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VOITH

2021 Sustainability Report

Sustainability Report 2021

Dear Readers,

Once again we can look back on a challenging fiscal year in which the persistent global pandemic demanded our highest level of commitment. Companies across all industries continue to face the ultimate stress test, which is putting processes, supply chains, and the general resilience of business models to the test.

Voith has mastered these challenges well so far. What is more, we are confident we will emerge stronger from this crisis. With a clear focus on our strategic goals, we fully intend to take advantage of the megatrends we already identified years ago as our business drivers: the increasing digitalization of the economy and society as well as the fight against climate change, which can only be won through decarbonization. With our broad technological know-how and deep knowledge of our markets we want to become a driving force and co-creator of a decarbonized industry in the digital age – and thus actively shape our own future.

“Sustainable technologies for future generations – that has always been Voith’s DNA. In recent years, we have aligned our entire business model with this. All three of our divisions contribute to the decarbonization of the industry with their products and services.”

Dr. Toralf Haag

I am therefore particularly pleased that we were able to continue our successful course towards sustainability in the 2020/21 fiscal year. We are guided by a clear leadership ambition: We want to make a provable contribution to the sustainable development of our company and society as well as the environmental, while setting sustainability standards in our industrial sector.

For years, the focus of our activities has been on consistent sustainability management, on which we have reported transparently and comprehensively from the very beginning. This report shows where we currently stand, the objectives we are pursuing, and the milestones we achieved in the 2020/21 fiscal year.

In climate protection, for instance, we have set ourselves an ambitious goal: Voith will already operate climate-neutrally worldwide in the current fiscal year, meaning none of our sites will retain a CO_2 footprint. We are launching our Net Zero concept with four levers, above all raising process efficiency. In the past ten years alone we successfully achieved total energy savings of around 130 GWh – this corresponds to the electricity consumption of around 32,500 four-person households. We are also tapping into key climate neutrality potentials through renewables self-generation, harnessing renewable energies, and – as a last resort – compensating unavoidable emissions via the corresponding certificates. We have made progress in all these areas, and we will progressively reduce the need for compensation measures going forward. All in all, we are well on the way to climate neutrality.

With regard to our products, the balance is even more positive. Voith products already contribute more to the avoidance of CO_2 emissions than they cause in operation. While the use of our technologies produces CO_2 emissions of around 2.2 million t per year, some 3 million t of CO_2 emissions are avoided at the same time, benchmarked against the reference technologies in each case.

Results such as these are now also increasingly gaining external recognition. For example, the rating agency ISS ESG awarded Voith's sustainability performance a B- for the first time in 2021. This makes us one of the top companies in our sector and means we continue to hold Prime Status. The evaluation is based on more than 100 criteria in the areas of the environment, social affairs, and corporate governance. Ratings such as these also play an increasingly important role for banks and thus lead to specific economic advantages for Voith. Even in public debate, companies' performance has no longer been evaluated exclusively on their financial key figures for years now: Numerous other indicators have long been considered here – above all, companies' commitment to climate protection, but also to social aspects, fair employment conditions, and how they uphold human rights throughout international supply chains.

You may rest assured that Voith will pursue its successful path. Sustainable action and cost-effective business will continue to move forward hand in hand. By accessing new business opportunities through our sustainable technologies, we can contribute to a climate-neutral industry and society in many areas. And we will seize these opportunities – for Voith, for environmental and climate protection, and to secure a future worth living in for the generations that follow us!

This report shows once again how serious we are about this ambition. I wish you an informative and stimulating read.

Sincerely yours,

Dr. Toralf Haag
President and CEO

1. Strategy and integrity

1.1 Our profile

The Voith Group is a globally active technology group. Through our broad portfolio of production plants, products, industrial services, and digital applications we set standards in the Energy, Oil & Gas, Paper, Raw Materials, and Transport & Automotive markets. At Voith we understand business success as a constant, long-term undertaking. From our company's very beginning, the way we conduct business has always been geared towards sustainable, profitable growth. Our shareholders, the Supervisory Board, and the Voith Corporate Board of Management are jointly committed to developing the company in an economically, environmentally, and socially sustainable way. Clearly defined values serve as our compass, and sustainability is one of them.

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We develop sustainable technologies to preserve the fundamental viability of future generations. At the same time, we secure the long-term future of Voith by ensuring our stability and independence through profitable growth, thus reconciling our business success with our responsibility towards society and the environment.

Overview of the Group

Voith is represented worldwide through locations in over 60 countries and maintains a comprehensive network of production, service, and sales units on every continent. Voith GmbH & Co. KGaA, headquartered in Heidenheim an der Brenz, Germany, is the operative management holding company as well as parent company of the Group. The Group's core corporate functions are also concentrated within it. The Corporate Board of Management of Voith Management GmbH is responsible for the strategic and operational management of the Voith Group. Voith Management GmbH, which like Voith GmbH & Co. KGaA is 100 % family-owned, manages the businesses of Voith GmbH & Co. The Corporate Board of Management of Voith Management GmbH is appointed by the Shareholders' Committee of Voith KGaA as the personally liable shareholder. The Supervisory Board is the supervisory body of Voith GmbH & Co. KGaA.

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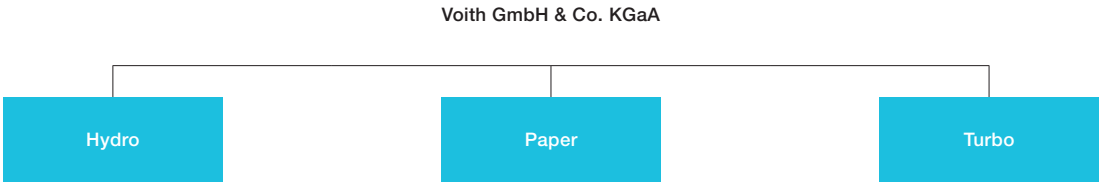
Voith's operating business is organized into three Group Divisions:

The Group Division Hydro is a leading full-line supplier and reliable partner for equipping hydropower plants. It provides customized, long-term solutions and services covering the entire plant lifecycle and all major components for large and small hydropower plants.

The Group Division Paper is a leading full-line supplier as well as a pioneer in the paper industry. Thanks to constant innovation, Voith Paper continually optimizes the paper production process and enables resource-saving, efficient production.

The Group Division Turbo specializes in intelligent drive technology, systems, and tailored service solutions. Voith Turbo's innovative and smart products provide maximum efficiency and reliability. Customers from numerous sectors such as oil & gas, energy, mining and mechanical engineering, marine technology, rail and commercial vehicles rely on Voith's cutting-edge technologies and digital solutions.

Organizational structure
Voith Group Divisions



Management system

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The key financial performance indicators used by the Voith Group are the development of orders received and sales revenue, as well as EBIT (Earnings before Interest and Taxes) and ROCE (Return on Capital Employed).

Business development in 2020/21

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The Voith Group looks back on a particularly challenging fiscal year 2020/21 – the second fiscal year impacted by the Corona pandemic. After the global recession in the previous year, the year under review saw the beginnings of a gradual recovery in many business sectors. However, the macroeconomic environment was still characterized by disruptions caused by the pandemic. In particular, these included supply chain disruptions as well as shortages in raw materials and precursors. These are reflected in increased logistics costs and rising material prices.

Incoming orders in the 2020/21 fiscal year amounted to € 5.0 billion, 24 % higher than the figure for the previous year. Boosted by the consolidation effects resulting from acquisitions made in the previous year, Group sales rose by 2 % to € 4.3 billion.

In two fiscal years overshadowed by both the pandemic and its broader economic impact, we have continued to operate profitably. In the year under review, EBIT rose by 18 % year-on-year, exceeding our targets to reach € 165 million. Return on sales (3.9 %, previous year 3.3 %) and ROCE (8.8 %, previous year: 7.5 %) showed corresponding increases. Group net income after taxes was € 1 million and so slightly below the previous year's level (previous year: € 6 million). This is mainly due to increased tax expenditure resulting from deferred taxes.

The Voith Group's asset and financial situation continues to be very sound. Net liquidity remains at a good level after the last purchase price payments from the previous year's corporate acquisition activity: As at the balance sheet date, this amounted to € -5 million (previous year: € 71 million).

Fact base
Economic indicators, International focus

In the 2020/21 fiscal year Voith invested a total of € 127 million in property, plant and equipment, and intangible assets (previous year: € 131 million). The investment ratio, as a percentage of Group sales, was 3.0 % in the reporting year (previous year: 3.1 %).

Due to the pandemic, personnel cost subsidies totaling € 456,000 (previous year: € 1.39 million) were received and booked on the company's accounts to reduce expenditure.

Independence of members of the Supervisory Board and Shareholders' Committee

The Supervisory Board of Voith GmbH & Co. KGaA is constituted in accordance with the German Codetermination Act. Accordingly, six of the total of twelve members represent the shareholders and six represent the employees.

Voith follows the recommendations of the German Corporate Governance Code (DCGK). This defines a member of a Supervisory Board as independent "if they have no personal or business relationship with the company or its Management Board that may cause a substantial – and not merely temporary – conflict of interest." (German Corporate Governance Code as at December 19, 2019, Recommendation C.7). In accordance with the regulations set out in the Code, this does not apply to the employee representatives: As employees, they are at least partly subject to the Board of Management's right to direct and, in accordance with German law, they are explicitly elected to represent the interests of the employees on the Supervisory Board.

On the basis of these regulations, four of the six members of the Supervisory Board who represent the shareholders of Voith GmbH & Co. KGaA are currently to be regarded as independent. The two non-independent members are members of the Management Board of the general partner of a controlling shareholder. In accordance with Recommendation C.10 of the German Corporate Governance Code, the Chair of the Supervisory Board is independent, as are the Chairs of the Audit Committee and the Nomination Committee.

Under the terms of the Articles of Association, a so-called 'external member' must always chair the Shareholders' Committee of Voith Management GmbH; the Chair of the Shareholders' Committee usually also chairs the Supervisory Board. An external member in the aforementioned sense is a person who is neither a direct nor an indirect shareholder of the company, nor the legal representative or spouse of direct or indirect shareholders of the company, nor the legal representative of companies that are associated with direct or indirect shareholders of the company within the meaning of Section 15 of the German Stock Corporation Act. Furthermore, external members should be people particularly suited to this office by virtue of their position and skills, preferably with a proven record in company leadership.

1.2 Sustainability strategy and organization

Sustainability as a core objective

Sustainability is a fundamental aspect of how we see ourselves at Voith; it has shaped our business activity for more than 150 years. In the tradition of a family-owned company we are especially committed to environmentally friendly, fair, and long-term business success. We want to make a provable contribution to the sustainable development of our company, society, and the environment, and be the sector benchmark for sustainable business practices. In our core business we are already addressing the global megatrends of digitalization, decarbonization, and the circular economy – in further developing hydropower as a renewable energy source, in resource-saving paper production, and in the electrification of mobility. Based on our broad technological expertise and deep knowledge of our markets, we intend to become the driving force and co-creator of a decarbonized industry in the digital age. We have derived a clear strategic claim from this vision: We want to take one of the top three positions in each of our Divisions' respective industrial sectors. In this effort, four strategic pillars provide the foundation for Voith's long-term, profitable growth.

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Our sustainability performance is recognized in numerous ratings and rankings. One example is the rating by the independent agency Institutional Shareholder Services (ISS) in the area of Environment Social Governance (ESG). ISS currently analyzes the sustainability performance of around 5,000 companies worldwide. The assessment is made on the basis of a twelve-point grading system, from A+ (excellent performance) to D- (poor performance, or lacking the transparency for a performance evaluation). Furthermore, the best companies in a business sector achieve Prime status, which Voith has held since 2018. In 2021, Voith was graded B- by the agency for the first time, placing us among the best companies in the mechanical and plant engineering sector worldwide.

The rating result confirms that we are on the right track regarding sustainable business practices. On the one hand, it provides us with guidance in the further development of our Sustainability Strategy. On the other, it shows us that our commitment is also worthwhile in financial terms: Banks increasingly link their credit terms to companies' sustainability performance; therefore the rating result enables us to reduce our financing costs.

In addition, Voith was awarded second place in the category Mechanical and Plant Engineering Companies by the organization 'Test Deutschland' in its study 'Germany's Most Valuable Companies'. The study analyzed the contribution companies make to society and how they assume environmental, economic, and social responsibility.

High-performance sustainability organization

At Voith, sustainability is understood as a cross-sectional task that is supported by the Corporate Board of Management as well as the corporate functions and Group Divisions and thus permeates the entire company. The central function Corporate Sustainability agrees the framework for Voith's strategic focus on how we organize sustainability; it reports directly to the Group President and CEO, and defines the necessary tools and methods used within our Group to measure and steer our sustainability activities, such as our sustainability database and associated reporting tools. Together with

the specialist departments, the Sustainability Department works out strategies and measures to raise Voith's sustainability performance, and monitors their implementation. It is also responsible for internal and external reporting, and for the coordination of sustainability-related communication tasks. As the central sustainability department, Corporate Sustainability is responsible for Strategic Sustainability Management as well as Ecological Business Management (EBM) and decarbonization.

Since 2019/20, our stated goal has been to make continuous and provable improvements in the areas of environmental, social, and corporate governance to create economic value for the company. We measure the success of our activities primarily by means of the KPIs underpinning the ISS ESG rating as well as the in-house target figures and target horizons of our respective specialist departments. In this way, we emphasize the fact-based approach of our actions. Against this backdrop, the central function Corporate Sustainability evaluated the results of the stakeholder dialog and carried out a detailed positioning exercise based on benchmark and best practice analyses of Voith in the area of sustainability, which also took into account the regulations adopted in the year under review. The corresponding optimization potentials within the strategic fields of action were then identified in workshops with the specialist departments. In future, it is planned to incorporate the international requirements from the regions to a greater extent.

In the 2019/20 fiscal year, the Quality & HSE/Sustainability Board was established as a new committee at Voith (HSE stands for Health, Safety, Environment). The Head of the central function Corporate Sustainability attends the Board's meetings alongside HSE representatives and Quality Assurance Managers; together, they agree on topics that are relevant to both areas. A comparable organizational structure will be implemented with further specialist departments in the 2021/22 fiscal year. The aim is to develop the topic of sustainability further and to roll out the corresponding measures via the specialist department structure to the Group Divisions and the regions.

Sustainability approach with five fields of action

Our systematic approach to implementing Voith's Sustainability Strategy rests on five fields of action. Securing sustainable corporate governance is just as much a part of these five fields as our responsibility towards our products, our supply chain, the environment, and our employees. We ensure maximum transparency by regularly communicating our goals and activities within these fields of action, and documenting our progress.

Fact base
Employee sustainability training

Informing our employees and raising their awareness is centrally important to us. To achieve this, we increasingly use online communication channels and give our people the opportunity for open dialog. In addition, in 2021 we implemented an extensive campaign on the topic of sustainability, providing information about our activities and goals not only to our employees but also to external target groups. The positive feedback we received is powerful motivation for us to continue this in future.

Harnessing opportunities for sustainable development

Opportunities are identified as we develop our business strategy. We follow a holistic approach, taking into account as many as possible of the prospective influences that are relevant to our business. This

approach is based on an extensive study of megatrends: As one of these, climate change and climate protection deeply impact society, global markets, and the physical world on many different levels. Against this backdrop, in 2018 Voith conducted a Technology Foresight Project to ensure the company is equipped to deal with long-term challenges, particularly with regard to sustainability topics. In the process, future scenarios were developed for all areas of the company up to the year 2040. From these scenarios, we derived strategic objectives for 2025 and up to 2040. Based on a gap analysis, we defined fields of action for these objectives, and from these in turn we developed technology roadmaps for the business areas. These roadmaps resulted in specific workstreams and tasks which are to be tracked. The Group Divisions are developing new concepts based on the findings of the Foresight Project and increasingly acute climate issues. While these findings chiefly address GHG emissions relating to Scope 3 (downstream use of products sold), in parallel with this we launched a KPI-driven emissions reduction campaign in order to reduce emissions from direct operation in Scopes 1 & 2.

Chapter Products and supply chain

Chapter Environment

Targeted management of environmental and climate change risks

To safeguard the company against risks that could threaten the existence of the Group or its companies, risk management is mandatory across the Group. Voith's Risk Management is organized on a decentralized basis; nevertheless, it is centrally monitored and coordinated. As part of this, potential climate and environmental risks are assessed and communicated within the company. The basis for this is a procedure for identifying, evaluating, and reacting to climate-related risks and opportunities that is embedded in our multi-disciplinary, company-wide risk management process, which covers both the direct as well as the upstream and downstream value chains. The potential climate and environmental risks are categorized into risk classes according to their probability and impact.

The starting point for the process of risk identification is the Voith Risk Catalog. Each of the respective levels of the company (Operating Unit, Division and Group) must analyze every risk area and identify whether there are potential risks. A list with definitions of the risk areas and relevant examples can be found in the Risk Assessment tool. The analyses differentiate between regulatory risks such as current and future regulation, acute and chronic physical risks, transitory risks, and reputational risks. The time horizon of the respective risks is also included in the analysis. As part of our fundamental analysis we investigated all relevant locations for potential risks. Our analysis takes into account the effects of climate change including heavy rain, flooding, storms, and other natural forces such as seismic activity, volcanic eruptions, and large forest fires.

Risk monitoring is a three-part process. It begins with regular and continuous risk monitoring by the Risk Manager, who must ensure that all risks are fully identified and assessed according to a uniform standard. The Risk Manager must also regularly monitor the implementation of the corresponding measures. In the second step of the process, every risk that has been identified and assessed is responded to on the basis of the respective risk owner's defined risk strategy. Last but not least, in the third step of the process, every level of the company must regularly report on the current risk situation.

Further information on risk management processes and the opportunities and risks that have been identified is available in the current CDP Report, which can be reviewed on the CDP homepage after free registration.

CDP Report

Intensive stakeholder dialog

Maintaining ongoing dialog with stakeholders is vital for a global group such as Voith, and we have pursued this for many years. Our key dialog partners include shareholders, supervisory committees, rating agencies, employees, the Works Council, our customers, suppliers, investors, communities neighboring our company sites, trade associations, academia, government agencies, and policymakers. We also focus on NGOs, such as the World Wide Fund for Nature (WWF) as well as the broader interested public.

Fact base
Memberships and associations

Stakeholder survey and materiality analysis

Our evaluation of the materiality of the topics is largely based on the results of the 2018 stakeholder survey. This has been continuously updated and adjusted since then on the basis of direct dialog with and feedback from our stakeholders, particularly employees, customers, and associations. The stakeholder dialog 2018/19 also included an impact analysis: According to this, Voith has the greatest impact on the economy, society, and environment in the Products (30 %), Sustainable Corporate Governance (24 %), Employees (21 %), Environment (15 %), and Supply Chain (10 %) fields of action.

In future, a new stakeholder survey concept is intended to better reflect the differing expectations of our stakeholders and also to take the often very heterogeneous regional requirements better into account. The frequency of surveys is also to be increased once again, to enable a timelier reaction to our stakeholders' proposals. After the necessary conceptual redesign of the stakeholder dialog, it will be possible to include qualitative elements such as interviews, and to leverage the possibilities of social media more fully.

Stakeholder survey results

Three key aspects per field of action

Sustainable corporate governance
1. Legally compliant, value-aligned company management
2. Long-term oriented business development
3. Transparency regarding business practices

Employees
1. Strategic personnel development and further training
2. Ensuring safe working conditions
3. Promoting work-life balance

Environment
1. Efficient use of resources
2. Reduction in greenhouse gas emissions
3. Minimizing environmental impacts

Products

1. Innovative, high-quality products and services
2. Product resource efficiency
3. Partnership-based collaboration with customers on product development

Supply chain

1. Building and maintaining cooperative long-term supplier relationships
2. Securing market-superior quality, service, and profitability
3. Controlling mechanisms for compliance with laws and environmental and social standards in the supply chain

1.3 Values and compliance

How we see ourselves

Voith unites the tradition of a family-owned company with the diverse needs and culture of a global group. Clear values define the way we conduct our business: We are ambitious, innovative, reliable, fair, and sustainable. Our values, and the guidelines derived from them, help ensure that Voith acts in alignment with a unified set of business principles worldwide and lives by this consistent philosophy.

- **Ambitious:** We embrace challenges and set ambitious goals that enable us to continuously grow both as individuals and as an organization.
- **Innovative:** We turn ambitious ideas into innovative technology. To do so, we listen attentively, examine closely, and think outside the box. We thereby experience firsthand the way the world and our customers are changing, create solutions that add value, and set new standards in our markets.
- **Reliable:** As Voith employees we constantly strive to deserve the trust of our customers and partners by keeping our promises. This allows us to build productive, long-term relationships.
- **Fair:** In every interaction, we show respect, sincerity, honesty, and modesty. This is not a question of mere compliance with rules and regulations, but constitutes our underlying philosophy.
- **Sustainable:** We are mindful of our responsibility to society and the environment in everything we do. Through our technical innovations we want to contribute to global growth and prosperity. As a family-owned company, we strive for lasting financial independence.

Compliance organization at Voith

The Voith Compliance Committee establishes, further develops, and coordinates our Compliance Program, revises compliance regulations, and coordinates training. This committee meets monthly and comprises the Head of Group Legal Affairs (Chair) as well as the respective Heads of the Group Human Resources Management and Group Audit Department. The Voith Compliance Committee Chair reports directly to the Corporate Board of Management of Voith GmbH & Co. KGaA and to the Audit Committee of the Supervisory Board. The CFOs of the Group Divisions serve as the Compliance Officers in their units. There is a Compliance Officer at each Group company; the respective CFO generally has this role. Within their area of responsibility, the Compliance Officers are responsible for implementing Voith's Code

of Conduct (CoC) and also serve as Group-wide points of contact. This is also aligned with the rest of our Risk Management organization.

Code of Conduct binding for all employees

As early as 1927, Voith committed to the following business principles: “In the business world one must be ethical, decent, and honest. If a contracting party or competitor behaves unfairly, this does not give us the right to deviate from this principle.” These principles still govern the way we conduct business today. The Voith Code of Conduct (CoC) defines the way we act towards customers and business partners, as well as how our employees behave towards one another within the company. It sets out clear standards that are aligned with established external charters and principles. The key principles include:

Code of Conduct

- Observance of the rules of fair competition
- No anti-competitive agreements
- No corruption or bribery, neither offering, granting, or demanding bribes, or accepting unfair advantages
- Transparency on donations and sponsorship
- Safeguarding our own patents, intellectual property and business secrets, and respecting those of other organizations
- No undue preferential treatment of certain suppliers and service providers
- Respect for human rights, fair working conditions, and rejection of child and forced labor
- Tolerance and equal opportunity

In the 2020/21 reporting year we revised our Code of Conduct. As a result, new content was incorporated into the Code, which enters into force on publication in October 2021. With 24 language versions available online, all of the major markets and countries of relevance to Voith are covered.

The Code of Conduct provides specific information on correct conduct and points of contact. By signing their employment contract, all Voith employees confirm that they have taken note of the Code. In so doing, they commit to comply fully with prevailing legislation and the internal regulations in force at Voith – right across our global Group and at all hierarchical levels. Breaches are met with disciplinary measures. We constantly update our rules and procedures, and adapt them to meet current requirements. Our values also play a central role in the training programs of the Voith Academy, and the start-up leadership program for future managers.

GPC
General Purchasing Conditions

Together with our General Purchasing Conditions (GPC), the Code of Conduct defines Voith’s understanding of partnership-based collaboration with our suppliers; in parallel it sets out the guidelines on dealing with compliance issues as well as environmental and social standards in Voith’s supply chain. The Code of Conduct is reflected in our GPCs and is an integral part of our business relationships with suppliers, representatives, and sales consultants.

Chapter
Responsibility in the supply chain

Regular further training on compliance topics

All Voith employees with personal access to the company IT network are required to update their knowledge of compliance issues and our Code of Conduct via our e-learning programs every three years. Through their successful participation, employees also explicitly document that they are fully aware of our Code of Conduct and have understood the appropriate regulations. Approximately 96 % of our employees with a computer workstation have completed our programs on Anti-Corruption and Antitrust Law, as well as on Leadership and Employees. Employees who do not have a computer workstation are trained by their line manager to ensure their knowledge stays up to date. In the reporting year we continued to hold face-to-face and online courses, which are assigned automatically to employees: 364 employees, mainly Sales and Purchasing managers and staff, took part in 20 training events (previous year: 26 events, with 155 participants). Online training courses enabled us to reach more employees, so the number of people trained more than doubled. At many training days we offer morning and afternoon sessions so that employees working part-time or at locations in different time zones can participate. Separate, exhaustive and highly detailed training courses are provided to Compliance Officers.

Fact base
Compliance training

Continual compliance reviews guarantee effectiveness

The Group Internal Audit Department examines observance of all compliance regulations in a routine risk assessment involving around 35 operating units annually. We ensure that our business partners comply with our regulations by means of a Supplier Self-Assessment (SSA). In addition, all agents and sales-oriented consultants are checked at the start and at regular intervals in the course of the business relationship. The audit covers topics such as corruption, money laundering, and violations of foreign trade law. Amongst other sources, it draws its comparative information from the database of an external service provider that systematically evaluates numerous sources globally. Information about (criminal) convictions and sanctions imposed (such as blacklisting) are also available via the database. A Group Directive makes the audit of agents and sales-oriented consultants mandatory. We work tirelessly to optimize our Compliance organization and adapt it to meet new standards and requirements.

Chapter
Responsibility in the supply chain

No compromise against corruption

For Voith, taking rigorous action against corruption and other criminal or unlawful conduct is a matter of course. This is why all Compliance Officers are required to keep a defined Risk Control Matrix, which includes potential corruption risks for their specific Group unit, and to name and assess the identified risks. This structured process covers all Voith locations worldwide; the results of all Group Divisions are aggregated and form the basis of centralized risk monitoring and internal compliance audits, among other measures. Our risk assessment is based on many factors, including the Corruption Perceptions Index (CPI) published annually by Transparency International. As our company maintains business relationships all over the world, special precautionary measures apply to high-risk countries, whereby the respectively responsible Risk Manager decides on the most appropriate measures. In addition, Purchasing conducts an integrity check when a new creditor with a purchasing volume of more than € 25,000 is created. At the same time, checks are carried out with the aid of publicly available data to determine whether compliance incidents have occurred in the past, for example regarding fraud, corruption, or cases of child labor.

Chapter
Responsibility in the supply chain

Group-wide complaints procedure and whistleblower system

In principle, any stakeholder – naturally including our own employees – can report complaints to Voith or notify us of abuse or breaches of the Voith Code of Conduct. They are free to report these instances to a variety of points of contact: their direct line manager, the competent HR representative, the Compliance Officer of the Group companies, operating units or Divisions, or any member of the Compliance Committee, as well as via any one of the five Group-wide Helpdesks. Staffed by local multilingual contacts and present in all the key Voith regions, Asia, North America, South America, EMEA with Austria and Germany, this system is available to both internal and external whistleblowers. Details on how to get in touch with these points of contact are provided to employees in an appropriate way throughout the Group, including via the Compliance intranet page. The Compliance Helpdesk and the Whistleblower Scheme are also available to all stakeholders via the Voith website.

Compliance helpdesk and whistleblower scheme

An employee who reports a suspected breach of the Code of Conduct in good faith and on the basis of firm evidence will not suffer any detriment whatsoever. This right is laid down in our Code of Conduct. If necessary, Voith will take measures in each individual case to protect the employee reporting the suspected breach against any such detriment, for example in relation to career progression or bullying at the workplace. To the extent possible and permissible under law, Voith will maintain confidentiality regarding the identity of employees reporting a breach of the Code of Conduct or a suspected breach of its guidelines. The same applies to the identity of employees investigating a breach or suspected breach of the Code of Conduct. We also follow up on complaints submitted anonymously via our Group-wide whistleblower system, with the number and type of breaches documented centrally. This whistleblower system can also be accessed by external parties at any time via our company website and is thus also available to all our business partners and suppliers. Any type of complaint on any subject can be reported. Confidentiality and anonymity are granted if this is desired and legally permissible. As a matter of principle, to ensure the strictest confidentiality is maintained, information concerning the number, type, and nature of complaints is not disclosed to external parties.

Fact base
Escalation paths, Breaches of compliance regulations

Confidential treatment of information

Information security and the protection of personal data are a top priority at Voith. Both topics are governed by corresponding Group Directives. Every employee is expected to show appropriate awareness of security and a sense of responsibility. There were no notifiable breaches of data security in the reporting period. The processes implemented at our Data Center in Heidenheim are certified according to the international standard ISO/IEC 27001.

Human rights

As a global group, Voith observes human rights as a matter of course. The framework for this is set out in the Voith Code of Conduct, which as a Group Directive is binding for all employees. Voith rejects all and any forms of human trafficking, forced labor, and child labor and has issued a corresponding Declaration in accordance with the UK Modern Slavery Act 2015, the UN Universal Declaration of Human Rights 1948, the California Transparency in Supply Chains Act 2010, and the Australian Modern Slavery Act 2018. This Declaration is freely available on the company website. Through our General

Declaration of Principles

Purchasing Conditions we also ensure that our suppliers and business partners are involved in upholding human rights. As part of this, we incorporate the assessments of our internal management systems, such as the Risk Country List, into our planning of measures. If a supplier violates these rules, we reserve the right to terminate the business relationship.

Statement on the UN Global Compact

Voith shares the values contained in the Principles of the UN Global Compact (UNGC). Together, the Voith Code of Conduct and the Voith values cover all areas addressed by the UNGC. We at Voith are strongly convinced that our individual commitment as a company is the right approach. We have developed this over a century and a half, have anchored it in our Code of Conduct, and it clearly reflects our company values.

Taxation compliance

At Voith we see compliance with all statutory taxation requirements and fulfilling our tax obligations as a matter of course. This claim is also anchored in our Code of Conduct. Our Group's taxation strategy is aligned with our company's values and commits us to cooperating with tax authorities in a fair and transparent manner. In the 2018/19 reporting year Voith began to develop its internal tax controlling system towards becoming a Tax Compliance Management System that is thoroughly integrated in the Group's Compliance Management System. Transfer prices within the company are always based on the "arm's length" principle and are lawful; this is clearly regulated in our Group's corresponding guidelines. Voith follows the OECD standard and avoids implementing artificial structures purely for tax purposes. Voith has no subsidiaries in countries that are on the EU list of non-cooperative countries and territories for tax purposes. A complete list of the companies and countries included in Voith's consolidated financial statements is set out therein.

Fact base
Taxes

1.4 Responsibility for society

We see ourselves as a company that plays an active social role – something that has been part of our DNA ever since we were founded. In doing so, we always ensure strict compliance with our Code of Conduct and all applicable laws.

Our societal engagement is managed by Voith GmbH & Co. KGaA, headquartered in Heidenheim. Within the company, responsibility for Donations and Sponsorship is coordinated by Corporate Communications. The Head of Corporate Communications updates the Corporate Board of Management once a year on how funds have been allocated across the entire Voith Group. Individual Group Divisions and local Voith companies can also launch and run their own assistance and sponsorship projects, provided these comply with our Group Directive and are approved in accordance with the process it specifies.

In selecting projects to support, Voith applies clear criteria: We must above all be convinced of the recipient's integrity, and that their project is worthy of assistance. We also take into consideration the project's regional relevance as well as its appropriateness to our business segments, company values, and corporate culture. Furthermore, we consider the frequency and volume of our previous contributions, ensuring these are distributed as widely as possible. In humanitarian emergencies where urgent action is demanded we nevertheless provide help quickly and directly. Our sponsorship activities always focus on the appropriateness of the contribution and the benefit to Voith in return. This is because we follow additional, mainly communicative goals besides providing sponsorship. Irrespective of this, it is highly important to us that our sponsorship partnerships engage in worthy, reputable causes.

The Hanns Voith Foundation supports a variety of initiatives and projects. Through its activities, this independent foundation regularly engages in numerous local and cross-regional initiatives, and also provides financial support in the form of annual donations to various projects.

The Hanns Voith Foundation

Success in business carries an obligation and the Voith family has always understood this. Our customers, our employees' welfare and our responsibility to society have always been close to the Voith family's heart. As a result, Dr. Hanns Voith (1885 – 1971), who headed the company for almost 60 years, played a major part in the company's societal engagement. Created in 1953 to institutionalize community involvement within the company, the independent and not-for-profit Hanns Voith Foundation continues Dr. Voith's extensive engagement today.

Over the years, the Hanns Voith Foundation has been an important means to enable Voith's shareholders and the Voith Group to demonstrate their responsibility to society and employees in the areas of social, educational, and cultural policy. The Foundation supports projects in training and education, science and research, as well as in culture and the environment. It also promotes measures that support international understanding and developmental aid, as well as projects based on the teachings of Rudolf Steiner and related initiatives.

For instance, the Hanns Voith Foundation supports the training and education of underprivileged and talented young people from the Heidenheim area as well as underprivileged and talented employees of Voith Group companies and their children. This includes contributions to enable them to study and graduate at universities and technical colleges in the sciences, engineering, and economics.

Hanns Voith Foundation

Group Directive sets the framework

Ever since 2008, our Group Directive on Donations and Sponsorship has set out the type and scope of our commitment. It also outlines the financial frameworks of our donations. Unless otherwise determined by the Corporate Board of Management, the budget is based on the previous year's Earnings Before Tax (EBT). In the reporting year this was limited to a maximum of 1 % of EBT. This ensures that we can provide consistent support, irrespective of any volatility in our company's development. Internal controlling systems log and monitor our donations and sponsorship activities, worldwide and across all Voith business units.

In 2021 we reviewed the Group Directive. Our existing funding priorities were stated more precisely, complemented and articulated as follows:

- Education, training (supporting future generations)
- Science and research (supporting sustainable innovations and technologies)
- Events relating to our business areas (such as trade fairs and conferences)
- Social affairs (supporting disadvantaged social groups and social institutions)
- Sport, the arts, and culture (only in relation to the company's local involvement at Voith locations worldwide)

The new Directive comes into force across the Group on its formal adoption in October 2021. It also states that from then on, Voith no longer makes donations or financial contributions to politics and political parties.

Fact base Donations and sponsorship, Hanns Voith Foundation donations and sponsorship, Financial contributions to political organizations

Our engagement activities in the reporting period

In the reporting year we invested around € 1.98 million in societal engagement activities (previous year: € 2.04 million). Of this, we provided € 0.77 million in the form of donations, of which € 0.68 million were cash donations and € 0.09 million were in-kind donations. € 1.21 million was used for sponsorship measures. We spent the greatest share on 24 sports projects (48 %) and 62 education projects (21 %), followed by 40 social projects (21 %) and 19 cultural projects (10 %).

Engaging for sports with a local focus

We believe that supporting local initiatives is an investment in the attractiveness of the region, which benefits the region's citizens and naturally also our employees. Through this, we intend to increase the attractiveness of the location for our employees and make it a more appealing place for them to spend their free time. This is why Voith sponsors professional as well as amateur sports, assisting various sports clubs and supporting events worldwide, albeit with a focus on Heidenheim. In the reporting year we invested € 0.95 million in this area (previous year: € 1.17 million).

Voith is a long-standing supporter of the professional soccer club 1. FC Heidenheim 1864 e.V. In addition, we sponsor the Fencing Center at the Heidenheimer Sportbund 1846 e.V. (HSB – Heidenheim Sports Association) as well as the local HSB baseball team. In the reporting year, together with the sponsor partners of the Heideköpfe and HAKRO Merlins Crailsheim baseball clubs, and the sponsor partners of the Heidenheim Fencing Center, Voith again sponsored three professionally managed vacation camps for the children of Voith employees.

Multifaceted engagement for education

We support kindergartens, schools, and universities around the world, as we firmly believe that only a good education and training can give people the right basis for optimal personal development. We are thus continuing the tradition of Hanns Voith.

Since way back in 1946, Voith has dedicated itself to preparing disadvantaged young people in its home State of Baden-Württemberg for vocational training schemes and the world of work. What initially started as a vocational preparation and training course has since become an institution and has been recognized since 2004 as the Sonderberufsfachschule Hanns Voith (Hanns Voith Special Vocational College). Furthermore, for 17 years now Voith has supported the Germany-wide business@school education initiative of the Boston Consulting Group (BCG): This initiative gives senior high school pupils the opportunity to gain hands-on experience with business topics over the course of a full academic year. Voith's vocational training is also rooted in the region: In the last fiscal year, for example, our apprentices actively engaged in the restoration of an over 100-year-old Voith Francis turbine that has been generating environmentally friendly electricity on the Egau River to the east of Heidenheim for a century now. The completion of the turbine restoration is scheduled for December 2021.

Promoting culture at our Heidenheim location

We want to give as many people as possible access to cultural life. In this reporting period we once again provided financial support to various institutions in Heidenheim, including a € 125,000 donation to the Opera Festival. However, due to the Corona pandemic the Festival could not take place as usual in 2021; the City of Heidenheim therefore developed an alternative program that included digital formats such as a livestream.

Engagement for integration

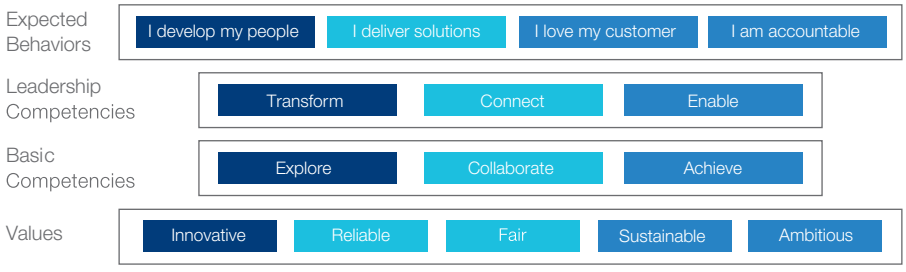
For many years, Voith has committed to societal engagement around the world that improves people's living conditions and promotes intercultural exchange. For instance, Voith is one of the initiators of the German industry integration initiative "Wir Zusammen" (We Together), dedicated to helping refugees integrate in Germany. We provide places on a vocational training course for young refugees. The first Syrian refugee very successfully completed his vocational training as a construction mechanic in January 2021. In addition, together with AFS Intercultural Encounters e.V., Voith aims to encourage young people to gain intercultural experience at an early stage. For this reason, Voith, with the support of the Hanns Voith Foundation, will once again award partial scholarships for a stay abroad in the 2021/22 academic year, preferably in Brazil, China, or the USA. The scholarship holders will spend the academic year in a volunteer host family and Voith will contribute up to € 4,500 per scholarship holder.

2. Employees

2.1 Management approach

Our company's greatest strength lies in our employees' skills and motivation. This is why we will continue to take a targeted approach to developing Voith's corporate culture to enable our employees to develop their potential even more fully. We aim to create an environment that is highly innovative and agile, and is focused on customers and results as well as reliability and strong cooperation, so that we can meet today's challenges and the future developments of the various markets in which we operate. Our managers' behavior plays a central role in the development of the Voith culture. This is why we consider the topics of leadership and culture as a single entity and have developed a corresponding framework to guide our employees and managers, as illustrated in the diagram below.

Sustainable technologies for future generations



Our corporate culture is based on the Voith values. The competencies we require and encourage in our company are derived from these values. Fundamental competencies such as personal responsibility and the ability to accomplish objectives (Achieve), generating ideas and solving problems together (Collaborate), and the willingness to break new ground and learn from mistakes (Explore) go hand in hand with core leadership skills. It is each manager's responsibility to create an environment in which employees can succeed (Enable) and where transparency and openness (Connect) prevail. It is also important to promote the willingness to initiate and implement change in order to facilitate innovation (Transform). These competencies are intended to enable our managers and employees to behave in accordance with our expected behaviors, the implementation of which is expected of each individual – and may be expected of others.

The acid test: Coronavirus

In this reporting year, our established work processes and forms of cooperation were once again put to the test by the COVID-19 pandemic. As in the previous year, despite the particular challenges to Voith resulting from the pandemic, we succeeded in continuing our business operations at all times and

without significant restrictions, ensuring smooth cooperation with internal and external contacts without endangering the health of our employees in the process. We intend to build on the diverse experiences of the past two years by continuing to implement proven working methods as well as digital and virtual collaboration processes – even after the pandemic has passed.

Sustainable organization of HR services

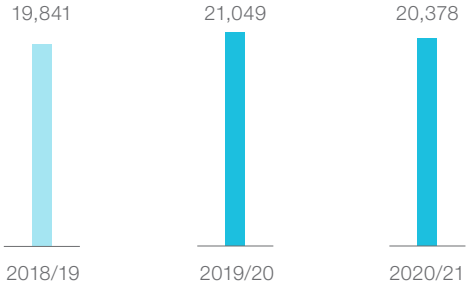
A large part of the operational HR work at Voith is distributed across four regional HR Global Business Services (GBS), where transactional processes and programs are concentrated. These HR services are provided in accordance with the regional statutory and operational regulations and are coordinated by Group Human Resources. We have made further progress with the digitalization of our HR processes. In the reporting year we launched the rollout of a Group-wide HR Service Delivery Platform that maps out HR processes, making them efficiently manageable. As a first step, in the spring of 2021 we started to offer all employees in Germany a personal electronic locker based on this platform, via which employer-driven correspondence, such as remuneration statements, can be delivered digitally. This offer has been taken up by the majority of our workforce.

Furthermore, in future the new platform will bring together our HR knowledge base and the complete operational HR service. From October 2021, employees using the platform will benefit from optimized access to information about their employment contracts and increased service levels: Both an intelligent search function and our first employee self-service HR services will be available in every region. In Germany, for example, applications for parental leave, special leave or secondary employment will be submitted online and processed digitally. The new platform is available in all countries which are supported by an HR Global Business Service Center, meaning it can be used by the majority of Voith's employees. We have set ourselves the goal of gradually transferring all HR services that can be optimized through digitalization to the new platform in the next two years.

2.2 Voith as an employer

Voith's business model is geared towards the long term – a principle that also includes our employment policy. As a dependable employer, we intend to live up to our responsibility as a family-owned company and offer our employees security and prospects at a time when especially the external conditions for their employment are subject to a wide range of changes.

Number of employees
in individual persons



Fact base
Employee structure, Employees by employment type

Upholding employee rights

Voith provides its employees with fair working conditions that comply with all statutory requirements. This principle reflects Voith's fundamental commitment to upholding human rights worldwide, a commitment that is further expressed in the new Voith Code of Conduct which applies across our global Group. A section of the Voith Code of Conduct is dedicated to the topics 'Respectful Interaction, Tolerance and Equal Opportunity'; several other sections also explain how cooperation between different people at Voith should be structured while upholding the rights of all employees. We also reject all forms of forced labor and child labor. In structuring working conditions at Voith, beyond the directly applicable laws we are guided by the principles of the International Labour Organization (ILO) and other national and international organizations. Furthermore, we view trusting collaboration with employee representatives as a key prerequisite for our company's long-term success. The framework for this is set by the Code of Conduct and the Group Policy, which every employee is obliged to take note of as part of his or her employment contract. Therein, we explicitly commit ourselves not to obstruct lawful employee representation in any form, for example, obstruction of the freedom of association and collective bargaining agreements. Breaches of these regulations can be reported via the grievance procedures of our whistleblower system.

Chapter Values and compliance

We guarantee our employees working conditions that in many instances exceed statutory requirements. Therefore, the majority of the employment contracts of our global workforce are covered by collective bargaining agreements. These give our workforce clarity and certainty with regard to remuneration, working hours and vacation entitlement. In the 2020/21 fiscal year, a collective agreement was in place for 64 % (previous year: 67 %) of employees worldwide. The decrease compared with the previous year is due to changes in the organizational structure.

We always involve employee representatives in discussions between the Corporate Board of Management, local HR departments, and employees. At numerous Voith locations our employees are represented by elected Works Councils, which are involved both in personal actions specific to individuals and in negotiations regarding local company agreements. In Germany, in addition to the respective locations' Works Council committees, a General Works Council operates at company level, and a Group Works Council is in place for the Voith Group as a whole. Furthermore, for companies in the European Union there is a European Works Council, the Euroforum, at Group level. The respective Works Council committees and their members represent the interests of the workforce towards the company: They are contact points available to employees to refer perceived impairments to their rights, for example. Our Corporate Board of Management or the local management team communicate fundamental changes to the committees and employees in a timely and proactive manner. We achieve this through a range of communication channels, particularly our intranet, video and telephone conferencing facilities, and notices. In Germany, the decision-making process in the event of fundamental company changes is subject to the provisions of the Works Constitution Act. Implementation of the measures adopted is supported by the respective location's Works Council. This is exemplified by our agreements to safeguard Voith locations in Germany, namely in Heidenheim and Crailsheim. In the tradition of a family-owned company, we are implementing necessary headcount reductions as socially responsibly as possible by avoiding operational redundancies. We make use of natural employee turnover while also relying on tools such as early retirement, semi-retirement, or mutually negotiated termination agreements. Use of these tools is agreed with employee representatives and unions. We also use interim employment companies and vocational training measures. If work has

Fact base
Details on upholding employee rights, Measures for socially responsible restructuring and job security

to be transferred between locations, the employees concerned receive offers for continued employment at other Voith locations wherever possible. At our international locations we also strive, wherever possible together with the employee representatives, to safeguard employment, avoid redundancies, and carry out any necessary staff reductions as socially responsibly as possible, based on tried-and-tested practice in Germany.

In addition, there are various employee advocacy groups at Voith. Some exist in compliance with regional laws, while others are initiated by the employees themselves. Examples include the Representative for severely disabled persons, the Trainee Council, the Senior Executive Representation Committee, the Supervisory Board set up in accordance with the 1976 German Codetermination Act at Voith's head office, and the Voith Women's Network.

Performance-based and market-driven remuneration

Besides the customary evaluation systems, Voith relies on an internationally standardized job evaluation system. This ensures a fair and transparent evaluation of roles, for example through the use of country-specific salary benchmarks, as well as consistent market-based remuneration and salary development. The analyses currently available to us, especially for our core countries of Germany, the USA, China, and Brazil, confirm this. Individual remuneration is based exclusively on the requirements of the position, professional qualifications, and performance. Differentiation of individual remuneration on the basis of origin, gender, religion or other personal characteristics is not tolerated.

Fact base
Expenditures for employees

Diversity and equal opportunity

As an internationally operating company, Voith can only be successful if our working environment is underpinned by equal opportunity and mutual respect. In our Code of Conduct we take a clear stand against discrimination toward our employees and business partners – a statement we once again sharpened in the 2021 edition of this Code. The Voith Compliance Organization monitors the implementation and enforcement of our Code of Conduct. Corresponding information and complaints are documented and tracked via Group-wide grievance procedures. In addition, there is a separate Diversity and Inclusion (D&I) e-mail address that employees with complaints or requests for help can use to contact the Voith D&I team.

Chapter Values and compliance

Furthermore, in the reporting year the Corporate Board of Management signed a Diversity and Inclusion Declaration in which it again states its clear position of zero tolerance for discrimination. The aim is to create equal opportunities for everyone in the company. This principle applies regardless of race, ethnicity, gender, religion or worldview, political opinions, age or gender identity, and expressly includes all vulnerable groups. The Declaration also confirms our aspiration to administer all phases of the HR cycle at Voith – from recruitment, through training and further education, to evaluation and promotion – as well as all employee conditions and benefits in a fair and unbiased way.

Diversity and Inclusion Declaration

"Each of our employees is unique due to their different backgrounds, experiences, perspectives and strengths. We appreciate this diversity and promote equal opportunities because we are convinced that diverse teams boost innovation and help us to truly understand our customers' needs."
Dr. Toralf Haag, President and CEO, Global Sponsor Diversity and Inclusion at Voith

Also in the Declaration, the Corporate Board of Management emphasizes the importance of diverse teams and an environment of mutual respect and appreciation. Managers in particular are expected to foster their team members' development, support good collaboration – even across borders – and drive the willingness to transform within their teams. This approach is further underscored by the fact that the Group President and CEO personally promotes the topic of Diversity and Inclusion, supporting relevant activities in the company as sponsor.

Our workforce comprises people of all genders and numerous ethnicities who are at different stages in their lives and can contribute their own unique experiences to our company. We believe they should all have the same opportunities at Voith, which is why we signed the German Diversity Charter in October 2018, committing ourselves to create a working environment free from prejudice and to promote a culture of appreciation in our company. This aspiration is supported by our Diversity and Inclusion (D&I) program, which we introduced across our Group back in 2012/13 and which has been continuously developed since then.

We understand diversity as recognizing and embracing the uniqueness of our employees in the aspects of gender, age, nationality and ethnic origin, skin color, language, religion, education and professional experience, as well as all other personal differences such as family status, social background, beliefs, health status, physical and mental abilities, or gender and sexual identity. We are convinced that these multifaceted dimensions combined with varied experiences, talents and strengths enable the diversity of ideas. At Voith, we understand inclusion as the aforementioned culture of appreciation and respectful cooperation that enables everyone to develop their potential freely and contribute different perspectives, ways of thinking, and approaches. The D&I mindset is also integrated in our competency model.

Internationality – more than an aspiration for Voith

Our company's international nature is also reflected in our employee structure. Employees from 93 different nations work for Voith, and the Voith Senior Management Circle also has an international composition, with 95 members from ten countries. Voith deliberately promotes cultural diversity, thereby enhancing international cooperation at all levels of our company. 75 employees were working simultaneously in an international secondment at the peak of this program. These secondments enable employees from different regions and of different nationalities to enrich their international careers. And to further increase mutual understanding, tolerance, and communication skills, we offer our employees intercultural training and language courses.

As a signatory to the Diversity Charter, Voith has taken part in German Diversity Day since 2019. In 2021, this day was extended to a global D&I Month to enable intensive interaction in regional and global self-directed workshops, giving us the opportunity to learn with and from one another. Our D&I program applies to all sites and includes not only the consistent sensitization of employees but also the implementation of appropriate measures. The relevant topics are shared with contacts at the respective

locations by the Regional HR Business Partners as well as by the D&I Managers and Advocates in the regions. Group Human Resources coordinates the program and defines globally applicable standards, ensuring we take a uniform approach across the Group, share best practice approaches, and consider the varied challenges we face worldwide. This approach is supported by our range of digital tools and formats to promote exchange and networking across hierarchies, regions, and divisions. In addition, employees can get involved in regional Employee Resource Groups (ERGs), actively contributing to specific D&I topics via these networks.

An important element of our D&I program is the optimization of our processes to deal with unconscious bias. Consequently, in the reporting year we began the Group-wide rollout of standardized and objectified procedures for the selection and promotion of employees, both in the recruitment phase and as part of talent development. Our objective is to counteract unconscious bias in our HR processes. When selecting applicants, in addition to the requisite professional qualifications for the position, a decisive factor is whether their ways of thinking and working match our corporate culture. Our newly developed guide for job interviews is therefore based on the competency model. The guide includes standardized questions and clear criteria for evaluating the answers, making it possible to select applicants objectively. It was launched in Germany in the reporting year, and will be used in all regions in future once regional adaptations have been made. To create equal opportunity in talent development, we also piloted new talent management tools in the reporting year: These enable talents to nominate themselves, thus supporting their own (career) development proactively and independently.

We regularly keep our employees up to date through global communication campaigns on the subject of D&I and make relevant information available online. To advance equal opportunities, a pilot project running from April to June 2021 tested a coaching format for managers and internal multipliers in Germany. The format includes an app-based Learning Journey to be worked on and is supplemented by a personal coaching session every week. Managers also have a toolkit available to them on our company's own SharePoint platform that provides ideas for measures and activities to make D&I part of daily working life and teamwork, as well as to help them reflect on their own management style. In addition, mandatory workshops for the upper four – in some regions, five – management levels help to continuously raise awareness among managers throughout the Group regarding D&I and draw attention to specific topics such as unconscious thought patterns. A mandatory training module on D&I has also been introduced for prospective managers in all regions. In the 2020/21 fiscal year, training courses on D&I content took place with around 70 participants. In addition, an e-learning module on the topic of "Unconscious Thought Patterns" was made available worldwide.

Since women are still underrepresented in technical apprenticeship occupations and higher education courses, Voith is committed to a large number of measures around the world with the aim of increasing girls' and young women's interest in technical professions. For example, we have been participating in Girls' Day for many years and are involved in various initiatives run by the responsible State Ministry in Baden-Württemberg. These initiatives aim to encourage more girls and women to take up MINT professions and to increase career opportunities for women, including those returning to work.

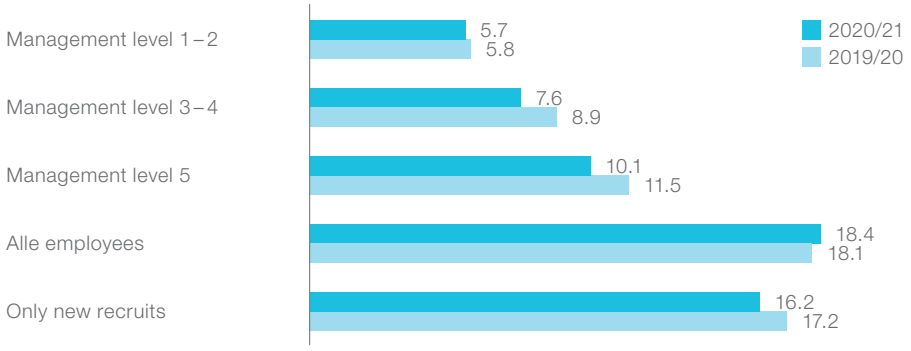
We are implementing various measures to increase the percentage of women, and more specifically the proportion of female managers, in the company. For example, these include HR marketing activities that aim to spark girls' and women's enthusiasm for MINT professions and to position Voith as an attractive employer for women in particular. In addition, we have set ourselves appropriate recruitment targets at

all levels, across all regions, and in all divisions, and are supporting these through the use of specific recruitment methods and channels. Furthermore, we are working on promoting equal opportunities in every phase that an employee passes through in our company. This is also supported by internal regional Women's Networks with various initiatives such as mentoring programs, networking events, and training courses.

Fact base
Diversity in the management team and in the workforce

As at September 30, 2021, the proportion of female employees in the workforce stood at 18.4 % (previous year: 18.1 %). In the Voith Senior Management Circle, the proportion of women currently stands at 6.3 % (previous year: 6.3 %). In our middle management circle, the proportion of female managers fell to 10.1 % (previous year: 11.5 %).

Percentage of women by management level
in %



We measure the success of our activities on diversity and equal opportunity in the company using topic-specific employee surveys – including in North America in the reporting year – and external evaluations. Voith was listed in Brigitte magazine's Employer Study as a "Top Employer for Women". Since 2020 we have also been included in the Financial Times list of Europe's Diversity Leaders.

Balancing work and private life

Voith sees itself as a family-friendly company, an understanding that is embedded in our Group-wide guidelines to provide a flexible and family-conscious work culture. We work to familiarize all our managers with the necessity of this working culture through ongoing communication measures. After all, our stated goal is to offer our employees an attractive working environment. This also includes flexible working models that are compatible with their respective life situations. Indeed, 84 % of our employees are largely free to organize their working time flexibly. In consultation with their supervisors they can agree personal models that range from the use of flextime, through part-time work, job sharing, and sabbaticals, to remote working.

Since 2020, against the backdrop of the COVID-19 pandemic, the flexibilization of working hours in terms of time and place has been further advanced in several regions and set out in framework regulations. Where not yet in place, specific agreements on mobile working were made.

Fact base
Flexible working time models, Parental leave

Furthermore, thanks to our cooperation with an external service provider, our employees in Germany can obtain information and support relating to the care of family members and childcare.

Employee satisfaction

We are convinced that one of the keys to employee motivation and satisfaction lies in the exchange between managers and employees. This is why we intend to establish an ongoing dialog in our company on skills and interests, event-related feedback, and a constructive no-blame culture. The aim is to give all employees the opportunity several times a year to speak to their managers in a structured manner about their performance, changes in behavior, and what support options are available to them. To go beyond simply agreeing on goals as a part of performance objectives, we intend to focus even more on how these goals can be achieved in particular. As of the 2021/22 fiscal year we are using the leadership tool MyDialogue to create the conditions necessary to implement ongoing, event-driven discussions between managers and employees systematically throughout the organization.

Fact base
Turnover, New hirings

The employee turnover rate in the Voith Group rose in the reporting period to 12.3 % (previous year: 11.5 %). 4.9 % of this fluctuation (previous year: 3.3 %) was due to employees terminating the employment relationship. In these cases, we investigate the reasons for termination in order to identify potential for improvement.

2.2.1 Attracting and promoting talent

We are taking a more differentiated approach to our personnel marketing activities in order to enhance our efforts to get new talent excited about Voith. In the reporting year, the employer branding concept we developed in the previous year was implemented across the relevant digital channels. It picks up our new competencies, and focusses on employees from all regions. Against the backdrop of the ongoing COVID-19 pandemic, we continued to strengthen our presence at virtual career fairs and events in the reporting period.

Leadership training

The development of our executives is of great significance within the overall strategy of our training and education measures. We pay particular attention to the emotional bond and adaptability of our employees, by which we mean those aspects that are more influenced by intrinsic motivation than subject-specific abilities and skills. With training courses on specific leadership challenges and topics such as agile leadership in projects, remote leadership, and leadership and health, we are meeting the highly complex challenges posed by modern leadership.

With the goal of developing strategic competencies, in the reporting year we implemented a standardized leadership model based on the new leadership skills – Enable, Connect, and Transform – and trained 2,700 managers as part of our e-learning program. Alongside self-study, Recap Sessions facilitated interaction between managers about what had been learned. Transfer Challenges were also provided to support the independent transfer of the learning content into practice. In the coming fiscal year, all further development programs for managers will be adapted to the new leadership model and the leadership skills defined therein.

To support our managers in their individual development, we plan to introduce multidirectional feedback in the 2021/22 fiscal year. This is also based on our leadership model and will give managers feedback on the perception of their leadership behavior from different perspectives.

Promotion and development schemes for employees and talents

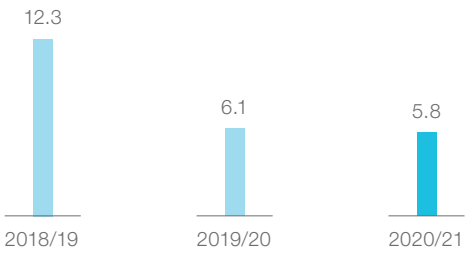
In the coming fiscal year, the talent management tools for managers piloted in the reporting year will be put to use across the entire organization. Our talent management efforts aim in particular at identifying people with leadership potential and providing them with targeted support. Our overall objective is to fill the majority of our leadership positions from within our own ranks. Against this backdrop, one of our plans is to give employees the opportunity to put themselves forward for advertised positions, thus furthering their own development proactively and independently. We also want to improve the quality of the selection of leadership talents by means of objective potential assessments. And last but not least, we want to fill leadership roles more quickly and transparently via a pool approach.

Our employees' training and further education is a top priority at Voith. The focus of our attention is the continuous development of our employees' skills by means of a wide range of training programs in the areas of leadership and social skills, as well as methodological and specialist knowledge. For example, this includes our functional training models for Sales, Purchasing, and Product Management. In addition, there are also programs for specific Group Divisions such as the PaperSchool (training for the dissemination of skills and knowledge in the area of paper production). With train-the-trainer programs we create a high level of internal participation in the transfer of skills, making use of the full range of classroom and e-learning formats, both internally and externally.

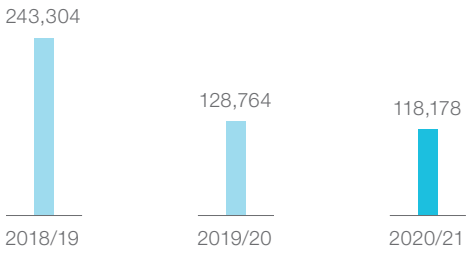
Fact base
Training time by hierarchical employee category

In the 2020/21 fiscal year our employees completed an average of 5.8 hours of training and further education (previous year: 6.1). We work tirelessly to improve our training program, ask participants about their experiences after each training course, and provide the findings to the trainers and the HR department. In addition, the supervisor's assessment is obtained as a means to evaluate the success of a measure from different perspectives.

Average hours of continuing education



Total hours of continuing education



With the program ‘Shape your future@Voith’, Voith provides a Group-wide offer that is specially tailored for graduates as well as interested people with first professional experiences. The three options, ‘Grow’, ‘Discover’, and ‘Innovate’, meet the different needs of both the talents and the organization. The talents develop exciting projects relating to strategically relevant topics in an international context, tackling innovations and topics with future relevance.

Even in the midst of a pandemic, within the framework of the Voith Paper Talent Board, emerging talents from Germany were able to work together on specific and highly strategic project tasks that were either set by the Corporate Board of Management or proposed by the emerging talents themselves. As part of the program, they had the opportunity to reflect on the results with the Corporate Board of Management, and to prepare for future management and leadership responsibilities. Personal mentoring as well as the opportunity to attend a leading business school rounded off the program.

Voith takes part in ‘AFRIKA KOMMT!’, a training program in cooperation with the German Federal Enterprise for International Cooperation (GIZ GmbH). The program aims to train prospective managers from Africa in the company. A key component of the annual training initiative, which Voith has supported with a scholarship since 2008, is an eight-month training course in our Group, as one of the GIZ partner companies in this program. The long-term objective for Voith is the permanent acquisition of African talents and strengthening business activities in Africa. There are great opportunities for Voith, particularly due to the high demand for hydropower plants. At the same time, by implementing the appropriate projects, development can be driven forward locally.

At Voith Turbo, talent is promoted through targeted collaboration in strategic, mostly international, cross-functional projects. Job rotation, international secondments, and in-depth mentoring in an international context also support the development of high-potential employees.

High aspiration – high level of training

By tradition we are committed to providing world-class vocational training, and this commitment has remained steadfast for over 100 years. At the same time, interdisciplinary learning and the integrated provision of social and specialist expertise are especially important. Voith trains employees around the world, and to do so we utilize our own training centers in Heidenheim (Germany) and Kunshan (China). Our international locations also deliver vocational training that, while based on the dual-study system practiced in Germany, also incorporates cultural and country-specific considerations.

Our training portfolio is as focused as possible and concentrates on the technologies and developments that are relevant for Voith. The objective is to provide graduates with the best possible preparation for their employment with Voith. Part of this preparation is an extensive onboarding process that ensures a seamless transition between training and the target position.

In the course of the digital transformation, modern information and communication technologies are merging with industrial processes. To adequately prepare young people for the changing production landscape, we already started to integrate new digital work content into the training of technical professions at Voith in the 2017/18 fiscal year. Thanks to comprehensive digital offerings, this year's graduates were also able to complete their vocational training with excellent results despite the Corona pandemic.

The Baden-Württemberg Cooperative State University (DHBW) has been a strong partner of ours in the academic training of emerging talent for over 40 years now. The program offering includes ten different courses at five university locations. The training links theory and practice and is combined with a secondment abroad or an inter-location assignment. The range of courses offered by DHBW is an important pillar for securing our future management and leadership pipeline.

Fact base
Vocational training

Voith's training is also recognized as first-class outside our company: In the national survey 'Germany's Best Training Companies' published in the reporting year, Voith was awarded the ranking 'very highly attractive', achieving 18th place among the approximately 1,850 companies listed in the industrial sector. This was based on a nationwide survey by the Cologne-based analysis institute ServiceValue in partnership with the daily newspaper Die Welt, in which around 4,000 companies were considered.

For more information:
Germany's best training companies

2.2.2 Occupational health and safety

Occupational health and safety are a top priority at Voith. By taking a responsible approach to designing workplaces and processes, we work to prevent accidents and work-related illnesses as far as we can. Our HSE (Health, Safety, Environment) organization provides the best basis for this. In addition, our systematic approach to implementing the Shared Services structure ensures that individual locations and regions receive the most comprehensive support possible. Many of our sites have also implemented

Fact base
Certifications

an occupational safety management system certified to ISO 45001. This currently covers about 80 % of our employees.

Fact base
Approach to preventing and dealing with negative health and safety impacts

To reach our employees even better, we converted the organization to a decentralized structure. The activities are concentrated in the central Quality & HSE/Sustainability Board, in which the HSE managers in the Group Divisions coordinate their activities. They report functionally to the Global Head of Corporate HSE. In addition to a greater on-site presence, the aim is to offer specialist support with a stronger product focus. Established processes serve to identify dangers and risks in occupational health and safety. These are accessible to everyone involved, and all information can be called up via a system so experiences can be transferred easily between the business areas.

A Group Directive sets out the requirements and responsibilities for effective occupational health and safety, laying down binding minimum requirements and standards for the Group. It also includes all Standard Operating Procedures (SOP) on HSE at Voith. In principle, while all locations are covered by this Directive, the more stringent provision in each case is always applied when reconciling the regulations with regional requirements. As a third step, customer agreements are binding if they impose stricter or more specific requirements. We are currently reviewing and, where necessary, amending all Group Directives to ensure that their contents are up to date and consistent with the new organizational structure. In the 2020/21 fiscal year, work was begun on streamlining the Group Directives to allow for more efficient and more effective regulations at Group and Division level. The SOPs are gradually being transformed into process instructions and operating procedures. This transition is expected to be completed in the 2021/22 fiscal year.

Chapter
Environment management approach

We use our Group-wide hse+ IT system to manage HSE, which is now also used in smaller organizational units. As a fundamental principle we attach great importance to the early involvement of Data Protection Officers in all issues relating to HSE reporting, controlling, and communication. All occupational health and safety policies are accessible globally via this system, just like our environmental protection regulations. Moreover, the majority of countries can enter relevant laws and regulations directly into the system and assign the resulting responsibilities to those accountable.

The Environmental Risk Assessment tool rolled out at Voith in 2019 was rated very positively in internal and external audits in the reporting year. This tool allows for the objective identification of the diverse hazards at our locations as well as their daily documentation. As with the other risk assessments, actions can also be assigned and their implementation tracked. Continuous optimizations in the reporting year also made it possible to record more incidents in the nonconformities area.

Joint task of occupational health and safety

Fact base
Employee representation in committees

Company agreements on occupational health and safety, and on preventing addiction, complement the regulations embedded in our HSE Group Directive. A monthly Safety Committee Meeting brings together employee and employer representatives at the major production sites to develop the annual occupational safety program and decide on its implementation.

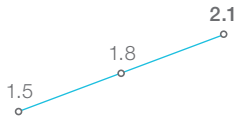
Occupational safety

In 2009 we anchored accident frequency and severity reduction in our corporate goals. Today, Voith ranks among the world's leading companies in occupational safety across all industrial sectors. This is confirmed by the Accident Frequency Rate (AFR, the number of notifiable accidents per 1 million working hours), which we calculate according to the international standard. Accordingly, our AFR decreased very significantly from 12.6 in the 2008/09 fiscal year to 2.1 in the reporting year (previous year: 1.8). By comparison, the average AFR of companies in the Professional Association of Plant and Mechanical Engineering in Germany is 20.69. Furthermore, at 79 the number of notifiable accidents (previous year: 68) is a particularly low figure compared to other industries. We are gradually working to identify accident focus areas and establish safer procedures and processes through appropriate programs. However, in the reporting year we again suffered an increase in the Accident Severity Rate (ASR), with 537.2 working hours lost per million (previous year: 454.8). The ASR serves as a benchmark for the severity of work-related accidents.

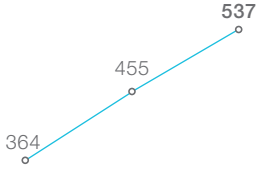
Despite our enormous efforts and the measurable successes achieved in the field of occupational safety, the 2020/21 fiscal year was overshadowed by a work-related fatality. The tragedy occurred in July 2021 at a plant of ELIN Motoren GmbH in Hungary. We were deeply saddened by the incident and instigated a full enquiry. This exhaustive process, which has largely been completed, was carried out with a high degree of transparency and in close cooperation with the local government agencies. We want to further increase awareness of the topics of occupational health and safety and accident prevention, and to prevent work-related injuries across the board with Group-wide information and awareness campaigns.

Fact base
Occupational accidents

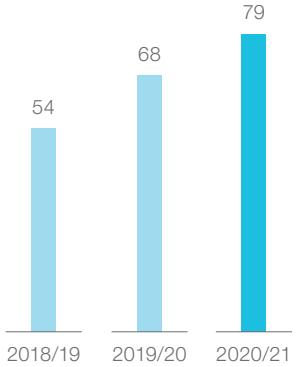
Frequency rate
Specific figure in accidents per 1 million working hours



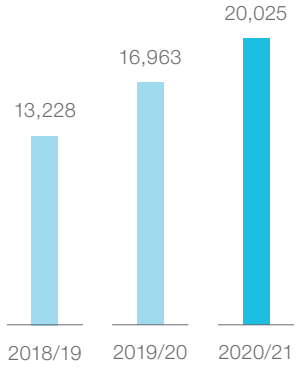
Severity rate
Specific figure in lost hours per 1 million working hours



Number of accidents



Number of lost hours



Extensive occupational safety program

Our occupational safety program includes every employee. We also involve service providers in occupational safety activities through our “Coordination of Visitors and Contractors” Occupational Safety Directive. Executives with supervisory roles have a particular responsibility in this regard: They are responsible for risk assessments, as they are best acquainted with the technical requirements as well as the level of education and experience of their employees. Furthermore, they have a clear duty to ensure that information and targets are cascaded as prescribed, right from the Corporate Board of Management, through the respective executives, all the way down to employee level. Employee training and adequate communication of key developments also fall within their area of responsibility. Employees must be given documented instruction at least once a year, with centrally prescribed training documents supporting this process. Besides annual instruction, brief information on the subject of HSE is published regularly – in some cases also on a daily basis – and information sheets are available for selected topics.

The use of our HSE software for online instruction continues to gain in importance, even if it cannot replace personal instruction by the supervisor. Individual business areas conduct training courses online that are precisely tailored to their respective needs. These have proved particularly effective in communicating information globally and in a timely manner to both office-based and Field Service staff. We work to raise our production employees’ awareness through five- to ten-minute, high-impact presentations. Beyond the annual instruction we provide, these presentations on current topics keep aspects of occupational safety firmly in employees’ minds as they carry out their daily work. We document instruction sessions that are required by law.

We place particular emphasis on the training of our experts in the regional HSE organization. They have already been rigorously trained on the use of hse+: We have used this online system at Voith since the 2015/16 fiscal year to display information globally, uniformly, and transparently on audit planning and audit results, as well as key information on hazardous materials, compliance, and risk assessments. Our goal remains for as many hse+ modules as possible to be used intensively at our largest locations. To achieve this, the documentation and follow-up of measures derived, particularly in the area of hazardous substances, will be extended. We will continue to steer towards these goals, even though the pandemic is currently slowing down the implementation of the appropriate measures significantly.

Fact base
Occupational safety training

Special responsibility with field service

When on construction sites or service calls, Voith Field Service employees often take responsibility for compliance with occupational safety and environmental protection, whether as supervisors without authority over other service providers, or by taking full construction-site responsibility that includes authority over subcontractors.

Documenting, analyzing, and preventing accidents

At Voith we record all accidents centrally so the direct supervisor is reliably informed and the notifications can be published on the intranet (in the WebApp). This also ensures that the Corporate Board of Management is informed within 24 hours in the event of serious incidents. Investigation teams,

comprising stakeholders, supervisors, and safety experts, review and document the accidents. Especially serious accidents are examined separately once again by our global HSE team. Our hse+ IT platform plays a key role in this regard, allowing us to further improve the transparency of our pipeline of measures and implement measures in a more targeted way. In the last reporting year, together with the respective software supplier we continued to work towards establishing a uniform quality level throughout the Group. Our activities focused on improving accident reporting and the corresponding reporting forms, which provide us with detailed accident statistics. These allow us to analyze incidents based on the type of injury, its severity, or the cause of the accident. A detailed description of accident definitions is given in our Group Manual; these are then presented in a way that makes them comparable internationally with other companies.

Our eVAP (electronic Voith Awareness Program) app involves employees actively in accident prevention. With clear icons to facilitate user interaction, the app enables them to log potential accident causes quickly and easily on the spot. Pictograms make the app easy to use and help to break down possible language barriers. The app sends this information to a central database, where the data is analyzed automatically and then published in target group-specific internal media along with corresponding instructions. This allows us to raise our employees' awareness of unsafe actions and situations before accidents occur. Furthermore, even more targeted prevention work is made possible thanks to the improved data quality across sectors and countries. Our HSE experts received an average of 727 (previous year: 448) reports per month in the 2020/21 fiscal year. This means that they also achieved a significant increase in the number of safety talks carried out. These serve, for example, to identify unsafe actions, involve employees, and derive key action points. At many locations, the findings feed into the annual safety program. Routine communication about security issues, accident analyses, audits, and other measures enable us to ensure we are always up to date in terms of HSE and can take immediate action in response to serious accidents, or if specific accident types occur more frequently. We intend to perform more audits and further improve the quality of the content. Our global HSE Flash News on the accident/incident focus areas in occupational health & safety and environmental protection enables us to inform affected employees immediately and directly.

Routine communication on security issues

We employ several communication channels to keep every employee across our Group updated on changes and developments. The global HSE Team holds fortnightly conference calls on safety topics. In addition, workshops on specific topics take place regularly. Safety topics also play a central role in the QHSE Board's meetings. Following this, meetings are held at a regional level to communicate the points discussed. This information is then shared with the individual locations in the monthly occupational safety working groups. The local experts are also responsible for translating the guidelines and standards into their respective languages.

Occupational health

Regardless of where our employees work, we want them to stay fit for work and retire healthy at the end of their professional lives. To comply with legal requirements and recognize cultural differences at our locations in different countries, we always take a regional approach and set different priorities in

occupational health management. In this way further improvements in occupational health care were achieved at our German and individual international sites in the reporting period.

In 2021, the Occupational Health Management (BGM) Steering Committee in Heidenheim launched the Voith Health Initiative (VGI). This brings together a program of activities carried out selectively as well as long-term health promotion offers. All health promotion programs are made transparent and summarized on a VGI SharePoint site. This is initially being done for our Heidenheim location; the programs of other Voith locations in Germany will be added in future. This means that in the medium and long term, a uniform approach to promoting occupational health is being pursued across Germany.

In the reporting period, we also adjusted the structure of the crisis team. The team was decentralized to enable it to meet the needs of the various countries. In addition, a crisis team was set up for Germany. This team meets regularly and consists of representatives of the Group Divisions and central functions such as Communications, HSE (including Occupational Health), Legal, Corporate Security, and HR.

The Corona pandemic once again required our full attention in the 2020/21 reporting year. A crisis team comprising the heads of Corporate Security, Occupational Health, Communications, HSE, and HR met regularly. One focus of the work was to review international recommendations for action, to assess the relevance of events for the Group, and to derive appropriate actions. The channels we used to inform our employees included a special SharePoint on the subject of Corona and how to protect themselves. Employees could also call our occupational health service hotline and seek advice from our HSE experts.

Our focus remains on communication between individual teams as well as between managers and employees. To systematically drive relevant topics, we establish health working groups comprising management, HR, Occupational Safety, and Occupational Health experts. A higher-level central steering group with representatives from Occupational Health, HR, and the Works Council acts as a provider of stimuli and builds a network between the Health working groups at our locations.

3. Environment

3.1 Environmental management approach

As a family-owned company Voith is especially committed to its employees and neighboring communities to avoid environmental risks and to use resources responsibly. We link this with our ambition to be a driving force and co-creator of a decarbonized industry in the digital age and to continuously and provably improve how we protect the environment. Here, we focus particularly on energy and resource management. We are committed to continually reducing our energy consumption and corresponding Greenhouse Gas Emissions (GHG), the efficient use of both work materials and raw materials, and minimizing waste. The continual reduction of our water withdrawal and wastewater volumes is a further core objective in this area.

Our environmental management is organizationally anchored in two areas. In conjunction with Occupational Health and Safety (HSE), in operational environmental protection we support our business units and locations strategically and operationally in their compliance with and implementation of environmental regulations. In addition, the Ecological Business Management (EBM) at Voith identifies environmental-economic improvement potentials in production processes, enables them to be leveraged and thus contributes directly to improving energy and resource efficiency at our sites.

Highly effective environmental protection organization

A central approval process ensures that our environmental protection processes and procedures are organized as uniformly as possible. Our HSE Group Directive sets out specific requirements on how environmental protection is to be organized at a local level. Together with Occupational Health and Safety, we have consistently organized our corporate environmental protection activities within a Business Partner structure, in alignment with the Group's shared services system. At all Voith sites, responsibility for the implementation of HSE topics is held by the local operating units, with every Voith location required to appoint an Environmental Officer. Their tasks cover a wide range of topics including immission control and water protection, waste management, hazardous materials and goods, and preventing incidents with an environmental impact. They also advise operations managers on plant newbuilds and modifications as well as approval processes, and conduct regular site inspections and audits. Environmental experts in our Group Divisions ensure that Group companies are provided with systematic support. In doing so, we strive for a uniform environmental management system and a comprehensive certification of our worldwide locations. Currently, the ISO 14001 certification coverage of our sites is 81 % (previous year: 79 %) in relation to the number of employees.

Fact base
Certifications

Global management approach to resource efficiency

In Ecological Business Management we pursue a globally uniform management approach to our resource efficiency. This way we ensure that the same standards are applied throughout the company and enable high data quality and comparability. EBM has been implemented at over 90 Voith locations;

these are advised by the EBM managers of the respective Group Divisions. The central Corporate Sustainability function coordinates the respective activities and assumes responsibility for target controlling and reporting.

To achieve our ambitious goals, especially in climate protection, we rely on a four-stage Green Controlling process. Through this proven process we manage resource efficiency activities by regularly comparing the implemented and potential measures with the respective effort required to achieve the targets set. In the 2020/21 fiscal year we expanded this process to be able to take CO_2 emissions into account even more. Therefore, we are now also able to map the respective quantities of self-generated renewable energy and externally purchased energy. This way we ensure continuity in our review of interim targets and are in a position to take targeted countermeasures quickly if required.

Hot-spot analyses support the EBM team in advancing specific and cross-site topics. For efficiency reasons we focus on the largest consumption drivers: At Voith Hydro and Voith Turbo, these are buildings, machine tools, and test rigs, while Voith Paper consumes the most energy during thermal fixing (heat setting). In the reporting period it was only possible to carry out a few hot-spot analyses on site at our locations due to the pandemic; as far as possible, remote and self-analyses were carried out as an alternative. In addition to hot-spot analyses, Voith Turbo also conducted "Zero CO_2 Workshops" in the fiscal year and defined measures for all locations designed to achieve climate neutrality without emissions compensation.

Fact base
Environmental goals,
Hot-spot analysis
methodology

IT system as a central information source

Our Group-wide hse+ IT system supports the work of our HSE and EBM experts. With its ability to store and manage all relevant processes, documents, and analyses centrally, the system forms the basis for efficient operational environmental protection, successful resource management, and matrix certifications. Current legislative texts are available there, including summaries and comments in the respective national languages. The legal obligations derived from the legislation are assigned to the officer responsible via the system; this officer is then responsible for ensuring the obligations are met. hse+ provides all employees with a PC access to a central legal database that comprises all laws and regulations relevant to Voith in the HSE area. Current legal texts are available here as well as summaries and comments in the respective national languages. The legal obligations derived from the legislation are assigned to the controllers via the system as obligations. The same applies to Voith standards as well as approvals and requirements. Furthermore, hse+ is used to perform location-related environmental risk analyses and to assign, document, and control implementation responsibilities as well as deadlines for the measures derived. We check and update the system regularly to include new locations, among other data.

Group-wide reporting system

At Voith we record and analyze all environmental incidents centrally each month using a Group-wide reporting system based on standardized criteria. The Corporate Board of Management is informed about the results of the analysis on a quarterly basis. We use existing occupational health and safety categories to evaluate and rate incidents across topic areas according to the same standards. Awareness and use of our Group-wide standardized process is increasing across our workforce; in

parallel, the larger database is increasing the conclusiveness of the analyses. We are also raising our employees' awareness through targeted communication measures. No environmental incidents requiring public reporting were registered at Voith in the reporting year.

To manage resource efficiency, reports on the status of target achievement are prepared for the managers responsible at each site. A report is also submitted to the Corporate Board of Management at least twice a year. Should the Green Controlling process indicate a requirement for more comprehensive countermeasures, the Board of Management is informed promptly. This way we continuously monitor and analyze our current target progress in the areas of energy, water, waste, and CO_2 emissions.

3.2 Energy efficiency and climate protection

According to the United Nations Paris Climate Agreement, the rise in average global temperature needs to be limited to well below 2 °C and if possible to 1.5 °C compared to pre-industrial levels. Voith supports this objective and as a company aims to make its contribution to climate protection and fulfilling international climate protection targets. That is why we have set ourselves the goal of operating climate-neutrally from 2022 onwards. This means that all Voith sites worldwide will no longer have a CO_2 footprint from 2022 on.

To achieve this goal, we pursue a concept based on four pillars:

Energy efficiency further increased, rise in GHG emissions

- **Energy efficiency:** We work continuously to increase the energy efficiency of our production processes. For instance, we have already achieved a total reduction in energy consumption of 150 GWh since the 2011/12 base year; this corresponds to a 29 % efficiency increase by the 2020/21 reporting year. In view of this we remain confident that we will achieve our target of a 30 % efficiency increase next year compared to the base year.

More electricity generated from renewable sources

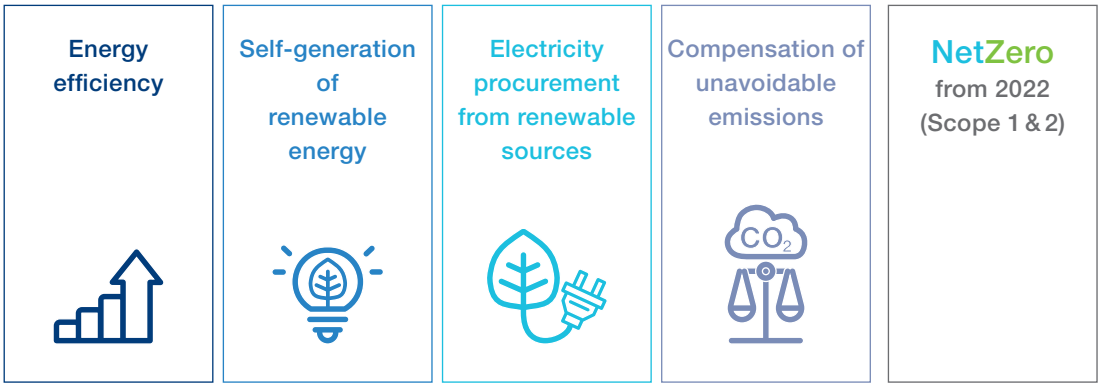
- **Self-generation of renewable energy:** A further pillar of our climate protection activities is the expansion of renewable power generation. We continuously check at which of our locations further photovoltaic projects are possible and economically sensible, or could make sense in the future. In the year under review we generated around 6 GWh of electricity from solar and hydropower. By the end of the 2026/27 fiscal year we plan to increase our generation from these energy sources to 16 GWh per year.

Progress in renewable energy purchasing

- **Electricity procurement from renewable sources:** From October 2021 we will switch our externally purchased electricity to green sources wherever possible. The necessary preparations were already underway in the reporting year. Above all, it was necessary to define criteria for the purchase of green electricity. In accordance with these criteria, we will obtain electricity from 100 % renewable sources and completely renounce the purchase of nuclear generated power. As a supplier of hydropower components, we prioritize the purchase of electricity from hydropower. In the year under review we were able to further increase the share of our electricity needs covered by renewable energy sources. We currently obtain around 38 % from renewables and the coming fiscal year we expect this figure to rise to over 80 %.
- **Compensation of unavoidable emissions:** We will compensate for currently unavoidable CO_2 emissions via compensation measures. Here we rely exclusively on the purchase of certificates based

on a high standard: For example, the certificates we purchase must be certified according to the “Gold Standard” or the “Verified Carbon Standard” at a minimum. In future we plan to reduce the proportion of compensated CO_2 emissions progressively through further reductions in fossil fuels and by increasing our own energy generation. The targets and interim targets we already communicated apply here in order to reduce CO_2 emissions at our sites by 35 % in terms of value creation by 2024/25. By the end of 2049/50 we want to achieve absolute savings of 90 %.

Our climate neutrality strategy



In defining our goals, our orientation was on the guidelines of the Science-Based Targets Initiative (SBTi). Among other measures, we document the success of our engagement as part of the Carbon Disclosure Project (CDP). This is how we want to contribute to achieving the goals of the Paris Climate Agreement; the projects and interim targets launched in our Ecological Business Management provide the optimal conditions to achieve them.

Measures showing an impact

Thanks to numerous measures in all Divisions we once again made important progress in the 2020/21 fiscal year. Additional savings in the infrastructure (lighting, compressed air, heating, ventilation, air conditioning) were realized; savings were also achieved in process-specific topics (machine tools, thermo-fixation process), and production capacity was better utilized. The significance of CO_2 emissions reduction measures will continue to rise in the coming fiscal year. In this regard it is already foreseeable that CO_2 reduction through electrification will in some cases be accompanied by higher green electricity consumption. To counteract this effect, Voith sites are already implementing specific measures: The Garching site converted its heat supply to geothermal district heating in the year under review, while Salzgitter will follow in the 2021/22 fiscal year by purchasing heat generated without CO_2 emissions. Further, Crailsheim plans to save around 5 GWh of district heating through heat recovery. In addition, we are working to replace gas-fired heating systems with heat pumps as soon as possible.

Energy efficiency further increased, rise in GHG emissions

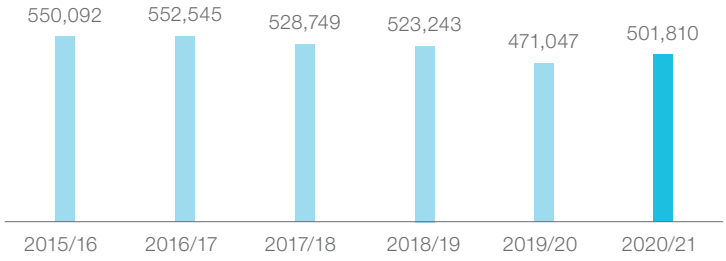
Fact base
Energy consumption and GHG emissions recording methodology, Total energy consumption and total GHG emissions, Energy-saving and GHG emissions reduction measures and further potentials, Air pollutants

In the reporting year, absolute energy consumption at Voith remained largely stable, despite the slight increase in sales revenue: We consumed a total of 382,047 MWh of production-related energy (previous year: 382,700 MWh). 89.7 MWh of energy were thus consumed per € 1 million sales, or 2.1 % less than in the previous year (91.6 MWh per € 1 million sales). A more significant improvement in absolute energy consumption was not achievable for several reasons: For instance, the pandemic-related production restrictions in 2021 were less drastic than in 2020. The increasing return of employees from their mobile workplaces to our sites raised the requirement especially for heating and cooling energy. Measures to ensure adequate ventilation, for health protection reasons in particular, also contributed to an increase in energy consumption. The demand for district heating increased by 16 % to 67,620 MWh, while the intensive use of air conditioning and ventilation systems led to an increase in electricity consumption. In the reporting year, Voith consumed a total of 259,758 MWh of electricity (previous year: 237,994 MWh).

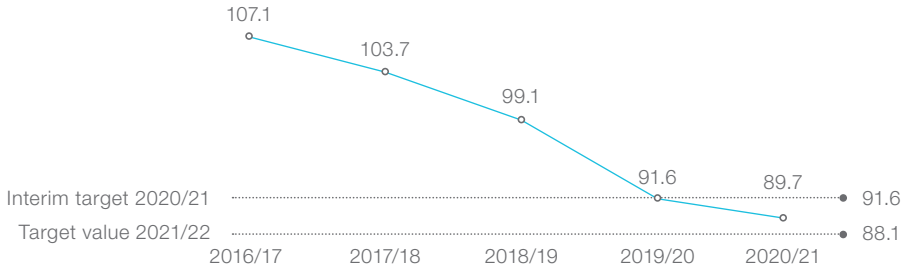
In the reporting period the identified action potential in the pipeline rose from 140.3 to 141.0 GWh (+1 % versus the previous year). The completion of efficiency measures in the year under review enabled a further 7.2 GWh in energy savings, primarily in the areas of building heating and air conditioning, lighting, and pressurized air.

In recording its GHG emissions Voith adheres to the guidelines listed in the Greenhouse Gas (GHG) Protocol. Our energy-saving measures alone achieve annual GHG savings of approximately 3,655 t. Differences in national electricity mixes as well as shifts in the mix of direct energy sources cause the energy and GHG emissions indicators to diverge. This means that energy savings at individual locations, or even production relocations, vary in their impact on GHG emissions. In the 2020/21 fiscal year, GHG emissions at our sites rose by 1.5 % to 142.464 t CO_2 (previous year: 140,318 t CO_2). In addition to the increased requirement for heating energy, this rise is due in particular to the integration of some major acquisitions. The share of direct GHG emissions decreased by 3.1 % to 32.773 t CO_2 (previous year: 33,814 t CO_2). Indirect GHG emissions increased by 3 % to 109.691 t CO_2 (previous year: 106,504 t CO_2).

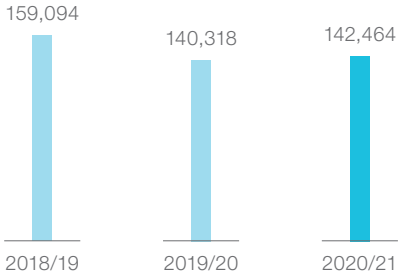
Total energy consumption
(Scope 1 and 2) in MWh at 100 % coverage



Production-related energy consumption
Specific value in MWh/€ million revenues



GHG emissions within the organization
Total in t CO_2



More electricity generated from renewable sources

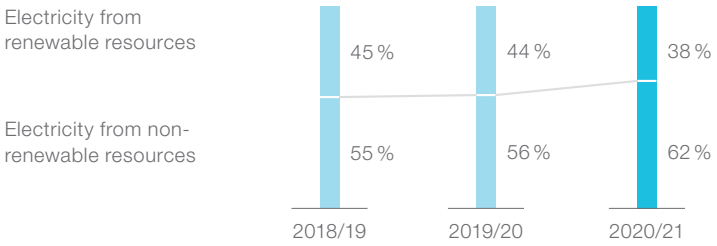
Our aspiration to achieve net climate neutrality is strong motivation to further increase the share of renewables in the electricity we consume. Various renewable power generation projects are already being implemented, or are in the detailed planning phase. New projects for Voith's own solar power generation at our Shanghai, Frankenmarkt, Laakirchen, Wimpassing, Twello, and Sankt Georgen sites are contributing to annual savings of 4.5 GWh (1,787 t CO_2/a); The amount of self-generated renewable electricity at Voith therefore doubled on the previous year. In the reporting year, our purchased electricity mix was supplemented by a total of 4,629 MWh of self-generated electricity. Further photovoltaic projects are being planned, currently at our German sites in Kiel and Rutesheim as well as in Noida, India.

Progress in renewable energy purchasing

We want to cover the highest possible share of our electricity consumption with power from renewable sources. In view of this, one focus of our activities in the 2020/21 fiscal year was on the corresponding conversion of electricity contracts from October 2021 onwards. This change is regulated very differently from region to region and is not easy to carry out in every country. The energy purchased from external providers in our electricity mix is currently still 38.0 % (previous year: 44.3 %) from renewable and 62.0 % (previous year: 55.7 %) from non-renewable resources. The decline in the share of renewables is largely due to the closure of the foundry in São Paulo, which was powered by green electricity. From October

2021 we plan to procure at least 80 % of our electricity demand from renewable sources and following this will continue working to achieve 100 % green externally purchased electricity.

Power consumption by resource type
in %

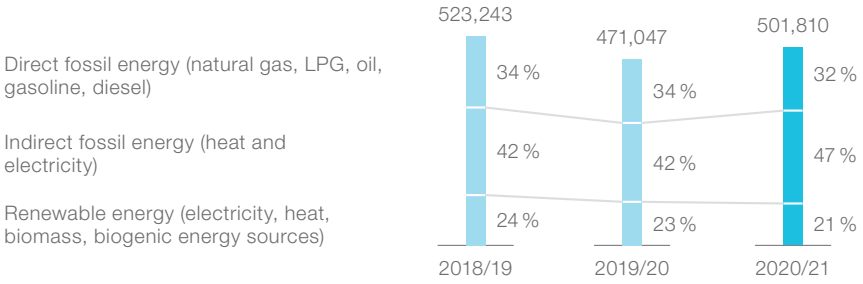


Fact base
Electricity mix

Another focus in the 2020/21 fiscal year was on the analysis of the direct consumption of fossil fuels in our production processes. Here we see further potential for reducing CO_2 emissions through renewable energy sources or electrification. Since in many cases production processes need to be modified, intensive planning and coordination is required. We are working on specific action plans and have already scored initial successes. In Garching, the conversion of the heat supply from gas to geothermal energy resulted in annual saving of around 1,000 t CO_2 per year. Process improvements to the looms in Faridabad lowered CO_2 emissions by 577 t, while in Kunshan 89 t CO_2 was eliminated through heat recovery for heating purposes. Further emissions cuts were also achieved in lighting, with reductions of 105 t CO_2 achieved at the sites in Heidenheim, Hudiksvall, Kiel, and Liaoyang. The improved façade insulation of the production hall in Rutesheim saves a further 9.4 t of CO_2 annually.

We currently see the greatest potential in the conversion of heating energy and heat recovery. There are specific plans for the switchover to green heating energy or heat recovery from production processes, for example, at our locations in Högsjö, Laakirchen, Crailsheim, and Rutesheim; we expect to achieve a total reduction of 3,640 t CO_2 in this area. Major lighting conversion projects are planned at the Shanghai site that should lead to an annual emissions reduction of approximately 520 t CO_2.

Energy use by source
in MWh



3.3 Material efficiency and waste

At Voith we manage our use of working and raw materials across the Group centrally, to make our processes as resource-efficient as possible. Significant challenges result from the broad scope of our product portfolio and our correspondingly diverse process landscape. On top of this come differing project business requirements at Voith Hydro and Voith Paper, compared to serial production at Voith Turbo.

3.3.1 Use of material and efficiency measures

In addition to decarbonization and digitalization, Voith also focuses on the principle of circular economy. We want to drive innovations that contribute to closing cycles in our industries and therefore promote the principle of circularity. The same applies to our own production process cycles. In view of this, material efficiency and avoiding waste are already a key topic in our product design phase: This is when the materials are selected and the manufacturing processes are defined. Savings in subsequent production, on the other hand, can generally only be achieved by reducing tolerances and sizes as well as through improving quality. The operational objectives of Ecological Business Management for improved material efficiency and waste reduction are defined in the relevant Group Divisions together with the respective operations sites. The specific objectives depend on the local focal points and the parameters that can be influenced there. Fundamentally we have set ourselves the Group-wide goal of reducing waste volumes by 35 % by 2021/22 compared to the 2011/12 base year. However, our successes to date make it difficult to define absolute material efficiency projects in the future. The focus on absolute weight clearly emphasizes heavy materials such as metal, which do not necessarily have a greater environmental impact. We are therefore currently working on adapting our internal goals as well, to integrate the circular economy principle and to take greater account of aspects such as types of disposal and recycling. Having already surveyed the disposal methods for all our waste worldwide, we are currently working on identifying responsible drivers and waste reduction potentials.

Material efficiency increased once again

In the reporting period Voith purchased approximately 160,000 t of materials from suppliers, around 15 % less than in the previous year (187,000 t). Of the materials we purchased, 57 % were semifinished products (previous year: 55 %), 33 % were raw materials (previous year: 31 %), 8 % were for packaging (previous year: 11 %), and 2 % for auxiliaries (previous year: 2 %). The share of renewable materials rose year-on-year to 16 %.

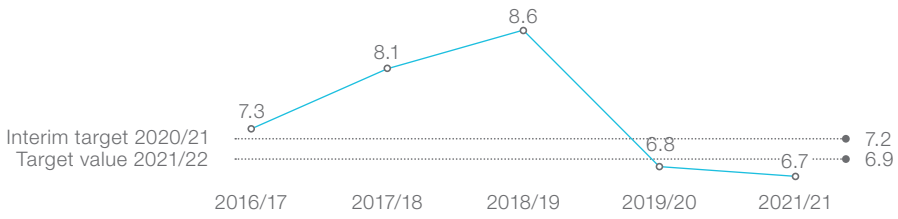
In the 2020/21 fiscal year approximately 43 % of the materials we used were recycled (previous year: 31 %). The recycled proportion was 75 % for auxiliaries (previous year: 51 %), 43 % for raw materials (previous year: 24 %), 36 % for semifinished products (previous year: 25 %), and 80 % for packaging (previous year: 79 %). Hot-spot or Ishikawa analyses help us to constantly optimize our material efficiency. We apply these analyses in alignment with our Excellence program, which provides us with key approaches for identifying product development and engineering improvement potentials.

Fact base
Materials used

3.3.2 Management of waste and hazardous materials

In total Voith generated 28,617 t of waste in the reporting period (previous year: 28,504 t), which is 78 t or 0.3 % more than in the previous year. This increase was due to a rise in production activities and the optimization of inventories at a site in China. As a result we were able to supply 450 t of steel for new use outside Voith. Nevertheless, the corresponding indicator fell to 6.7 t/€ million in sales revenue versus 6.8 t/€ million sales in the previous year. This not only enabled us to achieve our interim target of EUR 7.2 t/million sales for 2020/21 but also our target for the fiscal year 2021/22. We want to maintain this level until the target year.

Waste
Specific value in t/€ million revenues



Fact base
Waste volume, Waste-saving measures and further potentials

In the reporting year, the volume of measures implemented rose from 8,855 t to 9,000 t (+2 %). The identified potential in the pipeline rose by 1.3 % to 9,000 t during the period under review. Process improvements meant we successfully avoided 99 t of hazardous waste in Shanghai, which had a positive effect on the overall net result. In Dongying the cooling lubricant requirement was also lowered by 25 t. The measures implemented all contributed to the prevention of hazardous waste and demonstrate that we are already sharpening our focus on the environmental impact of our waste.

Share of hazardous waste decreased significantly

In the 2020/21 fiscal year Voith reported a consistent and clear reduction of 563 t in hazardous waste and a 641 t rise in non-hazardous waste versus the previous year. Approximately 87 % of our waste is classified as non-hazardous and 13 % as hazardous.

Fact base
Hazardous waste

Voith does not transport any waste itself. The collection of hazardous waste at Voith is regulated by internal guidelines, with disposal performed by external disposal and recycling companies. We follow up guideline violations thoroughly; if confirmed, these lead to a termination of the business relationship. We regularly audit our disposal and recycling contractors, and these audits include on-site inspections of their locations and disposal/recycling facilities. We also gather proofs of disposal and associated documentation. In the reporting period we were not notified of any violations of the law in relation to the disposal of waste by our external disposal and recycling service providers.[1)]

[1)] Addendum to fiscal year 2018/19: Environmental incident concerning waste
In April 2019 an environmental incident (Fatal Environment Accident) occurred at the site in York, USA. The respective court only reached a decision on this in December 2020 and it was therefore not included in reporting for the 2018/19 fiscal year. Legal proceedings have now been closed. Voith was fined $ 41,000. As a consequence of this incident, Voith already implemented corresponding measures at the York site. These included the correction of all deficiencies, improved documentation of waste treatment requirements, and the training of employees. Regular audits and inspections are also intended to ensure that the corrective measures taken are maintained over the long term.

Targeted management of hazardous materials raises safety

In its production processes Voith uses hazardous materials such as paints, lacquers, thinners and solvents, adhesives, resins and hardeners, lubricants, cleaning agents, and industrial chemicals. Through our management of hazardous materials, we want to make sure critical materials are handled as safely as possible.

With our Group-wide hazardous materials approval process we work to promote the replacement of particularly harmful materials with harmless substitutes, and to advance the harmonization of safety standards company-wide. For example, every plant, work material and hazardous material at Voith undergoes a central and local approval process before it can be employed. This involves a systematic and automated comparison with applicable legal regulations (e.g. ECHA Candidate List and REACH annexes). In the downstream local approval process, workplace and site-specific topics are supplemented (e.g. water protection area, local government requirements, storage location, on-site transportation, and disposal). The use of centrally approved materials may therefore be prohibited locally for site-specific reasons. A central hazardous materials database allows us to perform uniform global analyses of the environmental, occupational safety and health risks of plant, work materials and hazardous materials, providing us with a valuable decision-making basis. Since 2014 around 10,250 materials have been recorded centrally, about 1,150 of which have been either disapproved or blocked for future use. In the reporting year we processed 830 applications (for new and existing materials): Approximately 7 % of these were rejected because they contained banned or critical materials, with a request to select a suitable substitute from our list of materials already approved.

In the reporting period, the topic of hazardous materials reduction was given higher priority and the number of active participants in the corresponding working groups was also expanded. With intensified involvement from the participating Divisions, Voith's Standards Department, and Purchasing, a strategy is currently being developed to ensure a consistent and effective procedure across the whole company. A restrictive approval process is planned which will involve the organization seeking approval making a direct contribution to the corresponding costs incurred, amongst other things. This is aimed at achieving a further reduction in new applications for hazardous materials. At the same time we constantly monitor our baskets of goods and work to reduce the number of hazardous materials through feasible substitutions here as well. In doing this, our focus is not only on lowering the number of materials but also on reducing particularly hazardous materials. Therefore, in the 2019/20 reporting period we completed an initial categorization of the hazardous materials into application groups, to prevent an increase in the number of new hazardous materials in use at Voith and to support the phase-out of redundant materials. This lays the foundation for further measures in the future.

Going forward we also intend to include materials with an acute toxicity category of 1 to 3 in our system, so they are covered by our approval process; this may enable us to further reduce the number of materials used at Voith. The internal specifications have already been drawn up and discussions are underway with the software supplier regarding implementation in our systems. The scope of materials

Fact base
Work materials and hazardous materials approval process

to be captured in the database and the inclusion of additional sites present us with particular challenges. The consolidation will therefore take longer than originally expected when launching the project in 2011. In order to speed up the process in the USA in particular, a service provider there will migrate the relevant data to our systems.

3.4 Water

Voith sees handling water responsibly as a matter of course. At Voith it is our stated goal to achieve further reductions in freshwater withdrawal, although water and therefore also wastewater play a minor role in our production processes compared to other industries. Nevertheless, we analyze and manage our water withdrawal in the same way as our energy and material consumption. Our minimum standards fulfill the respective legal requirements. In this, we differentiate between drinking water, groundwater, and surface water. We work above all to reduce our consumption of freshwater, also to reduce the burden on the local water supply. Our goal for the 2021/22 fiscal year is to withdraw 40 % less freshwater compared to the 2011/12 base year. However, having succeeded in reducing specific freshwater withdrawal by 32.4 % and absolute water withdrawal by 38 % in recent years, it is becoming increasingly difficult to identify further efficiency projects that make economic sense.

At the Heidenheim and Garching sites, for example, large quantities of surface water are withdrawn for cooling purposes and returned without any environmental impact. While these are ecologically sensible measures for circularity they stand in contrast to our water withdrawal reduction goal for the 2021/22 fiscal year. We are therefore currently working on a revision of our water targets and the evaluation of our water withdrawals. In setting our new targets we will give the issue of water scarcity greater importance and will give special consideration to affected regions. In doing so, we follow the fundamental principle of first taking action where we can have the greatest positive impact on the environment and society. In developing our water withdrawal plans we therefore pay particular attention to those locations in regions facing imminent water stress. According to the UN World Water Development Report 2021, approximately four billion people live in areas affected by high water scarcity at least one month of the year. Even with small water savings we can thus make a key contribution to reducing local water scarcity at the sites concerned. To analyze water risks at Voith locations in the reporting year we used the World Resources Institute (WRI) Aqueduct database and the WWF Water Risk Filter. The criteria of water quality and quantity were considered, along with regulatory framework conditions. The analysis results showed that water stress is currently highest at our Indian sites. This is followed by Voith locations in China and Indonesia, then Dubai and São Paulo. We are currently examining how this risk assessment can be combined with an operational target for freshwater efficiency. The analysis comprised all location-specific criteria available in the tools. Currently, 20 % of Voith's water withdrawal takes place in water-scarce areas. Based on the analysis results, our conclusion is that our local water withdrawal activities currently have no impact on the environment or on our stakeholders. Any such impact would trigger our environmental incident reporting process, resulting in a thorough root cause analysis and rapid resolution.

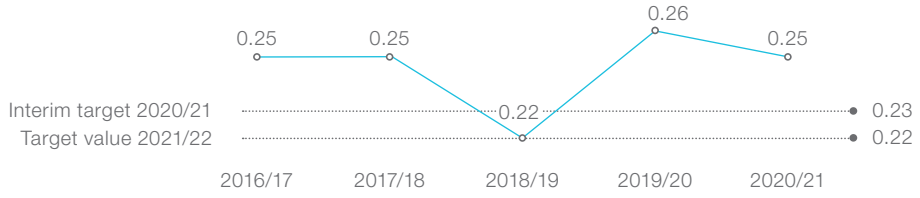
For more information:
UN World Water Development Report 2021

Increased water withdrawal

In the reporting period, Voith's freshwater withdrawal rose by 61,572 m³ or 6.0 % to 1,075,786 m³. Freshwater withdrawal rose by 8.3 % year-on-year to 0.26 m³ per € 1,000 in sales revenue. This increase resulted, among other things, from a defect in the cooling water system and an increase in the consumption of building air conditioning based on ambient heat at German locations. In the same period, we increased the volume of implemented measures by 13,556 m³ of freshwater. The measures already implemented from the pipeline thus rose slightly in the same period to 813,653 m³ of freshwater. As a result, we achieved an overall reduction of 32.4 % since the 2011/12 base year (target value: 40 % by 2021/22) and thus fell short of our interim target for the 2020/21 fiscal year.

As in the current fiscal year, the increase in water withdrawal in recent years is largely due to processes at our Training Center in Heidenheim. Here, water is taken from the River Brenz for cooling purposes, is officially checked and then returned to the Brenz unaltered. This is a rational measure in terms of energy efficiency as it saves energy. The COVID-19 pandemic has had a significant impact on this increase in water withdrawal, as the replacement of larger amounts of air in the buildings to ensure the best possible protection against infection is also accompanied by increased water withdrawal.

Freshwater withdrawal
Specific value in m³/€ thousand revenues



Fact base
Water withdrawal, Freshwater-saving measures and further potentials

Increase in wastewater

At 966,326 m³ the volume of wastewater we generated was 13 % higher than in the previous reporting period (855,260 m³). Around 58 % (previous year: 51 %) was discharged into rivers, lakes, or the soil, while 42 % (previous year: 49 %) was discharged into the sewage system. We use recycled water in our processes wherever it is appropriate economically, environmentally, and socially. This includes cooling processes (São Paulo), as well as processes in closed cooling water circuits (e.g. Garching, Summerville, and Kunshan). Voith also operates its own wastewater treatment plants at the sites in São Paulo, Garching, and West Monroe, USA. We work consistently to close water cycles wherever it is economically feasible and have now achieved this objective in most cases.

Fact base
Wastewater by method of discharge and quality

In direct comparison to other industrial companies, our production processes have a minor impact on natural bodies of water. Measurements of water quality are therefore rarely necessary, with only a small number of locations required to take continuous or repeated monitoring measurements. However, the overall burden of BOD, COD, TSS, heavy metals, nitrogen, and phosphorus cannot be derived reliably, owing to the low sampling requirements. In the reporting period we identified no contaminants in our wastewater that exceeded statutory threshold values.

4. Products and supply chain

4.1 Product responsibility

4.1.1 Management approach

With its products and industrial services, Voith is represented in five markets around the world: Energy, Oil & Gas, Paper, Raw Materials, and Transport & Automotive. As these markets have different requirements, the solutions our company provides are just as varied.

Our responsibility – our fields of action

Given the diversity of our product portfolio and the very different market requirements we face, our Group Divisions are confronted with a broad spectrum of challenges regarding product responsibility. To identify these demands systematically and evaluate their materiality, we draw on evaluations of customer requirements as well as the results of our stakeholder survey from the fall of 2018. We have also evaluated external benchmarks, including those of the German Institute for Ecological Economy Research (IÖW) and ISS ESG.

In conjunction with our Group Divisions' evaluations and assessments, we define the material fields of action for our company with regard to product responsibility as follows:

- Quality and reliability of our products and services
- Guarantee of maximum product safety
- Longevity of products
- Resource efficiency of products
- Minimizing products' environmental impacts

Orientation toward megatrends

Led by the Divisions' respective Chief Technology Officers (CTO), we developed future scenarios for energy, water, paper, mobility, and the environment extending right through to 2040. Key technologies and potential business segments were identified and prioritized. In this process, the megatrends of decarbonization and digitalization play a central role, as does the principle of the circular economy. Individually and jointly these shape the future scenarios derived in each of the Group Divisions, and thus flow into each Division's definition of its strategic objectives.

- **Decarbonization:** Voith aims to contribute to decarbonization and to achieving the goals of the Paris Climate Agreement. To this end, we are focusing on the promotion of hydropower as a renewable energy source with low CO_2 emissions, delivering paper production facilities that make efficient use of resources, and working on systematic drivetrain electrification as well as alternative drives to facilitate eco-friendly mobility.

- **Digitalization:** Voith views digitalization as an opportunity and combines its long-standing automation and IT expertise with its know-how on hydropower, paper machines, and drive technology. In our core business we develop customer-oriented solutions that drive forward the digital transformation in key global industries, enabling a reduction in energy expenditure and resource consumption as well as extending the life of the equipment and system-equipped facilities that we supply.
- **Circular economy:** Voith drives innovations that contribute to closing cycles in our industries and thus promote resource conservation.

Provable contribution to decarbonization

Our analyses show: Over the entire product lifecycle, the greatest lever for decarbonization lies in the use phase of our products. Against this backdrop, the Sustainability Department together with representatives of the Group Divisions conducted a Group-wide analysis in the reporting year in order to determine the CO_2 emissions of the Voith products put into operation in fiscal year 2019/20. At the same time, we calculated the amount of CO_2 that could be avoided by using our products, in each case compared with a reference technology.

In line with Voith's business activities, this analysis encompasses the following three business segments in which the following products and product groups were considered:

1. Voith Hydro: New hydropower plants commissioned, with output and annual running times (corresponding to Voith's share of the overall project)
2. Voith Paper: Whole systems delivered for paper manufacturing and stock preparation as well as rebuilds
3. Voith Turbo: Applications in new wind turbines (corresponding to Voith's share of the overall project), products for power transmission, and products installed in vehicles (corresponding to Voith's share of the overall product)

The analysis is verified by TÜV SÜD and shows clearly that Voith and its technologies already make a significant contribution to decarbonization today. For example, a total of 2,205,701 t of CO_2 was emitted through the use of Voith products such as paper machines, gearboxes and engines that went into operation in fiscal year 2019/20. This stands in contrast to 2,968,765 t of CO_2 emissions avoided by Voith technologies such as hydropower plants and wind turbines. In the future, this analysis will be carried out annually. In this way, we want to measure how our products affect CO_2 emissions in the use phase and document the further development in a provable manner. In addition, this regular analysis will serve to further advance the implementation of our strategic targets with a view toward the decarbonization megatrend.

Fact base
Calculation method for CO_2 emissions of products in the use phase

A closer look at the emission sources also reveals that around three quarters (77 %) of these emissions originate from the use of electric drives. These emissions could already be made carbon-neutral today by purchasing green electricity. By electrifying the driveline, Voith is already making an important contribution to decarbonization.

Research and Development

Our success largely relies on our technological expertise and our ability to constantly apply our know-how in innovations that create added value for our customers. This is why Research and Development (R&D) has traditionally been a high priority at Voith and why we continuously invest in our future: In total, over the last five years we invested over € 1 billion in R&D activities. Even in the two fiscal years marked by the Corona crisis, we deliberately kept our R&D commitment high. As a result, the Voith Group's R&D expenditure in the 2020/21 fiscal year exceeded the previous level at € 192 million (previous year: € 189 million). As in the previous year, our R&D ratio was 4.5%. Voith holds several thousand active patents around the world, with hundreds of new ones added to our portfolio in the reporting year.

Annual Report 2021
p. 23 f.

Fact base
R&D expenditure

Customer dialog

Maintaining close customer relationships and a deep understanding of customers' needs has always been one of Voith's strengths. All divisions are in constant contact with their customers, who also play an important role in trend analyses. In joint working groups with customers, current and future trends are identified and joint projects are subsequently defined and implemented. In addition, there are regular and standardized surveys on customer satisfaction or future requirements on the performance and sustainability of our products. Development collaborations with selected customers have also proven effective in jointly developing solutions that offer the highest added value on both the customer and supplier sides.

4.1.2 Reliable and safe products

Voith is world-renowned for the safety, quality, and reliability of its products. We are fully aware of the value of this important competitive advantage. Therefore, we have set out the principles of our quality and technical risk management processes in two Group Directives that apply worldwide to all Voith companies. The Corporate Board of Management implemented the current version for Quality Management in July 2021. Our Group Divisions and their companies expand on the respective Group Directive and supplement them with additional regulations. This provides a clear and binding Group-wide framework for the management and objectives of quality, risk, occupational safety, environmental protection, and occupational health.

Fact base
Quality targets

Uniform KPIs across the Group enable benchmarking within both the company and the relevant industrial sectors. The corresponding performance indicators are regularly reported to the Corporate Board of Management. Our measures are reviewed in internal and external audits, in which our suppliers are also involved.

Fact base
Certifications

We document and certify our activities according to the international ISO 9001, IATF 16949, and ISO/TS 22163 Quality Management (QM) standards, as well as ISO 14001 for environmental protection and ISO 45001 (previously OHSAS 18001) for occupational safety; we also supplement these with many of our own QM methods. Virtually all Voith locations are certified to at least one of these standards, with the majority of Voith locations meeting all three of the standards mentioned. Voith Hydro meets all three standards for all its locations.

Voith products always meet the statutory and regulatory requirements of the countries we supply. EU Directives, such as Machinery Directive 2006/42/EG, provide the basis for the minimum requirements for product safety worldwide. Our Group Divisions are responsible for implementation, while the relevant Quality Assurance Departments ensure process compliance. Our Quality Management system also defines how to fulfill the respective statutory product documentation requirements and how products are to be labeled. Besides internal technical documentation, operating instructions provide information on the intended use of our products and on how to handle them in a technically and environmentally safe way. Our QM system also outlines procedures for decisions that entail risks.

Product safety in the Group Divisions

Voith Hydro always provides its customers with safe equipment – throughout its entire service life. This aim is a top priority for us and applies to all products and services of the Group Division. We use the Failure Mode and Effects Analysis (FMEA) method for risk analysis. At Voith Hydro, all products must at least meet the safety, health, and environmental requirements of the relevant EU Directives, irrespective of the market area. Risk Assessment Sheets are available for all machines and products, in relation to the European Directives or any national directives that exceed the EU requirements, for example Machinery Directive 2006/42/EG. The construction rules for all Voith Hydro components and products are defined in design manuals. Product safety is ensured in the design process through compliance with industrial standards and – where necessary – also through service Life Cycle Assessments. For this purpose, the component stresses determined from numerical analyses (e.g. finite element method) are evaluated with the aid of relevant sets of rules such as the Computational Strength Assessment Guideline (FKM). If necessary, supplemental material tests for service life durability are performed on hydro-specific materials under environmental conditions. To ensure the accuracy of the modeling in the calculation methods, measurements are also performed during the operation of the hydropower components. Examples include measurements of pressure fluctuations, vibrations, and strains on critical components in the relevant operating states.

Safety tests are always carried out, both during the manufacturing process and during installation and commissioning. For all components and products, an Inspection and Test Plan defines the specific test criteria, responsibilities, and documentation requirements. During commissioning every single machine undergoes a clearly defined test phase, the results of which are logged. All essential functions and signals – from idle to full load – are verified, as is compliance with the limit values. The scenarios investigated also include operating envelope boundary states, up to emergency shutdown at maximum load. Only after the contractually agreed test program for verification has been carried out is the machine handed over for commercial operation.

In line with its Business Management System, Voith Hydro continues to monitor its products during the utilization phase with regard to potential safety risks and major machine damage. We always adhere to product liability law and its specifications regarding the active product monitoring obligation. In case of a safety risk or safety-relevant event, Voith Hydro informs customers immediately and always in accordance with legal requirements. To ensure our customers and their facilities enjoy a maximum level of protection, all safety information on Voith Hydro products is also documented in operating manuals.

The principles of **Voith Paper's** Quality Management are documented in guidelines as well as process and work instructions. Necessary safety tests and the corresponding documentation are implemented via internal Enterprise Resource Planning (ERP) systems in line with Voith Quality Specifications (VQS). These include the technical specification, the test specifications, and the quality assurance agreement for products and product groups. The content is created by the respective specialists and released by trained and authorized personnel. Mandatory tests (e.g. dimensional, magnetic particle, dye penetrant or ultrasonic tests) are used to fundamentally test possible effects on the environment, health, and safety. These tests are carried out on the basis of clearly defined specifications and checklists. Various tools are used in order to continuously improve processes, such as Ishikawa analyses, FMEA and A3 and 8D reports.

Specially trained employees carry out risk assessments as early as the product development phase. Virtual walk-throughs are performed on detailed 3D designs to uncover any safety deficiencies. Standard products and components are tested as prototypes in industrial applications before being launched on the market as part of the Stage Gate development process. For example, all Roll Cover and QualiFlex jackets under development undergo extensive durability and load tests. In addition to verifying performance, the focus is on safe operation. Necessary validations are carried out as part of internal assembly/factory installation and commissioning. Independent quality engineers are core members of the project teams and provide quality assurance – from order receipt through to customer handover.

The focus is on safe operation during the use phase as well. This is ensured by means of a clearly defined process for product monitoring. A standardized product monitoring process described in process and work instructions is used here. It refers not only to the Voith products available in the market but also includes competitor products. On roll test stands, thermography systems and vibration-measuring devices monitor flawless operation around the clock and precisely document potential fault causes. In addition, Service and Sales employees regularly visit many customers to measure the performance of wearing products such as fabrics and roll covers. They also create a comprehensive record of product and facility safety, thereby providing the greatest possible safety for our customers.

All Voith Paper products are delivered with extensive operating manuals that contain detailed safety notes. All wearing products are supplied with the relevant safety data sheets. Customers can also obtain detailed documentation on request, such as REACH compliance certificates, which are in place for all Voith products.

Voith Turbo places the highest demands on the quality of its products and has documented this in its safety guidelines. The Group Division sets corresponding targets and closely monitors their achievement. Product safety is an integral part of all processes, including preventive methods such as FMEA. Quality Management reviews the achievement of safety targets annually, assesses safety-relevant incidents, and takes appropriate measures where needed.

Voith Turbo inspects all products regarding safety and potential health impact. We consider a large number of relevant criteria here, from functional safety, through explosion and fire protection, to electrical safety and electromagnetic compatibility. Throughout their service life, all products are also monitored for safety and reliability. Depending on the applicable contractual, legal, or official requirements, systems such as Entity in Charge of Maintenance (ECM) are applied. In addition, some products are monitored online, such as the DIWA drives in a fleet of over 1,000 vehicles in Dubai and Abu Dhabi. This enables

proactive maintenance and therefore helps to avoid unexpected downtime. Online remote monitoring can also be implemented for Voith Schneider Propellers (VSP) via an extended sensor system. Work is currently underway on a corresponding Condition Monitoring System (CMS) that will provide for ongoing monitoring.

Voith Turbo provides its customers with all relevant safety information. This can be found for example in Material Safety Data Sheets, product declarations (REACH, IMDS, etc.), fire protection certificates for materials, or safety requirement specifications for risk assessments (CE, etc.). In addition, customers receive information on possible risks in the operating instructions for drive units, which also explain the correct handling of working materials from a safety and environmental perspective.

Wherever necessary, Voith Turbo supports its customers when it comes to the authorization and approval of its products and delivers the required documentation and registration papers. The Division's experts are involved in the creation of safety concepts as early as the product development phase and check their implementation, right through to joint validation with the customer. If the need arises, the components are taken into operation with the customer in their production.

Training

Voith Hydro trains both its employees and its customers in how to apply the relevant specifications and deal with the respective framework conditions and regulations. These are available via Group-wide databases and internal communication channels. We also offer training to our customers, at our Training Center or directly on site.

Skilled specialists with many years of experience in Voith HydroSchool courses, as well as comprehensive on-the-job training, ensure that our customers' employees are able to implement the specifications for safe conduct in the daily operation of the machinery and continue developing their knowledge into the future. Since the start of 2020, the Voith HydroSchool has also provided online training courses to its customers. This enables location-independent learning and also means individual webcasts can be repeated, making long-term knowledge retention easier.

The topic of safety has particular significance in the Voith HydroSchool customer training courses. In particular this includes:

- Safety-by-design Principles and Case Studies: In this one-day seminar, we train customers on the fundamental safety requirements of hydropower plants and discuss combined case studies on damage and accidents
- Application and Fulfillment of EU Directives on Machine and Plant Safety: In this seminar, we share our expertise and provide practical examples to prepare our customers for the complex process of CE marking
- Training programs tailored for individual customers that can be repeated regularly
- Topic-specific training series that help customers visualize the learning progress of their employees through evaluable tests
- Mentoring and train-the-trainer programs for sustainable knowledge-building

Voith Paper conducts extensive training for all operating personnel at customer facilities. Usually, training is delivered as a group course as well as directly at the facility. Virtual reality, webinars, and digital training methods developed as part of the PaperSchool are also utilized. In addition, Voith Paper carries out required training directly at the paper machines during scheduled service visits. This kind of training is particularly efficient because it takes place directly where the product is used. Experts are also available to Voith Paper customers to answer questions and for joint problem-solving via the OnPerformance.Lab and other remote connections. The solutions from our digital portfolio (OnCumulus, OnView, OnEfficiency) always include service delivery through the OnPerformance.Lab in order to ensure the best possible performance.

At **Voith Turbo**, all employees are also trained on quality issues and ensure learnings are thoroughly implemented. Extensive training courses on safe operation of products complement this area. Several quality programs are currently running to increase product and service reliability even further throughout the lifecycle. At the same time, Voith Turbo consistently seeks a close relationship with customers to allow experiences from daily system operation to be incorporated into its product development activities.

Requirements for substances of concern contained in products

All Voith Group Divisions comply with the relevant rules and regulations for the handling and exclusion of suspect and hazardous materials.

For **Voith Hydro**, EU Directives such as the candidate list, the list of substances subject to authorization (Annex XIV), and the list of restricted substances (Annex XVII) according to the REACH regulation are applied. The centrally managed Group Standardization Department is responsible for the implementation of and compliance with guidelines. The central Technical Department has identified substances that will be banned by REACH in the future; appropriate replacement options are currently being worked out in a development project. In the reporting period, progress was made as planned.

During modernization projects, old machines containing asbestos may be found. Voith complies fully with applicable rules and regulations when handling these and commissions specialized companies with their proper disposal.

The REACH regulation applies to **Voith Paper** as well. No free chemical substances on the REACH list are marketed in our products. When new substances are added to the list, Voith Paper reviews their use and, where necessary, identifies a harmless substitute which is then tested and introduced.

For **Voith Turbo** products, the regulations for the handling and categorical exclusion of suspect and hazardous substances are numerous. For example, EU regulations such as the REACH regulation, the RoHS Directives and German Battery Law (BattG) apply. In addition, there are railroad fire protection standards, the Group's own specifications on hazardous materials, specific customer requirements, and guidelines from associations such as the Rail Industry Substance List and the globally standardized IMDC exchange and management system for material data in the automotive industry. Hazardous materials are avoided or replaced by other materials as early as the engineering phase, wherever technically and economically feasible.

4.1.3 Product responsibility by Group Division

The constant development of our products makes them more environmentally and resource-friendly throughout their lifecycle. In doing so, we meet our customers' demands, statutory requirements, and last but not least our own aspiration. Conserving resources and minimizing the impact of our products on the environment are therefore top priorities for all Group Divisions. In the case of projects, the respective sustainability impacts are always critically analyzed as part of the internal risk assessment before the submission of tenders. To achieve this we follow a decentralized management approach.

We predominantly supply components that, as part of an overall system, have differing energy and material footprints. We employ a range of tools to gain an even more detailed picture of our products' energy and raw-material efficiency and thus enable optimal resource utilization in the use phase. We conduct product Life Cycle Assessments (LCAs) in accordance with ISO 14040 and 14044. These comprise the four phases of production, transport, use, and end-of-life. The corresponding analyses consider GHG emissions, hazardous substances (carcinogenic, non-carcinogenic, and ecotoxicity), the REACH regulation, particulate matter pollution, mineral and metal use, energy use, and water use.

Fact base
Further information on Life Cycle Assessments carried out

However, as Voith products are often not serially produced, LCAs are not carried out on every product. Nevertheless, we successively prepare corresponding analyses for high-turnover products as well as for new technologies that are still in development. In recent years several LCAs were carried out for various product groups in all three Group Divisions.

Voith Hydro

The Group Division Voith Hydro develops customized, long-term solutions and services for hydropower plants across the globe. Its broad portfolio of products and services covers the entire lifecycle and all essential components of hydropower plants of all sizes – from generators, turbines, pumps, and automation systems through to spare parts, maintenance and training services, and digital solutions for intelligent hydropower plants.

Product group	Share of orders received of Group Division in %
Components for large hydro (including refurbishments)	66
Components for small hydro (including refurbishments)	13
HyService and automation (with digital products)	21

Around 38 % of Voith Hydro's orders in the last fiscal year came from countries in which only part of the population can be supplied with electricity and the degree of electrification is in some cases well below 100 %. An inadequate power supply hinders economic and social development. Access to electricity is therefore one of the basic prerequisites for regional development and a reduction in poverty. The expansion of hydropower generates added value and thus local jobs. In addition to large-scale plants that feed electricity into public power grids, there are also small hydropower plants that supply individual companies or communities with electricity, generating energy close to where it is needed.

Shaping the future with hydropower

Voith Hydro is active in hydropower, the largest renewable energy source for power generation worldwide. As a proven, mature, predictable, and competitive technology, it combines an unrivaled high efficiency of over 90 % in modern plants with an extremely long and reliable plant service life of up to 40 years until the first modernization, as well as low CO_2 emissions.

The importance of hydropower is also underlined by the commonly used energy KPIs Energy Payback Ratio (EPR) and Energy Return on Investment (EROI). These are calculated by dividing the electricity output during the normal service life of a system by the energy required for its construction, maintenance, and operation. A high EPR is an indicator of a highly energy-efficient system. Scoring 267 (for run-of-river plants) and 205 (for storage plants), hydropower has the highest EPR of all methods of power generation. In comparison, fossil fuels achieve a value of 3 to 11, large wind farms 39, and nuclear power 16. To further improve EPR, we are focusing not only on product efficiency but also on reducing the energy required during production at our facilities.

Voith is convinced of the benefits of hydropower and intends to further strengthen its role in the energy transition. As a flexible and grid-stabilizing energy source, hydropower enables the integration of wind and solar power into the grid. It is therefore essential to achieve the global and local CO_2 reduction targets set by policymakers.

In this light, consistent future scenarios for energy and water were formulated with the help of scenario techniques and retropolation (gap analysis). Alongside the large hydro sector, the focus is also on the growth areas of small hydro, services, and digitalization. In the 2018/19 fiscal year the findings were discussed with our customers and business partners and compared with their own assessments. We were able to convince customers of our solutions and are now in a position to design a digital and sustainable future. Above all, the three global megatrends of decarbonization, digitalization, and the circular economy shaped the analysis in the Hydro Group Division. While digitalization played a standout role in all scenarios, decarbonization and the circular economy were observed differently in the individual scenarios. Together with the structure of world trade (open vs. protectionist) and global economic growth, decarbonization and the circular economy are the key differentiating factors in the scenarios. As a result, they also directly influence the key technologies relevant in these scenarios.

Among others, the following trends emerged:

1. With their high number of full-load hours and low generation costs, hydropower plants are perfectly suited to the production of synthetic fuels and chemicals essential for decarbonization. Adapted hydropower plants optimized for the production of synthetic fuels offer an opportunity here, with a particular focus on the concepts of power-to-gas and power-to-liquid. No risks through decarbonization have currently been identified, since the demand for both renewable energy and energy storage systems will increase. Also, existing reservoirs are needed to ensure the supply of drinking water and flood control.
2. Voith supplies highly efficient pumped storage plants that can store large quantities of renewable energy with a high level of efficiency. The use of water as the storage medium, as well as the almost complete recyclability of the materials used, makes pumped storage the ideal storage system for renewable energy. Today, over 90 % of storage systems for electrical energy are based on pumped

storage. Pumped storage power plants that work with a completely closed water cycle and are therefore not reliant on extracting water from natural reservoirs are currently being planned.

3. Hydropower is a key technology for the production of 'green' – i.e., renewably generated – hydrogen, which is one of the essential foundations for successful decarbonization. Above all, run-of-river power plants, some of which have more than 6,000 full-load hours per year and relatively low costs, offer ideal conditions for optimally utilizing electrolysis plants.
4. Reservoir sedimentation has also been identified and evaluated as a key issue for the future. Based on communication with several customers we have developed an innovative business model in the service area and signed the first contract with a customer in Austria.
5. However, for Voith Hydro, increased digitalization poses an additional challenge regarding plant security. This is because large-scale hydropower plants count as systemically important infrastructure in many countries, so they need to meet more stringent requirements – particularly in the area of cybersecurity.

Voith technologies play a decisive role in minimizing the environmental impact of hydropower plants – from improving water quality through aerating turbines, through oil-free hubs that prevent water contamination, to innovative runners that improve fish passage through rotors, and innovative concepts that facilitate sediment transport. Voith Hydro also works tirelessly to further minimize the remaining environmental impacts. Tighter environmental protection standards and stricter legal framework conditions also require hydropower to make an ever-greater contribution to sustainability. Voith not only meets this challenge itself, but also provides the required technology to its customers.

Hi-tech for environmental protection

Targeted research makes hydropower even more sustainable. With a comprehensive approach, Voith covers everything from fish protection, through water quality, to energy efficiency. To give an example, the Voith StreamDiver compact turbine can be operated entirely oil-free. The machine has water-lubricated bearings and therefore does not emit any lubrication whatsoever into the water flow. This protects sensitive hydrophilic ecosystems from potential damage caused by spilling even minute amounts of oil.

Operators also have the opportunity to use new assessment methods, such as a Fish Threat Index for fish populations, fish passage analysis at the power plant, or software for planning fish protection concepts. These and other analytical methods are also used to develop new types of turbines with improved fish protection, for example on the Columbia River and Snake River in the northwestern USA. In addition, there are innovative concepts such as the Alden turbine: This operates with just three rotor blades and at reduced speed, which reduces injuries to fish due to collision. The minimum gap runner turbines developed by Voith in turn use a completely spherical hub and periphery. In addition, pressure changes can be reduced by shaping the barrel vane. Pressure values for fish passing the turbine can thus be optimized. The efficiency of such measures is proven by surveys of the run-of-river power plant in Washington State: Researchers there were able to demonstrate that more than 98 percent of fish survived passing through the plant.

For more than 50 years, Voith has included environmental aspects during the development of mechanical and electric power plant equipment. In the reporting year, Voith Hydro participated in two research programs to develop innovative concepts and methods for fish protection even further: the EU

project FITHydro, coordinated by the Technical University of Munich, and the FINI project led by the University of Innsbruck. As part of FITHydro, 17 hydropower plants were surveyed, including three Voith plants. One of the goals was to improve the evaluation of fish protection measures. In addition, the company funded and designed a turbine that is gentler than previous versions of water turbines, especially with regard to European eels; a model of this turbine has been tested. In the FINI (fish protection at low-pressure power plants) project, numerical 3D simulations and experiments were used to evaluate the effectiveness of bypass systems, turbines, and their interaction in fish protection on the basis of a run-of-river power plant. These findings can be applied to the construction of low-cost and low-maintenance power plants that also have only a small impact on the fish population and thus the river's ecology.

Further innovations were also driven forward in the field of generators. Particularly noteworthy is the further development of the high-voltage insulation system. This is now made even more environmentally friendly by the use of a new chemical component.

Megatrend decarbonization – energy efficiency and greenhouse gas emissions

On the journey towards climate neutrality we are continuously working on bringing products with an ever-smaller CO_2 footprint to market. The avoided CO_2 emissions described above relate to electricity from hydropower projects in which Voith Hydro participated and that were connected to the grid in the last fiscal year. Thanks to their long service life, these new projects, like the older ones, help avoid emissions over many decades. Pumped storage power plants are a proven and efficient method of storing energy: Due to their flexibility, they are an important prerequisite for the integration of fluctuating power generation from wind and sun. So far, however, we have not quantified the contribution of pumped storage projects to the decarbonization of electricity generation because, although essential, this contribution is indirect.

Voith Hydro contributes to decarbonization by constantly improving the efficiency – and therefore the energy efficiency and carbon footprint – of its products. Efficiency optimization is continually in focus in product development across the full Voith Hydro product spectrum. While plant energy consumption is an important cost factor in hydropower generation, it is of only minor significance when these plants are in operation.

The generation efficiency of our plants is the dominant criterion in our customers' evaluation process. As a result, the continuous optimization of energy efficiency is essential to ensure our products remain competitive. To this end, Voith operates test rigs in the Brunnenmühle River in Heidenheim, Germany that are among the best of their type worldwide. At the same time, Voith Hydro's development teams have access to state-of-the-art supercomputers, enabling them to carry out advance development.

In May 2021, the Hydro Group Division presented a new generation of hydraulic turbine regulators, HyCon GoHybrid. This combines the safety of conventional systems with the advantages of new technologies, especially with regard to potential savings in oil and energy consumption. The new regulator reduces the

amount of oil required by up to 60 % compared to conventional high-pressure units and by up to 90 % compared to low-pressure units. At less than 10 % of the amount of energy that a conventional unit would consume, the projected energy savings were actually exceeded. HyCon GoHybrid will soon be used in more power plants and it will be introduced gradually in the worldwide regions.

Voith Hydro is a leading member of the EU-funded XFLEX Project, which aims to demonstrate how smart hydropower technologies can enable a low-carbon, reliable, and stable energy system. For the Frades 2 pumped storage power plant in Portugal, Voith Hydro supplied two variable-speed pump turbines, two asynchronous motor generators, the frequency converters, and the control technology, as well as steel hydraulic engineering components. As part of the project, Voith Hydro leads the development and implementation of additional solutions to make the Frades 2 demonstrator even more efficient. The aim is to extend the power range by operating the variable-speed machines in the so-called ‘short hydraulic circuit’. This means the availability of renewable energy in the energy mix can be increased. By optimizing plant operation using multidimensional maps and optimized operating transitions, maintenance intervals are extended and downtime is minimized. In addition, power plant efficiency is increased by optimizing and reducing the power consumption of auxiliary operations.

Megatrend digitalization – towards the intelligent hydropower plant

Models for predictive maintenance as well as the repair, overhaul, upgrading, and retrofitting of products throughout their lifecycle help to conserve resources while increasing efficiency. Residual life calculations are applied here that allow the degree of wear and the residual service life to be determined by analyzing the mode of operation and performing specific system measurements. This means that maintenance and servicing work does not have to take place at fixed intervals, but on the basis of the degree of wear, thus making better use of materials.

Against the backdrop of advancing digitalization, Voith Hydro sees the development of sensor technology as a prerequisite for enhanced interconnectivity on the journey to making the networked digital power plant a reality. In 2018 Voith Hydro founded the OnPerformance.Lab: Here, Hydro specialists analyze operating data from hydropower plants and provide specific action recommendations for improving productivity, avoiding unplanned shutdowns, and optimizing plant security. Numerous hydropower plants already use analysis services such as remote support and Asset Health Assessments from the OnPerformance.Lab. The evaluation is performed by aggregating several hundred operating signals and derived characteristics into standardized diagnostic ratios, making it possible to display the current technical health status of a plant simply and clearly. In addition, initial individual optimization approaches are defined within the scope of co-development projects, according to the plant type. The high level of interconnectivity offered by the individual systems permits automated analysis – a unique design feature. The combination of new IIoT (Industrial Internet of Things) solutions such as our acoustic monitoring system and data analytics transforms the system into an intelligent hydropower plant.

Furthermore, the focus is on optimizing the maintenance, repair, and operation process with proprietary software and service solutions. In addition to developing purely data-based approaches to pinpoint predictions of unplanned outages or maintenance work, development of new sensor technology was driven forward in the reporting period: A new approach was piloted that enables the measurement of material loss from impellers due to abrasion or cavitation. This makes it possible to extend the service life of turbine runners and lower maintenance costs.

Long service life, repairability and recyclability – maximum availability is our goal

A decisive quality characteristic of machines and systems in the Group Division Voith Hydro is their long service life – and this is also an integral part of plant specification. Hydropower plants are designed for a specific number of operating cycles, which generally guarantee a service life of at least 40 years.

As part of our HyService activities we support power plant operators in maximizing the useful life and availability of their facilities. During inspections and repairs (e.g. cavitation repairs or generator rewinds), we take care to recondition all existing components for further use wherever possible. In the case of modernizations, generally due after 30 to 40 years, we plan to achieve the best possible improvement in plant efficiency together with our customers, while preparing operation-critical parts of the plant for further usage. In particular, the diagnostic evaluations of plant operating data on the current condition of systems, sub-systems, and components of hydropower plants support plant operators in the safe operation of their plants and thus also provide the option of extending runtimes until rehabilitation measures at the fundamental level are required and carried out.

In order to raise resource efficiency even further and improve the repairability and therefore longevity of products, our Voith Hydro Group Division employs an increasing number of modular mechanical engineering models as well as the targeted use of components constructed for and proven in earlier projects. In 2022, for example, the ‘neutral bill of materials’ for modularized components will be used for the first time, making it possible to reuse identical designs worldwide with little effort. This is based on our objective of not only designing products and machine components for multiple use, but also making them easy to use. At the same time, reusing designs tested and proven in operational experience allows us to guarantee the quality of our products. Consequently, we ensure that our products are modularized by using as many identical components as possible and by ensuring the best possible qualification of our supply chain partners, thus guaranteeing optimal product quality. We were able to provide this proof across regions in the first projects under execution.

The most important goal for Voith Hydro with regard to material utilization is the consistent reduction of material costs. The biggest lever for this is of a technical nature: In fiscal year 2020/21, for instance, around 60 % of savings were achieved through technical measures that resulted in an improvement in material efficiency. Examples of this are the avoidance of waste due to punching and laser-cutting generator sheets by suppliers optimizing roller widths, using burnout waste to manufacture large welded structures for the production of transport stiffeners, and designing cast and forged semifinished products to be close to their final shape and thereby reduce machining work.

Not least thanks to their very long operating times, the recycling of materials in a hydropower plant is a cross-generational topic. The majority of the materials used in a hydro plant can be very easily recycled, since these are predominantly steel and copper. For example, the proportion by weight of recyclable materials in the machine sets is more than 95 %. Thanks to the plant’s long service life, the energy consumption required for recycling is only of minor significance in the total energy footprint. Examples of the service life of hydropower plants being extended significantly through modernization are the works at the power stations in Drakensberg (South Africa) and Töging am Inn (Germany).

In the reporting year, Voith Hydro modernized three generators at the Drakensberg pumped storage power plant (1,000 MW) in South Africa for its customer ESKOM and then successfully recommissioned them. They are now designed for another 40 years of operation and thus also demonstrate the ease of repair, resource efficiency, and enormous longevity of our systems. Particularly noteworthy is the technical concept of modernization, which has improved the performance of the machines thanks to selected measures such as a reduction in machine operating temperatures and vibration. The majority of the components of this power plant, which has been in operation since 1981, did not require any machining at all, despite the long period of operation.

The hydropower plant in Töging am Inn in Bavaria began operation in 1924 and provides annual power generation of 564,600 MWh. Since the fall of 2019, the power plant has been remodeled and renewed by its operator, VERBUND. In April 2021, the stator (diameter 8.2 meters, weight over 100 tons) of the first of three 55 MVA generators was delivered, with which Voith is helping to increase the energy production of the almost 100-year-old power plant on the river Inn by 140,000 MWh as part of a renewal project. This project also shows that the majority of the power plant components can continue to operate smoothly even after many decades.

Fact base
Further information on social and environmental impacts – Voith Hydro

Voith Paper

As a pioneer in the paper industry, the Group Division Voith Paper aims to optimize the paper production process and enable the efficient use of resources in production. As a full-line supplier, Voith Paper delivers an integrated product portfolio from a single source. Its products and components reflect its experience as a process provider, helping to increase the capabilities and efficiency of the entire paper production process while boosting our customers' productivity and profitability through reduced resource consumption. Thanks to Papermaking 4.0, paper manufacturers can optimally interconnect their equipment and raise their competitiveness through the effective and secure use of the data generated.

Product group	Share of revenue of Group Division in %
Projects • New facilities – paper machine • New facilities – stock preparation • Rebuilds	40
Roller shells and clothing • Paper machine clothing • Roll shells • Press sleeves	30
Products & Services • Spare parts • Performance-enhancing components • Services: maintenance and repairs, training, and audits • Smaller modifications to facilities	30

Trend analyses – strategy for a sustainable product portfolio

The megatrends of decarbonization, digitalization, and the circular economy are key components of the future scenarios for the Voith Paper business segment that were developed as part of the Group-wide Scenario Foresight Project. Voith Paper has transposed these into strategic goals for 2025 and defined further objectives through to 2040. In addition, trend developments are systematically recorded and incorporated into portfolio decisions for new developments as well as business development. Accordingly, Voith Paper aims to offer sustainable and efficient paper production technologies from a single source, and to enable process and technology advances for new low-carbon paper mills. We intend to continue further reducing the environmental impacts of paper production while increasing plant cost-effectiveness.

Voith Paper aims to generate the greatest added value for its customers through maximum resource-friendliness in operation and efficiency in plant design. To Voith Paper, resource conservation means above all reducing the specific consumption of freshwater as well as electrical and thermal energy per ton of paper produced. It also means reducing fiber loss and wastewater.

As an example, Voith Paper has already identified the following reduction potentials for corrugated board papers with an average basis weight of 130 g/m^2 by 2025 and intends to leverage these optimally:

1. Reduction in energy consumption by 10 %
2. Reduction in CO_2 emissions by 25 %
3. Reduction in freshwater consumption by more than 50 %

Moreover, Voith Paper is always looking for opportunities to increase the recycling rate of its own production processes. This objective applies to all new products developed by the Group Division Voith Paper. To further optimize the operational reliability of our customers' own paper facilities we are also working on the automation of manual process interventions in hazardous areas.

Sustainability criteria already considered in product development

The product development process in the Group Division Voith Paper follows the stage-gate process. In the development phase, every product undergoes an assessment that examines the following key sustainability parameters: water, energy, fibrous raw material, quality, and efficiency. The new Voith Paper strategy focuses on six further key business segments: new facilities, spare parts, wearing parts, services, digitalization, and rebuilds. This will enable us to maintain an even better view of the complete product lifecycle in the development stage in future. Safety, efficiency, and sustainability are key differentiation criteria, and are of paramount importance in generating customer benefit. We are driving these topics forward in joint development partnerships with our customers to assure high sustainability and safety standards. This approach also provides the basis for modifications and improvements that help our customers save resources in paper and cardboard production while minimizing the loss of fibrous raw materials. We are also working on avoiding production disruption at paper manufacturing facilities resulting from adhesive contamination of reused wastepaper. For example, sensors are being developed to detect and quantify agglomerated adhesive contaminants that are finely distributed in water circuits. They serve as the basis for fully automatic control concepts that reliably keep impurities

below a critical level to avoid production disruptions. At the same time, it minimizes fiber losses in the sorting processes. A further focus is developing the ability to manufacture high-value, robust packaging from recycled fibers with minimal fresh fiber input.

Megatrend decarbonization – energy consumption and greenhouse gas emissions

Worldwide, the paper industry is facing the challenge of significantly reducing CO_2 emissions. This applies especially to Europe where, in its Roadmap 2050, the Confederation of European Paper Industries (CEPI) aims to achieve a reduction in CO_2 emissions of 80 % in comparison with 1990 levels – an enormous challenge for the entire paper value chain. The Green Deal agreed by the EU envisages CO_2 neutrality in the EU by 2050, and recently proposed amendments to the EU's 2030 Climate Target Plan stipulate a 55 % reduction in greenhouse gases versus 1990 emission levels by 2030. Voith Paper wants to contribute to mastering this challenge and pursues the goal of only developing products and services that will have a positive impact on customers' energy efficiency and production costs in future.

In four defined focus areas, technologies and processes will be developed or optimized with the clear goal of cutting CO_2 emissions and conserving resources in paper production:

1. **Process improvements and technologies:** The ongoing further development of products and technologies is aligned with our goal of lowering energy consumption and is already making an important contribution to reducing CO_2 emissions. For instance, innovations in roll covers reduce energy consumption in paper production. The development of a new industrial cleaning product is also playing its part: The completely new design reduces energy consumption by 30 % while enabling a significant increase in throughput – without any adverse effect on cleaning performance. In addition, a modified weaving process developed by Voith was used to produce special coverings for drying sections of the paper machine. In Voith production, these reduce manufacturing time for coverings by 20 %, also reducing energy consumption in comparison to standard coverings. Voith Paper has also developed an innovative drying system due to new manufacturing methods. The HelioX radiation grille features new manufacturing processes and special coatings that enable significantly higher energy efficiency. With these new, more efficient high-performance emitters, total gas savings of 125,000 MWh can be achieved over the next five years.
2. **Digital solutions:** Digitalization solutions and smart, AI-based process controls are already delivering efficiency and availability improvements at paper production facilities. In future these will make an even greater contribution to reducing CO_2 emissions and conserving resources. Decisive factors will be the efficiency of the machines used, followed by the optimization of paper production processes. Our OnView.Energy solution visualizes the energy consumption and CO_2 emissions, offering a basis for consistent energy optimization.
3. **Renewable energies and energy storage:** A further key focus area providing great strategic leverage is the use of energy from renewable sources, as well as from residues and production wastewater. Today, Voith is already using anaerobic reactors to purify water and generate biogas, reducing the share of energy from fossil fuels and contributing to the decarbonization of paper production. Energy storage technologies create the opportunity to minimize energy losses further and to produce cost-effectively – even in difficult operating conditions, such as fluctuations in the availability or price of renewable energies. Although still in the early stages of development, CO_2

storage technologies (Carbon Capture & Storage) can also make an important contribution to reducing CO_2 emissions in the future.

4. **Innovations set the course in paper production:** Last but not least, even the very mature industrial process of paper production offers the potential for significant reductions in energy consumption and therefore also in the quantity of CO_2 emitted. To do so, fundamental and possibly also disruptive new developments will be required. As an example, Voith Paper is an active partner in a project for a model factory in the town of Düren in North Rhine-Westphalia. This project was initiated by the paper industry, supplier industries, and by universities and institutes, in order to research CO_2-neutral paper production and put the findings into practice at pilot-plant scale.

Megatrend digitalization – an opportunity for differentiation

Digitalization offers Voith Paper the opportunity to use its core strengths to differentiate itself even more clearly from the competition. The digitalization of highly complex paper production processes will determine competitiveness in the future. In the project business, Voith Paper aims to set the standards in plant engineering required for scaling and sustainable implementation of digitalization by incorporating digital thinking at an early stage. The focus here is on the development of smart products and cloud-based data analysis techniques. The aim is to prepare both instrumentation and automation for the digital age under the label Papermaking (PM) 4.0 Ready. For instance, Voith Paper is working on increasing the availability of paper machines as well as improving process efficiency, which also includes predictive maintenance solutions. One example is the Talking Roll: Here, sensors are used to measure operating data on rolls, which is then used to determine the safe operating window for predictive maintenance using cloud-based data analysis techniques. In addition, the system indirectly serves to complete the higher-level data sets required for the efficient management of paper production processes. A further driving force of the digital portfolio in the Paper Division are the OnEfficiency products that can help customers save fiber, chemicals, water, and further raw materials when operating their facilities.

Circular economy principle – using resources efficiently

Voith Paper has had many decades of market success with recycling technology for wastepaper as a raw material for paper production, for wastewater, and for rejects. Today, the Group Division leads the market in feedstock preparation solutions and generates more than 50 % of its sales with paper production plants that process recovered paper. In the stock preparation sector, paper recycling plants account for almost all sales.

The paper value chain currently enjoys high stability and offers a high recycling rate, which is around 60 % worldwide and over 72 % in Germany. To expand this share and to continue to close the cycle, optimized technologies for feedstock preparation are being developed. It is thereby important to develop additional process steps or to customize processes in order to safeguard the use of recycled paper in paper production. A particular challenge regarding recyclability is the loss of large amounts of graphic paper used in printing newspapers and magazines, for example. In order to offset the resulting lower strength potential of the used-paper mix and to contribute to maintaining the recycling loop, Voith Paper is working on new solutions to improve resource efficiency, and more specifically material efficiency. This includes hard nip sizing, for instance, which enables a reduction in the required starch spray application

and thus the use of fewer raw materials and less drying energy. Furthermore, the control module OnEfficiency.Strength allows lower fiber consumption without affecting the properties of the product.

For more information
4evergreen

Voith Paper is part of an industry consortium of around 80 well-known companies throughout the entire fiber-based packaging value chain. The initiative aims to increase the recycling rate of fiber-based packaging from 72 % to more than 90 % by 2030 and to reduce CO_2 emissions in the packaging lifecycle.

Voith Paper products are developed so as to achieve both low fiber loss and a reduction in reprocessing chemicals. The area of plastic packaging provides an opportunity to replace plastic packaging with paper and cardboard products, which are highly attractive due to their very good recycling properties. This requires the further development of paper and cardboard boxes so that they can assume the barrier function of plastics, repelling water, fat, and gaseous substances while at the same time retaining their recyclability. The application of such barriers as a continuous thin film is a major challenge that we are working to meet, together with our customers. To this end, Voith has made substantial, multi-million euro investments in pilot facilities for paper calendaring as well as for the application and drying of barrier layers on the paper. These map the industrial process 1:1. With the help of these pilot facilities we are seeking the optimal process engineering concepts and set-up parameters for the different barrier formulations, together with our customers. We are also evaluating the recyclability of the barrier-coated papers.

Besides energy use, water withdrawal is the key factor in the papermaking process – from both an environmental as well as an economic standpoint. In addition to the successful HydroSeal and FilmLube products, the newly developed CleanLine Excell can save a large quantity of water when cleaning the surfaces and structures of forming and press felts. The new cleaning system uses 95 % less water, making it much more effective than conventional cleaning systems. The need for chemical cleaning is also significantly reduced.

The concept of the Zero Effluent Mill Process is of particular importance for progress towards a circular economy. This project, in which Voith Paper is involved together with other manufacturers of packaging papers, is expected to show that a paper facility can operate without any resulting wastewater and with a minimal freshwater input of only around 1.5 m^3 per ton of paper produced. With an annual plant production output of 750,000 t paper, this equates to annual freshwater savings of around 3.75 million m^3. The recent realization of this AquaLine Zero concept by Voith as part of a new plant project with ProGroup AG confirms the achievability of the targets set and shows how a significant reduction in water and wastewater volumes can be achieved through modern process design.

Longevity of products through repairability, upgradability and recyclability

With regard to the circular economy, it is essential to ensure our plants can be repaired and upgraded to keep them working reliably and efficiently for decades. Together with our customers, we take great care early on during plant installation to ensure optimal operating conditions in this respect. Special service audits offer the opportunity to check, prepare and repair whole sections. For example, buildup welding of rotors for stock preparation machines can be used to improve operating conditions also in terms of energy and raw material consumption. Regular maintenance and the appropriate

documentation deliver an overview of plant condition, also contributing to the optimal operation and improved service life of the plant. Innovative products such as the OnCare.pm Portal and ID tagging enable Voith as a service partner as well as a spares and wearing parts supplier – and equally the customers themselves – to optimize asset management (rolls, QualiFlex sleeves and fabrics). Logically, this helps prevent plant downtime due to the failure of components that are inadequate or have been serviced too late. As a result, Voith Paper's concept is designed holistically and can also integrate competitors' assets, thus enabling the efficient use of resources in wearing-parts logistics. Through mechanical repairs and upgrades of the rolls in our workshops or at customers' sites as part of our mechanical roll service, we help to significantly extend the service life of the rolls in paper machines – a service that is increasingly in demand and that will allow this segment of our business to grow further.

Fact base
Further information on social and environmental impacts – Voith Paper

Voith Turbo

The Group Division Voith Turbo specializes in intelligent drive solutions, systems, and pioneering service solutions. Customers from numerous sectors such as oil & gas, energy, mining and mechanical engineering, marine technology, as well as rail and commercial vehicles rely on Voith's cutting-edge technologies and comprehensive expertise.

Product group	Share of revenue of Group Division in %
VT Mobility Of which Rail (43 %)	67
VT Industry Of which wind generators (7.5 %)	32
VT Others	1

Strategy for a sustainable product portfolio

Following the successful completion of the Foresight project, Voith Turbo has further elaborated the scenarios on the topics of mobility, water, and environmental technologies. Strategic search areas for innovations and technologies were derived from the findings of the project, also in the fields of alternative drives, artificial intelligence, and the use of new and hybrid materials. Specific technology roadmaps for the electrification of powertrains and further digitalization of product lines were also developed.

In addition to the Group focus on digitalization and decarbonization, Voith Turbo has set itself two additional focal points: urbanization and electrification. In the field of electrification, Voith Turbo focuses on driving forward the electrification of the driveline. In terms of decarbonization we are focusing on renewable energy technologies and low-emission transportation solutions. The aim is to transform the product portfolio in the direction of sustainable and forward-looking products. Various products or product groups already have a positive impact with regard to the sustainable use of energy and the limitation of climate change. In the area of mobility, this includes rail products, the electric drive for buses (VEDS), and the electric Voith cutting propeller for ships (eVSP). In the Industry segment, this includes products for wind turbines.

Guideline for sustainable product development

Voith Turbo set itself the goal of reducing the use of materials with negative impact on people and the environment to an absolute minimum. The product development process already incorporates this requirement right from the initial stages, with harmful materials replaced by other materials as early as the engineering phase wherever technically and economically feasible.

Voith Turbo has established a guideline for implementing sustainable product development and improved energy efficiency and climate footprint, which covers all phases of the product development process – from developing ideas, through the definition, feasibility, and development phase, to the validation phase. The three steps, Green Design, EcoDesign, and Sustainable Design, describe all material sustainability criteria and define specific requirements. For example, Green Design encompasses aspects of material selection, ingredients, packaging, reparability, and end-of-life considerations. EcoDesign explains the principles of Life Cycle Assessment according to ISO 14040 and 14044. Sustainable Design adds social and legal aspects such as fair competition and ethical conduct in business relationships.

Megatrend decarbonization – focus on energy efficiency

For Voith Turbo, decarbonization and the path towards e-mobility remain the key megatrends. These once again accelerated during the reporting period as a consequence of significantly more demanding emissions targets.

The fields of action for reducing CO_2 emissions are divided into four areas.

1. **Process improvements and technologies:** Voith Turbo is driving forward the optimization of its products' energy efficiency and is conducting Life Cycle Assessments for selected products. To meet the growing demands worldwide regarding climate protection and CO_2 reductions, our continuous further development of products and technologies to reduce energy consumption is supplemented by developments in the area of electric drives in all segments in which Voith Turbo is active: commercial vehicles, rail, shipping, and mining. Our goal is to offer our customers increasingly energy-efficient products by continuously improving their efficiency. To do so, we drive a continual improvement process in which customers are also involved. Here we always focus on the impact of using a Voith component on the Total Cost of Ownership (TCO). Energy costs account for by far the largest share, so reducing these takes top priority for all business areas at Voith Turbo. At present, further improvements in energy efficiency and the climate footprint are being made for around 80 % of the products in the Group Division Turbo.
   With AeroMaxx, for example, Voith Turbo's Industry Division offers the opportunity to reduce energy consumption and oil requirements of power generation systems' gearboxes by up to 30 %, by using new types of slide bearings and separating the lubricating fluid from the cooling oil. The energy consumption of the Veco Drive was also reduced by a third. The Vorecon NX has a 20 % higher energy efficiency in partial load operation. Further, VT Mobility is developing DIWA NXT, a new type of transmission for city buses that will enable fuel savings of 7 % (mechanical optimization) and an additional 9 % thanks to the optional mild-hybrid system (recuperation unit). Overall, this achieves a 16 % reduction in energy consumption compared to the previous transmission generation – the equivalent of 17 % lower carbon emissions.

2. **Digital solutions:** Products and solutions from the VT Mobility und VT Industry Divisions are leveraging digitalization and smart process controls to contribute to more efficient energy use and longer service life for products across all markets served by Voith Turbo. One example is BeltGenius, an innovative digital system for simulating entire conveyor systems in the mining sector, developed in the VT Industry Division. Efficient monitoring, comparison, and optimization of belt conveyors and conveying systems enable reductions in plant downtimes and energy savings of up to 10 %. Also, VT Mobility's Pilotfish system is a cloud-based analysis process for optimized fleet management that reduces fuel consumption, thus enabling additional CO_2 reductions and extending vehicles' lifespan thanks to lower wear.
3. **Renewable energies and mobility transformation:** Voith Turbo is paving the way for electro mobility. Voith Turbo Mobility is addressing this challenge by developing hybrid transmissions and a fully electric drive. The aim here is the market launch of uniquely efficient systems in the competitive environment. To this end, extensive projects have already been launched. In the reporting year 2018/19, six city buses with electric drive systems were put into operation in Schwäbisch Hall and Heidenheim; by the end of 2020 they had already covered 320,000 km, saving around 400 t CO_2 in comparison with conventional diesel engines. In addition, in February 2020 in Heidenheim the municipal bus operator Heidenheimer Verkehrsgesellschaft mbH began operating a further three e-buses equipped with Voith Electrical Drive System (VEDS) drivetrains. The Solaris Urbino 12 e-buses are equipped with VEDS. Sophisticated control algorithms make 100 % of torque available on start-up. With the delivery of the first automated freight train couplers to Swiss Federal Railways (SBB), Voith is contributing to strengthening rail freight transport, which can make a substantial contribution to lowering CO_2 emissions.
4. **Groundbreaking innovations:** For Voith, the topic of hydrogen production and utilization is of major importance. We are therefore stepping up our involvement in all relevant areas of the hydrogen value chain and covering important key areas, from generation to transport via hydrogen pipelines, storage in high-pressure hydrogen tanks, and utilization by means of hydrogen fuel cells and components for the hydrogen-electric powertrain.

Megatrend digitalization – efficient systems to develop optimization potentials

Voith Turbo continues to focus on the digitalization of its product portfolio to enable even greater resource efficiency. To this end, in the reporting period Voith Turbo worked on various systems for the status monitoring of components and systems. This is intended to avoid critical operating conditions and support the reliability and long service life of products.

One example of this is the Fingerprint Project: Its purpose is to fit our equipment with intelligent monitoring systems and sensors at such an attractive price as to maximize the number of applications for which they can be used. The project is currently being trialed by various customers on universal joint shafts used in steel mills, for instance, on a Vorecon and on a VECO-Drive. All test facilities are fully operational; we are logging the signal data and will initially use these within a Condition Monitoring System (CMS). The focus is on gathering and evaluating critical signals to learn more about the load profile of drive components, as well as their predicted service life; this enables appropriate forecasting in order to avoid premature failures. In a second project phase, data-based performance improvements will also be developed using artificial intelligence.

Circular economy principle – contribution to repairability, upgradability and recyclability

Long service life is a key quality of Voith Turbo's products and at the same time means they consume fewer resources. All Voith Turbo products are designed for a very long service life. For example, many of our products are in use for 40 years or more; they are therefore designed to be repaired and reconditioned after this period of use and remain in service for another few decades. Our industrial gear units therefore comply with ISO 6336 and American Petroleum Institute (API) 613 & 617 for durable design. Our service promise is based on supporting systems and components with spare parts over a very long period and therefore avoiding early scrapping. This remanufacturing is resource-efficient since it prolongs the products' lifecycle, while our customers benefit from lower total cost of ownership due to the longer life span. In addition, we have established our own returns business for the three largest product areas in VT Mobility (transmissions, retarders and Scharfenberg couplings). This means that products are brought back to our facilities for repairs, where they are reconditioned and upgraded where possible. In addition, most of our products are made of metals such as steel and aluminum and can therefore be recycled at the end of their lifecycle even after decades of use.

We are now also able to restore spare parts with low resource consumption thanks to newly developed additive manufacturing processes – these eliminate the need to cast new parts, for example. Digitalization in service and production also supports the overhaul of returned bus gearboxes and leads to design improvements, an intelligent spare parts supply, and significantly optimized gearbox service life. As part of modularization and value analysis, we are working on further increasing the recyclability, upgradeability, and reparability of our products. This is enabled by intelligently designing component interfaces, for instance, so that individual modules can be swapped out quickly and easily without having to replace the entire product.

Fact base
Further Information on social and environmental impacts – Voith Turbo

4.2 Responsibility in the supply chain

Management approach

In the 2020/21 fiscal year we once again purchased a broad spectrum of goods and services worth almost € 2 billion from our external suppliers and service providers. Measured by overall invoicing volume, the purchase of complete plant systems was the largest item of expenditure. As a fundamental principle we work to build long-term relationships with our business partners, and therefore closely monitor the economic sustainability of our requirements on them. In this regard, mutual fairness is the core element in establishing and maintaining a long-term, trust-based business relationship.

Fact base
Procurement markets

For the most part, responsibility for sustainability topics within Voith's purchasing activities lies with our Corporate Strategic Purchasing (CSP) Department. Besides reporting, this also includes supplier-specific compliance activities. Current topics are coordinated with representatives of the Group's divisions in cross-divisional Purchasing Committees and translated into appropriate measures. Our fundamental principles on resource conservation as well as environmental and social responsibility are anchored in our Purchasing Strategy and General Purchasing Conditions, together with our Code of Conduct. In our purchasing activities we pay particular attention to legal compliance, including those laws relating to occupational health, safety and environmental protection, and the prohibition of child and forced labor. At

Fact base
Raw materials from controversial sources

Voith, requirements for the declaration of hazardous substances and the handling of conflict minerals are also addressed throughout the Group in our GPC. By confirming the GPC, suppliers undertake to implement appropriate measures in their organization and, with regard to their own supply chain, to work towards ensuring that conflict minerals – as defined in Sections 1502 and 1504 of the U.S. Dodd-Frank Act – are not contained in the products to be supplied.

Chapter
Values and compliance

Our CoC is the core guide for all our purchasing activities. Together with our GPC, the CoC defines our understanding of partnership-based collaboration and sets out guidelines on dealing with issues regarding compliance as well as environmental and social standards. They serve as the basis for the contractual agreement with our suppliers, who are encouraged to pass on the requirements to their subcontractors. Furthermore, during the assessments and audits carried out by Quality Management, attention is paid to compliance with social and environmental standards in accordance with our Code of Conduct. By drawing up country-specific versions of our GPC we ensure that our Purchasing organization takes national particularities into account, for instance with regard to payment conditions, environmental requirements, and customs regulations. For this reason, we updated specific versions for two countries in the reporting period. This brings the total number of country-specific GPCs to 35, which are available either in the national language or in English, and in most cases even in both languages. In the coming reporting period, we will revise all country-specific versions and supplement the topics they cover.

Commitment of Honest Cooperation

In China, we use an additional query document for the Code of Conduct. The corresponding document (Commitment of Honest Cooperation) will be requested from new supplier in China in the future and is available for download on our Internet page.

Supplier management via a central IT system

Voith SLM & eSourcing (SLM = Supplier Lifecycle Management) is a central system for supplier management used by Voith Purchasing globally. Regular software updates correct and eliminate redundant and obsolete datasets. Suppliers can log in to Voith SLM & eSourcing as users directly via the Voith homepage, update their details themselves, complete survey questionnaires, upload certificates, and respond to calls for tender. The system also comprises further supplier management aspects; in addition to the Compliance and Sustainability Checks and Supplier Evaluations, these aspects include a document database for contracts and contractually related documents such as Non-disclosure Agreements (NDAs), as well as a certificate database that includes quality certifications.

Even greater transparency is achieved in the purchasing process through eSourcing – an additional function of our standardized IT system. This makes it possible for suppliers to process requests online via a unified platform that additionally interfaces with the Voith SAP system. Price negotiations on individual tenders can also be carried out online: This eliminates the need to travel to negotiate in person on site and reduces the environmental impact. A transparent and fair contract award process for all parties, internal award specifications for auctions, and eAuction Golden Rules also ensure that compliance requirements are met at all times.

We took many decisions in the reporting period in our efforts to improve our IT infrastructure, including to replace our existing supplier management system with a new IT system: PurOne. It performs all aspects of supplier management and takes an end-to-end approach to communication and interaction with our suppliers by covering all relevant processes – from registering suppliers through to confirming

orders and including further regular aspects of supplier management. It is also closely interlinked with our ERP systems. Furthermore, we plan to increase its functionality with respect to compliance and sustainability topics.

Extensive training programs

We take all possible care to ensure that our employees are always fully up to date on legal compliance requirements, adherence to standard purchasing processes, usage of our IT systems, and our supplier negotiation rules. To this end, we encourage our people to take part in Voith's global further education offer and make use of the comprehensive training program specially developed for our Purchasing organization that covers all core purchasing processes. Our further education measures include compulsory one-day, onsite training modules on Compliance, and the regular New Buyer Academy for recently hired Purchasing employees. In the onsite courses, local trainers also present key elements of the respective market culture and characteristics. Webinars and e-learning offers additionally ensure training content is globally available and constantly up to date. Seminars and webinars are delivered in all Voith regions around the world.

In the reporting year, almost all purchasing employees once again took part in training or e-learning courses. Overall, Purchasing employees received 4,522 (previous year: 6,125) training hours in the year under review. The decline in the total number of training hours received is due to the COVID-19 pandemic. Nevertheless, in Strategic Purchasing, the overall training effort was maintained at the previous year's level of around 2,500 hours.

Ongoing compliance training was also carried out regularly in the reporting year. These mandatory events for Purchasing employees focused on the rules of the Code of Conduct, the relevant anticorruption laws, competition law, and occupational safety regulations. All relevant information on the topics of compliance and sustainability, the Voith Code of Conduct, the GPC, and documents on packaging and logistics guidelines, empty container requirements, etc. are publicly available on the Voith website within the supplier ecosystem.

Fact base
Scope of training

Consistent response to violations

If a supplier violates applicable laws or the Voith Code of Conduct, or loses its creditworthiness, our Purchasing organization will carry out an in-depth investigation or terminate the business relationship immediately, and the supplier concerned will be placed on the Group's central blacklist. Violations of Voith's occupational safety, health, and environmental protection standards can also trigger Group-wide blacklisting. Suppliers as well as all other external stakeholders can also report violations of sustainability standards in the supply chain on their own initiative. Such procedures also take place in coordination with the Voith Legal Department in order to be able to assess the violation from a legal and compliance perspective.

Chapter
Values and compliance

We have defined and implemented a specific process for this, which defines the appropriate threshold levels and also sets out specific reporting structures on local and central levels. Violations are reported differently depending on their severity: While minor violations are reported to the local Compliance

Officers, with major incidents the Compliance Officers of the respective Group Division are consulted. In cases of corruption or particularly serious incidents, the central Compliance Committee is called in.

The actual blacklisting is then carried out by Voith's central Master Data Governance Department, which has had organizational representation in all Voith regions since 2019 and holds technical responsibility there. To this end, a central Master Data Governance System is being introduced to support the processes technically. This project started in the 2018/19 fiscal year and is now being progressively implemented as part of activities to improve Voith's IT infrastructure.

Checks prior to establishing a business relationship

Led by the Master Data Governance Department and supported by Purchasing staff, various upstream Compliance and Sustainability Checks are carried out as soon as potential new creditors (suppliers) are created, even before a business relationship is established. The first step is to determine whether the supplier in question comes from a risk country (Critical Country Check) or is even blocked (Blocked List Check). The supplier-data consistency check, including their banking records, is carried out according to the dual control principle. In addition, Purchasing conducts an integrity check when a new creditor with a purchasing volume of more than € 25,000 is created. At the same time, checks are carried out with the aid of publicly available data to determine whether compliance incidents have occurred in the past.

Our social and environmental compliance approach for suppliers

Critical country check / integrity check	Supplier self-assessment	CoC integral to General Purchase Conditions	Compliance questionnaire	Supplier evaluation / audits
• All suppliers are checked against critical country lists • The integrity check is an essential part of the creditor registration process (master data management) • It ensures that a supplier actually exists and that no instances of fraud, corruption, or child labor occurred. Furthermore, creditworthiness checks/ratings are obtained in relation to the planned order volumes	• The supplier self-assessment is a functionality of the Voith SLM system • It depicts the requisition of standardized statements (general and technology-specific) from our suppliers including their level of certification (quality, environmental, energy and industrial safety, ISO, etc.)	• The General Purchase Conditions (GPCs) also require compliance with statutory provisions and laws and prohibit bribery, corruption, and child or forced labor • For Chinese suppliers all suppliers are explicitly required to sign the Voith CoC	• The compliance questionnaire is part of the Voith SLM system • It contains mandatory questions about compliance which must be answered by each relevant supplier. Additionally, suppliers must appoint a contact person for compliance issues at their companies • Social compliance (child labor, human rights, etc.) • Environmental compliance (work in progress)	• The supplier audit questionnaires of the different GD quality departments contain chapters with compliance and sustainability questions, which must be answered during a supplier audit or a site inspection • Scope and frequency of the audits are defined by the GDs
All suppliers/>€ 25,000 order volume	**Selective**	**All suppliers with purchase order**	**Majority of supply base**	**Majority of supply base**

CoC = Code of Conduct (Verhaltenskodex)

SLM = Supplier Lifecycle Management

GD = Group Directive (Konzernrichtlinie)

With the exception of one-time sellers (up to a yearly volume of € 5,000)

Self-assessments reduce risks

To minimize risks in the overall purchasing process we require regular Compliance and Sustainability Self-assessment documentation from our suppliers. A standardized Group-wide questionnaire ensures that the relevant data are collated and processed in a logical and optimally coordinated way. In the reporting period we expanded the scope of our Compliance & Sustainability questionnaire to include occupational safety and environmental protection aspects (such as ISO 45001) as well as the topic of information security. In North America we also ask our suppliers questions regarding minority inclusion. In addition, we are testing a third-party vendor's offering to identify minority categories of companies in North America. Alongside material-specific questionnaires, the Supplier Self-assessment on HSE topics complements our Supplier Self-assessment initiatives.

Fact base
Supplier Self-assessment

As at the end of the reporting period, the system already contained a valid Compliance and Sustainability Check for over 7,414 Voith suppliers. The suppliers assessed thus represented 68 % of our overall supplier expenditure in the 2020/21 fiscal year (previous year: 64 %) – a significant improvement driven by the strengthening of our survey activities in the reporting period.

Our employees in the specialist departments work together with our Purchasing staff to assess our active suppliers, complementing their Supplier Self-assessments. A standardized procedure with transparent criteria ensures cross-Group comparability of the results. We are progressively switching to a case- and classification-based assessment built around transparent criteria that are standardized across the Group, as this increases the comparability of results. There are currently over 554 individual evaluations for 464 defined suppliers, which can be viewed worldwide in the system. The regular supplier assessments for the reporting period had not yet been completed by the editorial deadline. The topic area of sustainability is also included as a criterion in this supplier evaluation; here, the weighting differs depending on the overall scope of the criteria set. In addition to working conditions and occupational safety standards, occupational health and environmental protection are also assessed.

Furthermore, the Sustainability Ratio shows our internal specialists' subjective assessment of our suppliers regarding their compliance with environmental and social standards. The business partners we assessed in the reporting period reached an average ratio of 86 %, which broadly matches the ratio achieved in the previous year.

Fact base
Supplier evaluations, Supplier compliance, Supplier risk assessment

The uniform supplier classification methodology established in the 2018/19 fiscal year was further implemented in the IT system; Purchasing specialists classify suppliers at least once a year regarding their significance in the supply chain.

Material-specific recycling

To promote the principle of the circular economy, Voith Purchasing increasingly sources recycled materials by following a parts- or material-specific approach. Selected examples from Voith Corporate Purchasing of materials that can be bundled reveal the great significance we attach to this topic in individual areas and procurement fields. For example, in Voith's procurement of steel as a raw material, the share of recycled steel already exceeds 70 %. Even low-value, high-purchase-volume materials – known as C-parts – that Voith procures externally are made predominantly from recycled materials. The strategic goal of Central Steel Purchasing is to increase the recycling rate for steel purchases to more than 85 % in the next three to five years.

GRI Index

General disclosures

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102-5	Ownership and legal form		8
102-6	Markets served		Fact base: International focus (84)
102-7	Scale of the organization		9–10 Fact base: Economic indicators (84) Fact base: Employee structure (87–88) AR 2021: 88–89
102-8	Information on employees and other workers		24 Fact base: Employee structure (87–88) Fact base: Employees by employment type (88)
102-9	Supply chain		72–73 Fact base: Procurement markets (105)
102-10	Significant changes to the organization and its supply chain		AR 2021: 45–61
102-11	Precautionary Principle or approach	As a family-owned company with a long-term focus, Voith is committed to a precautionary approach. This is anchored in our management and Group Directives, for example in the Health, Safety & Environmental Protection (HSE) Group Directive.	
102-12	External initiatives		19; 42; 51 Fact base: Raw materials from controversial sources (105)
102-13	Membership of associations		Fact base: Memberships and association (85)
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102-14	Statement from senior decision-maker		4–6
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102-45	Entities included in the consolidated financial statements		108 – 109 AR 2021: 96 – 97
102-46	Defining report content and topic boundaries		14 – 15
102-47	List of material topics		14 – 15
102-48	Restatements of information		108 – 109
102-49	Changes in reporting	There were no significant changes in the list of material topics and boundaries compared to the reporting period 2019/20. The Voith Sustainability Report 2020 provides information on changes from previous reporting periods.	
102-50	Reporting period		108 – 109
102-51	Date of most recent report	The Sustainability Report 2020 was published on May 7, 2021.	
102-52	Reporting cycle		108 – 109
102-53	Contact point for questions regarding the report		111
102-54	Claims of reporting in accordance with the GRI Standards		108 – 109
102-55	GRI content index		77 – 83
102-56	External assurance	This report has not been externally audited.	

Topic-specific standards

Disclosures		Comment	Reference
Economic performance			
Economic			
103/201	Management approach		8 – 10 AR 2021: 20 – 23
201-1	Direct economic value generated and distributed		Fact base: Economic indicators (84) Fact base: Taxes (85) Fact base: Donations and sponsorship (86) Fact base: Expenditures for employees (89) AR 2021: 90 – 91
201-3	Defined benefit plan obligations and other retirement plans		AR 2021: 145 – 153
201-4	Financial assistance received from government	No significant financial assistance in the reporting period.	

Disclosures		Comment	Reference
Anti-corruption			
103/205	Management approach		15–19; 72–76 Fact base: Escalation paths (85) https://voith.com/corp-en/about-us/compliance.html
205-2	Communication and training about anti-corruption policies and procedures		15–18 Fact base: Compliance training (85)
Anti-competitive behavior			
103/206	Management approach		15–19; 72–76 Fact base: Escalation paths (85) Fact base: Breaches of compliance regulations (85) Fact base: Supplier compliance (106) https://voith.com/corp-en/about-us/compliance.html
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	For reasons of confidentiality, the number and type of legal actions are not communicated externally.	
Environmental			
Materials			
103/301	Management approach		39–41; 46–49; 76
301-1	Materials used by weight or volume		46 Fact base: Materials used (99)
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Energy			
103/302	Management approach		13; 39–45; 58–72 Fact base: Certifications (94) Fact base: Environmental goals (95)
302-1	Energy consumption within the organization		43–45 Fact base: Energy consumption anf GHG emissions recording methodology (95) Fact base: Total energy consumption (96) Fact base: Direct energy consumption: Scope 1 (97) Fact base: Production-related energy consumption: specific Scope 1 and 2 (97) Fact base: Electricity mix (99)
302-2	Energy consumption outside of the organization	We report our Scope 3 emissions in detail on our freely accessible CDP profile: https://www.cdp.net/en/data.	Fact base: Total energy consumption (96) Fact base: Calculation method for CO_2 emissions of products in the use phase (103)
302-3	Energy intensity		43–44 Fact base: Production-related energy consumption: specific Scope 1 and 2 (97)
302-4	Reduction of energy consumption		43–45 Fact base: Energy saving measures and further potentials (97)
302-5	Reductions in energy requirements of products and services		59–62; 65–67; 70–71 Fact base: Further information on social and environmental impacts – Voith Hydro (104) Fact base: Further information on social and environmental impacts – Voith Turbo (104–105)

Disclosures		Comment	Reference
Water			
103/303	Management approach		39–41; 49–50; 68 Fact base: Certifications (94) Fact base: Environmental goals (95)
303-1	Interactions with water as a shared resource		49–50
303-2	Management of water discharge-related impacts		49–50
303-3	Water withdrawal		49–50 Fact base: Water withdrawal (101) Fact base: Freshwater-saving measures and further potentials (101)
303-4	Water discharge		50 Fact base: Wastewater by method of discharge and quality (102)
Emissions			
103/305	Management approach		13; 39–45; 52; 58–72
305-1	Direct (Scope 1) GHG emissions		43–44 Fact base: Total GHG emissions (98) Fact base: GHG emissions: Scope 1 (98)
305-2	Energy indirect (Scope 2) GHG emissions		43–44 Fact base: Total GHG emissions (98)
305-3	Other indirect (Scope 3) GHG emissions	We report our Scope 3 emissions in detail on our freely accessible CDP profile: https://www.cdp.net/en/data	Fact base: Total GHG emissions (98) Fact base: Calculation method for CO_2 emissions of products in the use phase (103)
305-4	GHG emissions intensity		Fact base: GHG Emissions: specific Scope 1 and 2 (98)
305-5	Reduction of GHG emissions		41–43; 59–62; 65–67; 70–71 Fact base: Measures for reducing GHG emissions and their development (98)
305-6	Emissions of ozone-depleting substances (ODS)		Fact base: Air pollutants (99)
305-7	Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions		Fact base: Air pollutants (99)
Effluents and waste			
103/306	Management approach		39–41; 46–49 Fact base: Environmental goals (95)
306-1	Waste generation and significant waste-related impacts		46–49
306-2	Management of significant waste-related impacts		46–49; 63–64; 67–69; 72; 76 Fact base: Waste volume (100) Fact base: Waste-saving measures and further potentials (100) Fact base: Work materials and hazardous materials approval process (101)
306-3	Waste generated		46–48 Fact base: Waste volume (100) Fact base: Hazardous waste (100)
306-4	Waste diverted from disposal		Fact base: Waste volume (100)
306-5	Waste directed to disposal		Fact base: Waste volume (100)

Disclosures		Comment	Reference
Environmental compliance			
103/307	Management approach		15 – 18; 39 – 41
307-1	Non-compliance with environmental laws and regulations	Voith did not receive reports of any significant incidents in the reporting period.	41 Fact base: Breaches of compliance regulations (85)
Supplier environmental assessment			
103/308	Management approach		72 – 76
308-1	New suppliers that were screened using environmental criteria	Voith always takes environmental criteria into account when reviewing old and new suppliers. A separate evaluation of the proportion of new suppliers reviewed is not available.	76 Fact base: Supplier self-assessment (105) Fact base: Supplier evaluation (106)
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103/401	Management approach		23 – 26; 29 – 30
401-1	New employee hires and employee turnover		30 Fact base: Turnover (91) Fact base: New hirings (92)
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103/402	Management approach		23 – 26
402-1	Minimum notice periods regarding operational changes		25
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403-2	Hazard identification, risk assessment, and incident investigation		33 – 37 Fact base: Approach to preventing and dealing with negative health and safety impacts (94)
403-3	Occupational health services		36 – 38
403-4	Worker participation, consultation, and communication on occupational health and safety		35, 37 Fact base: Employee representation in committees (94)
403-5	Worker training on occupational health and safety		36 Fact base: Occupational safety training (94)
403-6	Promotion of worker health		37 – 38
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		33 – 37
403-8	Workers covered by an occupational health and safety management system		33 – 34 Fact base: Certifications (94)
403-9	Work-related injuries		34 – 35 Fact base: Occupational accidents (94 – 95)

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103/404	Management approach		23–24; 30–33
404-1	Average hours of training per year per employee		31–32 Fact base: Training time by hierarchical employee category (93)
404-2	Programs for upgrading employee skills and transition assistance programs		30–33
404-3	Percentage of employees receiving regular performance and career development reviews		Fact base: Training time by hierarchical employee category (93)
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103/405	Management approach		26–29
405-1	Diversity of governance bodies and employees		26–29 Fact base: Diversity in the management team and in the workforce (89) AR 2021: 9; 15 https://voith.com/corp-en/about-us/company/corporate-board-of-management.html
Non-discrimination			
103/406	Management approach		15–16; 26–29
406-1	Incidents of discrimination and corrective actions taken	Voith did not receive reports of any significant incidents in the reporting period.	
Freedom of association and collective bargaining			
103/407	Managementansatz		15–19; 25–26; 72–76 https://voith.com/corp-en/about-us/compliance.html
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Voith did not receive reports of any significant incidents in the reporting period.	72–76 Fact base: Details on upholding employee rights (89)
Child labor			
103/408	Management approach		15–19; 25–26; 72–76 https://voith.com/corp-en/about-us/compliance.html https://voith.com/corp-en/brochures_modern_slavery_en.pdf
408-1	Operations and suppliers at significant risk for incidents of child labor	Voith did not receive reports of any significant incidents in the reporting period.	18–19, 74–76
Forced or compulsory labor			
103/409	Management approach		15–19; 25–26; 72–76 https://voith.com/corp-en/about-us/compliance.html https://voith.com/corp-en/brochures_modern_slavery_en.pdf
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Voith did not receive reports of any significant incidents in the reporting period.	18–19, 74–76
Human rights assessment			
103/412	Management approach		15–19; 25–26; 72–76 https://voith.com/corp-en/about-us/compliance.html
412-2	Employee training on human rights policies or procedures		16–17; 74 Fact base: Compliance training (85) Fact base: Scope of training (105)

Disclosures		Comment	Reference
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Global respect for basic human rights is enshrined in our Code of Conduct. All investment decisions are subject to this code.	
Supplier social assessment			
103/414	Managementansatz		72–76
414-1	New suppliers that were screened using social criteria	When reviewing existing and new suppliers, Voith always takes their working practices into consideration. A separate evaluation of the percentage of new suppliers that have been reviewed is not available	76 Fact base: Supplier self-assessment (105) Fact base: Supplier evaluation (106)
Public policy			
103/415	Management approach		19–22 Fact base: Financial contibutions to political organizations (87)
415-1	Political contributions		Fact base: Financial contributions to political organizations (87)
Customer health safety			
103/416	Management approach		51–57
416-1	Assessment of the health and safety impacts of product and service categories		53–54
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Voith did not receive reports of any significant incidents in the reporting period.	
Customer privacy			
103/418	Management approach		19
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Voith did not receive reports of any significant incidents in the reporting period.	19
Socioeconomic compliance			
103/419	Management approach		15–18
419-1	Non-compliance with laws and regulations in the social and economic area	Voith did not receive reports of any significant incidents in the reporting period.	Fact base: Breaches of compliance regulations (85)

Fact base

Strategy and integrity

Our profile

Economic indicators

Economic indicators in € millions	FY 2020/21	FY 2019/20	FY 2018/19
Revenues	4,260	4,173	4,283
Operating result before non-recurring items	165	139	208
Income before taxes	80	73	138
Business area portraits in € millions	FY 2020/21	FY 2019/20	FY 2018/19
Revenues			
Voith Hydro	945	947	1,147
Voith Paper	1,776	1,805	1,660
Voith Turbo	1,457	1,337	1,398
EBIT			
Voith Hydro	8	10	50
Voith Paper	114	104	111
Voith Turbo	41	42	76

International focus

Locations by regional distribution

More information

Sales markets in € millions	FY 2020/21	FY 2019/20	FY 2018/19
Germany	583	727	715
Europe excluding Germany	1,349	1,109	1,184
Americas	965	1,045	1,214
Asia	1,227	1,168	1,032
Other	136	124	138
Sales markets in %	FY 2020/21	FY 2019/20	FY 2018/19
Germany	14	13	17
Europe excluding Germany	31	33	28
Americas	23	21	28
Asia	29	30	24
Other	3	3	3
Major sales countries in € millions	FY 2020/21	FY 2019/20	FY 2018/19
Germany	583	727	715
China	758	639	590

Strategy and organization

Employee sustainability training

A multilingual e-learning course that aims to emphasize the importance of sustainability to all employees has been available since the 2019/20 fiscal year. The course is open to all employees, and is obligatory for new job-starters at Voith Hydro. It was completed by 866 employees worldwide in the reporting year.

Memberships and associations

Voith and its Group companies currently represent their interests through 513 different association memberships, on which we spend around € 2.3 million annually in membership fees.
Voith activity in associations, by significant membership contributions:

- Verband Deutscher Maschinen- und Anlagenbauer e.V. (VDMA) (German Engineering Federation)
- Open Industry 4.0 Alliance
- Südwestmetall Verband der Metall- und Elektroindustrie Baden-Württemberg e.V. (SWM) (Baden-Württemberg Employers' Association of the Metal and Electrical Industry)
- Forschungsvereinigung Antriebstechnik e.V. (FVA) (Research Association for Power Transmission Engineering)
- Deutsches Institut für Normung e.V. (DIN) (German Standards Institute)
- Verband der Bahnindustrie in Deutschland e.V. (VDB) (German Railway Industry Association)
- Förderkreis der Deutschen Industrie e.V. (Society for the Advancement of German Industry)
- The Open Group
- International Hydropower Association (IHA)
- Paper Machine Clothing Association

Values and compliance

Compliance training

Compliance training Number of training sessions and employees trained	FY 2020/21	FY 2019/20	FY 2018/19
Management from the upper four levels, Sales, Sourcing (1 day)[1]	364	115	604
Decentralized training by Compliance Officers (1.5 hours)	825	257	600
Instruction by supervisor (0.5 hours)	1,326	805	956
Compliance Officers (2 days)	11	8	18
Scope and number of training sessions	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
Management from the upper four levels, Sales, Sourcing (1 day)[1]	20	26	29
Compliance Officers (2 days)	1	2	2
Scope and training sessions in %	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
Management from the upper four levels, Sales, Sourcing (1 day)[1]	84	100	100
Compliance officers (2 days)	93	100	100

[1] New managers at the Voith Academy were no longer included in FY 2019/20.

Escalation paths

- Compliance Officer
- Group Division Compliance Officer
- Compliance Committee
- Corporate Board of Management
- Supervisory Board

Breaches of compliance regulations

Compliance Helpdesk Number	FY 2020/21	FY 2019/20	FY 2018/19
Reports via the Compliance Helpdesk (no complaints regarding suppliers)	5	0	0
of which reported violations against environmental standards	0	0	0
of which reported violations against social standards	0	0	0

Taxes

Taxes paid by region[1] in € thousands	FY 2020/21	FY 2019/20	FY 2018/19
Germany	11,449	7,959	11,200
Europe excluding Germany	10,808	9,251	12,630
Americas	5,710	4,415	778
Asia	27,946	29,459	32,279
Other	1,503	217	1,268
Total	57,416	51,302	58,156

[1] Figures have been corrected retrospectively.

Responsibility for society

Donations and sponsorship

Donations and sponsorship in € millions	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	1.98	2.04	2.27
of which donations	0.77	0.62	1.23
of which cash donations	0.68	–	–
of which in-kind donations	0.09	–	–
of which sponsorship	1.21	1.42	1.04
Sponsorship aid by project Number of projects	FY 2020/21	FY 2019/20	FY 2018/19
Education (school, training, and science)	62	–	–
Social affairs	40	–	–
Sport	24	–	–
Culture	19	–	–
Sponsorship aid by project in %	FY 2020/21	FY 2019/20	FY 2018/19
Education (school, training, and science)	21	21	49
Social affairs	21	13	8
Sport	48	58	39
Culture	10	8	4
Sponsorship aid by region in %	FY 2020/21	FY 2019/20	FY 2018/19
APAC	8.0	7.0	3.0
EMEA	88.0	91.0	94.0
Americas	4.0	2.0	3.0
Other	0.0	0.0	0.0

Hanns Voith Foundation donations and sponsorship

Hanns Voith Foundation sponsorship aid by project in €	FY 2020/21	FY 2019/20	FY 2018/19
Science and research	67,000	50,500	61,900
Artistic, charitable, environmental, and ecological schemes	231,508	175,400	179,178
Measures aimed at international understanding and development aid	8,400	36,100	16,362
Training and education; measures based on the teachings of Rudolf Steiner	150,350	113,200	132,368
Scholarships	218,000	219,900	218,800
Total	675,258	595,100	608,608
Hanns Voith Foundation sponsorship aid by project in %	FY 2020/21	FY 2019/20	FY 2018/19
Science and research	9.9	8.5	10.2
Artistic, charitable, environmental, and ecological schemes	34.3	29.5	29.4
Measures aimed at international understanding and development aid	1.2	6.0	2.7
Training and education; measures based on the teachings of Rudolf Steiner	22.3	19.0	21.8
Scholarships	32.3	37.0	36.0

Financial contributions to political organizations

Financial contributions to political organizations in € thousands	FY 2020/21	FY 2019/20	FY 2018/19
Germany	5	0	0
Europe excluding Germany	0	0	0
Americas	0	0	0
Asia	0	0	0
Other	0	0	0
Total	5	0	0

In accordance with the specific Group Directive, donations to political parties and comparable party-political organizations and sponsorships for the activities of such political parties and organizations (e.g. events, campaigns, etc.) always require the explicit approval of the Corporate Board of Management of Voith GmbH & Co. KGaA.

Employees

Voith as an employer

Employee structure

Consolidation scope for employment figures[1] Number	FY 2020/21	FY 2019/20	FY 2018/19
Employees Group-wide as simplified FTE (without apprentices)	19,946	20,634	19,410
Employees Group-wide as headcount	20,378	21,049	19,841
of which employees included in data analysis	20,378	21,049	19,841

[1] In contrast to the procedure applied in compiling the Annual Report, in the Sustainability Report employment figures are stated as headcount instead of simplified FTEs. Consolidated companies are in the reporting scope, just as they are for the Annual Report.

Employees by age group, gender, and region[1] Number as a headcount	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	20,378	21,049	19,841
Number by gender	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
of which women	3,743	3,819	3,638
of which men	16,635	17,230	16,203
Number by age	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
of which < 30 years	2,406	2,636	2,546
of which 30 – 50 years	11,300	11,654	10,967
of which > 50 years	6,672	6,759	6,328
Number by origin	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
of which German	7,229	7,586	7,708
of which not German	13,149	13,012	12,133
Number by region	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
of which Germany	7,694	8,037	8,133
of which Europe excluding Germany	4,365	4,446	2,922
of which Americas	3,632	3,747	3,952
of which Asia	3,364	3,412	3,395
of which other	1,323	1,407	1,439

[1] Due to part-time work, the regional headcount distribution differs from that shown in the Annual Report, where the values are reported in FTE (full-time equivalents).

Number by main countries	FY 2020/21	FY 2019/20	FY 2018/19
Germany	7,694	8,037	8,133
China	2,463	2,495	2,513
USA	1,939	2,003	1,979
India	1,341	1,405	1,439
Brazil	1,323	1,103	1,358
Austria	967	1,388	953

As at the end of the 2020/21 fiscal year, 20,378 staff (previous year: 21,049) were employed by the Voith Group, 3.3 % fewer than in the previous fiscal year. Challenging market conditions led to a drop in headcount in all regions. The sharpest reductions were recorded in India (-6.0 %) and Germany (-4.3 %).

Our core workforce is structured according to the principle of commercial prudence. Workforce flexibility through the use of temporary employment enables us to manage order peaks and therefore to respond quickly and flexibly in markets that can be very volatile. The engagement of employees from external companies is governed by a Group Directive.

Employees by employment type

Full-time and part-time employees by age and gender Number	FY 2020/21	FY 2019/20	FY 2018/19
Full-time	19,220	19,845	18,727
of which women	2,921	2,999	2,870
of which men	16,299	16,846	15,857
of which < 30 years	2,301	2,533	2,449
of which 30 – 50 years	10,729	11,073	10,406
of which > 50 years	6,190	6,239	5,872
Part-time	1,158	1,204	1,114
of which women	822	820	768
of which men	336	384	346
of which < 30 years	105	103	97
of which 30 – 50 years	571	581	561
of which > 50 years	482	520	456

Temporary and permanent employment contracts[1)] Number	FY 2020/21	FY 2019/20	FY 2018/19
Permanent employment contract	18,316	19,014	17,706
Temporary employment contract	2,062	2,035	1,942

Ratio of permanent to temporary employment contracts[1)] in %	FY 2020/21	FY 2019/20	FY 2018/19
Permanent employment contract	89.9	90.3	90.1
Temporary employment contract	10.1	9.7	9.9

Ratio of direct and indirect employees to the total workforce[1)] in %	FY 2020/21	FY 2019/20	FY 2018/19
Direct employees	51.1	50.7	51.4
Indirect employees	48.9	49.3	48.6

Temporary employees[1)] Number	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	1,233	933	1,053

[1)] Reporting format has been adjusted retroactively.

In the reporting year Voith employed 1,233 workers (previous year: 933) through temporary employment agencies, which is 24.3 % more than in the year before. Temporary employment is a commonplace instrument in the sector to meet short-term order peaks. The number of permanent employment contracts increased by 1.3 % to 2,062 in the reporting year (previous year: 2,035).

Details on upholding employee rights

Collective bargaining agreements in %	FY 2020/21	FY 2019/20	FY 2018/19
Employees covered by collective bargaining agreements	63.9	67.0	72.0
of which Germany	95.9	96.0	97.0
of which Europe excluding Germany	69.3	70.0	74.0
of which Americas	48.5	54.0	80.0
of which Asia	16.5	26.0	24.0
of which other	23.2	31.0	18.0

Measures for socially responsible restructuring and job security

To avoid job losses we utilize every option available, such as deliberate hiring freezes for certain business areas or countries, the targeted use of working-hours accounts, and early retirement offers where appropriate. When making headcount reductions, we offer support for instance through advisory services and severance payments in accordance with local frameworks.

Examples of socially acceptable restructuring and measures to safeguard the future of locations:

Germany

- Despite the COVID-19 pandemic, in the reporting year we needed to deploy short-time working regulations only occasionally.
- A multi-year agreement to safeguard the future of our **Heidenheim location** has been in place since 2020, replacing the previous agreement from 2015. The central points of the agreement are headcount adjustments without operational redundancies, and investment in future topics that impact employment to safeguard the future of the location.
- An agreement between Voith and the Works Council to safeguard the future of our **Crailsheim location** has been in place for many years.
- At our **Kiel location**, negotiations are currently underway on the implementation of collective bargaining agreements of the metal and electrical industry.

At our **São Paulo, Mucuri, and Ponta Grossa locations in Brazil**, the employment relationships of all employees, with the exception of those in middle management, are governed by union agreements. A range of social benefits are stipulated in the agreements. For example, former employees continue to receive medical assistance from Voith for up to six months after the end of their employment and are supplied with food. In addition, depending on their length of service, employees who are about to retire are guaranteed that their employment relationship cannot be terminated up to 18 months prior to their departure.

Expenditures for employees

Expenditures for employees in € millions	FY 2020/21	FY 2019/20	FY 2018/19
Expenditures for wages and salaries	1,247	1,237	1,220
Expenditures for social security contributions, retirement pensions, and benefits	268.6	264.3	259.5
Expenditures for training and career development	2.3	2.8	2.9

Diversity in the management team and in the workforce[1)]

Employment ratio of people with disabilities in %	FY 2020/21	FY 2019/20	FY 2018/19
Employment ratio of people with disabilities	4.0	3.7	3.6

Diversity in the Senior Management Circle Number	FY 2020/21	FY 2019/20	FY 2018/19
Senior Management Circle	95	80	73
Proportion of women in %	6.3	6.3	8.2

[1)] New data basis. Retrospective adjustment is not possible due to redefinition.

Distribution of women and men at management levels Number	FY 2020/21	FY 2019/20	FY 2018/19
Executive management, Senior Management Circle	106	86	80
Proportion of women in %	5.7	5.8	7.5
Upper management	158	347	367
Proportion of women in %	7.6	8.9	6.8
Mid-level management	1,459	652	669
Proportion of women in %	10.1	11.5	12.4
Total (across all management levels)	1,712	1,079	1,116
Proportion of women in %	9.7	10.3	10.2

Flexible working time models

Availability of flexible working time models[1)] Number	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	17,024	14,504	12,056
of which women	3,195	2,624	2,246
of which men	13,829	11,880	9,810
of which < 30 years	1,944	1,806	1,422
of which 30 – 50 years	9,296	7,270	5,850
of which > 50 years	5,784	5,428	4,784

[1)]Number of employees for whom flexible working time models are available (e.g. flextime, saving and reducing overtime, sabbaticals)

Examples of flexible working time models:
In **Germany**, release from work for training is governed both by law and by collective agreements. In connection with this, a few years ago an additional agreement was reached with the Works Council to introduce subsidized part-time training in Heidenheim. In an "active" phase, employees can work for reduced remuneration; in a following "passive" phase, employees can utilize the time available for vocational training and continue to be remunerated.

All employees at our **locations in the USA and Canada** have a range of options available to them to structure their work insofar as their respective role allows. Having the flexibility to adapt their working hours to suit their particular needs is important for working parents, for example. In response to the new challenges posed by the COVID-19 pandemic, we also drew up a new Remote Work Policy. This will continue to offer executives with supervisory roles greater flexibility to work with employees to agree on work arrangements that meet their needs. In the USA, we have also been granting employees two weeks of additional paid vacation on the birth of their child since 2018.

In response to the COVID-19 pandemic, we expanded our Remote Work Policy as far as possible to all **locations in the South America region.** This means that around 70 % of all employees now have the opportunity to work remotely. Apprentices and interns will continue to receive full pay during the pandemic.

We are also applying remote work policies in the **APAC region** to enable us to respond to business requirements or special situations such as the COVID-19 pandemic. They ensure we are always in a position to meet customer needs and also offer the necessary flexibility for employees to become more productive and enjoy greater occupational satisfaction.

Percentage of flexible working time models in %	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	83.5	68.9	60.8
of which women	85.4	68.7	61.7
of which men	83.1	68.9	60.5
of which < 30 years	80.8	68.5	55.9
of which 30 – 50 years	82.3	62.4	53.3
of which > 50 years	86.7	80.3	75.6

Parental leave

Employees entitled to parental leave Number	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	19,940	20,351	18,413
of which women	3,686	3,746	3,505
of which men	16,254	16,605	14,908
Employees who began parental leave in the fiscal year[1] Number	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
Voith Group	360	344	356
of which women	123	99	97
of which men	237	245	259

[1] Reporting format has been adjusted retroactively.

Turnover

Employees who left the company by age group, gender, and region Number	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	2,386	2,213	1,884
of which women	350	335	373
of which men	2,036	1,878	1,511
of which < 30 years	412	392	399
of which 30 – 50 years	1,122	1,002	881
of which > 50 years	435	819	604
of which Germany	706	470	366
of which Europe excluding Germany	466	262	318
of which Americas	818	1,171	855
of which Asia	277	259	298
of which other	119	51	47
Percentage of employees who left the company by age group, gender, and region in %	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
Voith Group	12.3	11.5	9.9
of which women	9.8	9.5	10.7
of which men	12.9	11.9	9.8
of which < 30 years	18.5	17.0	16.8
of which 30 – 50 years	10.5	9.5	8.5
of which > 50 years	13.1	12.8	9.7
of which Germany	9.3	5.9	4.6
of which Europe excluding Germany	11.4	7.8	11.1
of which Americas	22.3	30.9	21.2
of which Asia	8.2	7.6	8.8
of which other	16.8	6.7	6.5

New hirings

New employee hires by age group, gender, and region Number	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	1,706	1,344	1,839
of which women	276	232	381
of which men	1,430	1,112	1,458
of which < 30 years	597	564	751
of which 30–50 years	827	602	857
of which > 50 years	282	178	231
of which Germany	375	293	430
of which Europe excluding Germany	342	281	286
of which Americas	687	496	713
of which Asia	236	220	310
of which other	66	54	100

Percentage of new employee hires by age group, gender, and region in %	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	8.4	6.4	9.3
of which women	1.4	6.1	10.5
of which men	7.0	6.5	9.0
of which < 30 years	2.9	21.4	29.5
of which 30–50 years	4.1	5.2	7.8
of which > 50 years	1.4	2.6	3.7
of which Germany	1.8	3.6	5.3
of which Europe excluding Germany	1.7	6.3	9.8
of which Americas	3.4	13.2	18.0
of which Asia	1.2	6.4	9.1
of which other	0.3	3.8	6.9

Attracting and promoting talent

Training time by hierarchical employee category[1]

Training and further education hours Number	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	118,178	128,764	243,304
of which women	37,564	23,919	50,872
of which men	80,614	104,845	192,432
of which < 30 years	16,535	19,712	43,014
of which 30–50 years	70,556	82,179	153,326
of which > 50 years	31,087	26,873	46,964
Executive management, Senior Management Circle	1,584	–	–
Upper management	2,677	656	11,130
Mid-level management	20,398	11,806	17,751
All other employees	93,519	116,302	214,423

Average training time per employee by employee category Hours	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	5.8	6.1	12.3
of which women	10.0	6.3	14.0
of which men	4.8	6.1	11.9
of which < 30 years	6.9	7.5	16.9
of which 30–50 years	6.2	7.1	14.0
of which > 50 years	4.7	4.0	7.4
Executive management, Senior Management Circle	14.9	–	–
Upper management	16.9	7.6	24.9
Mid-level management	14.0	11.8	26.5
All other employees	5.0	6.2	12.1

Number of employees who underwent further training	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	11,997	14,782	15,930

Employees who received performance and career development reviews[2] in %	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	–	90.1	92.1
of which women	–	89.2	90.4
of which men	–	90.3	92.6
Executive management, Senior Management Circle	–	–	–
Upper management	–	76.0	87.6
Mid-level management	–	92.3	94.9
All other employees	–	90.0	92.2

[1] New data basis, retroactive adjustment not possible due to redefinition.

[2] Cannot be evaluated for the 2020/21 fiscal year.

Vocational training

Vocational training Number	FY 2020/21	FY 2019/20	FY 2018/19
Apprentices and students	757	756	838
of which in Germany	499	530	534
of which at the Heidenheim location	330	334	326

Occupational health and safety

Certifications

Existing Voith location certifications Degree of coverage based on employees in %	FY 2020/21	FY 2019/20	FY 2018/19
ISO 50001	17	19	19
ISO 14001	81	79	81
ISO 9001	82	78	74
ISO 45001	81	78	81

The figures include all subsidiaries.

Approach to preventing and dealing with negative health and safety impacts

Regarding our own locations, construction sites, and products, Voith's approach to preventing negative health and safety impacts is as follows:

1. At our own locations, we continually employ the occupational health and safety system as described. We are progressively expanding this proven system of regional support to continuously improve its quality and effectiveness.
2. At our construction sites and during on-site activities with our customers, we perform risk assessments in advance. These are updated on a regular basis and involve a careful examination of many aspects, including how the various industrial technicians are coordinated in relation to safety aspects.
3. For our products and their use, we focus right from the product development stage on achieving strict compliance with regulatory requirements. In addition, our products undergo a range of test and inspection stages. We incorporate the findings from these processes, together with information from market and product monitoring, systematically into the development and enhancement of our products.

To identify and analyze work-related hazards and risks in connection with occupational safety, we have implemented a comprehensive audit system in addition to our overarching risk-management process. On the technical side, as in the previous year, we identified heavy-load handling and crane operation as the greatest HSE risks. In terms of personal hazards posed to employees, we are continuing to focus on the subject of hand protection.

Employee representation in committees

Total number of employees[1] represented on health and safety management worker committees in %	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	80	80	80

[1]Based on headcount

Occupational accidents

Occupational accidents Number	FY 2020/21	FY 2019/20	FY 2018/19
Total occupational accidents	79	68	54
of which fatal	1	0	0
of which severe	2	4	3
Frequency Rates[1]	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
Occupational accidents per million hours worked	2.1	1.8	1.5

[1]Number of occupational accidents resulting in downtime (1 day or more) per 1 million working hours

Occupational accidents – Personnel working for Voith who are not Voith employees Number	FY 2020/21	FY 2019/20	FY 2018/19
Occupational accidents	71	58	49

Since October 2017 Voith has gathered third-party occupational accident data centrally. Each incident is documented in an Incident Report and followed up. For these incidents Voith's Reporting Organization does not currently distinguish between degrees of accident severity, or working hours lost. Due to the differing data-gathering methods these values are not comparable with the data provided on Voith's own employees.

Severity Rate[1] Number	FY 2020/21	FY 2019/20	FY 2018/19
Voith Group	537.2	454.8	364.4
Germany	655.2	343.3	343.6
Europe excluding Germany	144.6	34.9	121.9
Americas	1,148.9	760.3	323.5
Asia	116.7	609.5	554.4
Other	508.1	270.6	397.1

[1] Hours lost per 1 million working hours.

Occupational safety training

Occupational safety training in %	FY 2020/21	FY 2019/20	FY 2018/19
Operations managers	90	60	ca. 100
Administrative managers	80	20	80
Trained service providers	n.r.	n.r.	n.r.

Environment

Management approach

Environmental goals

Environmental goals in %	FY 2020/21	FY 2019/20	FY 2018/19
Reduction in specific energy consumption compared to 2011/12	–28.8	–27.2	–22.1
Reduction in specific freshwater withdrawal compared to 2011/12	–32.4	–29.7	–40.3
Reduction in specific waste volume compared to 2011/12	–37.0	–35.9	–19.5

Hot-spot analysis methodology

Hot-spot analyses show the consumption (energy, water, materials, etc.) by control and analysis level (i.e. region, Group Division, location, system, process); these clearly pinpoint hot spots of high physical consumption levels and corresponding costs.

Based on this we develop project ideas for improvement, evaluate them and progressively develop them further in a stage-gate process through to implementation. We employ economic and environmental evaluation criteria in accordance with the Green Controlling cycle. We regularly review the distribution of our consumption based on varying patterns in overall conditions driven by changes in location activities, economic activities, changes to the fleet of machines and plant, etc.

Energy efficiency and climate protection

Energy consumption and GHG emissions recording methodology

In gathering data on GHG emissions, Voith follows the guidelines of the Greenhouse Gas (GHG) Protocol. With the aid of conversion factors, data on GHG emissions such as CH_4, N_2O, HCF, PFC, and SF_6 are gathered, recorded, and integrated as CO_2 equivalents.

Data are recorded and gathered monthly on all material direct and indirect energy consumption sources within the management scope. At smaller locations outside the energy management scope, data on annual energy consumption by consumption source are gathered at irregular intervals. The energy consumption figures given are adjusted for the respective reporting year based on the development of employee headcount. We derive consumption-per-capita rates differentiated by office and service units, and produce estimates based on these for our smallest organizational units. This consumption is indexed by energy consumption source according to the consumption index for our small organizational units. Direct fuel consumption due to vehicle operation is evaluated annually in Germany via a fuel card system; this covers almost 100 % of our operational area (Scope 1 + 2).

The applicable emissions factors for direct energy consumption are taken from Defra publications or Voith's own GaBi database, according to their availability. Our locations can adjust them for location-specific factors (e.g. for LPG or natural gas) with the requirement that they provide the corresponding proof, thus contributing to raising calculation accuracy. The emissions and GHG impact of refrigerants are also recorded and calculated.

The GHG emissions of indirect sources of energy consumption are calculated both on a location-specific and on a market-specific basis. The market-based emissions factors and the underlying grid mix are reported and documented annually by those locations in the management scope, based on the data supplied by the respective energy utility. The market-based data are compared centrally with location-based data from the International Energy Agency (IEA), checked for plausibility, and validated. Ecological Business Management acts in a consultancy function to Voith locations, for instance at those with complex energy sourcing through contracting or self-generation. The analysis of location-based factors provides an additional control of the reported market-based factors.

In the reporting year, the difference between the location-based and market-based GHG emissions was 18,607 t CO_2. Here, the location-based GHG factors were higher on average than the market-based factors.

We document the data-gathering and recording process as well as the level of coverage of Scope 3 emissions as part of our CDP Report.

CDP Report

Total energy consumption

Increasing data collection coverage

To achieve an even deeper understanding of our resource consumption and live up to our climate neutrality pledge, we have integrated the assessment of our smaller locations into the reporting system. These are usually service or sales offices. Based on data collation from random sampling, we have calculated per-capita rates for resource consumption at the smaller of these locations; the relatively larger of these were integrated into regular reporting. To facilitate the evaluation of developments over time, we have adjusted the data on energy consumption and greenhouse gas emissions from previous years in the rest of the chapter and in the Fact base to reflect this new level of coverage.

Total energy consumption in MWh	FY 2020/21	FY 2019/20	FY 2018/19
Energy consumption within the organization (Scope 1 and 2)	501,810	471,047	523,243
Direct energy consumption (Scope 1)	163,679	165,120	183,122
Natural gas	126,591	121,868	127,928
Heating oil	5,197	3,779	6,654
Diesel	16,280	20,281	26,642
LPG	8,891	11,133	11,535
Gasoline	4,364	4,692	5,344
Biomass / biogenic energy sources / hydrogen	2,355	3,367	5,020
Indirect energy consumption (Scope 2)	333,502	303,158	338,725
Electricity	259,758	237,994	269,223
from renewable sources	95,943	104,441	119,788
Long-distance heating	67,620	58,542	62,337
from renewable sources	4,270	n/a	n/a
Steam	6,490	6,968	7,454
from renewable sources	n/a	n/a	n/a
Energy sold	–366	–345	–288
Self-generated renewable energy	4,629	2,769	1,395
Energy consumption outside the organization (scope 3)			

We report our Scope 3 emissions based on energy consumption outside the organization in detail in our freely accessible CDP profile.

CDP Report

Direct energy consumption: Scope 1

Direct energy consumption (Scope 1) in MWh	FY 2020/21	FY 2019/20	FY 2018/19
Direct energy consumption in production	147,046	140,283	153,261

Direct energy consumption in production in %	FY 2020/21	FY 2019/20	FY 2018/19
Natural gas	89	86	81
Heating oil	3	2	4
Diesel	1	3	5
LPG	6	10	9
Biomass / biogenic energy sources / hydrogen	0	0	1
Other	0	0	0

Direct energy consumption of the Voith vehicle fleet in MWh	FY 2020/21	FY 2019/20	FY 2018/19
of which company cars[1)]	4,171	4,692	5,329
of which logistics	10,891	12,031	16,828

[1)] Company cars do not include employees' personal cars, or rental cars.

Production-related energy consumption: specific Scope 1 and 2

Specific production-related energy consumption (Scope 1 and 2) In MWh/€ million sales revenues	FY 2020/21	FY 2019/20	FY 2018/19
Specific energy consumption	89.7	91.6	99.1

Energy-saving measures and further potentials

Reduction in energy consumption as a direct consequence of conservation and efficiency drives in MWh	FY 2020/21	FY 2019/20	FY 2018/19
Energy-saving potential since FY 2011/12	8,301	6,500	17,405

In the reporting period, the following savings and reductions were achieved, amongst others:

- In Garching, the conversion of the heating supply from gas to geothermal energy saved around 1,000 t CO_2 per year.
- Process improvements in the looms in Faridabad saved 577 t CO_2 (542,085 MWh).
- In Kunshan, heat recovery for heating purposes saved 89 t CO_2 (481,303 MWh).
- We were also able to achieve further gains in the area of lighting: At the sites in Heidenheim, Hudiksvall, Kiel, and Liaoyang this achieved CO_2 reductions of 105 t (457,451 MWh).
- The improved insulation of the Production Hall façade in Rutesheim saved 9.4 t CO_2.

Reduction in energy consumption as a direct consequence of conservation and efficiency drives in GWh	FY 2020/21	FY 2019/20	FY 2018/19
Energy-saving potential since FY 2011/12	141.0	140.3	135.3
of which achieved in the FY	7.2	6.5	17.4
savings already achieved since FY 2011/12	137.6	130.4	125.2

Measures in scope on the location level are checked by the respectively responsible Ecological Business Manager for their effectiveness. Measures controlling is carried out centrally via a measures tool.

Total GHG emissions

Total GHG emissions in t CO_2	FY 2020/21	FY 2019/20	FY 2018/19
GHG emissions within the organization (Scope 1 and 2)	142,464	140,318	159,094
Direct GHG emissions (Scope 1)	32,773	33,814	37,398
Natural gas	23,272	22,424	23,542
Heating oil	1,392	1,012	1,782
Diesel	4,166	5,460	7,168
LPG	1,908	2,389	2,475
Gasoline	1,116	1,208	1,370
Biomass / biogenic energy sources	0	4	20
Coolants	919	1,318	1,040
Other renewable energy sources and captive generation of renewable energy	0	0	0
Indirect GHG emissions (Scope 2)	109,691	106,504	121,696
Electricity	90,314	87,812	101,295
Long-distance heating	15,048	14,192	16,244
Steam	4,465	4,627	4,264
Energy sold	–135	–127	–106
GHG emissions outside the organization (Scope 3)			

We report our Scope 3 emissions in detail in our freely accessible CDP profile.

CDP Report

GHG emissions: Scope 1

Direct GHG emissions (Scope 1) in t CO_2	FY 2020/21	FY 2019/20	FY 2018/19
Direct GHG emissions from production	49,491	28,019	30,329
Direct GHG emissions from production in %	FY 2020/21	FY 2019/20	FY 2018/19
Natural gas	91	83	78
Heating oil	3	2	5
Diesel	3	4	6
LPG	4	11	10
Other	–	0	0
Direct GHG emissions of the Voith vehicle fleet in t CO_2	FY 2020/21	FY 2019/20	FY 2018/19
of which company cars[1)]	1,070	1,208	1,370
of which logistics	3,044	4,588	5,690

[1)] Company cars do not include: employees' personal cars, rental cars.

GHG emissions: specific Scope 1 and 2

Specific GHG emissions (total emissions Scope 1 and 2) In t CO_2/€ million sales revenues	FY 2020/21	FY 2019/20	FY 2018/19
Specific GHG emissions (Scope 1 and 2)	33.4	33.6	37.2

Measures for reducing GHG emissions and further potentials

Reduction in CO_2 emissions as a direct consequence of conservation and efficiency drives in t CO_2	FY 2020/21	FY 2019/20	FY 2018/19
Reduction through efficiency improvement and fuel switching	–	3,300	6,003
Reduction in CO_2 emissions in %	FY 2020/21	FY 2019/20	FY 2018/19
Reduction in CO_2 emissions compared with previous year	1.5	–11.8	–9.5
Reduction in direct CO_2 emissions	–3.1	–9.6	–4.4
Reduction in indirect CO_2 emissions	3.0	–12.5	–10.9

See energy consumption reduction measures.

Air pollutants

Air pollutants[1] in t	FY 2020/21	FY 2019/20	FY 2018/19
Chlorofluorocarbons (CFCs)[2]	< 1	< 1	< 1
Hydrochlorofluorocarbons (HCFCs)[2]	< 1	< 1	< 1
Sulfur hexafluoride (SF_6)	< 1	< 1	< 1

The indicators for other air pollutants are calculated, based on LCI conversion factors, from the reported energy consumption, logistics and business-travel data. Other air pollutants from energy consumption sources generally dominate. We additionally gather data on emissions from refrigerants.

Business travel contributed 35 t (previous year: 46 t) to VOC emissions. Since fiscal year 2018/19, data on NM-VOC from production-related VOC emissions are no longer gathered due to their low relevance for Voith. At Voith these consist mainly of solvents used in coating or cleaning processes. We strive to reduce this volume continuously through efficiency and substitution measures, such as in-house distillation.

The closure of the foundry in São Paulo in fiscal year 2018/19 eliminated the largest dust emitter. There are no other significant individual emitters of heavy metals or dust.

[1] This includes air pollutants due to production, from production-related energy consumption, and from the transport of goods and business travel.

[2] Ozone-degradable substances in t CFC-11e.

Electricity mix

Electricity mix in %	FY 2020/21	FY 2019/20	FY 2018/19
Renewable resources	38.0	44.3	44.7
Non-renewable resources	62.0	55.7	55.3

Material efficiency and waste

Use of material and efficiency measures

Materials used

Materials used by weight in t	FY 2020/21	FY 2019/20	FY 2018/19
Total materials/raw materials used	159,831	187,341	197,962
of which raw material	52,262	58,931	63,968
of which semifinished products	90,750	103,275	107,327
of which packaging	13,354	20,815	21,949
of which auxiliaries	3,465	4,319	4,718
Materials used by weight in %	FY 2020/21	FY 2019/20	FY 2018/19
Renewable materials	16	11	11
Secondary raw materials	43	31	42

Voith employs country-specific recycling factors to calculate the proportion of secondary raw materials in terms of the overall amount of materials used.

Management of waste and hazardous materials

Waste volume

Reclaimed and removed waste by method in t	FY 2020/21	FY 2019/20	FY 2018/19
Total waste	28,617	28,504	36,766
Reclaimed waste total	22,811	21,217	23,216
Reused	668	237	200
Recycled	20,314	18,247	18,575
Composted	236	237	200
Recovered	1,592	2,062	3,878
Other reclamation	–	434	363
Removed waste total	5,805	6,927	13,479
Incinerated	3,167	2,904	3,098
Dumped at an external site	2,117	4,023	10,381
Dumped at a company site	–	–	–
Other removal	521	–	–

Alongside the type of waste, the locations also enter the manner of disposal in our database. Possible discrepancies are due to rounding.

Waste-saving measures and further potentials

Reduction in specific waste quantities in %	FY 2020/21	FY 2019/20	FY 2018/19
Reduction in specific waste quantities	–1.5	–20.6	5.9

Specific waste weight In t/€ million sales revenues	FY 2020/21	FY 2019/20	FY 2018/19
Specific waste weight	6.7	6.8	8.6

The individual Voith locations work continually towards specific solutions to overcome local challenges regarding waste. In the reporting period the following waste reductions were achieved, amongst others:

- Process improvements enabled 99 t of hazardous waste to be avoided at the Shanghai site.
- Reusing drums for the disposal of liquid-cooling waste saved 25 t at the Kunshan site.
- Reusing wooden freight crates avoided 18 t of wood recycling at the Appleton site.
- At the Heidenheim site, process optimization saved 2 t of hazardous waste in the production of press sieves.

At our Shanghai site there is great efficiency potential in steel processing, and we currently expect savings of over 600 t. Furthermore, in Manchester, UK we are also working on optimizing packaging material for delivery to our customers. Here we expect a saving of 36 t.

Material efficiency potential in t	FY 2020/21	FY 2019/20	FY 2018/19
Efficiency potential since FY 2011/12	9,000	8,886	9,188
of which achieved in the FY	145	47	266
savings already achieved since FY 2011/12	9,000	8,855	8,808

Hazardous waste

Hazardous and non-hazardous waste in t	FY 2020/21	FY 2019/20	FY 2018/19
Total hazardous waste	3,582	4,144	7,047
of which transported	3,582	4,144	7,047
of which imported	–	–	–
of which exported	–	–	–
of which transported between Voith locations	–	–	–
Total non-hazardous waste	25,036	24,360	29,720
Total waste	28,617	28,504	36,766

Work materials and hazardous materials approval process

At Voith, any new work material or hazardous substance undergoes central and local approval processes before introduction.

In the central approval process, a systematic and automated check is made against applicable legal regulations (e.g. the ECHA Candidate List, or REACH annexes). The downstream local approval adds workplace- and site-specific topics (e.g. water protection area, local regulatory requirements, storage location, on-site transportation, disposal). The use of centrally approved materials can therefore still be blocked at a local level for location-specific reasons.

Water

Water withdrawal

Water withdrawal by source[1] in m^3	FY 2020/21	FY 2019/20	FY 2018/19
Total water withdrawal	1,076,327	1,015,335	956,219
of which rainwater	541	1,121	599
of which wastewater procured from other companies	–	–	–
of which freshwater (< 1,000 mg/l total dissolved solids)	1,075,786	1,014,214	955,620
of which surface water	69,512	81,991	67,128
of which groundwater	626,718	538,804	493,133
of which public as well as private water treatment plants	379,556	393,419	395,360
of which other sources (> 1,000 mg/l total dissolved solids)	–	–	–

Water withdrawal by region in %	FY 2020/21	FY 2019/20	FY 2018/19
Germany	58	55	46
Europe excluding Germany	11	11	12
Americas	11	12	18
Asia	20	21	23
Other	< 1	< 1	1

Total volume and percentage of reused water in m^3	FY 2020/21	FY 2019/20	FY 2018/19
Reused water	20.2	31.0	25.5

In % of total water withdrawal	FY 2020/21	FY 2019/20	FY 2018/19
Reused water	< 0	< 1	< 1

[1] Categories are gathered centrally by means of a data-gathering process at the locations.

Freshwater-saving measures and further potentials

Specific freshwater withdrawal in m^3/€ thousands revenues	FY 2020/21	FY 2019/20	FY 2018/19
Specific freshwater withdrawal	0.25	0.24	0.22

At our sites in Düren and Shanghai a total of 13,556 m^3 of water were saved by optimizing washing processes. Apart from this, no further savings of significant magnitude were achieved in the reporting year.

Freshwater efficiency potential in 1,000 m^3	FY 2020/21	FY 2019/20	FY 2018/19
Efficiency potential in planning since FY 2011/12	818	818	806
of which additionally achieved in the FY	14	< 1	0
of which savings already achieved since FY 2011/12	813	799	799

Wastewater by method of discharge and quality

Wastewater by method of discharge in m³	FY 2020/21	FY 2019/20	FY 2018/19
Total wastewater	966,326	855,260	821,902
Total wastewater in %	FY 2020/21	FY 2019/20	FY 2018/19
of which discharged into the public sewage system	42.2	49.2	51.5
of which discharged into surface water	57.5	50.5	48.0
of which discharged into groundwater	0.3	0.4	0.5
of which reused at another company	< 1	< 1	< 1
Total treated wastewater in m³	FY 2020/21	FY 2019/20	FY 2018/19
Total treated wastewater	33,737	45,230	115,955
Total treated wastewater in %	FY 2020/21	FY 2019/20	FY 2018/19
of which discharged into the public sewage system	47.6	42.4	54.9
of which discharged into surface water	51.6	56.0	43.7
of which discharged into groundwater	0.8	1.6	1.4
of which reused at another company	–	–	–
Total untreated wastewater in m³	FY 2020/21	FY 2019/20	FY 2018/19
Total untreated wastewater	932,589	810,030	705,947
Total untreated wastewater in %	FY 2020/21	FY 2019/20	FY 2018/19
of which discharged into the public sewage system	42.0	49.6	50.9
of which discharged into surface water	57.7	50.1	48.8
of which discharged into groundwater	0.3	0.3	0.3
of which reused at another company	< 1	< 1	< 1
Wastewater quality[1] in t	FY 2020/21	FY 2019/20	FY 2018/19
Biological oxygen demand (BOD)	3.6	7.7	9.4
Chemical oxygen demand (COD)	10.8	25.2	31.9
Total suspended matter content	3.2	6.3	9.6
Heavy metals	< 1	< 1	< 1
Nitrogen	1.9	1.0	1.3
Phosphorus	< 1	< 1	< 1

The monitoring processes to measure and control locations' wastewater quality are designed to fulfill the respective local statutory requirements. The existence of monitoring processes is recorded via hse+. Currently 29 % of total wastewater volume is covered by monitoring processes.

[1] The emissions in wastewater are based on the volume of wastewater streams from Voith locations subject to monitoring, and the respective average of the measured concentrations.

Products and supply chain

Management approach

Calculation method for CO_2 emissions of products in the use phase

Voith has developed its own concept for analyzing CO_2 emissions of products in the operation phase, which is aligned with the GHG Protocol. TÜV SÜD Industrie Service GmbH was contracted to perform an independent verification of the analysis based on ISO 14064-03:2019 and with reference to compliance with the requirements of ISO 14067:2019. The calculation methods and results were verified in October 2021.

The calculations included all material products delivered in the 2019/20 fiscal year. The calculation of emissions and emission savings is based on usage scenarios and average emission factors relating to one year. Only the use phase was considered; upstream or downstream stages of the value chain such as the supply chain, product manufacture, transport, construction, and disposal of the plants were not considered.

The Paper Division includes whole facilities such as stock preparation and paper machines, as well as facility modifications. Other plant components, such as drying units, pumps and pipes that do not originate from Voith, were delimited accordingly. To calculate emissions, the paper produced was multiplied by the specific energy consumption per ton as well as a CO_2 factor and a run time of one year.

In the Voith Turbo Division, emissions resulting from the use of Voith products (transmissions, hydrodynamic couplings, retarders, and dampers) were considered. The calculation of the corresponding emissions is based on the respective efficiency or weight, depending on the product.

For hydropower and wind turbine installations, no emissions were calculated but rather emission savings. The energy fed into the grid was multiplied by the grid mix of hard coal and natural gas power plants and the Voith share, measured by the cost share in relation to the total cost of the project and a run time of one year.

R&D expenditure

Research and Development in € millions	FY 2020/21	FY 2019/20	FY 2018/19
R&D expenditure	192	189	213
Research and Development in %	**FY 2020/21**	**FY 2019/20**	**FY 2018/19**
R&D ratio	4.5	4.5	5.0

Reliable and safe products

Quality targets

- Complying with legal, regulatory, governmental, and customer requirements
- Ensuring the quality of products and services
- Reducing quality and risk costs, especially the cost of errors
- Reducing technical risk potentials and their likelihood of occurring
- Increasing efficiency and effectiveness with consistent and clear structures
- Ensuring the development and qualification of employees
- Aligning all measures with increasing efficiency and effectiveness
- Reporting and data analysis across Voith companies with the goal of reducing quality, environmental, health, occupational safety, and regulatory risk costs, as well as identifying early warning signs in terms of risk management
- Focus on preventive measures (e.g. FMEA = Failure Mode and Effect Analysis)

Product impacts by Group Division

Further information on Life Cycle Assessments carried out

Examples of LCAs performed include a fundamental analysis of Voith Paper's paper making process from 2014, an LCA for four types of hydrodynamic couplings from Voith Turbo Industry from 2012, and an LCA for drive systems with DIWA NXT (combustion engine), DIWA NXT+CRU (hybrid transmission), and VEDS (electric drive) from the Turbo Mobility Division from the 2020/21 reporting year. At Voith Hydro, a generic LCA model for hydropower plants was created as early as 2010 and evaluated in a case study for a pumped storage plant. In 2018, a detailed LCA for StreamDiver applications was carried out. In the current reporting year, work also began on preparing a Life Cycle Assessment for vanadium redox flow batteries. The available analyses of the global warming potential of our products showed that the majority of CO_2 emissions occur during the use phase. The production, transport, and end-of-life phases, on the other hand, are of little significance. In addition, Voith Turbo's analyses once again show the importance of the Group Division's electrification strategy. For example, a city bus drive system with electric propulsion causes significantly fewer emissions during the use phase than similar technologies with fossil fuel or hybrid propulsion. The same applies, among other things, to the stock preparation systems at Voith Paper: Here, up to 20 % less energy is consumed compared to competitor technology.

Further information on social and environmental impacts – Voith Hydro

Technology	Sustainability impacts	Area of application (product group)
Cavitation erosion detection: Enables statements on the intensity of material removal and/or damage to affected components, depending on their operating condition, as well as the creation of condition-based analysis reports and the derivation of recommendations for action.	• Improved reparability • Improved upgradability/ retrofitting • Improved service life technology	• Condition Monitoring System / Digital Hydro / HyService application area
StreamDiver: Enables the installation of new hydropower plants under strict environmental conditions at existing dams, locks, and irrigation dams. This allows energy potential to be used that cannot be tapped with conventional power plant concepts.	• Improved energy efficiency	• Small Hydro

Approach to noise emissions and pollution at Voith Hydro

At Voith Hydro, noise emission targets are set on a project basis in the calls for tender. Specifically with regard to noise emissions, Voith Hydro pursues the ongoing goal of predicting noise emissions increasingly accurately and defining necessary measures in advance.

An example of a project-specific measure to reduce noise emissions is the new Voith turbine gearbox for the Barrage du Seujet hydropower station on Lake Geneva. For years, the power plant could not be operated at night due to low-frequency vibrations that were clearly noticeable inside the adjacent residential area's buildings. Together with the power plant operator's technical partner, Voith developed the concept for an improved transmission arrangement. As a result, outstanding gear-system efficiency of over 99 % was achieved. In addition, it was possible to reduce noise emissions in particular to such an extent that the power plant can now be operated continuously.

Further information on social and environmental impacts – Voith Paper

Technology	Sustainability impacts	Area of application (product group)
Introduction of the **Curved Bar Refiner Plate**, whose new design significantly reduces wear of the die plates in the pulper. The service life has more than tripled.	• Improved reparability • Improved upgradability/ retrofitting • Improved service life technology	• Products & Services
After extensive fluid mechanics surveys on our pilot plants and by using 3D printing in production, we were able to completely redesign key functional components of the **EdgeExpert 2.0**. For example, its range of applications has significantly expanded to save fibers and energy for even more customers.	• Improved resource and material efficiency	• Products & Services
Green Pulping Technology: This completely new pulping concept for recycled paper is currently in the development phase. After successful testing and optimization as part of a pilot installation in the partial flow the design, automation, and manufacturing of the prototype for continuous operation in full stream was launched. Customers will commission the system in 2022. Green Pulping Technology will enable the significantly more energy-efficient pulping of recycled paper.	• Improved energy efficiency • Improved climate footprint	• Projects
ProLube / FilmLube: Freshwater consumption for lubrication spray pipes is greatly reduced, and the moisture cross-profile of the wet felts is significantly more uniform. This improves the useful life of press felts by up to 30 %. The machine environment is also safer for the plant operators, as no spray water mist is deposited, avoiding slippery walkways.	• Improved safety • Improved service life	• Rollers and covers
Smart Loop Technology for water treatment: This technology is the result of a cooperation project with Voith subsidiary meri Environmental Solutions. It enables improved cleaning of wastewater from paper factories. This reduces freshwater consumption by about 4 m^3 of freshwater per metric ton of paper. With an annual production output of 750,000 t paper, this corresponds to a saving of around 3 million m^3 freshwater per year.	• Improved environmental compatibility • Improved resource and material efficiency	• Projects
Polyurethane roller coverings: These roll covers have a significant proportion of bio-based raw materials and present unchanged excellent product properties. These have been commercially available to our customers as part of field trials since October 2021.	• Reduced carbon footprint of the product	• Projects
Forming screens: Further, a special yarn was developed that is an essential component of a forming sieve and has an optimized surface structure. When the covering is pulled over the vacuum cups used there, it allows optimized lubrication in the forming section. This reduces the power consumption of the drive motors in this process step, so that less electrical energy is required per metric ton of paper produced.	• Improved energy efficiency	• Covers

Further information on social and environmental impacts – Voith Turbo

Approach to lowering noise emissions at Voith Turbo

Voith Turbo works continuously to reduce its products' noise emissions. To this end, Voith Turbo always aims to comply fully with the technical specification for interoperability (TSI) relating to the subsystem "rolling stock – noise" (TSI Noise) according to EU regulation 1304/2014, as well as DIN EN ISO 3095 ("Railway applications – Acoustics – Measurement of noise emitted by railbound vehicles"). Other noise emission standards such as ISO/TR 11688-1/2 are also met. Examples are the Silent Vent fan wheel and the bionic gearing of final drives in the field of drive technology. Bionic toothing was developed to minimize material costs and noise emissions in gear drives. It is already being used in the serial production of rail vehicles and enables a reduction in noise emissions by up to 10 dB(A). An example of this is a new railcar transmission test stand that allows Voith Turbo to conduct detailed noise measurements, advancing the optimization of railcar-transmission noise emissions. An approach to reducing the noise generated by railcar transmissions was also developed.

Responsibility in the supply chain

Procurement markets

Regional distribution in %	FY 2020/21	FY 2019/20	FY 2018/19
Europe	61	57	56
Americas	16	18	22
Asia	23	24	21
Other	0	1	1

Raw materials from controversial sources

Due diligence in accordance with the US Dodd-Frank Act at Voith Turbo in %	FY 2020/21	FY 2019/20	FY 2018/19
Share of relevant suppliers identified for conflict minerals inquiry	52	–	–
Response rate of relevant suppliers	88	–	–

Voith Turbo is committed to taking appropriate steps within its organization in relation to its own supply chain to ensure that conflict minerals within the meaning of Sections 1502 and 1504 of the US Dodd-Frank Act are not contained in Voith Turbo products. This Group Division reports in accordance with the legal requirements of the United States Securities and Exchange Commission (SEC) on the topic of conflict minerals.

The Quality Guideline of the Voith Turbo Group Division specifies – in addition to the requirements in the GPC - further requirements for dealing with conflict minerals (see item 7.3.2 Conflict minerals). The Quality Guideline is publicly available and, in addition to providing a clear definition of conflict minerals and conflict resources, also contains detailed obligations for suppliers regarding due diligence and reporting obligations on the topic of conflict minerals as defined by the US Dodd-Frank Act.

Quality Guideline Voith Turbo

For example, we expect our direct suppliers to source 3TG from smelters whose due diligence has been certified by an independent third-party audit program, such as the Responsible Minerals Assurance Process (RMAP) under the Responsible Minerals Initiative (RMI). In addition, all Voith Turbo suppliers are required to provide information on conflict minerals in the products they have supplied. They are to use the standard Conflict Minerals Reporting Template (CMRT) of the RMI for this purpose. The CMRT complies with the IPC-1755 standard for Conflict Minerals Data Exchange and thus covers all reporting requirements resulting from the US Dodd-Frank Act.

Some of the required data is submitted digitally via the iPoint Conflict Minerals Platform (iPCMP). Voith Turbo evaluates the data in a regular review process and adopts appropriate corrective measures where any deficiencies are uncovered.

Scope of training

Training of purchasing employees globally Number	FY 2020/21	FY 2019/20	FY 2018/19
Purchasing employees	approx. 450	approx. 500	approx. 500
Purchasing employees trained	almost all	almost all	almost all
Hours of training of purchasing employees (total)	4,522	6,152	9,397

Supplier self-assessment

Suppliers who have submitted a self-assessment Number	FY 2020/21	FY 2019/20	FY 2018/19
Compliance & Sustainability Check of initial self-assessment	3,417	3,532	3,659
Initial self-assessment	n.d.	n.d.	n.d.

Suppliers who have submitted a self-assessment in %	FY 2020/21	FY 2019/20	FY 2018/19
Share of the invoice volume obtained from suppliers for whom there is a valid Compliance & Sustainability Check of the initial self-assessment	67.4	63.7	66.0
Supplier self-assessment ratio (share of the invoice volume obtained from suppliers for whom there is a valid self-assessment)	n.d.	n.d.	n.d.

Supplier evaluation

Evaluation of existing suppliers Number	FY 2020/21[1]	FY 2019/20	FY 2018/19
Evaluations (individual processes)	554	1,128	1,200
Suppliers evaluated	464	963	1,000
Suppliers audited	n.d.	n.d.	n.d.
Evaluation of existing suppliers in %	FY 2020/21	FY 2019/20	FY 2018/19
Sustainability ratio	86.0	83.2	82.8
Supplier evaluation ratio (percentage of invoice volume by evaluated suppliers)	18.0	26.7	29.0
Invoice volume in € millions	FY 2020/21	FY 2019/20	FY 2018/19
Invoice volume with suppliers with a current and approved supplier evaluation	329	479	–

Supplier compliance

Supplier compliance Number	FY 2020/21	FY 2019/20	FY 2018/19
Blocked suppliers	–	–	13

[1] The regular supplier evaluations for the reporting period had not been completed by the editorial deadline.

Only includes blocks due to violations of compliance and/or sustainability guidelines; excludes blocks owing to bankruptcy or technical quality issues.

Supplier risk assessment

Evaluation of existing suppliers

The processes implemented in the Group Divisions Voith Hydro and Voith Turbo exemplify our Supplier Risk Assessment.

For instance, Voith Turbo implemented a multi-step process for the risk assessment of suppliers. In addition to fundamental risk categories such as creditworthiness, quality, delivery reliability, competitiveness, and customer structure, the process also encompasses additional risks such as geographical location, geographical and political risk, and interruptions to supply systems.

Voith Turbo uses the VDA 6.3 Process Audit standard for Supplier Assessments and Supplier Audits. Among other things, this includes questions about occupational safety and environmental protection: These determine whether the supplier has implemented a system for occupational safety and environmental protection, and whether there is a system in place for implementing the material compliance requirements (EG 1907/2006 REACH, or Directive 2011/65/EU ROHS for electronics suppliers).

Voith Hydro carries out intensive checks on suppliers for compliance and quality over the entire product lifecycle. Prior to inclusion in the supplier database, suppliers undergo checks for integrity (including compliance and HSE criteria), financial stability, and implemented quality systems, as well as their experience of and references from working with other suppliers. Supplementary on-site audits are carried out on suppliers of key power plant components and services; these audits are carried out jointly by Quality Assurance and the Supplier Development & Support function within Purchasing. To secure the highest quality assurance, Quality Management always has the final decision in the approval process via its right to veto.

The report

Since 2011, our Sustainability Report informs our stakeholders annually about our sustainability performance. This report describes the progress made in the 2020/21 fiscal year, i.e. from October 1, 2020 to September 30, 2021. It focuses on the material fields of action for our company and our stakeholders. The report will be published on our website together with a supplementary Fact base. In addition, for many years now we also explain our sustainability activities in our Annual Reports.

In compiling our report we follow the internationally recognized guidelines of the Global Reporting Initiative (GRI). The scope of our report fulfills the requirements of the Core option of the GRI Standards. Our report was not audited externally. In 2018 we carried out an exhaustive stakeholder survey to identify the material sustainability issues and enhance our materiality analysis; this report includes those results.

Unless stated otherwise, the facts, figures, and information provided in this report apply globally to the following Voith Group Divisions: Voith Hydro, Voith Paper and Voith Turbo worldwide. In the year under review, the former Digital Ventures Division was established as a Group-wide function within the Group holding company and is no longer managed as a separate Group Division. Please refer to the Voith Annual Report for details of the Group companies covered. The degree of consolidation comprises at least 80 % of the Voith Group by revenue and headcount, and includes all of our Group's major locations. While we provide the number of employees in this report in terms of headcount, in our Annual Report we give this figure mainly in terms of FTEs (full-time equivalents); this may lead to discrepancies between the figures.

The data for the core figures provided in this report were gathered using mainly division-specific software. Figures have been commercially rounded to support reporting clarity, which may cause discrepancies between the individual totals given in the relevant tables and final Group-wide totals. In individual cases it is not yet possible to derive a three-year trend; however, this is our objective for future reports. In a few cases, certain key figures already reported relating to previous periods have been

retrospectively updated due to a change in the underlying data basis or calculation methodology. We have indicated this in the report at the corresponding points. All forward-looking statements in this report are based on reasonable assumptions as at the deadline for report content submission. Due to unknown risks, uncertainties and other factors, the actual results, developments or performance of our company may deviate from our forecasts, estimations, and statements. (For further information please see our Annual Report.)

As a result of the Corona pandemic, Voith introduced numerous health protection measures in the reporting period. The increased use of mobile working has led to significant changes in key figures compared to the previous reporting year, particularly those related to employee presence, such as the number of face-to-face training days.

When recording its GHG emissions, Voith complies with the guidelines set out in the Greenhouse Gas (GHG) Protocol. Emissions of greenhouse gases such as CH_4, N_2O, HCF, PFC and SF_6 are recorded as CO_2 equivalents using conversion factors and are reported correspondingly as CO_2e.

Voith is committed to Diversity and Inclusion and seeks to express this, among other ways, through gender-inclusive statements.

Annual Report 2021

Further information is provided at www.voith.com and in our Annual Report. We currently expect to publish our next Sustainability Report in early 2023.

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Further information
The Sustainability Report is also available in German.
The German and English editions are available online at:
http://voith.com/corp-de/ueber-voith/nachhaltigkeit.html
http://voith.com/corp-en/about-us/sustainability.html

In addition to the Sustainability Report, Voith also publishes a comprehensive Annual Report at the end of the fiscal year. It is available online at:
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