### Sustainability Report 2020





### Title image

Quality inspection in protective mask production – one of the many measures Festo is supporting to combat the coronavirus pandemic. More on this in Chapter 9.



### Notice within the meaning of the General Act on Equal Treatment (AGG)

Where only the masculine form is used in this report, this is done for linguistic simplification purposes only. Based on our position and the principles of the General Act on Equal Treatment, the information provided refers equally to all genders. The use of only one gender form should not be a gender-specific discrimination, but only serves the purpose of better readability and better understanding of the pages and the formulations used on them.  $\rightarrow$  The detailed report profile can be found on page 90.

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Because the photographic material was taken during the coronavirus pandemic, the photographs of people were taken in accordance with the precautionary and protective measures in force and recommended at the time.

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→ GRI 102-14, GRI 102-16

### Preface



### Dear Readers,

With its Corporate Responsibility Strategy, which was adopted for the first time in 2020, the family-owned company Festo has aligned itself with the Sustainable Development Goals (SDGs) of the United Nations. The SDGs aim to enable women, men and children worldwide to live in dignity, while protecting and preserving the natural foundations of life on our blue planet.

In this sense, we support fair competition. We treat our employees around the globe with dignity and respect and create humane working conditions. As a learning company, we promote the continuous professional development of our employees. We regard our suppliers as true partners and demand that human rights are respected throughout the supply chain. Last but not least, we serve society as a whole: we take responsibility and continually push the boundaries of education, knowledge, technology and innovation. The objective is the well-being of people in a healthy environment.

It is the inventive spirit at Festo – especially in times of a global pandemic. New paths were paved in 2020 with curiosity and ambition. Festo was able to contribute as an enabler in mask production, ventilation technology and equipment for vaccine production. By constantly learning from nature, we develop pioneering products with the help of bionics as an innovation method.

We strive for quality in everything we do as a company. Our corporate values form the foundation for these top performances. Farsighted, demanding, determined, appreciative and responsible – this is how we want to work, this is how we want to collaborate and this is how we want to be perceived externally.

Festo's sustainability can be experienced in a multitude of facets in the Corporate Responsibility Report 2020.

I hope you enjoy reading it.

Chies for

Oliver Jung Chairman of the Management Board at Festo SE & Co. KG

### Festo in summary

As an independent family-run company in its third generation, Festo thinks and acts long term and with a sense of responsibility. Our company, Festo, stands for clear values, the highest quality and customer-oriented innovation. In the fields of industrial automation and technical training, Festo has set standards from its beginnings and has thus contributed to sustainable development in terms of the environment, business and society.









Short delivery times, the right service and a high degree of flexibility – the demands of the global markets are constantly increasing. That is why we are where our customers are. With our own companies and 250 branches in 62 countries.





AND INFRAS

Compliance

Portfolio Management

Logistics

# 1. Strategy and sustainability management

Finance

The United Nations (UN) has formulated 17 Sustainable Development Goals (SDGs), which are intended to ensure sustainable development worldwide on an economic, social and ecological level. These goals are aimed at everyone: politics, business, science – and every single citizen is called upon to make their contribution. For companies like Festo, transparency, a sustainability strategy based on the SDGs and systematic sustainability management are key elements on the way to achieving this goal.  $\rightarrow$  GRI 103-1



### 1.1 Industrial transformation as a business model

Digitisation, individualisation, education and climate protection are the driving forces behind industrial change and cover all stages of value creation – from development, production, logistics and energy supply to services.

The Festo Group is a leading global provider of automation technology and technical training and further education, divided into the Automation and Didactic business units. Important industry segments are automotive, food and packaging, electronics and assembly, biotech, pharma and cosmetics, chemicals and water, as well as – with growing importance – medical technology and laboratory automation (life tech), which have been in focus since the beginning of the pandemic. Festo also supports all automated process steps in the field of electromobility, from battery production to the production of electric vehicles.

### The Automation business unit

The Automation division offers a wide range of solutions for factory and process automation: the business purpose comprises the development, manufacture and sale of pneumatic and electrical components, technical systems and services as well as the transfer of knowledge for automation tasks such as control, regulation, positioning and handling of machines, apparatus and technical processes. In terms of customer solutions, the increasing demand for energy and resource efficiency and humanisation of work is becoming a competitive factor in all industry segments.

### The Didactic business unit

The group's activities in the Didactic division stand for technical basic and further training and, for more than five decades, have included the continuous development of professional, industry-oriented learning products and services relating to automation technology. The educational offerings focus on pneumatics, hydraulics, electronics and mechatronics as well as sensor technology, robotics, CNC and field bus technology. Festo Didactic is a system partner of companies as well as private and public educational institutions to make and keep people fit for work through education and training and to allow them to participate in economic development.

→ GRI 102-2



The value chain in the automation sector is currently participating in the global industrial transformation processes. Automation technology is changing from components to smart components with software. Digitisation permeates all value creation processes and changes business models. The speed of innovation is increasing. Virtual simulations create security for real investments.

The use of artificial intelligence and new technologies such as piezo technology and superconductivity opens up new technical solution areas in industry for Festo. The main driver of business activities, apart from digitisation, is global growth.



The value-added chains of the Festo Group will become more international in the coming years. Nevertheless, globalisation is reaching its limits. The global trend towards 'local for local' is calling previous value-added chains into question and increasing the pressure on productivity in procurement, production and logistics at all locations around the world – for us and our customers. Online business is becoming increasingly important.

With regard to supply chains, there were no significant changes at Festo in the reporting years. Nevertheless, we are increasingly trying to procure raw materials in the countries where production takes place.

→ GRI 102-10, GRI 102-48

### Acquisitions

In 2020, the post-merger integration of the companies acquired in previous years was driven forward. In 2018 these were Resolto Informatik GmbH and Fabco-Air, Inc., and Certa Kft. in 2019. No other companies were acquired.

 $\rightarrow$  GRI 102-10

### 1.2 Sustainability strategy and management

Thinking in terms of generations to come and responsible and sustainable economic activity are deeply rooted in the corporate DNA, particularly in family companies such as Festo, and are expressed in the term 'corporate responsibility' (CR) and sustainability management. This chapter describes the further development of sustainability management and provides an outlook on the focal points of our 2020+ sustainability strategy.

At Festo, the tasks of the Corporate Responsibility department include the conception and implementation of an international sustainability strategy, sustainability management and CR reporting. As environmentally relevant topics are increasingly becoming the focus of public attention and are of strategic relevance to Festo, the two areas of Corporate Environment and Corporate Responsibility have been merged since 2020.  $\rightarrow$  GRI 102-2, GRI 102-18

### Development of the areas for action

The development of the areas for action (page 14) of our sustainability strategy is based on the identification of the Sustainable Development Goals that are relevant for our company. In the autumn of 2015, the United Nations General Assembly adopted the 17 SDGs. They are at the heart of Agenda 2030, a global action plan that aims to address current challenges such as extreme poverty, inequality and injustice and the protection of our planet, while making economic progress ecologically sustainable and consistent with social justice. We at Festo are committed to supporting the goals formulated therein as part of our own sustainability strategy.

#### Identification of key issues

The interests of both internal and external stakeholders were taken into account in the identification of topics. There are two groups within the external and internal stakeholders. 'Formative stakeholders' have concrete expectations of Festo as a company and also have a direct influence on its business activities. In addition, there are 'other stakeholders' whose interests are taken into account but whose influence is considered to be rather limited. In concrete terms, these two categories are as follows:  $\rightarrow$  GRI 102-40, GRI 102-42, GRI 102-43, GRI 102-44

Management Board

Local population

Employees

Public

### Formative stakeholders

- Shareholders
- Customers and their customers

### Other stakeholders

- Suppliers
- Science
- Non-governmental organisations (NGOs) State
- Supervisory institutions

In identifying the important SDGs and deriving areas of action, the results of the stakeholder analysis were supplemented by monitoring external changes in the areas of legislation, business and politics, technology, energy, environment and society. On this basis, we regularly review our strategic orientation as well as our sustainability goals and measures.  $\rightarrow$  GRI 102-31

The process resulted in an updated materiality matrix. In this, topics classified according to materiality are divided into the categories 'Watch list', 'Ongoing' and 'Focus area'.  $\rightarrow$  GRI 102-46, GRI 102-47, GRI 102-49

### **Topics relevant to Festo**

Currently, the greatest opportunities for Festo to make an impact have been identified in the implementation of the following SDGs:

- Good health and well-being (SDG 3)
- Quality education (SDG 4)
- Clean water and sanitation (SDG 6)
- Decent work and economic growth (SDG 8)
- Industry, innovation and infrastructure (SDG 9)
- Responsible consumption and production (SDG 12)
- Climate action (SDG 13)

Festo SE & Co. KG Sustainability Report 2020

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are highlighted above.



Relevance for internal stakeholder

### 2020+ sustainability strategy

Our areas of action were reviewed and updated as part of these analyses. We have developed our 2020+ sustainability strategy on this basis. It was adopted in March 2020 by the Management Board of Festo SE & Co. KG and is now subject to regular updating.

### **People at Festo**

Within this area of action, we will continue to work on the longterm issues relating to the qualification and further development of our employees, the expansion of occupational health promotion and safety, and equality and diversity. In 2020 and 2021, the focus was, and is, on measures to protect employees from COVID-19.  $\rightarrow$  Chapter 3

### **Ethics and governance**

The focus of the area of action ethics and governance will be on a global compliance management system and the integration of due diligence obligations for human rights in business processes.  $\rightarrow$  Chapter 4

### Environment, energy and construction

Festo will reduce the direct (scope 1) and indirect (scope 2) absolute  $CO_2$  emissions associated with energy procurement in its global production network by more than 30 per cent by 2025. We are guided by the scientifically defined target of limiting global warming to 1.5°C. We will achieve this by procuring  $CO_2$ -neutral green electricity with measures to increase energy efficiency and



the expansion of our own renewable energy generation facilities at our sites. Data management and the expansion of the balance sheet framework will be a focus in 2021.  $\rightarrow$  Chapter 5

As part of our ISO 14001-certified international environmental management system, we will also work to improve our environmental performance with regard to other environmental aspects such as water use or waste reduction.

### **Resource and material efficiency**

Our measures focus on the entire value creation process. Projects to save materials in our products lead to a more careful use of resources in our procurement. Increasing the environmental compatibility of our packaging concept leads to lower environmental impact from the point of purchase to the customer.

Increasing the efficiency of resources and materials is a priority at our plants. The continuous reduction in the number of defective goods or the consistent fluid management in metalworking are just a couple of examples.  $\rightarrow$  Chapter 6

### Climate protection and energy efficiency

Delivering our products to our customers for their use on-site results in significantly higher CO<sub>2</sub> emissions compared to our manufacturing processes.

This is why, in the coming years, we will continuously expand our Energy Saving Service, which helps our customers to significantly reduce their  $CO_2$  footprint associated with energy consumption. This service is supplemented by advice on the energy-efficient planning and designing of our products.  $\rightarrow$  Chapter 7 The development of energy-efficient and smart products and solutions is another important element in our efforts to help our customers increase their climate-friendly production.

We also want to optimise our delivery processes with regard to the associated  $CO_2$  emissions. Measures include the procurement and manufacture of our products centred around the sales market and the reduction of air freight by transferring it to rail or ship transport. We will report on the results of the individual projects.

### Technical basic and further training and CER

Along with climate protection, technical basic and further training is the most important pillar in our efforts to become sustainable.  $\rightarrow$  Chapter 8

Examples of our activities are:

- Expansion and further development of Festo Didactic's product portfolio in STEM subjects (science, technology, engineering and mathematics)
- Commitment to increasing technical education and training in Africa
- Bionics4Education with a focus on education for girls
- Organisation of World Skills and FIRST<sup>®</sup> LEGO<sup>®</sup> League to inspire young people with technology

Our activities relating to the areas of action in the reporting period of 2020 and their effects on procurement, our customers and society are explained in the following chapters with the help of corresponding GRI indicators.

### 2. Festo footprint

Sustainability can be divided into three areas: economy, ecology and social issues. A balance between these areas is important for sustainable development. In a globalised economy, companies must take responsibility for this balance, both in their own footprint and that of their suppliers. Festo faces up to this responsibility and represents this attitude along the entire value chain. Through our involvement in various networks and initiatives, we communicate openly with a wide range of stakeholders and partners and are clearly committed to the defined standards and guidelines. This is because our responsibility does not end at our factory gates.  $\rightarrow$  GRI 103-1



### 2.1 Regional distribution of purchasing volume

Festo's direct and indirect purchasing volume (production materials and non-production materials) has decreased from EUR 1,388 million in 2019 to EUR 1,246 million (2020). This is due, among other things, to the economic situation as well as the coronavirus pandemic.

Non-production materials refer to all production plants (Festo Global Production Centres – GPCs), local sales companies and production materials.  $\rightarrow$  GRI 204-1

Festo is constantly expanding its global supplier network, consisting of local and non-local suppliers. By 'local' we mean procurement within the country of the respective national Festo company. Compared to the previous year 2019, the number of local suppliers has remained constant in 2020. The 'local for local' strategy will continue to be pursued in 2020 to enable a reduction in delivery times throughout the supply chain as well as a reduction in transport routes. The aim continues to be to increasingly procure goods in those countries where production takes place.



GRI 204-1: Regional distribution of the direct and indirect purchasing volume of the Festo Group

### 2.2 Sustainable procurement

Festo's purchasing structure is characterised by the procurement of semi-finished products, components and finished parts. Aluminium and plastic are among the most important materials. The quantities of materials purchased in 2020 in tonnage have been visualised in the diagram below.  $\rightarrow$  GRI 301-1

As part of a scope 3 data project, we are working on the  $CO_2$  data collection methodology. With regard to ecological aspects (specifically:  $CO_2$  footprints of materials), it should be noted that electronic components have a considerable greenhouse gas potential (in kg  $CO_2$  eq), despite their low weight.

The aluminium supply chain begins with the mining of bauxite. The raw material for aluminium production has adverse effects on the environment depending on the mining region. The great economic importance and the supply risk of bauxite lead to bauxite being declared a critical raw material by the European Union in 2020. Bauxite was therefore placed on the 2020 EU critical raw materials list for the first time. In addition to bauxite, lithium, titanium and strontium were also added to the list as finite resources in 2020.  $\rightarrow$  GRI 304-2

 $\rightarrow$  https://www.ec.europa.eu/growth/sectors/raw-materials/specific-interest/critical\_en



GRI 102-9: From raw material to material used: the aluminium supply chain



### Environmental and social standards for suppliers

The commitment and monitoring of our suppliers for compliance with social and environmental standards is part of our corporate responsibility. At Festo, every supplier (100 per cent) is therefore evaluated and checked with regard to environmental and social criteria.  $\rightarrow$  GRI 308-2, GRI 414-1

All suppliers must confirm compliance with our Supplier Code of Conduct with a signature. In 2021, the Supplier Code of Conduct was replaced by the Code of Conduct for Business Partners ( $\rightarrow$  see chapter 4).

By signing this document, our suppliers undertake to demand compliance with these agreements from their suppliers as well. If the responses are not satisfactory, appropriate action is taken. Festo is careful not to accept any supplier with a considerable risk.  $\rightarrow$  GRI 308-1, GRI 414-1

### Evaluation according to environmental criteria

All our suppliers go through defined processes in which they are evaluated according to various criteria. A distinction is also made for technologies and production processes with higher or average environmental impacts. For suppliers with a higher environmental impact, certification according to ISO 14001 (or the Eco-Management and Audit Scheme – EMAS) is required. Alternatively, an environmental audit is carried out by Festo at the supplier's premises. For dealers (distributors), the certification of the actual manufacturer is used.  $\rightarrow$  GRI 308-2

### **Evaluation according to social aspects**

Since the introduction of the sustainability audit in 2017, a total of 255 suppliers from 31 countries worldwide have been checked against social criteria. No negative effects were found.  $\rightarrow$  GRI 414-1, GRI 414-2

The Festo Group is guided by the principles of the Business Social Compliance Initiative (BSCI) to establish an ethical supply chain. Festo will not tolerate any infringement.  $\rightarrow$  GRI 407-1, GRI 408-1, GRI 409-1

The introduction of the Festo Supplier Ecosystem (FSE) in 2020 supports the review of all suppliers. All suppliers – even those already approved – go through the approval process again.  $\rightarrow$  GRI 308-2, GRI 414-1

### Dealing with conflict minerals

In order to support the sustainable use of conflict minerals, we review the smelters from which the raw materials for our products come within the framework of the Responsible Business Alliance. By filling out the Conflict Minerals Reporting Template (CMRT), we are helping to create the necessary transparency to continuously increase the proportion of certified smelters worldwide. Festo expects its business partners to comply with all applicable regulations regarding conflict minerals.

### 2.3 Networks and committee work

Partnerships and networks mean significant added value for mutual exchange and working across corporate boundaries. Our two Automation and Didactic business divisions work both nationally and internationally as part of various committees and associations. An allocation is shown in the chart below.  $\rightarrow$  GRI 102-12, GRI 102-13





### 3. People at Festo

In order to live up to our mission and promise every day, the development of a sustainable workforce is a must. We therefore see lifelong learning as an essential part of our corporate culture. We put people at the centre and create the foundations for a secure and trusting relationship. At Festo, protection of labour, corporate health promotion and respect for valid employee rights form the basis for this. We offer fair and performance-related pay as well as flexible working models to improve work–life balance. This is because a healthy, motivated and efficient workforce is the guarantee for success for every company.  $\rightarrow$  GRI 103-1



### 3.1 Staff development

Committed, performance-oriented, qualified and adaptable employees are one of the prerequisites for Festo's business success. We therefore strive to attract, retain and develop the best employees. In 2020, the Festo Group had a total of 20,422 employees in 62 countries worldwide.  $\rightarrow$  GRI 102-8

### Employment contracts by gender and region

The total number of permanent and temporary employment contracts is shown in the graphic below. There are also activities carried out by trainees and students that do not fall into these two categories. In 2018, this number was 637, in 2019, the number was 599 and in 2020, the number decreased slightly to 582.  $\rightarrow$  GRI 102-8



GRI 102-8: Information on employees and employment by gender and region

### New employees and employee turnover

The following shows both the total number of new employees and employee turnover by gender, age group and region. The turnover of employees reduced significantly in 2020. All in all, various programmes and measures help Festo to continue to position itself as an attractive employer, even during times of crisis.  $\rightarrow$  GRI 401-1

### Attractive employer

With solutions such as working remotely and sabbaticals, Festo offers its employees further attractive options for individual organisation of their working hours, which go beyond the models regulated by law in some countries (part-time work, parental leave and care leave).



Self-determined and flexible working enables a better work–life balance in the age of digitisation. In this context, mobile work is a format in which the work tasks can also be fulfilled outside the company premises. To this end, a Group collective agreement on mobile work was adopted in April 2020.

All employees in Germany – regardless of whether they work parttime or full-time – receive fair overall remuneration and attractive social benefits such as:

- Places in nurseries for children of employees
- Family service and social counselling by external counselling partners
- Holiday care for children of Festo employees
- Company pension scheme
- Social fund for special financial burdens ('joy and suffering fund')
- Sport offers via company sport groups
- Further training (face-to-face learning and e-learning)
- Discounts on various discount portals and with regional partners
- Subsidised canteens or meal subsidies for our branch offices
- Sabbaticals
- Special leave (e.g. wedding, moving house or birth of child)
  → GRI 401-2

### Working from home during the coronavirus pandemic

In order to fulfil its corporate duty of care and not to expose its employees to any danger, Festo allowed the majority of its staff to work from home when the coronavirus pandemic broke out in Germany. The impact on Festo's IT infrastructure was enormous. The use of VPN access has increased from about 1,000 users per day before the outbreak of the pandemic to over 6,000 users per day. The access points were also heavily frequented worldwide, so that permanent analysis and control of the communication flows were necessary. By providing a modern IT infrastructure and using appropriate cloud solutions, the smooth transition to working from home was successful. Special solutions applied depending on operational and personal situations. In the areas close to production, the contact points were reduced, so employees could maintain production while adhering to strict hygiene rules such as distancing, covering up mouth and nose and disinfectants.

In concert with the loosening of restrictions by the state, Festo reintroduced in-person work with upper limits in phases in 2020. Since October 2020, all indirect employees in Germany have been working from home again. As a responsible employer, we support the most flexible solutions possible so that our employees can individually adapt their working hours to private challenges such as homeschooling. We were also able to deliver the necessary flexibility at our Festo locations worldwide by generously providing the option of working from home there as well.

### Total remuneration and collective agreement

The total remuneration package consists of a monthly basic salary, a performance-related remuneration component and a number of additional benefits such as a company pension scheme. This enables fair remuneration for personal performance and promotes employee motivation. Remuneration is based on tasks or activities and is therefore independent of gender.  $\rightarrow$  GRI 405-2

The appreciation and responsibility towards our employees is reflected in good remuneration and working conditions, which at least meet all relevant local and legal requirements. In Germany, the companies Festo SE & Co. KG, Festo Didactic SE, Festo Polymer GmbH and Festo Vertrieb GmbH & Co. KG are subject to the collective agreement of IG Metall.

→ GRI 102-41























### 3.2 Diversity

In our globally active company, employees and business partners of different nationalities, cultures, religions and approaches to life come together. Respect, tolerance, appreciation, fairness and openness are the basic requirements for this cooperation.

### **Diversity by nationality**

We are convinced that mixed teams can work more creatively and efficiently than homogeneous groups. In terms of origin, we continue to benefit from the cultural diversity of our workforce. In 2020, employees from 100 nations successfully came together at Festo. This diversity helps us, as a company active in more than 60 countries, to understand the specific needs of our customers worldwide.

#### Diversity by age and gender

In 2019, a total of 949 people were employed in senior management worldwide. This corresponded to about 5 per cent of the total workforce. In 2020, the number of people in senior management (levels E, F1 and F2) rose to a total of 1,176 (5.6 per cent). The charts below show the diversity of management bodies and employees by age and gender.  $\rightarrow$  GRI 405-1

Against the backdrop of demographic change and the promotion of diversity within the company, we have been encouraging our managers since 2020 to evaluate female employees and younger junior staff in terms of their potential and a next career step and prepare them for our talent management programme.



GRI 405-1: Diversity by gender and age

### Discrimination

Festo rejects, without exception, any form of discrimination, harassment, degradation or other disparagement as well as the preferential treatment of employees or business partners on the basis of their ethnic origin, gender, religion, world view, political view, disability, age, sexual identity or other ethical, social and legally protected characteristics. Our managers should be aware of their role model function here and ensure a working environment free of discrimination and harassment.

Discrimination can have different origins. Festo in Germany, for example, communicates information on the General Act on Equal Treatment (AGG) within the company. In addition, the topic of discrimination is repeatedly part of training and discussed in various courses (such as part of the course on compliance) and also among managers. Festo Germany also supports the 'Respect – no room for racism' campaigns.

At Festo, incidents of discrimination can be submitted to a specially established complaints office. There is an established process for this, which is laid down in a regulatory agreement between the company and employee representatives. The principles and procedures of the AGG are taken into account.

In 2020, one case was reported, processed and closed. Following a complaint, the responsible manager is made aware of their responsibilities.  $\rightarrow$  GRI 406-1

### **Managers in Germany**

In our specially developed leadership culture, every manager (levels E, F1 and F2 with employee responsibility) is called upon to act in accordance with these principles and to treat their employees in an appreciative, dependable and responsible manner.

Managers should act as role models and earn and retain the respect of their employees through their performance, approachability and social skills. In 2020, the qualification programme Leadershift @ Shopfloor (official start in 2019) was continued.

The project focuses specifically on the grassroots management level with the introduction of the role of team leader for production and logistics. The aim is to establish clear responsibilities and comparable positions and structures through the firmly defined team leader level and the team clusters, that is, the definition of the team area.

The graphic below shows that in 2020, 100 per cent of managers at the headquarters in Germany were recruited locally, i.e. within Germany.  $\rightarrow$  GRI 202-2



GRI 202-2: Percentage of locally recruited managers in Germany (main business location)



### 3.3 Further training

Lifelong learning is anchored in Festo's DNA. In Germany, the employees benefit from the combination of face-to-face events and e-learning. At the Festo Academy, the Festo training factory (Esslingen location) and the Festo Learning Centre Saar, employees from Germany receive a wide range of practical in-house seminars – supplemented by internal and external e-learning courses in the Virtual Academy. The classroom courses were conducted in 2020 in compliance with the applicable hygiene regulations.

The advancement of digitisation and the challenges posed by the coronavirus have led to an intensification of virtual training at Festo. For example, the previous Festo Sales' in-person training in the 'Step-into' further training programme took place virtually.

In addition, Festo Didactic has developed a digital learning portal called Festo Learning Experience (Festo LX) to be prepared for the future of learning and to create individual learning experiences for teachers and learners. The synergy effects of the different training formats have a positive impact on the learning culture at Festo.



GRI 404-1: Number of participants in internal learning facilities in Germany



At our locations in Germany, the total number of days for internal in-person training in 2020 amounted to 6,096. This represents an average of 0.74 training days per employee per year. The learning time of the digital learning formats is not taken into account in the diagram, as digital learning times cannot yet be surveyed in a measurable way.  $\rightarrow$  GRI 404-1



GRI 404-1: Internal training days per employee per year in Germany

### Training during short-time work

Festo introduced short-time work in some areas from June 2020 in order to cushion the effects of the crisis caused by the coronavirus, among other things, to a reasonable extent.

In the few months of short-time work, a voluntary programme for training during short-time work was set up in order to gain an advantage through further training, especially in economically difficult times. In this way, possible gaps in knowledge could be worked through on the one hand and additional new knowledge could be acquired on the other.

Many offers were designed as self-study courses and could therefore easily be integrated into a short-time working day. The courses were available via the Virtual Academy. The technical requirements for accessing the learning platform were also created for all employees in the indirect areas such as production and logistics. A total of 2,800 employees took part in the 95 online courses. The courses were held both live and afterwards as recordings in the Virtual Academy.



GRI 404-1: Internal training days per year in Germany

### 3.4 Training

The coronavirus pandemic also impacted training at Festo in 2020. Within a very short period of time, new teaching and lesson formats were implemented that complied with the legal framework. Alternating theory and practice phases for reflection and application of the learned content continued to be the focus.

### **Distance teaching**

Different e-learning tools were used to further qualify the trainees. The focus was on innovative solutions that could be implemented at short notice in order to be able to implement the essential features of dual training – alternating theory and practice phases for reflection and application of the content learned.

### **E-learning tools**

Virtual teaching with a touch monitor enriched the courses. The trainers were able to supplement learning material individually and support trainees' questions visually. Videos were created with an action cam, which replaced the previous practical lessons in the company. The trainees could thus combine theory and practical application from home – as often as they wanted. Additionally, there were calls with teams lasting several hours in which the trainees could connect as needed to clarify questions about the learning material or to study together in the virtual room.

### Home internships

Together with the trainees, a construction kit was developed with components from the fields of pneumatics and bionics. Supplemented with training materials and videos, at-home work placements can thus be offered to give pupils their first insights into different professions.

### Investment in training

In Germany, investments in our training amounted to approximately EUR 10.8 million in 2017, approximately EUR 11 million in 2018, nearly EUR 10.7 million in 2019 and EUR 9.8 million in 2020.







### 3.5 Holistic health promotion

The coronavirus pandemic has made everyone realise that health is our most precious commodity and that many things in life seem insignificant when health is lost.

### Prevention programmes before and during the coronavirus pandemic

From 2017 to March 2020, a total of over 3,000 course places were taken in our multifaceted prevention programme at the Esslingen locations.

With the onset of the pandemic, the established health promotion programme was unfortunately not able to be implemented as it had been to date. Nevertheless, an attractive alternative programme was designed and implemented for our employees, taking into account all coronavirus requirements and adhering to strict hygiene regulations.

From the middle of the year into the autumn, outdoor circuit training courses, an 'active break in the outdoors' course series and the popular annual pedometer campaign took place.

### Digital health week in Esslingen

From autumn 2020, the foundation stone was then laid for digital health promotion, thus heralding corporate health promotion 4.0. The digital health week at the Berkheim site was launched and focused on the topics of back, sleep and stress. In addition to three different online lectures and about 100 appointment options for online individual measurements, further online coaching sessions were offered this week. The digital health week was a great success, so it will be expanded in 2021.

### Health promotion at the Saarland locations

In compliance with strict hygiene regulations, workshops and individual measurements on various health topics could be offered to the first-year apprentices and all examinees during the summer. In addition, online workshops on resilience for managers were held with more than 20 participants. In 2020, the course was set for a virtual health centre in Saarland, which was launched in February 2021.



### 3.6 Safety at work

For Festo, safety, especially health and safety at work, is an elementary part of its corporate philosophy. The maintenance and implementation of the technical safety requirements serve to protect our employees and the company's values.

In Germany, the Occupational Safety department supports and advises all areas in establishing a safety-conscious occupational safety culture. Internationally, occupational health and safety management in the regions is managed independently at the respective locations. In the plants, local experts are thus responsible for all operational processes. On the part of the central Security department at the headquarters, control and networking is carried out. Thanks to the Festo network for occupational safety, the specialists are in continuous exchange and make use of the given synergies. The global safety standards are anchored in the integrated management system and written down in an international manual. They are continually and proactively being revised and are based on internationally applicable standards, regulations and Festo's requirements. In addition to the legal requirements, results from audits carried out and influences from the Festo network also ensure that everything is up to date.

The aim is to continuously reduce the risk of accidents and health impairments. In this context, Festo has already implemented the ISO 45001 occupational health and safety management system at its Budapest, São Paolo and Shanghai locations. This process is to be continued. In addition, numerous events and campaigns were initiated with a view to improving occupational safety.

### Industrial safety during the coronavirus pandemic: task force and measures to protect employees

Protecting our people and maintaining our global supply chains for systemically important sectors – such as the food or medical industries – has been the focus of our coronavirus task force from the beginning.

Extensive measures were introduced on the basis of customised protection concepts and constantly adapted to the current development of the pandemic: in addition to distancing concepts, hygiene measures, free protective masks and rapid tests, real-time communication via notification app was a real added value – especially in the plants.



### Accident frequency rate worldwide

The accident frequency rate is calculated using the number of occupational accidents per million hours worked. All production locations are taken into account. All accidents are documented and analysed. However, the vast majority of accidents have a minor impact. The accident frequency rate increased from 7.1 to 8.0 accidents per million hours worked from 2017 and 2018. In 2019, the rate fell to 4.2. In 2020, there was a slight increase to 6.54 accidents per million hours worked. Continuous raising of awareness for the topic of industrial safety is being widely worked on.  $\rightarrow$  GRI 403-2



#### GRI 403-2: Accident frequency rate worldwide

### Days of absence due to accidents in Germany

The number of days of absence due to accidents at Festo's German locations in 2020 was 1,331 days, which is significantly lower than in the previous year.  $\rightarrow$  GRI 403-2

Accident statistics in Germany take into account accidents at work that result in at least one day of absence. At present, genderspecific differences are not being reported on and so they are not taken into account in the evaluation of occupational safety. This is also not planned for the future.





GRI 403-2: Days of absence due to accidents in Germany





## 4. Ethics and governance

In order to achieve the goals of sustainable development, binding ethical and governance standards must be set and adhered to worldwide. Therefore, as part of our compliance, we commit ourselves to always act fairly and in accordance with applicable laws as well as applicable specifications, standards and guidelines. Legally compliant business processes and compliance with anti-corruption laws play a central role, as does respecting UN human rights and the National Action Plan for Business and Human Rights (NAP)  $\rightarrow$  GRI 103-1

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### 4.1 Compliance

Compliance means ensuring adherence to laws and internal rules, to which the company independently undertakes to adhere. For Festo, upholding integrity and responsibility towards people and the environment is elementary. At all our locations, we attach great importance to acting ethically, legally and in accordance with the rules.

### Compliance management system (CMS)

Festo has a zero-tolerance policy. This means that every violation will receive an appropriate sanction. In order to systematically ensure the avoidance of legal and reputational risks, Festo set up a compliance management system back in 2012, which controls and monitors the activities required to prevent legal violations. This is continuously expanded worldwide.  $\rightarrow$  GRI 102-17

To ensure and further raise awareness, 6,431 employees worldwide were trained on compliance from 2016 to 2020. These training courses were conducted by Corporate Compliance, the Regional Compliance Officers and the 62 Local Compliance Officers, among others.

### Whistle-blower portal

Our whistle-blower portal was converted to the new Halo system in 2020 and complies with the requirements of EU Directive 2019/1937. It enables employees and business partners worldwide to anonymously and safely report any misconduct or violations of our Code of Conduct (CoC) or the applicable law without fear of reprisals. You can find the link and additional information on the whistle-blower portal at  $\rightarrow$  www.festo.com/compliance

### **Regular review of CMS and business partners**

Observance and implementation of the compliance regulations are subject to regular audits by the group auditing department. In addition, our compliance management system has been regularly audited by external auditors since 2015. No legal proceedings have been initiated due to anti-competitive behaviour or the formation of cartels and monopolies.  $\rightarrow$  GRI 206-1

Since 2020, Festo has systematically checked selected business partners for regulatory requirements with the help of Dow Jones. This also ensures that we enter into ethically sound business relationships.

### Guidelines for internal and external documents

Our compliance guidelines include both internal and external documents and are accessible to every employee. Until 2020, our suppliers were obligated to adhere to the Supplier Code of Conduct. At the turn of the year 2020/2021, this code was replaced by the Code of Conduct for Business Partners, which has since been a binding document for all our business partners.

Both the Code of Conduct and the Code of Conduct for Business Partners are available for download in several languages on our corporate website.

 $\rightarrow$  www.festo.com/compliance

### Compliance training offer

The Festo compliance training offer consists of basic compliance knowledge, special training and mandatory web-based training for all employees with system access.

The central focus of the basic compliance knowledge is on the contents of our Code of Conduct as well as the internal compliance regulations. Basic compliance knowledge was also provided in 2020 in web-based training and at onboarding events at the Esslingen headquarters and in almost all national Festo companies. Within the framework of the special training courses, further focus areas of compliance are addressed in depth.

### Compliance guidelines 2020 $\rightarrow$ GRI 102-16

- 1) Code of Conduct
- 2) Supplier Code of Conduct (from 2021: Code of Conduct for Business Partners)
- 3) Anti-Corruption Policy
- 4) Antitrust (Antitrust Law)
- 5) Exclusion list of industries: Weapons and nuclear industry
  → GRI 102-11
- §



GRI 205-2: Information and training on anti-corruption strategies and measures

### 4.2 Human rights

By signing the joint declaration on human rights and working conditions, the Management Board has committed itself to complying with internationally recognised human rights and the fundamental labour standards of the International Labour Organization (ILO) worldwide.

Since 2010, Festo has systematically addressed the issues of human rights and child labour with its direct suppliers in the international production network. Compliance with human rights and the prohibition of child labour are firmly agreed via the Code of Conduct, the Code of Conduct for Business Partners and as part of supplier audits.

On 16 June 2011, the UN Human Rights Council adopted its Guiding Principles on Business and Human Rights. These refer to all states as well as transnational and other business enterprises – regardless of their size, sector, location, ownership or structure.

To realise human rights, all actors depicted must fulfil their responsibilities. The primary duty rests with states to protect and implement human rights. Businesses should ensure that they respect human rights in all their activities. With the help of complaint mechanisms, both states and companies must ensure that human rights violations can be identified and that those affected are guaranteed remedial measures in the event of harm.

The chart on the right shows our current measures for implementing the National Action Plan for Business and Human Rights (in future: Act on Corporate Due Diligence in Supply Chains – LkSG). These are continuously reviewed and expanded.

### VDMA peer group

Since 2020, we have been involved in a peer group of the VDMA to discuss the core elements of the new law and different methods of risk analysis as well as to exchange experiences. Festo is aware of its corporate duty of care and is continuously working on aware-ness campaigns as well as process-related further development.

An examination of compliance with human rights or a human rights impact assessment as part of the Act on Corporate Due Diligence in Supply Chains has not yet been carried out at the Festo Group's business locations.

→ GRI 412-1

### United Nations

Guiding Principles on Business and Human Rights

## 1. The state duty to protect human rights

Protecting human rights from abuses ...

- by third parties (including companies)
- through appropriate policies, regulation and jurisprudence (Guiding Principle 1–10)

## 2. The corporate responsibility to respect human rights

### Responsibility ...

- to act with due care
- to not infringe upon the rights of others
- to eliminate adverse impacts in which they are involved (Guiding Principle 11–24)

### 3. Access to remedy

Responsibility of the state and the economy ...

- to provide better access to the victims
- to provide effective remedy, both judicial and extrajudicial (Guiding Principle 25–31)

Graphic based on the 'protection, respect and remedy' analytical framework

### **Policy statement**

Festo is committed to respecting human rights. The corporate duty of care for this is laid down in the Code of Conduct and the Code of Conduct for Business Partners.

### **Risk analysis**

### (procedure for identifying impacts)

Since 2020, we have been working on a methodology to systematically assess human rights risks in the value chain. Since 2010, we have been conducting system-based audits (embargo, sanctions list and goods list audits as well as a critical end-use audit) as part of our export control. These audits are intended to, among other things, identify human rights violations and initiate appropriate measures.



### Reporting

As part of the sustainability report, the core elements of the Act on Corporate Due Diligence in Supply Chains are reported on annually. The GRI Index explains the corresponding key performance indicators (KPI) on the topic of human rights.

→ GRI 407-1, GRI 408-1, GRI 409-1, GRI 414-1, GRI 414-2, page 20 → GRI 412-1, page 40 → GRI 410-1, 411-1, 413-2, page 88

### **Complaint mechanism**

A whistle-blower portal has been an integral part of the Festo compliance management system since 2015. Complaints or information about human rights violations can be reported anonymously. The next step would be a systematic processing of the complaint.  $\rightarrow$  See Compliance, page 38

Current measures to implement the NAP

## 5. Environment, energy and construction

Environmental protection, energy management and sustainable construction are closely linked with one another. Because besides treating the environment with care, the economic and efficient use of energy in the face of advancing climate change is a key task of the current era. The use of renewably generated electricity – whether through in-house generation using photovoltaic technology, wind and water power or by purchasing green electricity from a corresponding supplier – already has an enormous influence on the emissions of many companies'  $CO_2$  balance sheets. At Festo, this is one of many examples of how cross-departmental climate management strategically counteracts the global increase in energy and resource consumption. After all, climate protection begins within your own four walls.



### 5.1 Environmental management

Society and industry face the challenge of conserving resources and counteracting climate change. This is because our energy consumption causes emissions and we need a reliable supply of resources for the production of consumer goods and industrial products.

This is also relevant for Festo's production. We have therefore established environmental management systems at all existing production plants and certified them according to ISO 14001. We continuously increase our energy and resource efficiency and minimise CO<sub>2</sub> and pollutant emissions from our production.

These measures also help us to reduce production costs, meet the demands of our stakeholders and be prepared for new legal requirements.

### Recording of emissions according to the Greenhouse Gas Protocol

The Greenhouse Gas Protocol (short: GHG Protocol) is considered the most widely used international standard for recording and accounting for greenhouse gas emissions. It breaks down emissions into scope 1 emissions (direct emissions), scope 2 emissions (indirect emissions from final energy purchases such as electricity and district heating) and scope 3 emissions (other indirect emissions along the value chain).



Scope 3 Indirect emissions (upstream activities)

Graphic based on the GHG Protocol



Activities along the entire value chain of the company

## Primary energy consumption and scope 1 greenhouse gas emissions

Among the primary energy consumptions  $\rightarrow$  GRI 302-1a, we document the fuel oil and natural gas consumption caused by the operation of our buildings. This also includes the fuel consumption of transport logistics between some of the European plants and the vehicle fleet in Germany, which is predominantly leased. We report on the CO<sub>2</sub> emissions caused by this in scope 1. Our production processes do not cause direct emissions of other greenhouse gases (e.g. process emissions). The emissions of cooling agents from cooling and refrigeration plants are negligible compared to CO<sub>2</sub> emissions – they are not reported.

Due to the growth of our locations and the occupation of additional buildings, the stationary primary energy demand increased by 10.5 per cent between 2017 and 2020. In contrast, the consolidation of transport processes and the continuous tightening of consumption limits for our passenger car fleet led to a decline in the primary energy demand of mobile applications already in 2019. As a result, the primary energy demand of both categories remained almost constant between 2017 and 2020 (increase of 0.6 per cent).

Scope 1 emissions  $\rightarrow$  GRI 305-1 are shown in the second diagram on the right. They are essentially derived from primary energy consumption. Only a shift between the various energy sources such as fuel oil, natural gas, diesel and petrol can lead to slight deviations. The influencing factors are correspondingly identical with those of primary energy consumption.

### Final energy consumption and scope 2 emissions

Festo obtains its final energy  $\rightarrow$  GRI 302-1c almost exclusively in the form of electricity. Two locations are heated with district heating in an environmentally friendly manner. The associated emissions are reported in scope 2. Final energy consumption does not show a uniform trend in the period from 2017 to 2020 and, at the end of the period, is barely above the comparison year 2017 (increase of 1.2 per cent). However, compared to turnover, which fell by 10 per cent, there is a clear deterioration. This is due to the fact that, even with reduced production capacity utilisation in 2019 and 2020, the base load of energy consumption for lighting or ventilation and air-conditioning technology could not be reduced to the same extent. However, consumption-reducing factors are increasingly making themselves felt.

These include the processes of our energy management, exemplary compressed air management and the consistent elimination of compressed air leaks, as well as the successive replacement of old fluorescent tubes with LED lamps and shutdown plans for production plants during non-production periods. The consistent search for savings opportunities was continued in 2020 and new projects were developed; however, these will not be implemented until 2021.

The development of scope 2 emissions is essentially different  $\rightarrow$  GRI 305-2. In addition to the economic influences and the above-mentioned measures, the purchase of electricity from renewable energies for all German locations will have an impact from the second quarter of 2020. This led – unlike final energy consumption – to a decrease in scope 2 emissions by more than a third (decrease of 36 per cent). In the coming years, we will successively implement this measure at the foreign locations as well.

In recent years, Festo has seen a slight decoupling of energy consumption and scope 1 and scope 2 emissions from economic growth. With the exception of scope 2 emissions, this development was interrupted by an unfavourable economy in the second half of 2019 and the subsequent pandemic.



GRI 302-1a: primary energy (fuel oil, diesel, gas, MWh)







Energy consumption in relation to sales (MWh/EUR millions)







GRI 305-2: Indirect energy-related greenhouse gas emissions (scope 2, t  $\mathrm{CO}_{_2}$  equivalents)



Greenhouse gas emissions (scope 1 and scope 2) in relation to turnover (t  $\rm CO_2$  equivalents/EUR millions)

### Scope 3 emissions

The scope 3 emissions  $\rightarrow$  GRI 305-3 as Festo's indirect greenhouse gas emissions along the value chain generally far outweigh scope 1 and scope 2 emissions. According to the Greenhouse Gas Protocol, they are typically four times higher than scope 1 and 2 emissions combined in the manufacturing industry. The GHG Protocol distinguishes 15 categories in this area. Due to this great variety and range, they are usually only estimated at certain points and only roughly.

We assume that the vast majority of our scope 3 emissions are generated during the use phase of our products by our customers, where they are in turn seen as scope 2 emissions. However, it is not possible for us to make approximately reliable assumptions when it comes to the estimation of these emissions. The wide variety of applications for individual products and product groups, process-typical operation cycles and the industry-typical lifetime of production plants make significant contributions.

In the following, we discuss other typical scope 3 categories for which we have reliable data. With regard to scope 3 emissions caused by commuting to work and business trips, no new calculations were carried out in 2020. We therefore refer to our CR report for 2017 to 2019.

For 2018, we have estimated the emissions caused by logistics for the first time and extended the system limits of the calculation for 2019. The logistics emissions amounted to around 37,600 tonnes of  $CO_2$  equivalents in 2020. This mainly includes air and sea freight transport between our plants, logistics locations and national Festo companies, as well as occasional transport from suppliers to our plants and transport to customers. Typical emission factors per tonne kilometre from publicly available sources were used.

Air freight emissions also include emissions of non-CO<sub>2</sub> greenhouse gases. We know about the effect of emissions at high altitudes, which is about three times higher, but it is not taken into account in the balance sheet for better comparability.

We are continuing to refine the methodology for calculating emissions. Although 25 per cent of the transport volume is handled by sea freight, air freight makes up more than 95 per cent of transportrelated scope 3 emissions. Our efforts to further decentralise procurement channels may have a favourable impact on this ratio in the future.

### **Environmental compliance**

Festo has not committed any serious infringements of environmental law. However, small fines for breaches of regulations (for example in the transport of dangerous goods) cannot be ruled out. Nonsanctioned, short-term exceedances of wastewater and emission limit values may occur. Appropriate countermeasures are always taken. Wherever there are reporting obligations to the authorities in connection with exceedances, these are carried out.  $\rightarrow$  GRI 307-1

### Waste indicators and transport of waste

Operation of production plants and buildings is always associated with the generation of waste. For this reason, for many years, we have been striving at all our locations to avoid waste or, if this is not possible, to recycle. The legal regulations applicable at the respective location are always fundamental for us. Over the last four years, our locations have produced an average of around 11,500 tonnes of waste per year. Of this, 83 per cent was non-hazardous and 17 per cent hazardous waste. The recycling rate for all waste categories has been above 92 per cent for years.  $\rightarrow$  GRI 306-2

We have achieved this high level through a large number of groupwide and local measures, such as returnable packaging, low-waste production methods, separate and process-related waste collection, and ongoing measures to promote environmental awareness among the workforce.

We collect our waste at our locations and only make it available for collection. We do not store it. The few types of waste that cannot be recycled, thermally recycled, composted or incinerated are deposited in landfills at local waste disposal facilities.

Our waste is disposed of exclusively by qualified waste disposal companies. We do not export or import waste.  $\rightarrow$  GRI 306-4



GRI 306-2: Waste by type and disposal method for non-hazardous waste



GRI 306-4: Waste by type and disposal method for hazardous waste

### Water consumption and wastewater

The Festo Group's water consumption was 246,509 cubic metres in 2020. Sanitary facilities have the highest consumption. In 2020, this accounted for 34 per cent, followed by production processes (24 per cent) and refrigeration mainly by evaporative cooling systems (23 per cent). Canteen operations, irrigation of green areas and some other processes are less important (19 per cent).

In all areas, we are implementing measures to continuously reduce consumption. We have equipped our own buildings with watersaving fittings throughout. Wherever possible, we optimise the production processes that generate wastewater and reuse the wastewater for other purposes. The diagram on the left shows the water intake by source from 2017 to 2020.  $\rightarrow$  GRI 303-1

We only discharge contaminated wastewater into the public sewer system. Our production wastewater is treated for process-specific pollutants before it is discharged. We hold the necessary permits for all treatment plants and monitor the treatment and pollutant parameters. With the exception of unpolluted rainwater, we do not discharge any wastewater into natural waters or groundwater.

The diagram on the right shows the wastewater discharge by quality and discharge location from 2017 to 2020.  $\rightarrow$  GRI 306-1







GRI 306-1: Wastewater discharge in terms of quality and discharge location (m<sup>3</sup>)



### 5.2 Sustainable construction in Jinan, China

The Festo Global Production Centre in Jinan, China, ensures the availability of products and components for our customers in the Asia/Pacific region. A lack of expansion options on the existing plant site and an approaching residential development led to the search for a new location.

In 2016, a new plot of land was acquired in a newly created industrial and commercial area of the city, about 15 kilometres away from the old location. Construction began in 2017, and the second and – for the time being – final construction phase was completed at the end of 2020. A total of 160,000 square metres of production space are available.

Ecological improvements were also realised during the construction of the plant. Instead of relying on district heating, which is based on coal, modern gas burners were installed for heating, which – together with high-quality building insulation – significantly reduce the heat requirement. LED lighting reduces energy requirements. Charging facilities for electric vehicles are available. Rainwater is collected in an artificial lake and fed into the nearby river in a targeted manner, in particular during heavy rainfall, which relieves the burden on the public wastewater infrastructure.

Deionised water is required for metal surface treatment processes. We use the wastewater from the reverse osmosis process for sanitary purposes and save about 8,000 cubic metres of fresh water annually.

In the factory, the painting technology was changed to electrostatic painting, which leads to a 10 to 20 per cent reduction in the amount of paint required. Switching to water-based paints also reduces solvent emissions. These are further eliminated by regenerative thermal oxidation.

Releasing die-cast aluminium parts from their moulds requires water-based release agents. In the past, 750 tonnes of hazardous waste were generated per year. Vacuum evaporation systems result in a reduction of 94 per cent to approximately 45 tonnes per year.

# 6. Resource and material efficiency

Earth Overshoot Day took place on 22 August in 2020. Last year, it was even on 29 July. Never before had we humans used up all the natural resources that our planet can regenerate and sustainably provide within a year so quickly. For industry, this means assuming holistic responsibility for its products. Even in the early stages of product development, the focus must be on material efficiency and resource conservation. This is because the course for a sustainable life cycle – from production to use and disposal of the products – is already set here. At Festo, we also understand holistic product responsibility to include all other measures that ensure product quality and safety such as brand protection and the active combating of product piracy.  $\Rightarrow$  GRI 103-1



### 6.1 Packing

Packaging is necessary to protect high-value products during their storage and transport. Finding the balance between sufficient protection, limiting packaging costs and the environmental compatibility of the packaging concept is no easy task. The continuous development and optimisation of our packaging concept is a challenge for the areas concerned at Festo.

Festo strives to achieve the highest possible proportion of packaging made from renewable materials. These include materials made of wood, paper, cardboard and corrugated cardboard. In 2020, this was just under 97 per cent for our largest distribution centre. In addition, we aim to limit the proportion of packaging in our shipping volume. This amounted to just under 16 per cent – also for Germany – in 2020. The values are likely to be in this order of magnitude internationally as well.

Customer complaints received in individual cases about too much packaging material are unfortunately justified. Therefore, we try to find sustainable solutions whenever possible. The complaints are mostly due to an automatic packaging installation with limited standard sizes. Internally, our goal is to reuse packaging that has been received. We can measure this percentage in our plants in China – the reuse rate there is more than 80 per cent.





### 6.2 Use of aluminium

The environmental impact of primary aluminium is significantly higher than that of remelted secondary aluminium. Since 2019, we have been recording the proportion of secondary aluminium in our internationally procured aluminium volume in order to be able to identify positive or negative developments. The proportion of secondary aluminium increased by 3 per cent in 2020 compared to 2019, to a total of 72 per cent. With a 10 per cent higher procurement volume, the CO<sub>2</sub> footprint associated with aluminium production has therefore only increased by 2 per cent to around 44,800 tonnes.

To ensure that this positive development can continue, in 2020 we began to test the alloys used at Festo for their producibility from secondary aluminium.

### 6.3 Scrap reduction in the plant

The reduction of rejects in our manufacturing processes is an important quality management project. This also contributes directly to improving resource efficiency and reducing waste. In 2020, the number of parts to be scrapped was reduced by more than 15 per cent. Since there is no one-to-one relationship between rejects and the disposal fraction, the savings effect achieved can only be estimated. This amounted to well over 20 tonnes for the relevant fraction of aluminium with foreign adhesions.

### 6.4 Consideration of applicable guidelines and laws

The processes involved in product approvals are described in internal guidelines. Festo must comply with applicable law so that the products are considered safe. There are different regulations and laws on product safety around the world to allow products to be placed on the market. This requires the respective certifications in the various regions.  $\rightarrow$  GRI 102-11, GRI 416-1

Statutory regulations that must be complied with are, for example, EU Directive 2011/65/EU (RoHS 2), EC Regulation 1907/2006 (REACH Regulation), the corresponding mandatory entries in the SCIP database, the requirements of the EC Packaging Directive 94/62/EC and the requirements of the EC Battery Directive 2006/66/EC. All regulations and directives aim to prevent prohibited ingredients being contained in a material at a concentration above the permitted limit.

The limit values for the regulated ingredients vary from one regulation to another and are embedded in Festo's internal guidelines. Festo's products are labelled in accordance with legal requirements with regard to their origin, composition and use. The corresponding label describes, for example, when a product was manufactured and in which factory so that traceability is guaranteed.

### 6.5 Simplified ecological life cycle assessment

Life cycle assessments can be used to calculate how high the environmental impact of products is in various environmental impact categories. In the past, we approached the complexity of environmental impact categories through the establishment of a simplified ecological life cycle assessment (LCA), which allows the  $CO_2$  footprint of the product to be calculated via the bill of materials in the early phases of product development.

In order to integrate such a calculation logic into standardised corporate processes, further projects and measures were set up on this topic in 2020. More and more customer enquiries are reaching Festo regarding the  $CO_2$  footprint of its own products (cradle-to-gate).

The graphs below show an internally calculated  $CO_2$  footprint for the solenoid valve VUVS, the solenoid valve MVH and the adaptive mould gripper DHEF.

### 6.6 Lightweight construction as an interdisciplinary cross-sectional topic

Lightweight construction must be taken into account as a cross-sectional topic in the early phases of product development. In addition to lightweight functional design and well-thought-out functional integration during the design of the functional structure, lightweight material design and lightweight mould design as well as lightweight manufacturing design are important elements that must be taken into account during systematic product development according to VDI 2221.

It is important that the development engineers reduce themselves to the essentials as much as possible. This leads directly to the fact that – in addition to the standard market products – new products can emerge that no longer fulfil all the functions that our customers are used to, but which are lighter and cheaper. Much therefore also depends on the mindset of the client: in order to achieve a  $CO_2$  reduction through lightweight construction within the meaning of sustainability, we as a component supplier are dependent on the machine and plant manufacturers, who should also specifically focus on lightweight purchasing.



### Adaptive shape gripper DHEF

An example of lightweight construction at the functional level and resource efficiency in general is the adaptive shape gripper DHEF, which was launched in 2019.

The elastic silicone cap of the gripper slips over almost any gripping object with the help of compressed air and spring force. This creates a tight form fit and the flexible silicone adapts precisely to many different geometries.

The great advantage here is that the gripper can replace a complex mechatronic system in a very simple way, with additional functions at the same time. The gripper can grip, collect and release a high variety of workpieces with different shapes without the need for manual conversion during operation. When combined with a pneumatic drive, the adaptive mould gripper also grips safely and with low energy consumption.

### Learning from nature

The operating principle of the adaptive gripper DHEF follows the function of the chameleon's tongue, which is placed over the respective prey animal during the hunt and encloses it securely and firmly.

The unique combination of force and form closure of the tongue was utilised by the Festo Bionic Learning Network with researchers from the University of Oslo in the development of a prototype under the name 'FlexShapeGripper', which was subsequently further developed into the series product DHEF.





Feeding as a collaboration of human and machine



Gripping from a pile of parts

### 6.7 Culture of repair

With a media mix of instructions and descriptions in the languages of our markets, users learn how to use a newly acquired product safely. Advice on possible misuse and information on maintenance, cleaning, care and disposal help the user to avoid expensive and climate-damaging costs and at the same time extend the service life of the products.  $\rightarrow$  GRI 417-1

The media mix also includes various tutorials that clearly explain how, for example, spare parts kits can be changed independently. Festo supports this so-called 'repair culture' with these instruction videos. You can watch the videos on our channel at  $\rightarrow$  www.youtube.com/FestoService.

As a customary service offering, repair is an important basis for offering a further range of products and services in the future in the spirit of the circular economy. Spare parts kit sets can be viewed and ordered in the Festo spare parts catalogue  $\rightarrow$  www.festo.com/cr/spareparts

### 6.8 Open-loop and closed-loop strategies

The figure on the right shows a schematic classification of Festo as a manufacturer of automation components in a circular economy. In general, a distinction can be made between open-loop and closed-loop strategies.

In this context, closed-loop strategies are circuits in which products flow back to the manufacturers, thus enabling the extension of product life cycles. This applies, for example, to reuse, repair and remanufacture.





In addition to Festo's repair offering, strategies for reusing and remanufacturing components will be re-evaluated in the future. Another player between the component manufacturer and the plant operator is the machine builder. As a result, the B2B sector in general faces the challenge of complex supply chains, which makes the collaboration of multiple players indispensable. Conventional recycling and material recovery of products can be described as an open-loop system, as secondary materials are obtained as input for new products.



# 7. Climate protection and energy efficiency

9 INDUSTRY, IN

13 LISMAN

In the scientific community, nine planetary load limits are being discussed, the exceeding of which endangers the stability of our ecosystem and thus the basis of human life. One of these planetary limits is climate change, which is caused by the constant enrichment of the earth's atmosphere with man-made greenhouse gases, especially carbon dioxide  $(CO_2)$ . Climate protection and the economical use of energy are two of the major tasks of our time.

Europe has the ambition of becoming the first climate-neutral continent by 2050. Industry plays an essential role in this.  $CO_2$ -neutral production can be achieved through energy efficiency measures, green electricity procurement and  $CO_2$  compensation. We at Festo support our customers' energy efficiency measures on the way to achieving this goal.  $\rightarrow$  GRI 103-1

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### 7.1 Energy efficiency

Climate change is also a central challenge for manufacturers of automation technology. Like any challenge, this is both a risk and an opportunity. Typical automation components occupy a special position in the field of sustainability, as they are usually only used together with other components and thus influence the respective system in which they are installed.

We consider the reduction of CO<sub>2</sub> emissions at an early stage in the development of products. In 2020, a field of action was anchored in the corporate strategy for this purpose. An interdisciplinary team was tasked with ensuring the reduction of CO<sub>2</sub> emissions in the products and their use by the customer through various activities.  $\rightarrow$  GRI 102-11

In 2020, the reverse jet pulse valve VSVA came onto the market. It makes it possible to save up to 80 per cent of pneumatic energy in certain applications. The valve can be used when blowing off chips or dust and when drying, cooling and transporting parts. Below are two exemplary calculations for possible application scenarios.

To implement an automation task, the machine builder generally has various pneumatic and electrical automation solutions at their

### Continuous air

Consumption: ~32 m³/h (533 Nl/min)\* Cost per year: €3,648

### Use of reverse jet pulse valve: 1 sec ON/0.5 sec OFF

Consumption: ~21 m³/h (350 Nl/min)\* Cost per year: €2,394 Savings: €1,254/year

### Use of reverse jet pulse valve: 0.2 sec ON/0.8 sec OFF

Consumption: ~6 m³/h (100 Nl/min)\* Cost per year: €684 Savings: €2,964/year

 $^{*}$  Consumption at 5 bar, 24 h/day, 250 days/year and compressed air costs of 1.9 ct/m³ (average price in Germany)

Possible savings potential when using the reverse jet pulse valve VSVA: Up to 80 per cent

disposal. The purchase of a solution and the decision to implement drive technology are directly linked to environmental effects in the utilisation phase.

Basically, criteria such as dynamics, force, adjustability, load stiffness and above all profitability play an important role in the decision. In many cases, a sensible combination of both technologies can also be the optimal solution.

 $(\rightarrow$  See Festo 2017–2019 sustainability report, page 68)

### Advice on energy efficiency

To pass this knowledge on to the customer, we offer the following energy efficiency consulting services directly at our customers' premises:

- Workshops to raise awareness among employees
- Energy efficiency analyses of production plants
- Calculations of the total cost of ownership (TCO) to compare pneumatic and electric drive systems

To ensure that customers receive the optimal solution for their application with regard to their  $CO_2$  consumption, this technology comparison will be supported online by additional tools in the future.

### Costs in the period under review



----- Function 2: With reverse jet pulse valve (1 sec ON/0.5 sec OFF)

— — Function 3: With reverse jet pulse valve (0.2 sec ON/0.8 sec OFF)

### **Energy-efficient products**

When using pneumatic components, the aim is to reduce compressed air consumption through efficiency technologies and thus lower the CO<sub>2</sub> emissions indirectly associated with the electricity mix in use.

### Reduction potential can be realised by adding the following products to the system concept:

### Energy efficiency module of the MSE6 series

Constant monitoring of the compressed air consumption to avoid unnecessary or increased compressed air, automatic switchoff in case of plant standstill or machine standby.



20% CO<sub>2</sub> reduction

### VSVA reverse jet pulse valve

This valve with its integrated pulse function automatically reduces energy consumption when using blast air.

80% CO<sub>2</sub> reduction

### SFAM flow sensor

Flow sensor SFAM installed stand-alone or in combination with a service unit of the MS series provides immediate transparency on compressed air consumption.

20% CO<sub>2</sub> reduction





Reduction potentials are realised by replacing individual products with energy-saving alternatives:

### VTEM Motion Terminal

Valve functions controllable via app, for example leakage diagnostics, energy-saving ECO travel, selectable pressure level.

70% CO, reduction

### DGO rodless linear drive

Constructive low leakage due to sealing system

15% CO<sub>2</sub> reduction







#### Vertical pressure regulator plate (VMPA1-... or VABF-...)

The working pressure can be regulated directly on the valve terminal via the pressure regulator plate for the individual cylinder. No additional installation effort.



### SFGA flow meter box

The ready-for-installation and ready-to-use analysis case contains everything you need for efficient, flexible consumption and flow measurement of compressed air at the plant.

20% CO, reduction



Reduced air consumption through air-saving circuit. Application-specific control of the vacuum through integrated measurement.

60% CO<sub>2</sub> reduction

### DGC pneumatic linear drive

Nearly no leakage due to new sealing system.

10% CO, reduction

### 7.2 Festo Energy Saving Services

On the way to achieving CO<sub>2</sub>-neutral factories for our customers, cross-company solutions for industry that go far beyond our own product portfolio are necessary. Currently, the greatest leverage Festo, as a component supplier, has in terms of climate protection is the reduction of scope 3 emissions – specifically in the use of the products sold by the customer ( $\rightarrow$  see pages 44–45, GHG Protocol, scope 3, category 11).

This requires specialists with the expertise to optimise the entire pneumatic system. Festo Energy Saving Services, a customised service programme in accordance with DIN EN ISO 11011 (compressed air energy efficiency audit), are based on this holistic approach. This serves to identify and best exploit compressed air savings potential at the customer's premises, which also optimises their entire energy management system in accordance with DIN EN ISO 50001.

The focus is on the Festo Compressed Air Energy Efficiency Audit, which is available around the globe and is carried out by our specialised auditors. In 2020, there were 18 auditors worldwide (specifically: six full-time equivalents [FTEs]) in use, which made the most effective contribution to reducing CO<sub>2</sub> emissions in our customers' compressed air generation and pneumatic applications.

### **Documented savings potential**

Overall, we have been able to demonstrate the CO<sub>2</sub> savings potential of 43,030 t CO<sub>2</sub> in the customer projects for 2020.  $\rightarrow$  GRI 302-5



GRI 302-5: Cumulative identified savings potential through the use of Festo Energy Saving Services by our customers (t CO.)



Analysis of compressed air distribution

Analysis of compressed air generation



Analysis of compressed air preparation



Analysis of pneumatic applications

### Festo Compressed Air Energy Efficiency Audit

With the audit, the customer immediately recognises weak points and knows which measures will pay off for their compressed air system. Our auditors examine both the compressed air generation (1) and the compressed air preparation and quality (2), as well as the compressed air network (3). They also carry out exemplary leakage detection on selected pneumatic systems, investigate potential savings and check pneumatic efficiency (4). To round off the audit offer, a concept for a monitoring system can be prepared for the client as required (5).

Finally, a detailed report is produced with precise documentation of the data and priority-weighted recommendations for action to optimise compressed air energy efficiency and its savings potential. The documentation also includes the  $CO_2$  emission values of the compressed air system that many companies require for inclusion in their sustainability report, for example in accordance with GRI or GHG, and that they use in their climate strategies.

### Festo Energy Saving Services portal

In 2020, work began on the development of the web-based Festo Energy Saving Services portal, where the results of the Festo Compressed Air Energy Efficiency audit can be documented and tracked online. This digital solution is an important step towards faster implementation of compressed air energy efficiency measures and their monitoring in real time. The faster optimisation measures, such as the reduction of pressure drops or the elimination of located leaks, are initiated by the customer, the more  $CO_2$  emissions and compressed air costs can be saved in total.



Directly to the portal  $\rightarrow$  https://energysavingservices.festo.com

# 8. Technical training and Corporate Educational Responsibility

Megatrends such as digitisation, individualisation and climate change influence many areas of life, including technical education. This is important for sustainable development and provides skills to tackle today's challenges in the technical field to shape the future and the interest of future generations Festo Didactic makes an important contribution to the technical qualification of future generations and today's professionals with its comprehensive range of training courses and worldwide projects and partnerships.  $\rightarrow$  GRI 103-1



101. 60



### 8.1 Energy innovation

Energy demand is increasing globally. Energy efficiency is therefore becoming a great challenge for us and future generations. Due to climate change and rising energy costs, innovations are urgently required in all sectors – namely in the way energy is produced, distributed, stored and used.

To successfully meet this challenge, we need above all electricity from renewable sources. Digitisation offers opportunities for monitoring and controlling energy. In the current energy infrastructure, this can increase energy efficiency and reduce consumption. This paves the way for sustainable production.

### An electric future through a skilled workforce

Energy innovation can be achieved through education. An adapted energy landscape also changes the qualification requirements. The success factor here is the skill set of the people. A growing proportion of employees need to be familiar with electrical systems in order to be able to use electricity in their everyday work. In technical training, it is important to sensitise and empower professionals in this way. Festo Didactic has therefore decided to expand its support for technical trainers and teachers around the world to train qualified employees and enable energy innovation.



### Learning solutions to support sustainability

Learning solutions should prepare employees for energy issues and enable them to think more sustainably. We use our expertise in electrical engineering for the benefit of teachers around the world. Trainers can use the learning solutions to develop knowledge and relevant skills in technical areas to promote sustainability The training systems, combined with e-learning and simulations, can be adapted to various learning contexts and learning styles. In addition, teachers can meet different training needs in simulating learning environments. Learners get excited about energy topics with the interactive and integrative learning systems.

A series of webinars has been launched on the electrotechnical topics for technical trainers. They provide ideas on how to incorporate sustainability issues into their courses and programmes Festo Didactic offers learning solutions for the topics of power grid modernisation, energy transition and electrification in order to cover relevant content.

### Power grid modernisation

A skilled workforce is needed to efficiently modernise power grids, to create innovations and to implement them. The concept of smart grids is based on digital technologies and computer-controlled



equipment. That is why we offer a complete, practical training concept in electrical power engineering. This is underpinned by a wellfounded course programme that is continuously being expanded. Everything from basic to advanced topics in power generation, transmission and distribution is covered. This includes topics such as regenerative power generation, power generation in the home power plant, power factor correction, medium- and high-voltage technology, protective relays and substations, AC transmission lines or power electronics.

### **Energy transition**

A transition in energy supply is currently taking place. Renewable sources such as solar, wind, hydropower and geothermal energy are becoming increasingly important. This can reduce dependence on fossil fuels. This change also leads to changed different qualification requirements and professional profiles. Festo Didactic offers suitable learning solutions to this end.

### Automation

The advancing automation of buildings and processes, as well as the increasing electrification in transport, requires new qualification: from the charging infrastructure for electric vehicles to energyefficient lighting systems and intelligent building infrastructure – with the right competencies, the energy transition can be successfully achieved.

The automation solutions of the future are designed with modern servo drives, stepper motors or energy-efficient motors controlled via frequency converters Festo Didactic uses the learning solutions to convey the relevant content.

### 8.2 Water management

In addition to the energy topics already presented, water is of great importance for people and the environment – because water is life. Nevertheless, 80 per cent of the water used worldwide ends up untreated in the environment. This endangers not only biodiversity, but also the drinkable water for the world's population. Management skills, expertise in service and maintenance routines and efficient processes will play a major role going forward. Here, training in water technology management is the most important lever. Several learning solutions from Festo Didactic in combination with Festo Water Management help to protect this precious resource more efficiently.

Due to the COVID-19 pandemic, a total of nine e-learning modules from the water technology programme were offered free of charge through various initiatives and platforms. The e-learning modules cover different aspects of the water cycle and water management, including topics such as water treatment and supply as well as wastewater transport and the treatment of wastewater. In addition, numerous in-person training courses were converted to online training courses. These online services are to be maintained in the future.

### **UNESCO – Global Education Coalition (GEC)**

The COVID-19 pandemic has hit the education sector hard. Schools and universities were closed all over the world. To ensure continuity of learning, the Global Education Coalition was therefore founded in March 2020. As part of this UNESCO initiative, we have decided to make a total of nine water management e-learning modules available to the general public in English and French.  $\rightarrow$  SDG 4

### **UNESCO-UNEVOC**

The UNESCO International Centre for Technical and Vocational Education and Training (UNEVOC) is responsible for setting up the Global Skills Academy. At the Global Skills Academy, free, high-quality online training is provided by members of the Global Education Coalition. These online training courses can help young people gain qualifications for employability. That is why we are also making nine e-learning modules on water management available globally here. In addition, UNESCO-UNEVOC centres inspire education and training for water and sanitation technicians worldwide.  $\rightarrow$  SDG 4.3, SDG 6







### Africa Cloud – atingi

The Africa Cloud – called 'atingi' – is an international cooperation of the Federal Ministry for Economic Cooperation and Development (BMZ), the Smart Africa Alliance and the Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ). The e-learning platform provides young people with free learning content and networking opportunities.

Festo Didactic has offered nine water management e-learning modules for the Africa Cloud within this framework. More than 130 young people have already taken advantage of the offer. The aim is to get them excited about training in the water sector.  $\rightarrow$  SDG 6

### Association for the Development of Education in Africa – ADEA

Ministries of education are being urged by Festo Didactic to engage in cooperation with the Association for the Development of Education in Africa (ADEA). ADEA supports digital learning and training to reach the African education system with the aim of preparing young people for their future in the world of work.

As Festo Didactic is a leader in technical education and training, we are seen as advisers to African ministries of education. Through our membership in the ADEA Board of Directors, we look forward to fulfilling our role as advisers in the years to come.





### 8.3 Festo Learning Experience (Festo LX)

Technical basic and further training is in a continuous process of change. Megatrends are changing not only the content of learning, but also the way learning is done. Digitisation is creating new opportunities for learning.

Due to the COVID-19 pandemic, homeschooling has increased sharply in 2020. Since then, it has become more important than ever that learning content is accessible regardless of location and time. The Festo Learning Experience (Festo LX) is the new digital learning portal from Festo Didactic and takes into account these new circumstances.

Learning trends such as micro-learning, mobile learning and blended learning not only make learning more flexible and individualised, but also more efficient. One thing is particularly important here: people are unique – therefore, education should also be oriented towards the individual needs of the learner. With Festo LX, the focus is therefore clearly on the learner.



The Festo LX digital learning portal offers comprehensive learning content for basic and advanced courses. Both educational institutions and industrial companies can benefit from these trainings using Festo LX.

The topics on the digital learning portal range from factory automation and pneumatics to hydraulics, electrical engineering, process automation, renewable energies and STEM Industry expertise is combined with didactic know-how, theory with practice and online with classroom teaching. The fusion of familiar learning methods with digital elements ensures that the full learning potential can unfold optimally.

Festo LX is based on a micro-learning approach with multimedia 'learning nuggets', which are small, self-contained learning units consisting of information, questions and tasks.


The learning nuggets can be worked on in a modular way and combined into individual learning paths. In addition, the content can be easily assigned to learners. With the so-called LX Creator, it is now possible to create completely new learning nuggets in no time at all and to design your own learning paths. The learner can always get started from where they are currently.

In addition, the didactic methods preferred by the learner can be taken into account when creating or modifying the learning paths. At the same time, multimedia formats such as videos, animations, simulations, text units or small quizzes ensure optimal focus and concentration. In the future, it is planned that Festo LX will also enable learning with virtual reality (VR) and augmented reality (AR).

### Introduction and use during the COVID-19 pandemic

Many customers from all over the world now use Festo LX. The market launch of the digital learning portal was greatly accelerated due to the COVID-19 pandemic.



During the pandemic, the digital learning portal was also used internally at Festo so that trainees could continue to receive optimal training. There are currently 70 external customers worldwide with a total of 8,455 users. Two-thirds of the users are from Germany, Austria and Switzerland, but Festo LX is also used in countries such as the United States, Sweden, Thailand and the Netherlands. There are currently 327 courses available with a total of 2,060 hours of learning time.

A competent community of teachers and trainers around the world continues to enrich the courses. The course programmes all have the goal of making further learning content available in as many languages as possible. With Festo LX, we want to continue to reach thousands of users and provide access to the content.



To the digital learning portal for teachers and learners: lx.festo.com

#### 8.4 Bionics and STEM offerings for secondary education

As part of our corporate educational responsibility (CER), we want to get children and young people excited about science and technology (STEM subjects) and thus create the basis for technological excellence at an early age.

#### **Bionics4Education**

Bionics generates curiosity and interest – that is the motor for learning. Festo Didactic has developed the 'Bionics4Education' STEM education concept since 2019. The aim is to create young people's interest in technical or scientific subjects and also in training and study courses, while they are still in school.

The offer includes training kits and free training materials that can be accessed online. This lays the foundation for increasingly digital education. Not only in school, but also in extracurricular learning activities, the practical transfer of knowledge of scientific and technical knowledge will become more and more significant. Bionics invites you to think outside the box – both in industry and in education.

In addition to the handling of technical components, electronics and software, the out-of-the-box thinking is also intended to teach the learners competencies and skills that young people will increasingly need in their working lives in the future. These are the so-called 21st-century skills such as communication, collaboration, creative problem-solving and critical thinking.

#### Bionic Flower - training kit: learning from nature

Festo Didactic has used water lilies and mimosa movement mechanisms as models for the development of the Bionic Flower. The bionic way of thinking and working can be excellently taught in the classroom with the project-based approach of the Bionic Flower. Approaching technology from nature and the plant world via biology is of great interest especially for girls to deal with robotics and STEM topics such as sensors, electronic components, microcontrollers and coding.

#### FluidSIM MecLab – homeschooling offer

We support schools with homeschooling in the pandemic and offer FluidSIM MecLab as a free homeschooling version. FluidSIM can be used to cover fluid engineering topics such as components and basic circuits of pneumatics, as well as the basic of electrical engineering, control technology and circuit logic.

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At www.bionics4education.com, you will find further information and teaching materials on all aspects of bionics.







#### 8.5 Learning through competitions

Not only Bionics4Education, but also international competitions are designed to get young people excited about technical topics. Learning through competitions can build their skills as future professionals in the industry. Because corporate responsibility for present and future generations is important to us.

Both digitisation and the COVID-19 pandemic have accelerated the planning of hybrid and all-digital competitions. New formats are anticipated at the national and international levels that seemed unthinkable before.

#### WorldSkills professional world championship

WorldSkills is the leading platform for the international benchmark test in vocational training. Festo takes on several different roles at the event: as a global industry partner and as a competitor with our Festo trainees. We are involved in various competitive disciplines, such as mechatronics and water technology. The topic of Industry 4.0 was still implemented as a 'Future Skill' at the 2019 competitions in Kazan, Russia. At the upcoming competitions in Shanghai, China, Industry 4.0 will be an official competition discipline for the first time. Festo sponsors, among other things, the workstations at which the international teams compete for the medals. The construction of the world's first WorldSkills Museum in Shanghai is being planned. As a Global Industry Partner of the WorldSkills organisation, Festo is involved in equipping the permanent exhibition.

### FIRST® LEGO® League

FIRST<sup>®</sup> LEGO<sup>®</sup> League is a support programme that introduces children and young people to technology and scientific research in a playful way. The annual robotics competitions motivate young researchers to solve tasks on specified topics with innovative ideas and team spirit. On the day of the competition each team goes through three jury evaluations – robot design, research and teamwork – and takes part in a robot game over three rounds with the specially developed robot.

Outside of the competition, there is a working committee called 'Technology and Robotics for Kids' which is made up of Festo volunteers who look after children all year round. At the Denkendorf location, there is a training area where up to four teams can train at the same time. In January, the FIRST® LEGO® League of the 2019/2020 season was still able to take place on-site. Due to the coronavirus pandemic, the Festo teams' preparations had to be halted and the competition will be held virtually for participating school teams in the 2020/2021 season.

# 9. Impact on our customers and society

Sustainable economies and lifestyles are the central themes of a future-oriented coexistence on our planet. Combining economy and ecology is becoming a generational task and is the responsibility of each individual. The COVID-19 pandemic and its impact on

the economy and society became the most defining issue in 2020, with massive consequences. From the beginning of the pandemic, our social mission was to contribute to the mitigation of the COVID-19 pandemic through supportive projects.  $\rightarrow$  GRI 103-1



#### 9. Impact on our customers and society



Extraordinary measures are required in an extraordinary time. As a system-relevant component supplier for the beverage, food and pharmaceutical industries, the focus is therefore on maintaining our international value and supply chain.

At the same time, we assume corporate responsibility and – whenever possible – make a contribution to society that goes beyond this with our products and our expertise. Combined with the extraordinary dedication of our staff, innovative solutions were created to alleviate the impact of the pandemic in many different areas of life.

#### 9.1 Support projects

Festo launched several focused support projects with the onset of the COVID-19 pandemic, such as the development of an emergency ventilator, support for protective mask production, the construction of an emergency hospital and the 'Virus Fighter's Handbook' app.



#### Development of an emergency ventilator

Festo does not manufacture ventilation equipment itself, but it supplies a range of components suitable for installation in ventilation equipment to certified manufacturers.

With the onset of the pandemic, numerous customer enquiries from Germany and abroad led to a specially established development team at Festo developing an emergency ventilator.

Within a few weeks, the interdisciplinary team working from home – in close exchange with hospital doctors – prototyped a functioning ventilator that works by means of digital pneumatics and in which the respiratory frequency and pressure as well as the ventilation volume can be adjusted.

The emergency ventilator was technically fully developed, but without approval for use as medical device. The German Medical Devices Act allows for a simplified approval process of the devices in the event of a disaster, so that use would be possible with a special approval. Festo made the concept available to its customers via its national companies, as well as to the authorities internationally.



#### Mobile automated mask production

Right from the start of the pandemic, Festo was a supplier and technical consultant for the Carola project for the machine manufacturer Mikron. The aim was to reduce the extreme shortage of protective face masks at the beginning of the COVID-19 pandemic.

In a 20-foot sea freight container, a production unit was installed where the raw material (polypropylene), delivered in rolls, was processed into complete protective face masks. The production capacity was around 50 masks per minute, corresponding to about two million masks per month.

The major advantage is that this unit is mobile, can operate immediately on-site, is independent of imports and can be used over a long period in any crisis area. Festo supplied electrical and pneumatic components and drives for this purpose, primarily from the core product range, which were available at any time.



Originally planned as an open-source project – meaning that the design plans are freely accessible worldwide – the autonomously running machine is now manufactured by our customer Mikron. The high production costs of 300,000 euros per machine could not be financed through donations.

#### Components for an emergency hospital

Another project was the emergency hospital at Messe Stuttgart, where about 320 cabins were set up in a hall to be able to supply patients with medical oxygen.

Festo supported the Malteser humanitarian relief agency in setting up and distributing the medical oxygen. Festo specially developed a system for supplying patients directly in the cabins with a corresponding connection to the supply ring line. A volunteer team took over the assembly on-site. The hospital was dismantled at the end of April 2020, because the feared overcrowding in the hospitals failed to materialise.



#### Virus Fighter's Handbook

Together with a team from the Fraunhofer Institute for Manufacturing Engineering and Automation (IPA), Festo has worked with medical professionals from several clinics to develop a concept for a digital manual to combat the coronavirus crisis.

The Virus Fighter's Handbook app is based on Festo's existing Smartenance app and is designed to provide registered users with information on the use and maintenance of the competition's newly developed ventilators, as well as specific knowledge in dealing with COVID-19 patients. The Virus Fighter's Handbook is available to users worldwide free of charge, as an app for download and as a web application.

#### 9.2 Stable production in system-relevant areas

In addition to the medical sector, it is also important for Festo to keep the production of system-relevant areas stable on a global scale. A supply chain task force established at the beginning of the pandemic has the objective of maintaining production and logistics throughout the global network, and distributing capacities as necessary.

Festo products can be used for example in filling technology in the beverage industry, for packaging at food manufacturers, and also in cleaning units for hospitals and care facilities and in packaging technology for medication in the pharmaceutical industry.

#### Components for laboratory automation and patient care

In addition to system-relevant sectors such as the beverage, food and pharmaceutical industries, Festo can offer an excellent portfolio of components for laboratory automation and patient care devices with its LifeTech business area.

#### Automation solutions for test laboratories

Global diagnostics companies and laboratories faced the challenge of meeting the high demand for COVID-19 tests during the pandemic.

Festo offers automation solutions for test workflows of diagnostics companies and laboratories – for instance the handling of sample tubes or the pipetting and dosing of liquids. When developing the components, the focus is on high throughput, precision and accuracy.

Devices for antibody testing also became increasingly important. Festo supplied valves and pressure regulators, for example, for these compact mobile on-site laboratory devices in doctors' practices and hospitals – so-called point-of-care (POC) devices.

This enabled large-scale testing that can help key workers get back to work on the ground and care for and protect more vulnerable people.





#### 9.3 Employee commitment

Everyday life is different during this extraordinary time and so is the commitment of our staff. With a wealth of ideas, initiative and a lot of commitment, the support projects could be implemented in a very short time.

In addition, our employees are involved in volunteering. This civic engagement addresses a wide range of problems during the pandemic and supports our social cohesion – an indispensable contribution to the management of the pandemic.

#### Ventilation systems in schools

In many schools, functioning ventilation systems are in short supply. During a pandemic, this can quickly turn into a healththreatening situation for the pupils. On their own initiative, with a lot of commitment and even more working hours, a ventilation system was installed in a school in the town of Kirchheim unter Teck in Baden-Württemberg. This enabled aerosol pollution to be reduced by up to 90 per cent.

Twelve helpers with around 120 hours of work were involved in building the prototype – half of them Festo employees. Teachers and parents were supported by different departments in the company with a wide variety of tasks such as the production of special tools.

Further ventilation systems are already being planned. The next 15 classrooms will require about 800 hours of work, 289 exhaust hoods will be built – each for two pupils at a table – and 526 metres of lightweight pipes and 563 square metres of film will be installed.

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103-1	Technical basic and further training and corporate educational responsibility (8)	66
103-1	Impact on our customers and society (9)	76
Econom	у	
	Directly generated and distributed economic value	
201-1	Festo in summary	6–7
	Proportion of locally recruited managers	
202-2	Staff development (3.1)	29
	Infrastructure investments and subsidised services	
203-1	In recent years, we have invested in various new buildings and internal infrastructure measures worldwide to	
	support our standard product range.	
	Share of expenditure for local suppliers	
204-1	Sustainable procurement (2.2)	18
	Information and training on anti-corruption strategies and measures	
205-2	Compliance (4.1)	39

Legal proceedings due to anti-competitive behaviour or cartel and monopoly formation       206-1     Compliance (4.1)	38
Environment	
Materials used by weight or volume	
301-1 Sustainable procurement (2.2)	19
Fuel consumption from non-renewable sources	
302-1a Environmental management (5.1) 46-	-47
Power consumption	
302-1cEnvironmental management (5.1)46-	-47
Reduction of energy demand for products and services	
302-5 Festo Energy Saving Services (7.3)	64
Water intake by source	
303-1 Environmental management (5.1)	50
Significant impacts of activities, products and services on biodiversity	
304-2 The mining of bauxite as a raw material for aluminium production can have adverse effects on biodiversity,	
depending on the mining region and the mining conditions prevailing there.	19
Direct GHG emissions (scope 1)	
305-1Environmental management (5.1)46-	-47
Indirect energy-related GHG emissions (scope 2)	
305-2Environmental management (5.1)46-	-47
Other indirect GHG emissions (scope 3)	
305-3 Environmental management (5.1)	48
Wastewater discharge in terms of quality and discharge location	
306-1 Environmental management (5.1)	50
Waste by type and disposal method	
306-2 Environmental management (5.1)	49

GRI	Title (chapter)	Page
	Transport of hazardous waste	
306-4	Environmental management (5.1)	49
	Non-compliance with environmental laws and regulations	
307-1	Environmental management (5.1)	48
	New suppliers which were audited using environmental criteria	
308-1	Sustainable procurement (2.2)	20
	Negative environmental impacts in the supply chain and measures taken	
308-2	Sustainable procurement (2.2)	20
Social a	ffairs	
	New employees and employee turnover	
401-1	Staff development (3.1)	25
	Business services offered only to full-time employees and not to temporary or part-time employees	
401-2	Staff development (3.1)	26
	Minimum notification period for operational changes	
402-1	Festo currently has no global information on the minimum notification period for operational changes.	
	The nature and rate of injuries, occupational illnesses, days of absence and absence from work and the num-	
	ber of work-related deaths	
403-2	Occupational safety (3.6)	35
	Average number of hours for basic and further training per year and employee	
404-1	Further training (3.3)	30–31
	Programmes to improve the skills of employees and to aid transitions	
404-2	In order to support the systematic development and employability of employees, the PeopleExcellence pro-	
	gramme was rolled out as part of the 2020 corporate strategy.	
	Percentage of employees that have regular performance and career development evaluations	
404-3	All employees received a regular assessment of their performance and career development in 2020.	
	Diversity among management bodies and employees	
405-1	Diversity (3.2)	28

GRI	Title (chapter)	Page
	Ratio of basic salary and remuneration of women to basic salary and remuneration of men	
405-2	Staff development (3.1)	26
1044	Incidents of discrimination and remedial measures taken	20
406-1	Diversity (3.2)	29
	Business locations and suppliers where the right to freedom of association and collective bargaining may be	
	threatened	
407-1	Sustainable procurement (2.2)	20
407-1	Human rights (4.2)	41
	Business locations and suppliers with a significant risk of incidents of child labour	
408-1	Sustainable procurement (2.2)	20
408-1	Human rights (4.2)	41
	Business locations and suppliers with a significant risk of incidents of forced and compulsory labour	
409-1	Sustainable procurement (2.2)	20
409-1	Human rights (4.2)	41
	Security personnel trained in human rights policies and procedures	
410-1	The security staff at Festo's German plants are completely trained in the topics of dealing with people, behaviour	
	in hazardous situations and de-escalation techniques in conflict situations.	
	Human rights (4.2)	41
	Incidents where indigenous peoples' rights have been violated	
411-1	Festo SE & Co. KG is currently working on the implementation of the National Action Plan for Business and	
	Human Rights (NAP). No data has been collected yet.	
411-1	Human rights (4.2)	41
	Business locations where a human rights audit or human rights impact assessment has been carried out	
412-1	Human rights (4.2)	40-41
	Rusiness activities with significant actual and notential negative impacts on local communities	
	So far there are no detailed investigations on this	
413-2	Human rights (4.2)	41
	New suppliers which were audited using social criteria	
414-1	Sustainable procurement (2.2)	20
414-1	Human rights (4.2)	41

GRI	Title (chapter)	Page
	Negative social impacts in the supply chain and measures taken	
414-2	Sustainable procurement (2.2)	20
414-2	Human rights (4.2)	41
	Party donations	
415-1	For 2020, the Festo Group had no receipts for donations to political parties.	
	Assessment of the health and safety impact of different categories of products and services	
416-1	Consideration of applicable guidelines and laws (6.4)	55
	Requirements for product and service information and labelling	
417-1	Product responsibility and transparency (6.8)	58
	Justified complaints regarding breaches of protection and loss of customer data	
418-1	The number of incidents is subject to internal confidentiality requirements.	
	Failure to comply with laws and regulations in the social and economic field	
419-1	Festo is committed to strict compliance with laws and regulations, which are binding for all employees and are	
	set out in the Code of Conduct.	

# 11. Report profile

In this sustainability report, the Festo Group informs its stakeholders about the 2020+ sustainability strategy and the sustainability activities that happened in 2020. In the reference figures, earlier comparison years are shown. The requirements of the German CSR Directive Implementation Act do not impose any obligation for sustainability reporting. Rather, Festo does so because it is committed to the topic of sustainability.

#### **GRI standards and UN Sustainable Development Goals**

The Festo 2020 sustainability report was compiled in accordance with the international standard for sustainability reporting by the Global Reporting Initiative (GRI) in the 'Core' option.  $\rightarrow$  GRI 102-49, GRI 102-54

We have supplemented this data with further information on strategically relevant and current topics, also with regard to the Sustainable Development Goals (SDGs).  $\rightarrow$  See page 12 for more details.  $\rightarrow$  GRI 102-46

#### Reporting period and editorial deadline

The document is available in German and English and mainly relates to the period from 1 January 2020 to 31 December 2020. All forward-looking statements in this report are based on general assumptions at the time of going to press. The editorial deadline for this report was 30 June 2021.  $\rightarrow$  GRI 102-50, GRI 102-51

The last sustainability report was published in December 2020 as a print version and interactive PDF and covered the 2017 to 2019 financial years. From 2020, the sustainability report of Festo SE & Co.KG will be published annually.  $\rightarrow$  GRI 102-52

#### External and internal audit

By using the GRI standard, we want to ensure transparency of information and comparability for the public. There was no external audit of GRI compliance.  $\rightarrow$  GRI 102-56

Our environmental management system according to ISO 14001 and our quality management system according to ISO 9001 are regularly reviewed by external auditors.

#### **Contact persons and project participants**

Numerous employees of the Festo Group worked on the Festo 2020 sustainability report. We will be happy to answer your questions and, if necessary, forward them to the relevant specialist departments.  $\rightarrow$  GRI 102-53

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