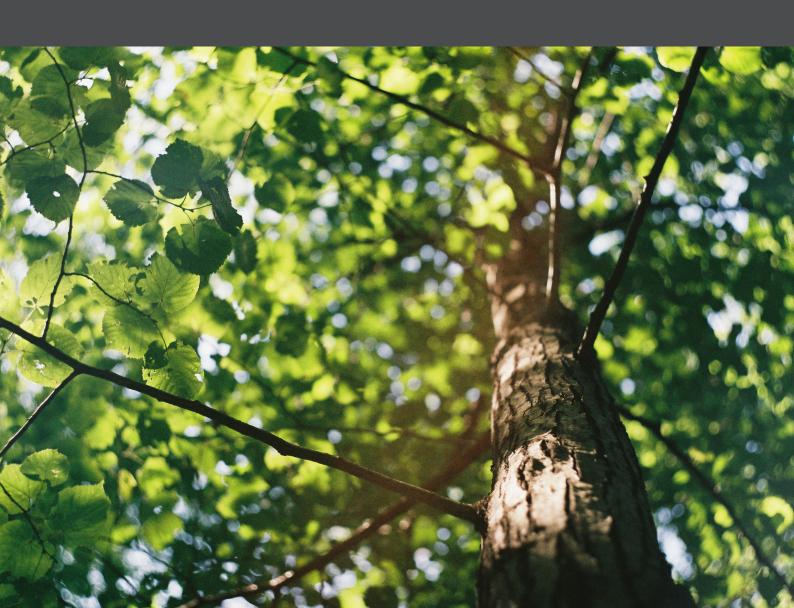


# **SUSTAINABLY SHAPING THE FUTURE**ENVIRONMENTAL REPORT 2022





#### **Dear Friends and Partners,**

Ever since the Vauth-Sagel Group was founded, we have gladly accepted the human and environmental responsibility that comes with building a company. For us, it has always been clear how important it is to not only consider our economic success but also our ecological success, if we want to create a world worth living in for ourselves and our children.

That's why we can proudly say that sustainability is firmly anchored at the core of our business. Concrete measures at all our locations show that with ambition and innovation, it's possible to move mountains. A 50% energy saving by switching to LED lighting, a 44% energy saving by optimizing the compressed air system and a 35% reduction in resource consumption with powder coating clearly indicate where our path leads: to an efficient, sustainable, circular economy that, in turn, results in a healthy environment with clean water, fertile soil and pure air.

We are pleased to lead the way down this path and look forward to introducing Vauth-Sagel's sustainability measures on the following pages.

Heinrich Sagel, Heinz-Otto Sagel, Thomas Sagel, Claus Sagel, Peter Sagel and Dr. Martin Sagel





01 // Saving energy 02 // Generating energy 03 // Using raw materials intelligently 04 // Preventing waste 05 // Creating value 06 // Helping the environment 07 // Seizing the future 08 // Taking responsibility

#### AT THE CENTER OF OUR BUSINESS

As a family company with a 60-year tradition, to leave future generations a world worth livour responsibility towards people and the en- ing in and actively shape its realization, we vironment is inseparable from our economic find ourselves in complete agreement with success. Resource-efficiency, which means the Sustainable Development Goals (SDG) saving energy, preventing waste and using of the United Nations and the German reraw materials wisely, is one of the fundamen- source-efficiency program, ProgRess III. tal principles of our business. In our efforts



### **ENVIRONMENTAL GOALS** FOR OUR LOCATIONS

Ultimately, it's not words that count, developing into an efficient, closed but deeds. With this in mind, it was circular economy with next-to zero important to us to align our company emissions and waste is a never-endstrategy with the compass point of ing process. New technologies sustainability from early on. We have will continue to offer fantastic new extensively invested in the ongoing opportunities. We look forward to implementation of resource-sav- setting yet more ambitious environing measures at all the sites in the mental goals in future, and transpar-Vauth-Sagel Group, and will con- ently sharing our successes in our tinue to do so. We are aware that environmental report.

<sup>1</sup> Erkeln <sup>2</sup> Paderborn

<sup>3</sup> Korbach

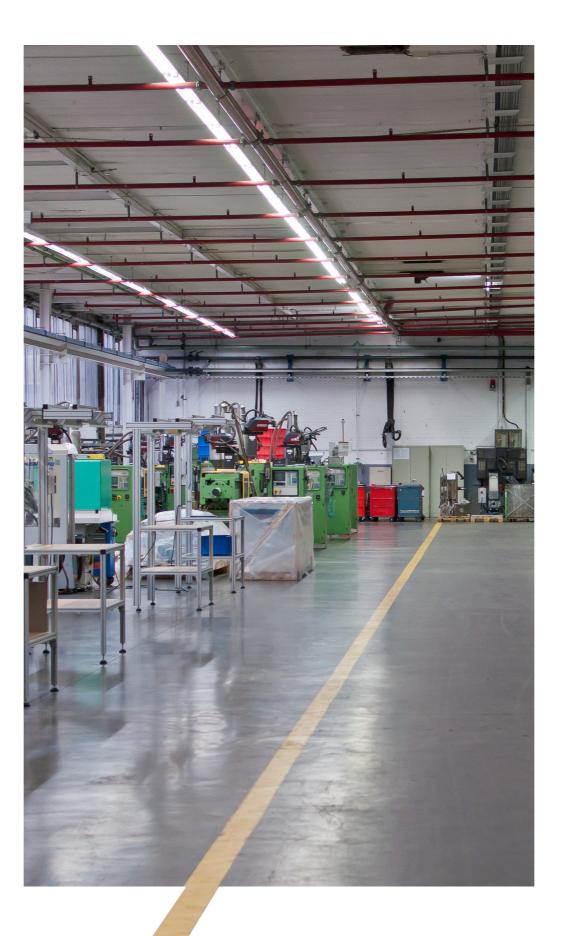
<sup>4</sup> Beverungen



#### 1.1 Heating with gas and good ideas

We saved approx. 200 t  $\mathrm{CO}_2$  per year in the plant at our company headquarters in Brakel-Erkeln by switching our heat supply from heating oil to natural gas. At the same time, we renewed our heating system at the Korbach plant and switched to state-of-the-art condensing boiler technology. This strategy reduced the consumption of fossil fuels by 16% at this site alone. Further savings have been achieved by generating our own electricity and heat using innovative cogeneration units and boilers.







AVERAGE ENERGY SAVING



#### 1.2 A shining example – LED

LED lights offer considerable advantages over conventional lighting. They consume far less energy, last a long time, and are considered a key technology in realizing a green future. The conversion of our exterior lighting and factory lighting confirmed these claims with average energy savings of 50–60%. In addition, the sensor-controlled LED system switches on and off according to user presence, and adapts to the daylight conditions.



**JJ** Digitalization and networking on all levels is the indispensable foundation for seamless data collection, analysis, and continuous improvement processes.





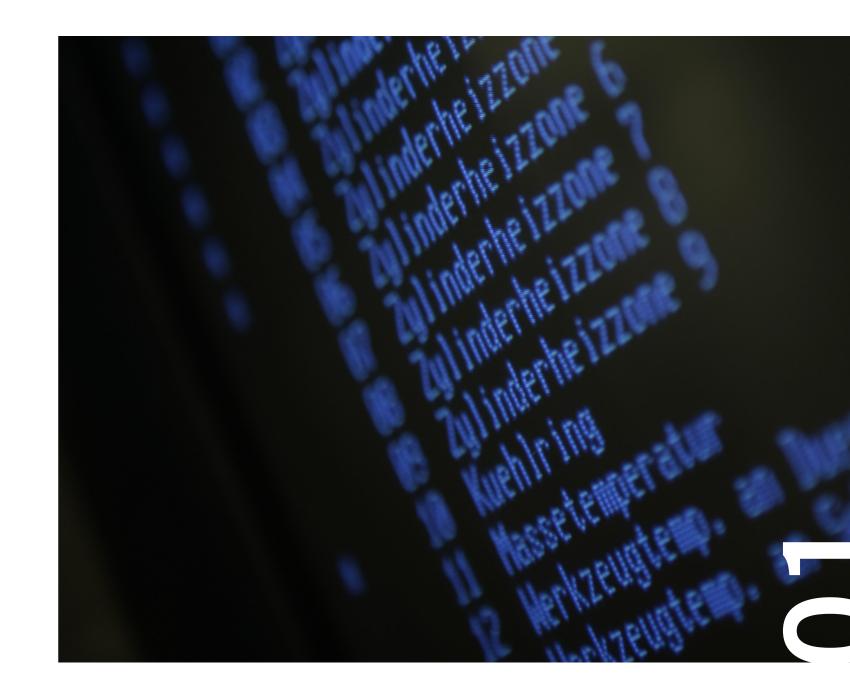
#### 1.3 Smart management – Factory 4.0

heat quantity and electricity meters, the in- and management systems. telligent and automated management of all

Digitalization and networking on all levels energy-related processes is a key factor in is the indispensable foundation for seam- certifiable sustainable production. For exless data collection, analysis, and continuample, energy savings of approx. 5% have ous improvement processes. As well of 24h been achieved at the Korbach plant by remonitoring of energy data using natural gas, placing and optimizing the building control

#### 1.4 Efficient and cold as ice -Our new cooling supply

The cooling supply for our injection molding machines at the Paderborn site has been switched to free cooling/cogeneration and cold absorption, combined with a cooling well. Improved cooling performance results in reduced production cycle times and energy consumption.





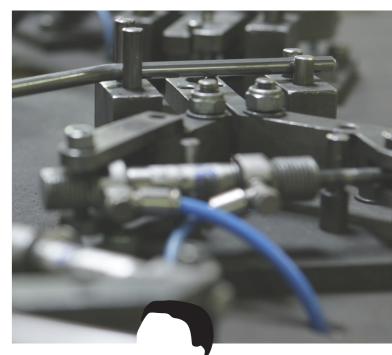


system can achieve remarkable savings. In ings of 44%.

Alongside electricity, compressed air is the the process of modernizing the compressed most important industrial energy source. While air supply with state-of-the-art compressors, wasted compressed air, e.g. through leaks, is heat is even recovered and fed back into the barely perceptive to the untrained eye, anal- heating system. The systematic identification ysis and optimization of the compressed air and elimination of leaks results in energy sav-







#### 1.6 Constant streamlining -Machinery

Not least, modern production technology is rapidly developing in terms of energy efficiency. By regularly investing in our machinery, we are continuously improving the environmental footprint of the energy used in our production.





**77** To save fuel and prevent unnecessary trips, we are renewing our fleet with the most efficient tractor units on the market.

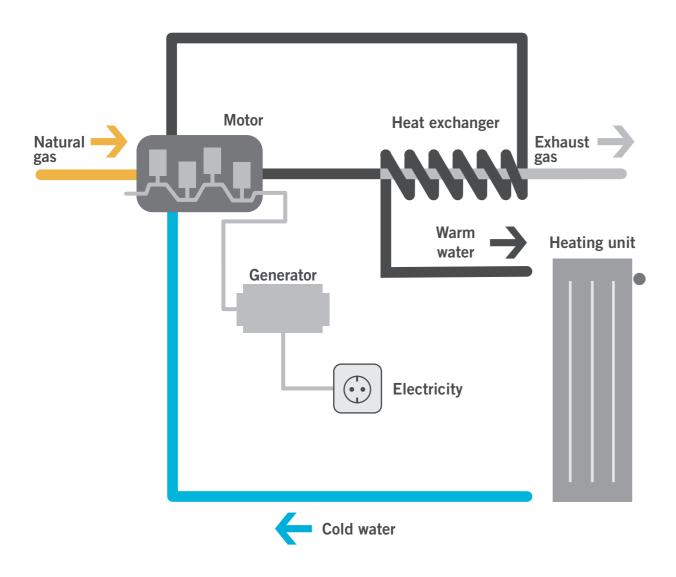
#### 1.7 Ecologically in the fast lane – Logistics

tor, transport is the third-biggest generator of greenhouse gases in Germany. Around 20% of roads – a good reason for us to regularly bring our own logistics up to scratch in terms of enunnecessary trips, we are renewing our fleet car fleet, including charging infrastructure. with the most efficient tractor units on the mar-

After the energy sector and industrial sec- ket. An intelligent telematics system provides the necessary data for optimal route planning, while the Mercedes-Benz Fleetboard seamall CO<sub>2</sub> emissions come from the trucks on our lessly tracks fuel consumption and supports our drivers in driving economically. As well as ecologically optimizing our HGV fleet, we have ergy consumption. To save fuel and prevent also introduced the first electric vehicles in our









#### 2.1 Electricity and heat from gas -**Cogeneration unit**

The pioneering technology of cogeneration is highly efficient at generating heat and electrical energy from natural gas. Cogeneration units have been successfully installed at our sites in Paderborn and Korbach. At the Paderborn plant, energy is generated all year round with a thermal output of 480 kW and electrical output of 450 kW. The cogeneration process has an overall effectiveness of up to 90%, which is reviewed annually during our energy audit.

#### 2.2 Electricity from solar energy – Photovoltaics

logical advantages and have a highly positive to base materials like silicon, glass and aluinfluence on energy and environmental foot- minum. Currently, we are in the process of print. The ERoEI factor is ten, meaning ten equipping all our sites with a total output of times as much electricity is generated as is 1,200 kWp, which makes up approx. 10% of needed for its production. Photovoltaic sys- the Vauth-Sagel Group's total energy requiretems reduce the overall sum of CO<sub>2</sub> emitted ment. during energy production, have a lifespan of

Photovoltaic systems combine a variety of eco-up to 30 years, and is 95% recyclable, thanks



Photovoltaic systems reduce the overall sum of CO<sub>2</sub> emitted during energy production, have a lifespan of up to 30 years, and is 95% recyclable, thanks to base materials like silicon, glass and aluminum.





It cannot be right to manufacture billions of objects that are used for a matter of minutes, and are then with us for centuries.

**ROZ SAVAGE** 





# 2.4 Nothing wasted – Recycling waste for energy production

Usually, waste is recycled. In our wood processing department at the Beverungen plant, waste wood is recycled to generate energy, which is used to supply heat.







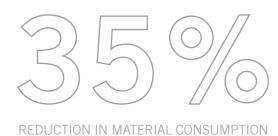
33 All the steel furniture we produce can be recycled without loss of quality, meaning they are not only attractive design objects, but also valuable resources for asustainable, circular economy.

#### 3.1 Everything stays in the cycle -**Secondary raw materials**

The Vauth-Sagel Group manufactures products made of steel, combined with other materials. Since the primary extraction of steel consumes without saying that we use multi-recycled steel in our production, up to material. All the steel products we cled without loss of quality, meaning they are not only attractive design in production.

objects, but also valuable resources for a sustainable, circular economy Like steel, plastic also has excellent recycling properties. Products made a vast amount of resources, it goes of 100% recycled material have long been available in various industries. The Vauth-Sagel Group is working half of which is composed of scrap on this too; for example, all the bins in our VS ENVI® waste sorting sysproduce, such as the furniture from tem are 100% recyclable. Internally, our subsidiary mauser, can be recy- defective containers are converted to ground granules and fully reused





# 3.2 Thin coating, big effect – Powder coating

Powder over paint. A major problem with painting processes is the processing of solvents, which do not readily biodegrade and are extremely harmful to the environment and the ozone layer. Powder coating technology, which is completely solvent-free, offers a sustainable, resource-efficient alternative. In 2019, we commissioned one of the biggest powder coating facilities in Europe at our Korbach site with an investment of 8 million euros. Thanks to the thin coating technology, we have reduced our material consumption by 35% and saved the  $\mathrm{CO}_2$  equivalent of 730 tons per year through reduced energy consumption.



# PREVENTING WASTE

REDUCING OUR ENVIRONMENTAL IMPACT

04 // As well as conserving resources, we are dedicated to preventing waste in general, especially environmentally polluting waste products such as solvents and paints. We assess and systematically improve everything we do with this in mind. One good example of this is the complete overhaul of our shipping packaging. Less material consumption, better utilization of storage space and 100% recyclability are an impressive result for our customers and the environment.







## 4.1 Paint and solvent replaced with powder

By investing in one of the most advanced powder coating facilities in Europe, we were able to replace conventional painting processes with powder coating at our Korbach plant. The advantages of the 3,000 m² facility speak for themselves: Unlike zinc phosphate coating, powder coating is free of heavy metals, preventing the build-up of sludge in the environment. The innovative, extra-thin coating consumes 35% less resources, i.e. paint. This process completely eliminates the need for non-biodegradable solvents.

# VAUTH

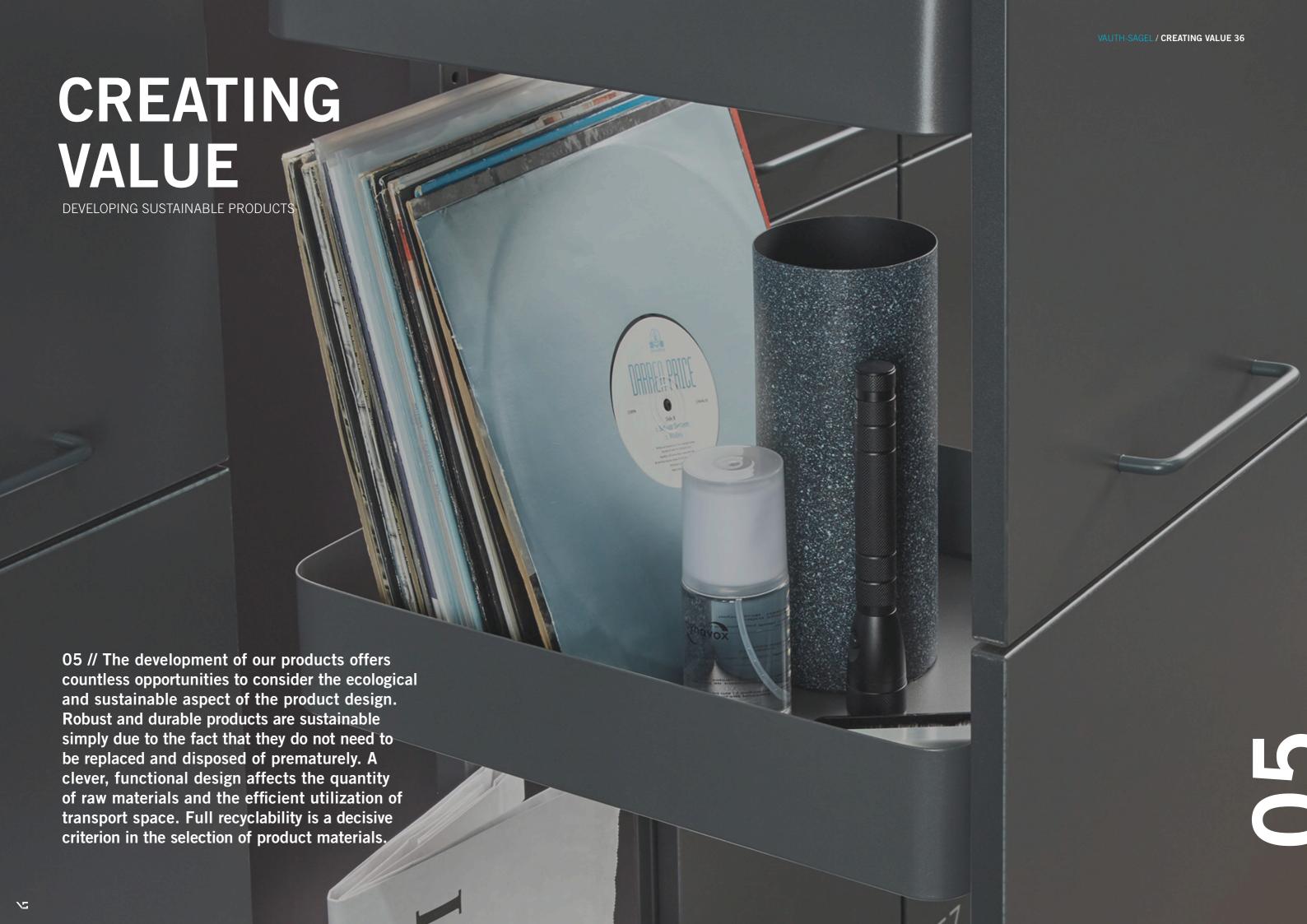
RECYCLABLE





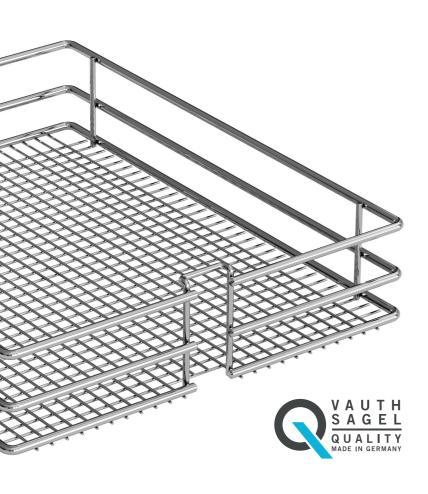
#### 4.2 Sustainable packaging is well-received

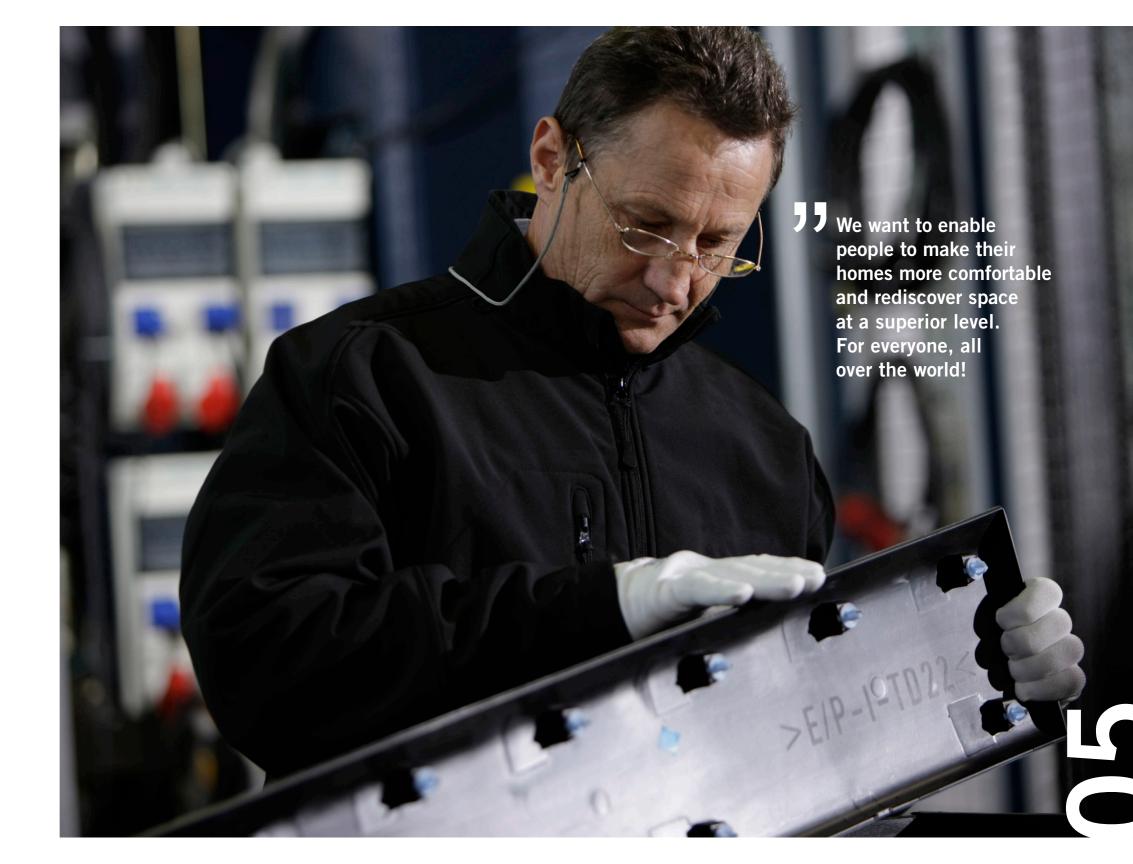
Every day, our plants dispatch contains only as much material as countless shipments using a variety necessary and as little material as of methods. For several reasons, we possible. This makes it more easily have fully revised, standardized and stackable, less bulky during transoptimized the packaging we use. It port, and 100% recyclable. Where goes without saying that we want to possible, we do not fill our packages ensure that our products reach the with packaging film, which are often customer safely and in one piece. thrown away by the recipient. For However, we also consider the en- recurring shipments, we use deposvironmental aspect in our packag- it systems such as module boxes to ing designs. Our new packaging avoid creating waste.



#### **5.1 Made in Germany – Long-lasting products**

The robust steel furniture from our subsidiary mauser is built to last for decades. Many of the models are design classics today and everything other than examples of the throw-away economy. The same is true of all other products from the Vauth-Sagel Group: quality made in Germany is non-negotiable and therefore innately sustainable. Thanks to this certified quality, Vauth-Sagel storage space solutions enhance kitchens and interiors around the world.













**77** Vauth-Sagel products offer maximum form and function, combined with minimal impact on the environment.



#### 5.2 The efficiency of design -**Resource-efficient products**

Many of our products and solutions are de- sign to the essentials measurably saves raw plays a role in this regard. Reducing the de- on the environment.

signed to make spaces easier and more con-materials and resources, as well as increasing venient for people to use. The efficiency of transport efficiency. Designed on this basis, the product design, which shouldn't consume Vauth-Sagel products offer maximum form more space than functionally required, also and function, combined with minimal impact





SUPPORTING A WORLD WORTH LIVING IN

06 // Protecting and advancing environmental interests is part of Vauth-Sagel's DNA. We are pleased to support initiatives that are dedicated to the same goals.

#### **6.1** A tree for every visitor – Plant for the Planet

During interzum 2021, we support-total of 1,000 trees. We will continue and our visitors managed to plant a customers and partners.

ed the initiative Plant for the Planet to support the initiative in future and for the first time by planting a tree for have made it our goal to invest a furevery visitor of our virtual trade fair ther 100,000 euros in the planting platform, VSLive!. By doing so, we of trees worldwide, together with our

We will continue to support the initiative in future and have made it our goal to invest a further 100,000 euros in the planting of trees worldwide, together with our customers and partners.









#### VS Systemtechnik GmbH & Co. KG

- ➤ Conversion from heating oil to natural gas
- \ Heat pump operation for heating and cooling in Plant 2, Erkeln
- Recycling of waste wood to generate energy at the Beverungen plant
- Conversion of all the lighting to LED technology, incl. motion sensors and daylight control
- Installation of charging infrastructure for electromobility

#### IN PREPARATION

- Installation of a 400 kW photovoltaic system in Erkeln and 135 kW in Beverungen
- \ Heat recovery in powder coating to reduce natural gas consumption
- N Digital data tracking of all energy flows
- Improving the energy efficiency of the compressed air supply



#### VS Logistik GmbH & Co. KG

- Continual replacement of the HGV fleet
- Telematics system for continuous management and optimization of routes and consumption
- Introduction of electric vehicles to the car fleet
- Installation of charging infrastructure for electromobility

#### IN PREPARATION

➤ Trialling of electric HGVs



#### Westo Kunststofftechnik GmbH

- Highly efficient energy supply system, incl. cogeneration unit for heat/cooling and electricity generation
- ➤ Building control technology, incl. heating control
- Continual replacement of machinery
- Conversion of all the lighting to LED technology, incl. motion sensors and daylight control
- Installation of charging infrastructure for electromobility

#### IN PREPARATION

- Installation of a +400 kW photovoltaic system
- Improving the energy efficiency of the compressed air supply
- Digital data tracking of all energy flows in the company



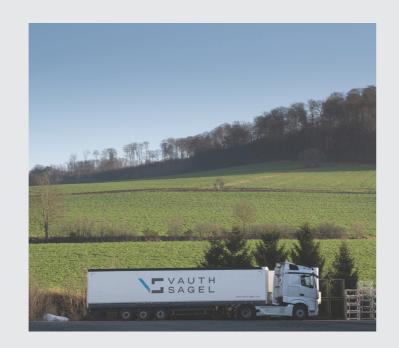
#### mauser Einrichtungssysteme GmbH & Co. KG

- Neplacement of the heating system
- Installation of a natural-gas-powered cogeneration unit that efficiently generates heat and electricity
- Replacement of the compressed air supply with speed-controlled compressors
- Introduction of a decentralized cooling supply
- Conversion of the lighting to LED technology
- Replacement and optimization of the building control and management systems
- New construction of a highly efficient powder coating system

#### IN PREPARATION

Installation of a 300 kW photovoltaic system

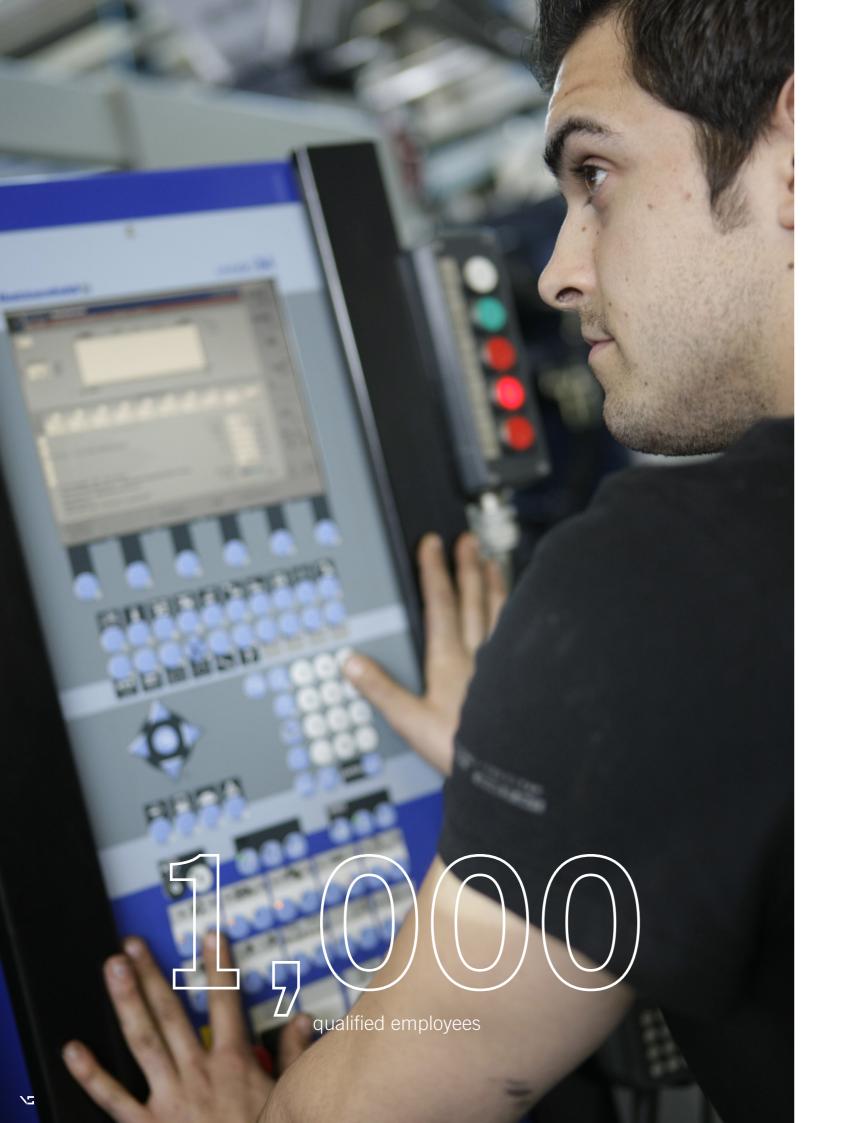


















# 8.1 Creating value through safety

The people in our company are our most valuable asset. That's why the health and safety of our approx. 1,000 employees is our highest priority. The entire organization is organized around accident prevention, and health and safety training is a regular, integral component of our company culture.





We should therefore claim, in the name of tolerance, the right not to tolerate the intolerant.

KARL POPPER



# 8.2 Tolerance, equal opportunity, and support

The non-negotiable values of our Group include respect and mutual appreciation. For us, social responsibility means that we promote gender equality, integration, e.g. by employing people from disadvantaged backgrounds, and fight against all forms of discrimination. Our comprehensive training and further education program offers employees of our company the opportunity for personal development in accordance with their strengths.







ZERTIFIKAT UM WELTMANAGEMENT

Mauser Einrichtungssysteme GmbH & Co. KG 34497 Korbach

Entwicklung und Herstellung von Büromöbeln, Lager- und und Krankenhäuser sowie Archiv- und Regalsysteme: Entwicklung Entwicklung und Herstellungssysteme:

Seinrichtungssysteme:

Seinrichtung von Büromöbeln, Lager- und für Pflege- Sozialeinricht hat für den Geltungsbereich und Krankenhäuser sowie Archiv- und Regalsysteme; Entwicklung ein relationer Einrichtungskonzepte inklusive Planungsleistung ganzheitlicher Einrichtungskonzepte inklusive Planungsleistung

Kerniechnik, Werk 3

Kiesweg 2

TUV NORD

THUM & Co. KG

Die Erfüllung der Normanforderungen wurde durch ein Umweltaudit festgestellt. Dieses Zertifikat ist nur gültig in Verbindung mit dem Hauptzertifikat-Nr 33n3/

ZERTIFIK. QUALITÄTS MANAGE Das Unternehmen VAUT

VAUTH-SAGEL Holding GmbH & C SAGEI

mit den im Anhang gelisteten Gesellschafte 33034 Brakel-Erkeln

Einrichtungssysteme – Logistik – Systemi Transporte Draht-, Rohr-, Specition und Transporte

Kunststoff- und Holzverarbeitu

Möhelfunktionsheschläge

Möbelfunktionsbeschläge Die Erfüllung der Normanforderungen wurde durch ein Qualitätsaud

Dieses Zertifikat ist gültig vom 18. November 2021 bis zum 20. M Dieses Zertifikat ist gültig vom 18. November 2021 bis zum 20. M

Geschäftsführer der Zertifizierungsgesells ESC Cert GmbH, Teichstraße 14, D-34130 Kassel

Zertifikat-Nr.: 33034





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