slightly to 1.6% in 2024. Further declines in energy prices and the gradual decline in core inflation are likely to help stabilize household consumption and fuel moderate economic growth. The increase in consumer prices is expected to fall to 5.7% in 2023 and further, to 2.6%, in 2024.

The accelerated pace of interest-rate hikes by the European Central Bank (ECB) will continue to make financing conditions more difficult, and demand in the housing sector in particular is expected to cool. The situation on the job market is likely to deteriorate somewhat further once again due to economic conditions, with the unemployment rate in the Eurozone rising to 7.1% in 2023 and 7.4% in 2024.

Germany

Prospects for the German economy brightened slightly toward the end of the reporting year due to lower energy prices; these remain high, however, and are continuing to significantly weaken purchasing power. The burdens on households and companies due to the high costs of energy will be cushioned by what are referred to as "price brakes." Just a slight, 0.1% increase in gross domestic is projected for 2023. Economic growth in 2024 is expected to increase at a somewhat faster rate of 1.4%. Inflation relative to consumer pricing will remain high at first but is expected to decline over the course of 2023. Following the record level seen in the reporting year, inflation is expected to maintain an elevated level of 5.4% in 2023 in spite of brakes on the price of electricity and natural gas. An additional, significant decline, to 2.2%, has been forecast for 2024. Despite the economic slowdown, the jobs market will be robust, partly because businesses are still in desperate search of skilled workers.

FUTURE DEVELOPMENT OF TÜV RHEINLAND

The future development of TÜV Rheinland is based on the TR+ strategic plan, which was adopted by the Executive Board in the 2019 financial year and acknowledged in support by the Supervisory Board in December 2019. It should be noted that the following projections for the 2023 financial year for the development of TÜV Rheinland may differ from the actual results – in the event, for example, of a significant change in global economic conditions as a result of the Russia-Ukraine conflict or inflation.

Sub-goals have been derived from the strategic plan, which extends up to 2024, and correspondingly incorporated into the forecast for 2023. Global macroeconomic trends were analyzed, evaluated and factored into the expectations for 2023 for the individual Business Streams.

The coronavirus pandemic is likely to pose less of a challenge to us in the 2023 financial year, but it could remain a burden as a result, for example, of continued absenteeism due to illness.

Once again in the 2023 financial year, changes in exchange rates for major currencies, the Russia-Ukraine conflict, the supply of energy and sustained inflation will all remain macroeconomic premises for TÜV Rheinland, which has operations worldwide, and we have also factored these changes into the 2023 forecast to the best of our knowledge. In our view, TÜV Rheinland is well positioned, as we largely completed the reorganization begun in recent years during the 2022 financial year. The resulting potentials will continue to help us meet our growth targets for 2023. We will

translate the benefits of a lean and efficient organization into competitive advantages.
For the 2023 financial year, we expect slight revenue growth along with an EBIT margin that is somewhat below the margin level seen in 2022.
Simplify!, Scale!, Digitalize! and Quality! are the focal points of our TR+ strategic orientation. Still, sustainable profitability and independence remain indispensable to us as TÜV Rheinland – as an efficient and digital provider of services worldwide. Where the five Business Streams at TÜV Rheinland are concerned, we project the following developments:

Industrial Services & Cybersecurity

The positive revenue trend, in addition to the restructuring and stabilization measures instituted in the financial year under report, helped elevate the Business Stream again to stable, double-digit margins. This positive development makes it possible to achieve revenue growth in the lower single-digit percentage range in 2023, with a focus on the long-term growth strategy, with an earnings margin holding steady at the level of the current reporting year.

Mobility

There is no fundamental change in global market conditions expected for the coming financial year. Under the prevailing conditions, revenue growth is expected to be in the mid-single-digit percentage range; this is on the same order of magnitude as was seen in the past financial year. A significant contribution to revenue and earnings is expected to stem from expansion and innovation projects during the 2023 financial year. The focus is on the consistent follow-up of the strategic future projects as well as the sustainable realignment in the Car Services & Appraisal Business Field. The main focus in the other Business Fields is on continuous implementation of the growth strategies adopted and the enactment of price adjustments in an effort to cushion the impact of inflation and cost increases on earnings. For the coming fiscal year 2023, the Business Stream is planning a slightly lower profit margin than in the previous fiscal year.

Products

We project mid-single-digit percentage growth in revenue for the 2023 financial year. All of the Business Fields and regions are projected to contribute to this growth. The optimization of the software systems, and of ComPASS in particular, will enable additional increases in efficiency. Large-scale investments in laboratory locations will continue to progress; some will be completed. The expansion of the chemical laboratory in the US and of the laboratory location in Taicang, China, will also ensure future growth. New hires will focus on fast-growing fields and regions. New service potentials in the area of sustainability will be further expanded and will help stabilize margins at the level of the current reporting year.

Academy & Life Care

The geopolitical impacts of the Russia-Ukraine conflict and the energy crisis are expected to continue to hamper the business environment relative to this Business Stream in the months ahead. Experience has shown that uncertainty and cost pressure will lead to reduced outlays for continuing-education programs. A future orders situation that is accordingly flattened out, especially in the seminar business, could be offset by countervailing effects in the IMEA region. In addition, due to the shortage of skilled workers and demographic trends, the general demand for qualification as well as the awareness and the demand for workplace health and safety, are constantly on the rise. With this in mind, we expect revenue growth in the mid-single-digit percentage range. The forecast earnings margin is still at the level of the current financial year, with a continued focus on investments to implement strategic business development and digitalization projects and on offsetting cost increases – rising personnel and energy costs in particular.

Systems

In spite of a challenging economic environment, the Business Stream forecasts revenue growth in the upper single-digit percentage range for the 2023 financial year. We expect the Certification of Management Systems Business Field to grow faster than in the previous year due to market and cyclical factors, with higher growth momentum expected to develop in the other two Business Fields. Growth will be focused mainly on the sustainability services of the Certification of Management Systems and Customized Services Business Fields, and on further diversifying the portfolio in the Government Inspections & International Trade Business Field. In addition, various national and European legislative proposals, including on supply chain monitoring, are expected to boost the growth of the services offered by the Business Stream. As a consequence of investments in growth fields, including in sustainability services, the earnings margin in the 2023 financial year will drop slightly below the level of the previous financial year.

Consolidated Balance Sheet

€ thousands	Dec. 31, 2022	Dec. 31, 2021
ASSETS		
Intangible assets	352,218	347,740
Property, plant and equipment	618,689	592,803
Investments accounted for using the equity method	191	2,564
Other financial assets	264,217	294,201
Other assets	20,213	18,274
Deferred tax assets	69,166	118,520
Non-current assets	**1,324,695**	**1,374,103**
Inventories	2,485	2,352
Contract assets	108,688	103,094
Trade receivables	292,962	257,555
Income tax receivables	25,089	30,167
Other receivables and other assets	269,057	241,379
Cash and cash equivalents	344,068	451,879
Assets classified as held for sale	4,473	7,878
Current assets	**1,046,822**	**1,094,304**
TOTAL ASSETS	2,371,517	2,468,407
EQUITY AND LIABILITIES		
Issued capital	35,000	35,000
Capital reserves	23,802	23,802
Other reserves	551,286	351,140
Non-controlling interests	31,201	26,270
Equity	**641,289**	**436,212**
Provisions for pensions and similar obligations	526,533	714,366
Other provisions	22,000	23,997
Liabilities to banks	27,255	88,750
Other liabilities	151,178	145,008
Deferred tax liabilities	17,036	19,041
Non-current liabilities	**744,002**	**991,161**
Provisions	361,281	386,217
Income tax liabilities	18,227	11,620
Contract liabilities	146,328	125,694
Trade payables	156,880	136,996
Liabilities to banks	20,939	156,014
Other liabilities	279,902	222,797
Liabilities classified as held for sale	2,670	1,696
Current liabilities	**986,226**	**1,041,034**
TOTAL ASSETS	2,371,517	2,468,407

Consolidated Statement of Comprehensive Income

€ thousands	2022	2021
Revenue	2,274,658	2,090,453
Inventory changes	511	198
Cost of purchased services	–379,730	–324,531
Operating performance	**1,895,439**	**1,766,120**
Personnel expenses	–1,247,214	–1,167,468
Amortization of intangible assets and depreciation of property, plant and equipment	–144,624	–153,050
Other expenses	–433,709	–366,699
Other income	110,447	78,942
Operating result (EBIT)	180,338	157,845
Interest income	9,588	5,016
Interest expenses	–16,561	–17,214
Other financial result	450	-899
Financial result	**–6,523**	**–13,097**
Earnings before income taxes	**173,815**	**144,748**
Income taxes	–49,686	–26,417
Consolidated net income	**124,129**	**118,331**
Thereof attributable to:		
TÜV Rheinland Aktiengesellschaft equity holders	115,830	107,718
Non-controlling interests	8,299	10,612
Earnings per share (in €), undiluted and diluted	**3,309**	**3,078**

Consolidated Statement of Cash Flows

in € thousands	2022	2021
Consolidated net income	**124,129**	**118,331**
Amortization, depreciation and impairment / Reversal of impairment of intangible assets and property, plant and equipment	144,624	153,050
Impairment/Reversal of impairment of financial assets	185	0
Change in non-current provisions	–29,579	–27,194
Change in deferred tax assets and deferred tax liabilities	5,050	–12,537
Profit/Loss from the disposal of intangible assets and property, plant and equipment	–4,491	–2,826
Other non-cash income/expenses	–5,500	43
Change in inventories, receivables, and other assets	–62,549	–64,893
Change in liabilities and current provisions	73,919	41,972
Cash flow from operating activities	245,789	205,946
Payments for investments in		
intangible assets and property, plant, and equipment	–90,794	–57,700
financial assets	–21,262	–16,008
shares in fully consolidated companies (less cash and cash equivalents taken over)	–9,661	–3,305
Receipts from disposal of		
intangible assets and property, plant, and equipment	11,332	0
financial assets	27,922	26,928
shares in fully consolidated companies (less cash and cash equivalents handed over)	569	3,936
Cash flow from investing activities	–81,895	–46,149
Payments to shareholders of TÜV Rheinland Aktiengesellschaft	–7,000	0
Payments to non-controlling shareholders	–7,820	–10,188
Receipts from bank borrowings	9,369	5,360
Payments from lending from banks	–205,938	–86,598
Payments from repayments of leasing liabilities	–62,710	–60,293
Acquisition of shares in subsidiaries	1,586	–1,878
Cash flow from financing activities	–272,513	–153,597
Change in cash and cash equivalents	**–108,619**	**6,200**
Cash and cash equivalents related to currency translation and consolidation	808	852
Cash and cash equivalents at beginning of period	451,879	444,827
Cash and cash equivalents at end of period	**344,068**	451,879

Independent Auditor's Report

The auditor, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, has audited the consolidated financial statements prepared by us – consisting of the Consolidated Balance Sheet as of December 31, 2022, the Consolidated Statement of Comprehensive Income, the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows for the financial year from January 1 to December 31, 2022, together with the Notes to the Consolidated Financial Statements, including a summary of significant accounting policies. The Group Management Report of TÜV Rheinland Aktiengesellschaft for the financial year from January 1 to December 31, 2022, was also audited. The content of our statement on corporate governance pursuant to Section 289f (4) of the German Commercial Code (disclosures on the women's quota) was not reviewed by the auditor.

Following the final results of the audit, we were issued an unqualified audit opinion.

Independent assurance practitioner's report

TO THE EXECUTIVE BOARD OF TÜV RHEINLAND AG, COLOGNE

We have performed a limited assurance engagement on the chapter "Sustainability Report" in the Corporate Report 2022 of the TÜV Rheinland AG, Cologne (hereinafter the "Company"), for the period from January 1 to December 31, 2022 (hereinafter the "Sustainability Report").

It was not part of our engagement to review product and service-related information, references to external websites and information sources, as well as future-related statements in the Sustainability Report.

RESPONSIBILITIES OF MANAGEMENT

Management of TÜV Rheinland AG is responsible for the preparation of the Sustainability Report in accordance with the Reporting Criteria. TÜV Rheinland AG applies the principles and standard disclosures of the Standards of the Global Reporting Initiative (GRI) (option "with reference to") in conjunction with internal reporting standards of TÜV Rheinland AG as Reporting Criteria (further "Reporting Criteria").

This responsibility includes the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures that are reasonable in the circumstances. Furthermore, management is responsible for such internal control as they consider necessary to enable the preparation of a Sustainability Report that is free from material misstatement, whether due to fraud or error (manipulation of the Sustainability Report).

INDEPENDENCE AND QUALITY ASSURANCE OF THE ASSURANCE PRACTITIONER'S FIRM

We have complied with the independence and quality assurance requirements set out in the national legal provisions and professional pronouncements, 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).

RESPONSIBILITY OF THE ASSURANCE PRACTITIONER

Our responsibility is to express a conclusion with limited assurance on the Sustainability Report based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the company's Sustainability Report for the period from January 1 to December 31, 2022 is not prepared, in all material respects, in accordance with the Reporting Criteria.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the assurance practitioner.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Inquiries of personnel who are responsible for the materiality analysis to get an understanding of the process for identifying material topics and respective report boundaries of TÜV Rheinland AG.
- A risk analysis, including a media research, to identify relevant information about sustainability performance of TÜV Rheinland AG in the reporting period.
- Evaluation of the design and implementation of the systems and processes for the collection, processing and monitoring of the qualitative and quantitative disclosures within the scope of the engagement, including the consolidation of data.
- Inquiries of personnel who are responsible for determining and consolidating disclosures as well as for performing internal controls for the data, including the accompanying explanations.
- Evaluation of selected internal and external documents.
- Analytical evaluation of data and trends of quantitative disclosures which are reported for consolidation at group level by all sites.
- Assessment of local data collection, validation and reporting processes and of the reliability of reported data via a sampling survey at site TÜV Rheinland Japan Ltd.
- Assessment of the overall presentation of the disclosures in the Sustainability Report.

ASSURANCE OPINION

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Sustainability Report of TÜV Rheinland AG, Cologne, for the period from January 1 to December 31, 2022 has not been prepared, in all material respects, in accordance with the Reporting Criteria.

It was not part of our engagement to review product and service-related information, references to external websites and information sources, as well as future-related statements in the Sustainability Report.

RESTRICTION OF USE/CLAUSE ON GENERAL ENGAGEMENT TERM

This assurance report is solely addressed to TÜV Rheinland AG.

Our assignment for TÜV Rheinland AG and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer (German Public Auditors) and Wirtschaftsprüfungsgesellschaften (German Public Audit Firms) (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf). By reading and using the information contained in this assurance report, each recipient confirms to have taken note of the terms and conditions stipulated in the General Engagement Terms (including the liability limitations to EUR 4 Mio for negligence specified in item No. 9 included therein) and acknowledges their validity in relation to us.

Düsseldorf, April 6, 2023

KPMG AG
Wirtschaftsprüfungsgesellschaft
(Original German version signed by:)

Stauder	Herr
Wirtschaftsprüfer	Wirtschaftsprüferin
(German Public Auditor)	(German Public Auditor)

About this Report

In 2022, the TÜV Rheinland Corporate Report once again contains the Financial Report and the Sustainability Report. The Financial Report is based on the International Financial Reporting Standards (IFRS) and the Sustainability Report has been prepared according to the GRI Standards of the Global Reporting Initiative (GRI). The GRI Content Index lists which GRI guideline criteria were used in the TÜV Rheinland Corporate Report.

The content of the Sustainability Report reflects the sustainability strategy of TÜV Rheinland. In the ten categories defined as essential, we report on objectives, actions and status quo. In the year under review, dialog with our stakeholders served as the basis upon which we conducted a review of our strategic direction in the categories. As a result, some targets were adjusted and new ones were added (e.g. the target for sustainability in procurement). Details are provided in the relevant chapters.

The Corporate Report for the previous financial year was published in April 2022. It will also continue to be published on an annual basis in the future.

Information about general developments and disclosures about the TÜV Rheinland Group are provided in the "TÜV Rheinland compact" brochure (see https://www.tuv.com/world/en/about-us/corporate-report/).

METHODOLOGY USED IN THIS REPORT

The reporting period is the 2022 financial year.

GERMAN COMPANIES

In the year under review, all locations and Group companies in Germany were included within the reporting scope for electricity consumption, business travel and paper consumption. All consumption of natural gas, heating oil, pellets and district heating was documented at the locations that actually consumed the energy. For the water consumption figures recorded, the collected data were extrapolated for the total workforce in Germany, whereby FTE (full-time equivalent) figures were applied. In extrapolating for the remaining locations, the location type/usage was also taken into account (mainly locations with low per capita consumption).
Other bases for calculation are stated separately. Estimates and assumptions are identified as such in the source data.

FOREIGN SUBSIDIARIES

To achieve global coverage in the collection of key environmental impact figures, data were collected across all TÜV Rheinland regions (69 foreign subsidiaries in all). Each of the consolidated foreign subsidiaries with more than ten employees (FTEs) was considered at the company level. For the foreign subsidiaries, this resulted in data collection that allowed us to cover at least 99% of employees (FTEs), e.g. for the consumption of electricity, paper and water. For other key environmental figures such as gas consumption or business travel, coverage is less in some cases or there was no consumption. Where appropriate, data were extrapolated to the total workforce of the foreign subsidiaries or a region. In so doing, the annual average FTE value was used. Other bases for calculation are stated separately. Estimates and assumptions are identified as such in the source data.

EMPLOYEE KEY FIGURES

Unless otherwise indicated as headcounts, disclosures concerning employee structure relate to FTEs. Both types of data represent closing-date disclosures as of December 31, 2022, unless otherwise stated. The data collected covers 98% of the total. When collecting data about the age and nationality of employees, the Group region of North America is excluded, as this information is not recorded for that region.

GRI Content Index

GRI standard and description	Page reference in the Corporate Report and on the internet	Disclosure in GRI Index 2022
Disclosure in GRI Index 2022		
2-1 Organizational details	TÜV Rheinland AG Am Grauen Stein, 51105 Cologne, Germany 48 – 49, 58 www.tuv.com, About us	
2-3 Reporting period, frequency and contact point	84 Sustainability service contact	
2-4 Restatements of information	84	
2-5 External assurance	81 – 83	
Activities and workers		
2-6 Activities, value chain and other business relationships	28 – 34, 41 – 44 48 – 54, 62 – 66 www.tuv.com, About us	
2-7 Employees	24 – 26, 66	The workforce figures are not subject to seasonal variations. 83.9% of our workforce comprises permanent employees. 61.7% of those permanent employees are male. 56.5% of the temporary employees are male. The share of permanent employment contracts in each region is as follows: D – 93.4%; WE – 96.6%; CEE – 93.5%; AP – 97.5%; GC – 46.9%; NA – 100.0%; SA – 95.9%; IMEA – 85.5%. 93.7% of men and 83.1% of women in the Group work on a full-time basis. This involves a headcount calculation, cf. section "About this Report".
Governance		
2-9 Governance structure and composition	91 – 93	
Strategy, guidelines and practices		
2-22 Statement on sustainable development strategy	3	
2-23 Policy commitments	41 – 44, 67 – 68	
2-27 Compliance with laws and regulations	4 – 10, 41 – 44	To our knowledge, there were no such significant breaches or resulting fines across the entire Group in the reporting year. We are not aware of any significant fines or other sanctions for non-compliance with social and economic laws and/or regulations during the reporting year.
2-28 Membership associations	4 – 10	
Stakeholder engagement		
2-29 Approach to stakeholder engagement	4 – 10	

GRI standard and description	Page reference in the Corporate Report and on the internet	Disclosure in GRI Index 2022
Disclosures on material topics		
3-1 Process to determine material topics	4 – 10	In defining the report content, we relied on the essential categories and associated topics of the Sustainability Strategy 2025, which is based on a stakeholder survey.
3-2 List of material topics	4 – 10, 84	
Data integrity		
3-3 Management of material topics	4 – 7, 39 – 40	
418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	4 – 7, 39 – 40	No substantiated complaints concerning breaches of customer privacy and losses of customer data are known to have been reported during the period under review. TÜV Rheinland operates a Data Protection Management System that uses strict standards and guidelines to enforce data protection compliance in business processes throughout the Group. In the year under review, rights of affected individuals and inquiries by data protection regulatory authorities were clarified and concluded in due time, and as a result, regulatory authorities initiated no actions against the company. To comply with specific state and national statutory regulations, the accountability relative to data integrity is placed under the responsibility of the respective legal entity; Group-wide reporting is therefore dispensed with during the period under review.
Employee safety		
3-3 Management of material topics	4 – 7, 11 – 14	
403-1 Occupational health and safety management system	4 – 7, 11 – 14	We have implemented an occupational health and safety management system in all legal entities of the Group. It covers all jobs, employees and activities of the Group. The system was developed on the basis of ISO 45001 and ISO 14001 as well as the statutory requirements in each country in which we operate, and applies for all employees who work for or on behalf of TÜV Rheinland.
403-2 Hazard identification, risk assessment and incident investigation	4 – 7, 11 – 14	The HSE Risk Management SOP is part of the HSE Management System and defines how HSE risks are identified, evaluated and managed. This includes the performance of risk assessments and the implementation of control measures. All employees who work for the company are authorized by the Executive Board to interrupt work when they feel that something is unsafe, and then to discuss the situation with their manager or supervisor. Personal Commitment Cards (PCCs) are used to communicate this authorization to the employees. HSE incidents are documented, reported and – in compliance with the HSE Incident Management SOP – investigated.
403-3 Occupational health services	4 – 7, 11 – 14	The HSE Risk Management SOP includes the assessment and management of risks that can affect the health of employees. In Germany, there is a site medical officer who provides independent occupational health services for the employees. Information concerning consultations with the individual employees is confidential.
403-4 Worker participation, consultation and communication on occupational health and safety	4 – 7, 11 – 14	The employees' consultation and participation in the company's HSE Management System are described in the HSE Communication and Awareness SOP. In Germany, there is a network of occupational safety committees (OSCs) in the divisions, and HSE committees at company level outside of Germany. The OSCs represent all employees in Germany. Throughout the Group, an HSE committee was set up in the reporting year for each company with more than 50 employees; these committees are to meet quarterly.
403-5 Worker training on occupational health and safety	4 – 7, 11 – 14	We train our employees regularly in the area of occupational health and safety, whether through personal training courses such as instruction classes or through e-learning programs via the myHR platform (in compliance with the HSE Competence and Training SOP).
403-6 Promotion of worker health	4 – 7, 11 – 14	The health of the employees is promoted at country level. In Germany, flu and COVID vaccinations are offered and priority is also placed on the mental health of the employees. Once again in the reporting year, against the background of the COVID-19 pandemic, all companies took action specifically designed to protect the health of the employees.
403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4 – 7, 11 – 14	The HSE Risk Management SOP and the HSE Emergency Response SOP contain detailed prevention and mitigation plans for health and safety on the job.
403-8 Workers covered by an occupational health and safety management system	4 – 7, 11 – 14	We monitor 100% of our employees through our Occupation Health and Safety Management System.
403-9 Work-related injuries	4 – 7, 11 – 14	Work-related injuries are recorded for all employees and contractors. Inasmuch as we do not record the number of hours worked by contractors, however, the rates relate only to employees. The rates are calculated per 1,000,000 hours worked. The number of hours worked is based on 7.7 hours per day and 220 workdays per year. The three main causes of injuries are slipping, colliding with objects, and car accidents. Work-related hazards are analyzed on a local level in the context of the risk management process, as described in detail in the HSE Risk Management SOP. All employees are required to report hazards when they see them. The actions to minimize and possibly eliminate dangers are implemented at the local level, because the activities and conditions on site or in the respective country differ.
403-10 Work-related ill health	4 – 7, 11 – 14	There were no deaths due to occupational diseases. Cases of occupational diseases are included in the figures for work-related injuries and are not currently counted separately. No employees are excluded from the figures. Occupational diseases of other groups of people are not taken into account here, because no such reports have been received.

GRI standard and description	Page reference in the Corporate Report and on the internet	Disclosure in GRI Index 2022
Service quality		
Management of material topics	4 – 10, 36 – 38	
416-1 Assessment of the health and safety impacts of product and service categories	4 – 10, 36 – 38	Analyzing products and services with regard to their effects on health, safety, and the environment is TÜV Rheinland's core area of expertise. Because all of TÜV Rheinland's services have the objective of contributing to an improvement in health, safety or environmental compatibility, the percentage of the significant product and service categories whose effects on health and safety are analyzed with regard to improvement potentials is not systematically documented. An overview of our services can be found at www.tuv.com
417-1 Requirements for product and service information and labeling	4 – 10, 36 – 38	Our companies have no specific requirements for the labeling of products or services. There is a catalog for our test marks, however, that provides transparency about the underlying testing services.
417-2 Incidents of non-compliance concerning product and service information and labeling	4 – 10, 36 – 38	We are not aware of any significant violations during the reporting year.
Employee development		
3-3 Management of material topics	4 – 10, 15 – 17	Violations of the TR Code of Conduct, guidelines or regulations can be reported worldwide via the "Whistleblowing Platform." That system is backed up by a standardized process that involves Compliance and – as needed – HR.
404-2 Programs for upgrading employee skills and transition assistance programs	Development & Career TÜV Rheinland	TÜV Rheinland offers numerous personnel-development programs for different hierarchical levels within the company. Detailed information is available on our website.
404-3 Performance review and career development planning	Development & Career TÜV Rheinland	The Development & Performance dialog enables continuous feedback worldwide between managers and employees. The development discussion is an opportunity to discuss skills and competences, individual actions for further development, and interest in talent and career development activities. The employees can take an active part here in setting targets and their own development. The transformation to the standardized IT system myHR is planned starting from 2023; global assessment will also be possible then. Accordingly, the system cannot yet generate an assessment by gender or employee category for the reporting year 2022.
Business ethics		
3-3 Management of material topics	4 – 10, 41 – 44	Employees and business partners can use a TÜV Rheinland whistleblower platform to report – also anonymously – complaints about possible misconduct or abuses in the company. This concerns information about the violation of laws, internal company guidelines or our compliance program. The system is specifically designed for reporting compliance violations and not for general complaints (such as customer satisfaction or quality problems). Those reports are processed in the respective business units and regions and recorded using a standardized methodology worldwide.
205-2 Communication and training about anti-corruption policies and procedures	4 – 10, 41 – 44	Information analyzed according to employee category and business partner category is not available at this time. We follow a standardized approach for the entire Group, irrespective of employee category or region.
205-3 Confirmed incidents of corruption and actions taken	4 – 10, 41 – 44	Due to the relative descriptive content, compliance-related violations are not processed or recorded separately with regard to corruption.
415-1 Political contributions	4 – 10, 41 – 44	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. No known contributions were made to political parties during the reporting year.
Legal compliance		
3-3 Management of material topics	4 – 10, 41 – 44	
206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	4 – 10, 41 – 44	To our knowledge, there were no known significant legal actions due to anti-competitive behavior during the reporting year.
Labor rights		
3-3 Management of material topics	4 – 10, 18 – 20	The TÜV Rheinland Code of Conduct contains clear information concerning our policy relative to labor rights in the foreword and in the section "Fair work." In our Code of Conduct, we have laid out how violations can be reported under "Violations and Sanctions."
402-1 Minimum notice periods regarding operational changes	4 – 10, 18 – 20	Based on 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.
405-2 Ratio of basic salary and remuneration of women to men	4 – 10, 18 – 20	At TÜV Rheinland, an employee's wage is oriented to the employee's work activities, qualifications, and professional experience.
Non-discrimination		
3-3 Management of material topics	4 – 10, 21 – 23	
406-1 Incidents of discrimination and corrective actions taken	4 – 10, 21 – 23	TÜV Rheinland consistently pursues all reports of discrimination and punishes them with disciplinary measures. Worldwide, no discrimination cases were pursued legally during the reporting period. In Germany, two employees consulted the HR department regarding sexual discrimination. One case resulted in the termination of the person who engaged in discrimination; in the other case, the situation was resolved in a meeting with the persons involved. Moreover, TÜV Rheinland is a supporter of Germany's nationwide campaign "Together Against Sexism" and during the reporting year provides additional information pages in the intranet to raise awareness of sexual harassment in the workplace.

GRI standard and description	Page reference in the Corporate Report and on the internet	Disclosure in GRI Index 2022
Diversity		
3-3 Management of material topics	4 – 10, 24 – 26	
405-1 Diversity of governance bodies and employees	4 – 10, 24 – 26	The age distribution of the total workforce breaks down as follows (headcounts): up to 30 years old: 18.6%; 30 to 50 years old: 53.7%; over 50 years old: 30.0%; No data: 5.0% The age distribution among managers breaks down as follows (headcounts): up to 30 years old: 1.4% 30 to 50 years old: 61.5% over 50 years old: 22.7% No data: 7.2% Two members of the Executive Board are male, one is female. All members of the Executive Board are German. One member is between 30 and 50 years old, and two members are over 50 years old.
Greenhouse gas emissions		
3-3 Management of material topics	4 – 10, 28 – 34	
305-1 Direct (Scope 1) GHG emissions	4 – 10, 28 – 34	The direct greenhouse gas emissions according to Scope 1 amounted to 10,236.8 t CO_2eq in the reporting year. Breakdown of Scope 1 emissions: a) from natural gas (global): 3,453.8 t CO_2eq; b) from heating oil (global): 752.6 t CO_2eq; c) from the company car fleet (GER): 6,025.7 t CO_2eq; d) from pellets (GER): 4.7 t CO_2eq.
305-2 Energy indirect (Scope 2) GHG emissions	4 – 10, 28 – 34	Indirect greenhouse gas emissions according to Scope 2 amounted to 35,613.2 t CO_2eq in the reporting year. Breakdown of Scope 2 emissions: a) from electricity (global): 33,883.7 t CO_2eq; b) from district heating (global): 1,729.5 t CO_2eq.
305-3 Other indirect (Scope 3) GHG emissions	4 – 10, 28 – 34	Indirect greenhouse gas emissions according to Scope 3 amounted to 25,548.5 t CO_2eq in the reporting year. Breakdown of Scope 3 emissions: a) from business travel (global) 17,483.8 t CO_2eq; b) from upstream emissions (global) 8,064.7 t CO_2eq
305-4 Greenhouse gas emissions intensity	4 – 10, 28 – 34	In 2021, the annual specific emission of CO_2eq per employee in the sum of all Scopes amounted to 3.28 [t/a FTE]. This figure took 21,786.7 employees into account.
305-5 Reduction of greenhouse gas emissions	4 – 10, 28 – 34	From reference year 2018 to 2022, reductions were made in Scope 2 (indirect) and Scope 3 (indirect). In Scope 1 (direct), there was an increase. As compared with the previous year 2021, in 2022 reductions were achieved in Scope 2 but not in Scopes 1 and 3.

Supervisory Board and Executive Board of TÜV Rheinland AG

The Executive Board of TÜV Rheinland AG leads the company jointly and under its own responsibility. The Executive Board comprises Dr.-Ing. Michael Fübi (Chairman of the Executive Board) together with Philipp Kortüm and Ruth Werhahn.

The current Supervisory Board of TÜV Rheinland AG comprises 16 members. The Chairman of the Supervisory Board is Prof. Dr. Michael Hüther, Director and Member of the Presidium of the German Economic Institute.

Chairman of the Supervisory Board

Prof. Dr. Michael Hüther

Executive Board

Dr.-Ing. Michael Fübi

Chairman of the Executive Board

Philipp Kortüm

Member of the Executive Board, Finance and Controlling

Ruth Werhahn

Member of the Executive Board, Personnel and Legal Affairs, Labor Relations Director

Status: March 31, 2023

Organization of TÜV Rheinland

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 work together to prepare the content of important decisions of the Executive Board; they reach agreement in the Group Executive Council, the top advisory committee of TÜV Rheinland AG below the Executive Board.

The operational parent company of the Group's subsidiaries is TÜV Rheinland AG, the shares of which are wholly owned by TÜV Rheinland Berlin Brandenburg Pfalz e.V. In accordance with Germany's right of co-determination, the workforce is represented by employee representatives on the Supervisory and Management Boards.

Business Stream Heads

Industrial Services & Cybersecurity
Petr Láhner

Mobility
Dr. Matthias Schubert

Products
Kimmo Fuller

Academy & Life Care
Markus Dohm

Systems
Andreas Höfer

Regional Heads

Germany
Ruth Werhahn

Western Europe / Central and Eastern Europe
Kirsten Raapke

India, Middle East, Africa
Benedikt Anselmann

Asia Pacific
Jennelle Petit

Greater China
Yushun Wong

North America/ South America
Chris Koci

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