Annual Report 2022

Our employees make the difference

Leadership in Filtration

MANN+HUMMEL

MANN+HUMMEL at a glance[1]

Sales	EBIT	EBIT margin	Locations
4.8 billion euros	**176** million euros	**3.7%**	**80+** on 6 continents

Total assets	Investments in R&D	Employees
4.3 billion euros	**114** million euros	**22,222** worldwide

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

Key figures[1]

In EUR million	2022	2021
Sales	**4,826**	4,200
Operating profit or loss (EBIT)	**176**	191
As % of sales	3.7%	4.6%
Net profit before interest, taxes, depreciation, amortization (EBITDA)	**394**	419
As % of sales	8.2%	10.0%
Net profit or loss before income tax and changes in capital economically attributable to the shareholders	**20**	154
As % of sales	0.4%	3.7%
Consolidated net income	**–9**	17
As % of sales	–0.2%	0.4%
Free cash flow	**68**	135
As % of sales	1.4%	3.2%
Total assets	**4,347**	4,347
Investments in tangible assets	**263**	180
Depreciation of tangible assets	**162**	154
Value added per employee in EUR thousand	**93**	80
Average number of employees	**22,222**	23,211

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

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Foreword by the Management Board

Our most important asset: our employees

Dear Ladies and Gentlemen,
Dear Business Partners,

Have you ever noticed that there is a lot of talk about "new" everywhere these days? New opportunities. New challenges. New realities. New world order.

It is not all that new. We seem to have forgotten that constant changes have always been part of our lives. When we close our eyes, there is no such thing as standing still. Society is constantly changing. Financial frameworks are constantly changing. Geopolitical balances of power are constantly changing. The rise of inflationary pressures has increased globally to levels not seen in decades. The world as we know it is constantly changing.

We have anticipated and adapted to the changes around us through the talent, dedication, and drive of our global employees led by our diverse international leadership team. With conviction, we move through our company's transformative journey. The ambitious targets we have set for ourselves are our path to a sustainable future. We constantly challenge the status quo and execute our strategy to transform our organization.

Transformation is not a buzzword for us. It is and always has been a driving force throughout our history. With 80+ years of experience in separating the useful from the harmful, we bring agility to each step along the way.

Looking back at 2022, there are numerous examples of outstanding initiatives and accomplishments throughout the whole organization that underline this. The commitment of our more than 22,000 global employees working to achieve our customers' satisfaction through challenging external conditions has been and remains our top priority. It is with our customers' success that we will succeed.

To speed up with conviction towards achieving our vision of leadership in filtration, in 2022 we sold our high-performance plastic parts business. With this important step, we will be able to fully focus on our core competencies filtration and separation, and to solidify our transformation strategy. We thank those employees who have relocated with this business and wish them much success.

At the same time, we are systematically driving forward the digitalization of our company, our processes, our products, and solutions. After Singapore, Shanghai (China)

and Raleigh, NC (USA), we have opened our fourth Digital Hub in Heilbronn (Germany). Digitalization is a key driver for our transformation strategy. We will continue our efforts in this area and actively shape the future—the future of filtration and the future of MANN+HUMMEL.

Another important cornerstone when following our goals and visions: solid and robust financing even in challenging times. Receiving prestigious awards in 2022 impressively demonstrates that we are on the right track in this area—and that it is a sustainable one.

We have fully embraced our drive for a sustainable future. Through our innovations, we will continue to enable our customers to be more sustainable. At the same time, we take responsibility for our business, our employees, our value chain, and our planet. We intend to promote company actions in harmony with our business interests as well as regulations. Our corporate social responsibility strategy follows a holistic approach to continuously improve in the areas of ecology, economy, social issues, and technology.

True sustainability also means constant improvement to achieve sustainable growth. In 2022, we secured significant new acquisitions in our Original Equipment business unit. We experienced growth in our Aftermarket business unit, both in our mature markets as well as in the South and Central American and the AMEA regions. In our Air Filtration and Water & Membranes Solutions business units (until December 31, 2022: Water & Fluid Solutions), we also made strong gains. In Air Filtration in the USA, we have invested and expanded our manufacturing and distribution footprint to serve our customers in close proximity to their needs. In Water & Membrane Solutions, we are investing in vertical integration of our products and solutions, thus advancing innovation and cost competitiveness to our customers' needs.

As you read this, you may ask: How was all this possible in challenging times? The answer is simple: thanks to our dedicated global team!

We have seen amazing creativity and outstanding performance throughout the whole organization. Be it our teams in Ukraine and Russia, performing under the most adverse conditions one can think of. Be it our team in China, showing unbelievable dedication when confronted with the strictest lockdown regulations possible. Be it our highly motivated teams around the globe, who have pushed the boundaries every single day to bring this company forward!

To recognize and honor our most important asset—our employees—we have opted for a somewhat different annual report 2022. You won't just get an overview of our key figures. You'll also get a deep insight into our various projects, initiatives, and achievements. Not printed in black and white, but cinematically told by colleagues who—together with their respective teams—made a valuable contribution to MANN+HUMMEL's success in 2022.

We highly recommend you take advantage of the opportunity to watch and learn more about MANN+HUMMEL.

Ludwigsburg, May 2023

MANN+HUMMEL International GmbH & Co. KG

The Management Board

Kurk Wilks CEO	Emese Weissenbacher EVP & CFO

Report of the Supervisory Board

Globalization is dead. Long live globalization!

If ever there was a need to show the advantages and disadvantages of globalization in one picture, 2022 can be used as a prime example. The dependence and fragility of global supply chains. Heterogeneous developments in global energy prices. Reducing bureaucracy on the one hand and increasing bureaucracy on the other hand. The return to bloc formation and geopolitical rifts long thought to have been overcome.

After reading the above lines, one might argue: globalization has failed because it has stalled. I argue: imagine where we would stand today in a world without globalization!

MANN+HUMMEL is a perfect example. A company born in Germany, grown internationally. For more than 80 years, we have been following our customers to shape markets and the future of mobility worldwide. As well as breaking new ground to pave the road for the future of green tech in our Life Sciences & Environment business unit. We have been making friends and establishing strong partnerships worldwide. A fundamental cornerstone for developing fruitful cooperations or even co-creation.

To be successful, we added innovative solutions, great engineering, and manufacturing excellence to the cocktail. Just to name a few. However, this is the basics.

In order to be sustainably successful in a globalized world, there is at least one more thing to tick off the list: to listen carefully to our customers' wishes and needs or, even more so, anticipate them. In today's world, it is not about creating one-size-fits-all solutions anymore and pushing them into different markets recklessly. It is of utmost importance to deliver what is wanted and needed, to customize products.

At MANN+HUMMEL, we have always done this well. Thanks to our diverse and internationally cross-linked teams we have been able to unlock potential and serve markets.

However, "better" is the enemy of "good". Driving standardization forward in such a way that we can create space for individualization must be one of our major goals as a global organization.

This is why cultural diversity is gaining more and more importance when forming teams. At the same time, it is important to accept—and I consciously choose accept above tolerate—that there are cultural differences. Not all cultures around the globe function or work according to the Western way. We might be proud of our achievements in the previous decades and centuries. However, it is not up to us to carry the Western culture and way of life into the emerging countries and markets throughout Asia, Africa, or to the Indian subcontinent with missionary zeal.

Given the challenges mentioned at the beginning, real diversity, genuine acceptance, true customer-centricity, absolute focus, and the willingness to pivotal transformation—supported through digital tools and mindset—may never have been of greater importance. 2022 has created an impressive example of what our teams around the globe are capable of. Strengths that will certainly be of great importance in the future, whatever that may be.

To prepare for this future, we have also reshaped our Senior Leadership Team, MANN+HUMMEL's key management committee. Former CHRO Bernhard Wimmer left the company at the end of the year. On behalf of the shareholders and the Supervisory Board, I would like to express my sincere thanks to him for his work over the past 39 years. On behalf of the aforementioned, I wish his successor Helena Hofer every success in her new role. The same applies to Cedric Dackam, who has been responsible for our Water & Membrane Solutions unit as President and General Manager since the beginning of 2023.

The Supervisory Board of MANN+HUMMEL Verwaltungs GmbH met twice in the reporting year. The meetings focused on current and future business developments. In addition, we continued our discussions on the impact of global economic developments. Additionally, the topics of investment and personnel policies, the quality situation, and the strategic alignment of the company and the Group were examined in depth. Issues with a negative impact on the company were also discussed and examined constructively and critically. In the 2022 fiscal year, the Supervisory Board once again continuously supported the Management Board by examining and discussing the verbal and written reports of the Management Board in detail at the Supervisory Board meetings. The Chairman of the Supervisory Board also maintained constant contact with the Management Board.

The Supervisory Board was satisfied with the legality, appropriateness, and regularity of the activities of the Management Board at all times. The audit of MANN+HUMMEL International GmbH & Co. KG's annual financial statements and the group management report of the MANN+HUMMEL Group were audited by Ernst & Young GmbH, Wirtschaftsprüfungsgesellschaft, Flughafenstraße 61, 70629 Stuttgart. All documents were issued with an unqualified audit opinion. The Supervisory Board examined the annual financial statements, the proposal for the appropriation of earnings, consolidated financial statements, and group management report in detail and was provided with a comprehensive report by the auditors regarding the results of their audits. The Supervisory Board approves the audit results without any reservations.

The Supervisory Board and the shareholders thank all employees of the MANN+HUMMEL Group, the Management Board, and the employee representatives for their successful efforts in the past fiscal year.

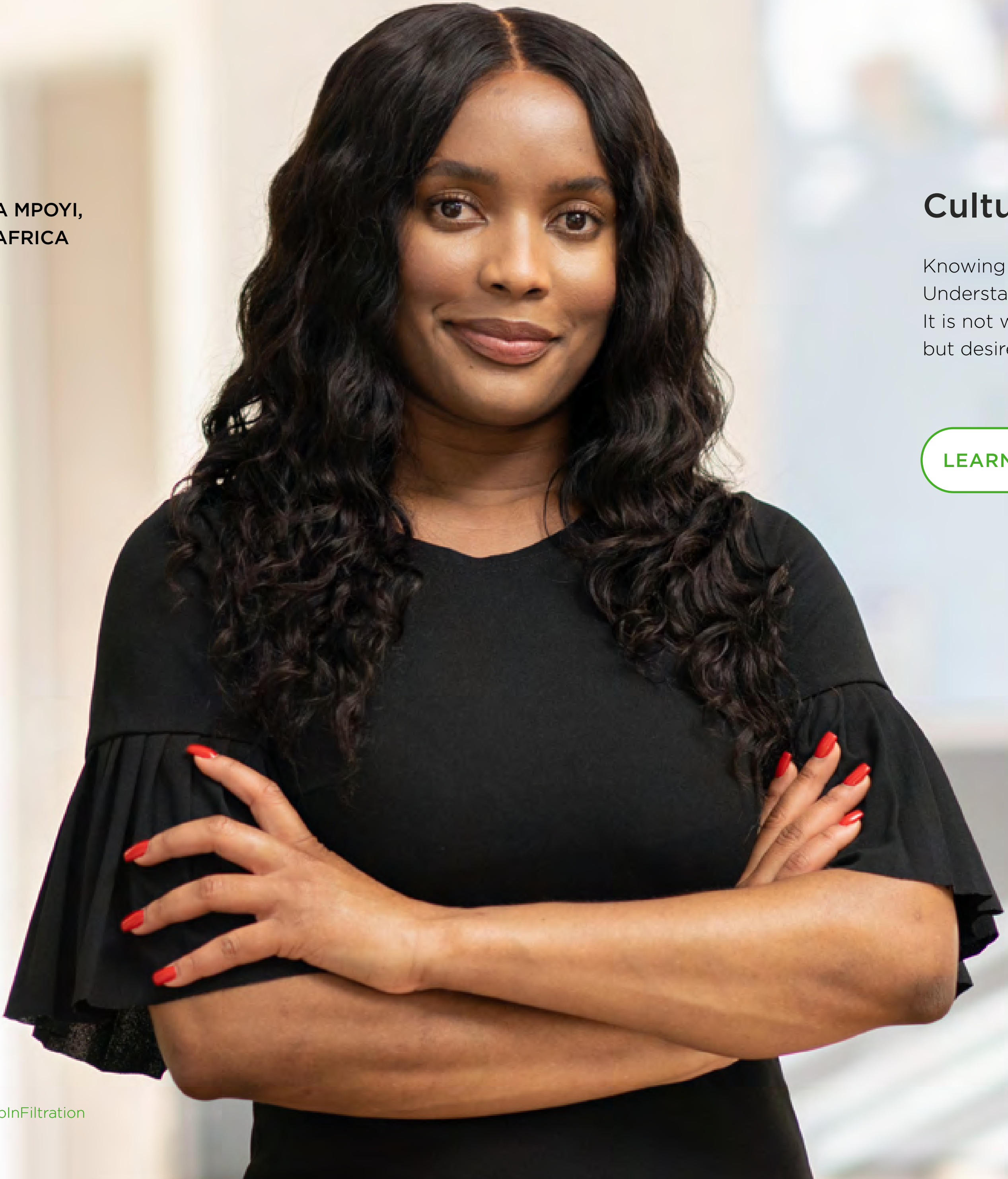
Ludwigsburg, May 2023

MANN+HUMMEL International GmbH & Co. KG

Thomas Fischer
Chairman of the MANN+HUMMEL Group

Our employees make the difference


MANN+
HUMMEL



AMANDA MPOYI,
SOUTH AFRICA

Cultures shape markets

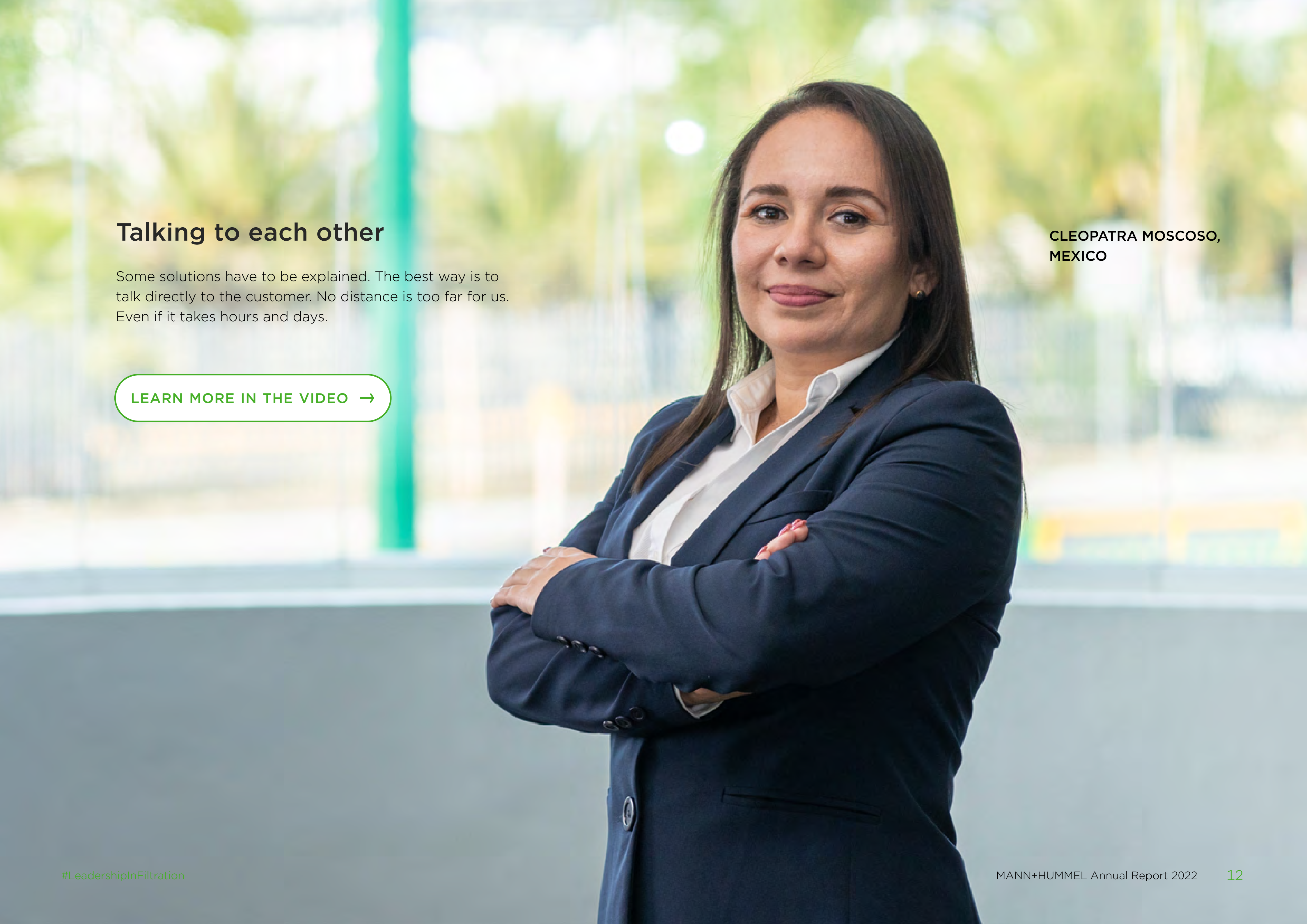
Knowing markets means understanding cultures. Understanding cultures is in the MANN+HUMMEL DNA. It is not what is technically feasible that is crucial, but desire and need.

LEARN MORE IN THE VIDEO →

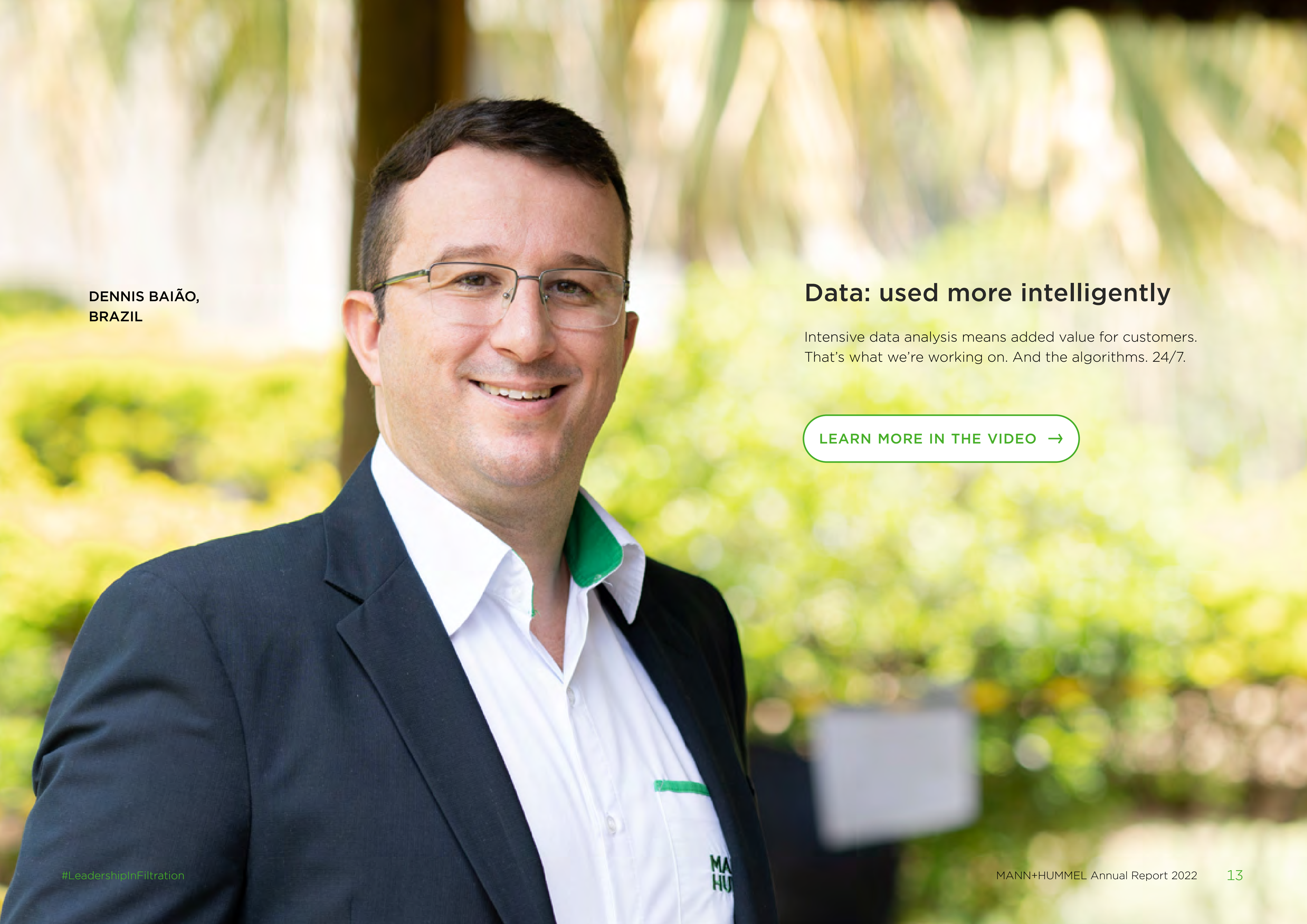
Talking to each other

Some solutions have to be explained. The best way is to talk directly to the customer. No distance is too far for us. Even if it takes hours and days.

LEARN MORE IN THE VIDEO →



CLEOPATRA MOSCOSO, MEXICO



DENNIS BAIÃO,
BRAZIL

Data: used more intelligently

Intensive data analysis means added value for customers. That's what we're working on. And the algorithms. 24/7.

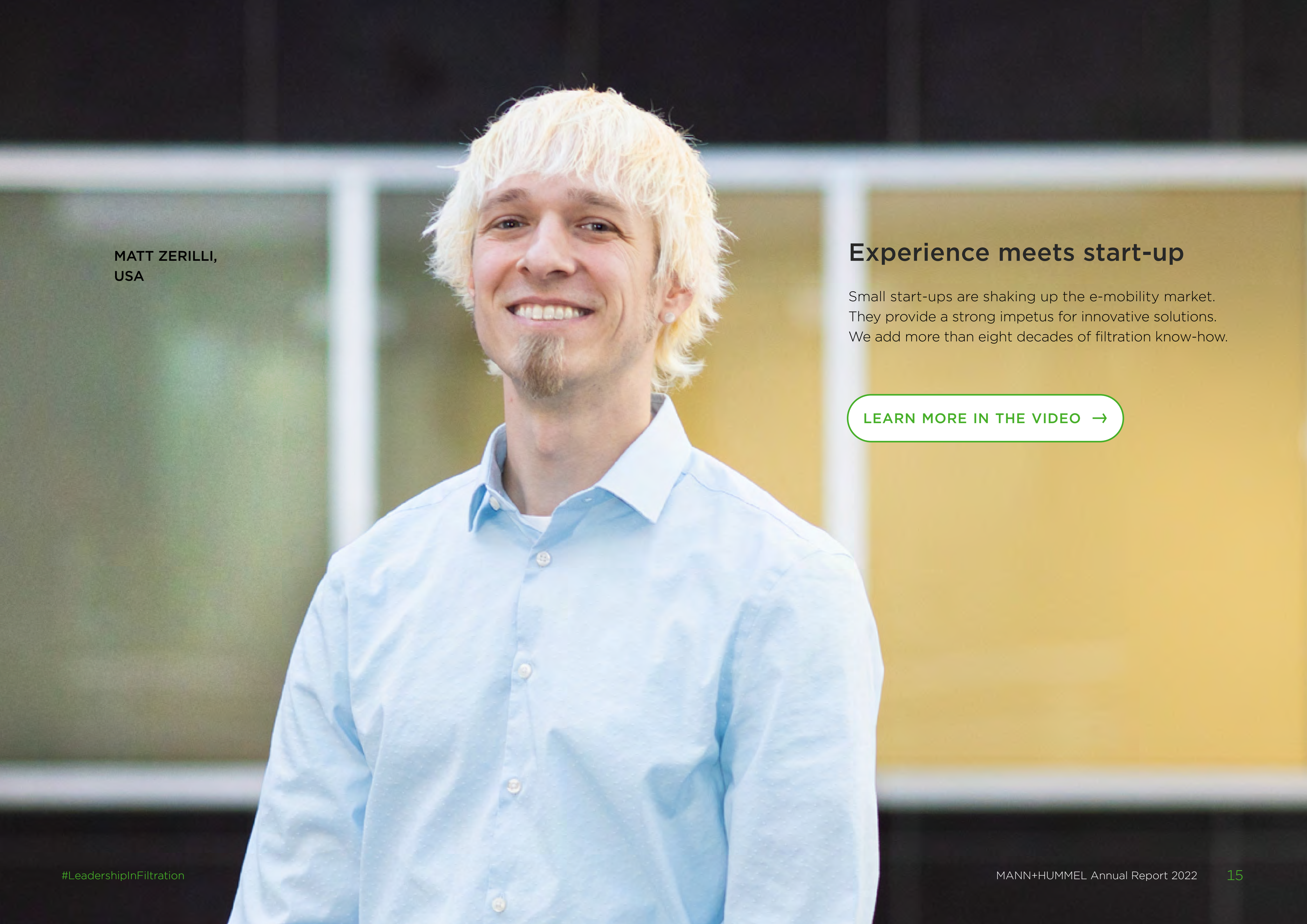
LEARN MORE IN THE VIDEO →

Unique selling proposition? Good idea!

Filters can filter all sorts of things. So why not the smells in South Korean barbecue restaurants? Now barbecuing becomes a pure taste experience—without distracting odors.

JOOMI KIM,
SOUTH KOREA

LEARN MORE IN THE VIDEO →

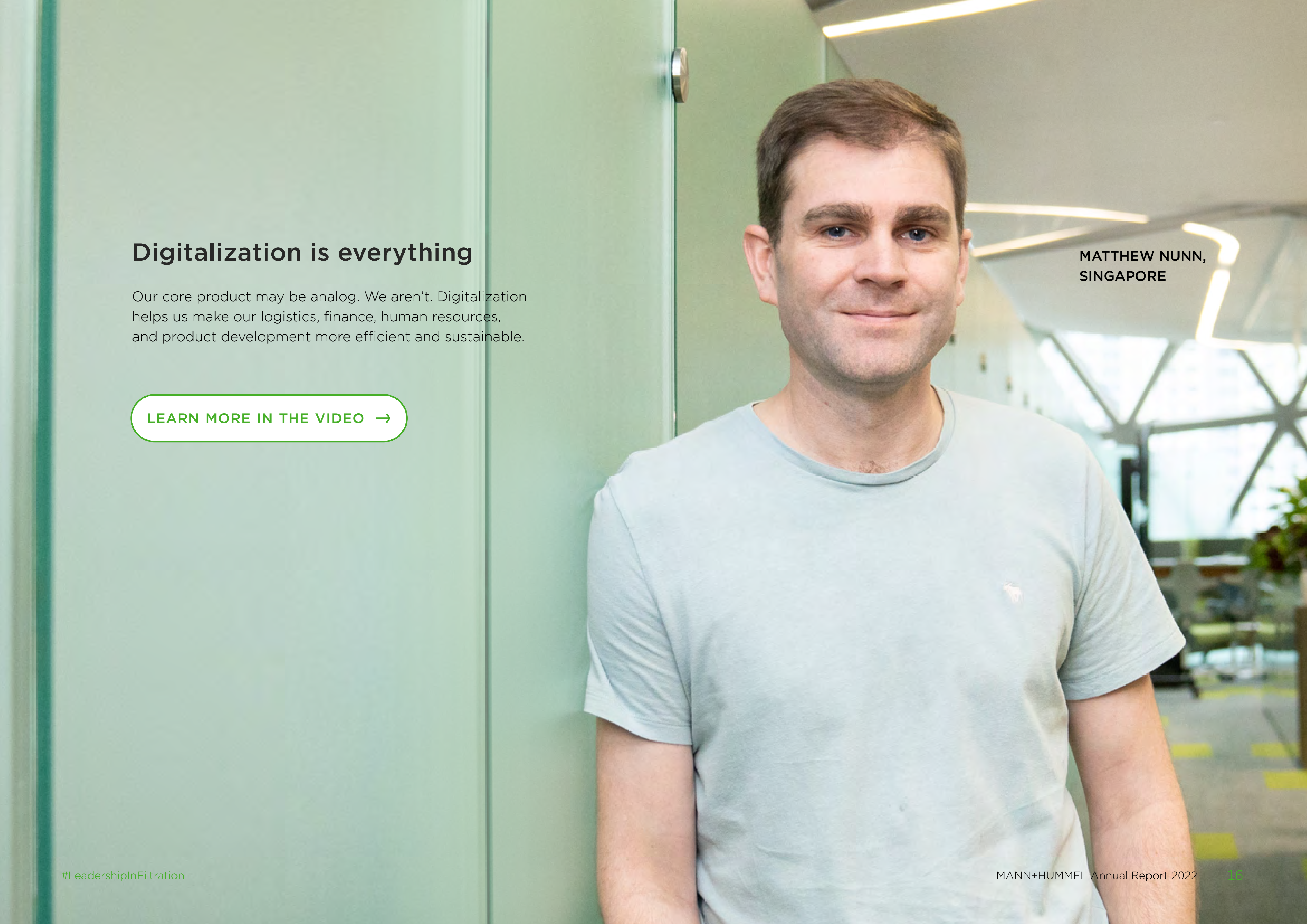


MATT ZERILLI,
USA

Experience meets start-up

Small start-ups are shaking up the e-mobility market. They provide a strong impetus for innovative solutions. We add more than eight decades of filtration know-how.

LEARN MORE IN THE VIDEO →

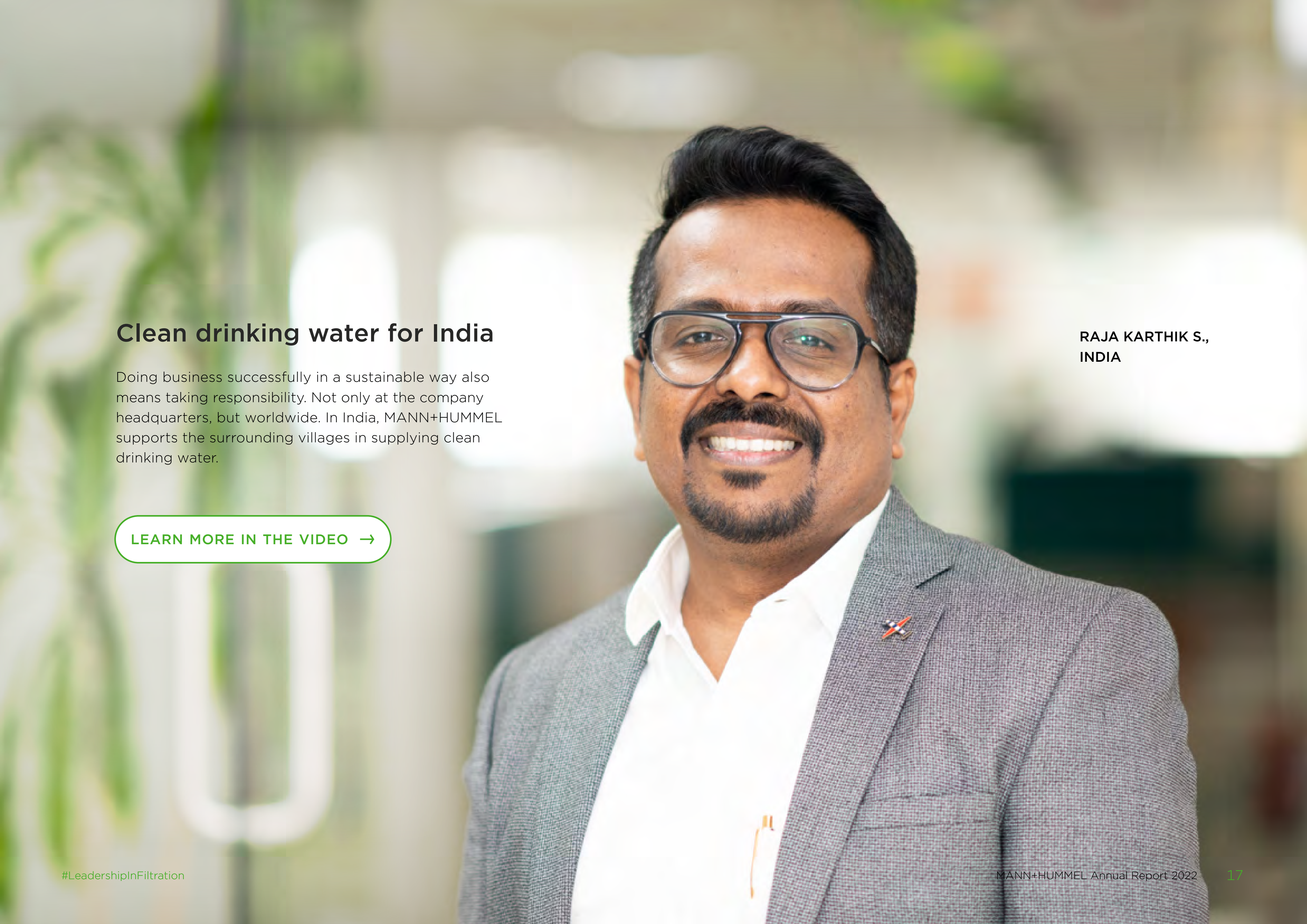


Digitalization is everything

Our core product may be analog. We aren't. Digitalization helps us make our logistics, finance, human resources, and product development more efficient and sustainable.

LEARN MORE IN THE VIDEO →

MATTHEW NUNN,
SINGAPORE

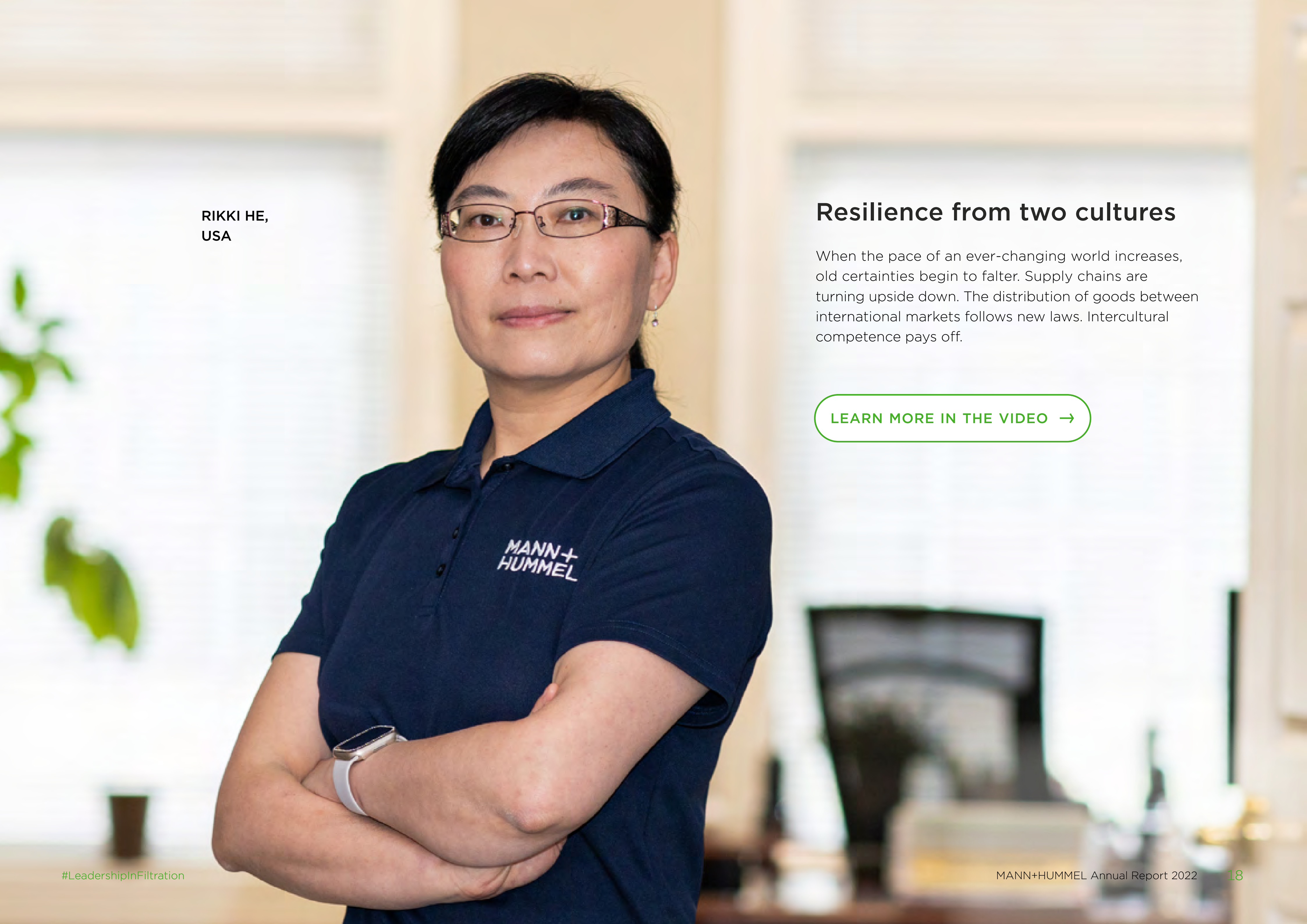


Clean drinking water for India

Doing business successfully in a sustainable way also means taking responsibility. Not only at the company headquarters, but worldwide. In India, MANN+HUMMEL supports the surrounding villages in supplying clean drinking water.

LEARN MORE IN THE VIDEO →

RAJA KARTHIK S.,
INDIA

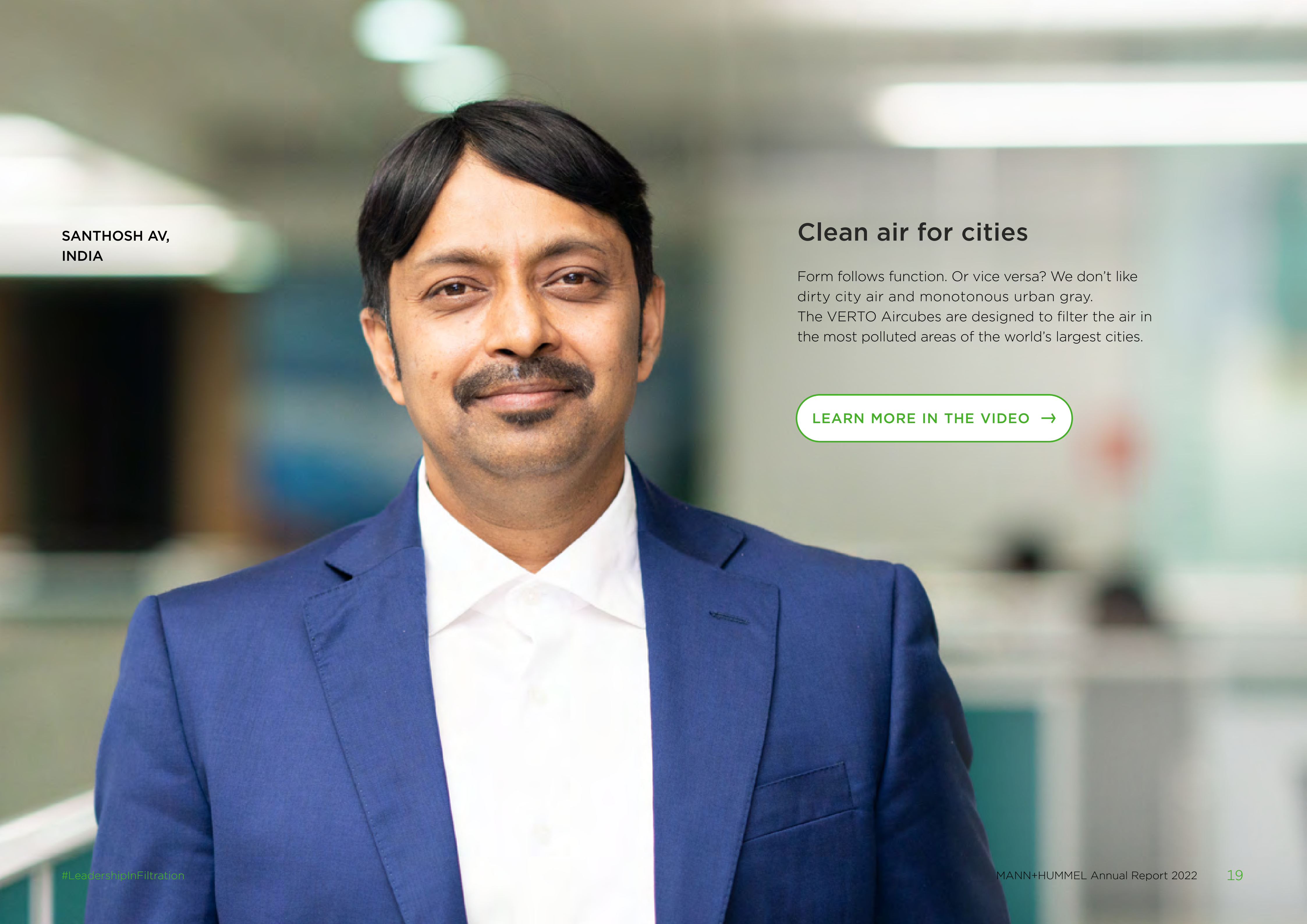


RIKKI HE,
USA

Resilience from two cultures

When the pace of an ever-changing world increases, old certainties begin to falter. Supply chains are turning upside down. The distribution of goods between international markets follows new laws. Intercultural competence pays off.

LEARN MORE IN THE VIDEO →



SANTHOSH AV,
INDIA

Clean air for cities

Form follows function. Or vice versa? We don't like dirty city air and monotonous urban gray.
The VERTO Aircubes are designed to filter the air in the most polluted areas of the world's largest cities.

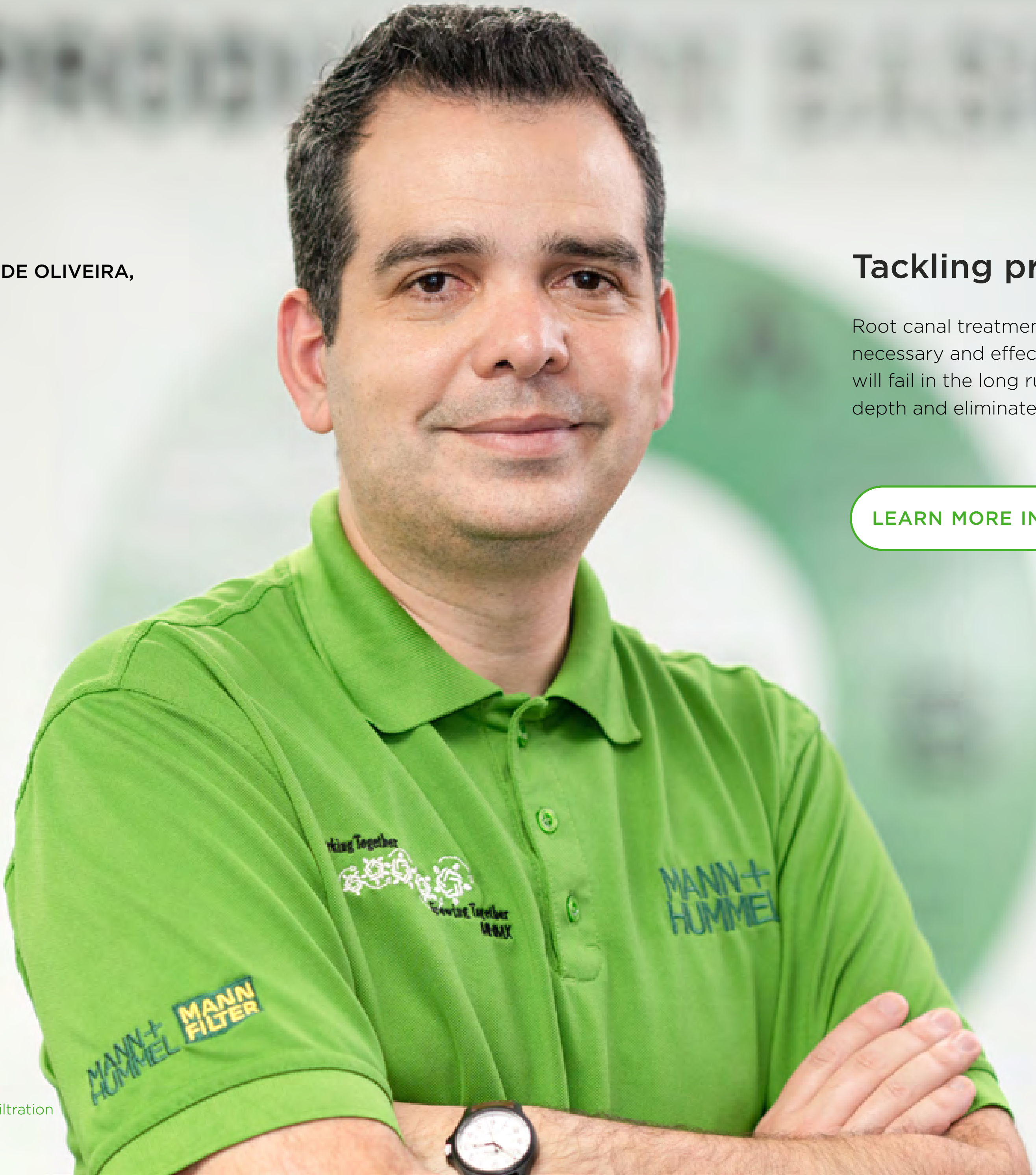
LEARN MORE IN THE VIDEO →

TIAGO DE OLIVEIRA,
USA

Tackling problems at the root

Root canal treatments can be painful. However, they are necessary and effective. If you only fight the symptoms, you will fail in the long run. That’s why we analyze problems in depth and eliminate the underlying cause. Then things work.

LEARN MORE IN THE VIDEO →



Making the world a better place. With the best.

MANN+HUMMEL is active worldwide. This also applies to our recruiters. We are looking for bright minds to continuously improve our outstanding team.

LEARN MORE IN THE VIDEO →

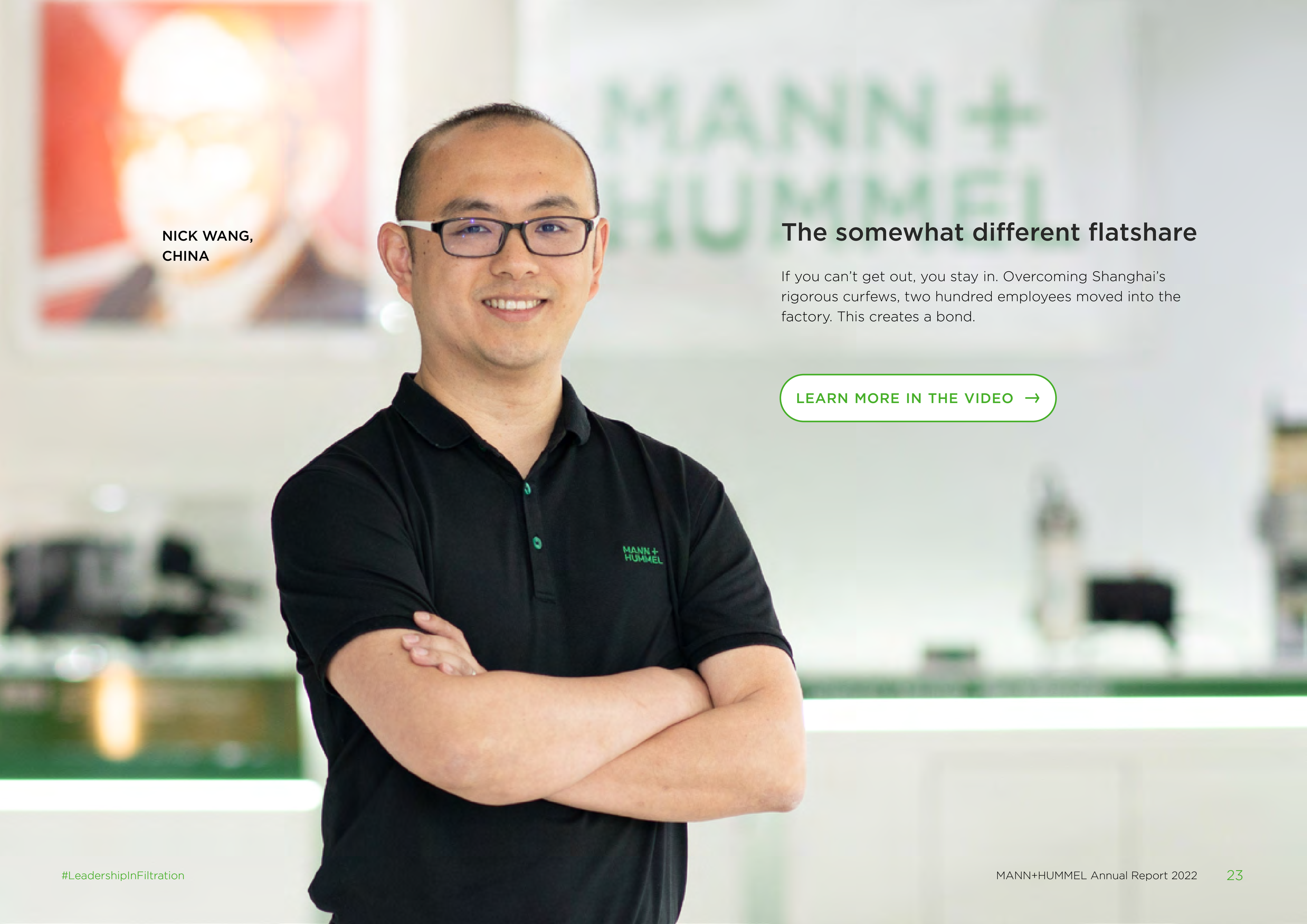
DANIELA LISSON, GERMANY

MARCUS MUNCAN,
GERMANY

Money has to be green

Even financing is green at MANN+HUMMEL: Our green bond's interest rate is directly linked to our sustainability rating. The more sustainable we are, the lower our interest rate. A turbocharger for our transformation.

LEARN MORE IN THE VIDEO →



NICK WANG,
CHINA

The somewhat different flatshare

If you can't get out, you stay in. Overcoming Shanghai's rigorous curfews, two hundred employees moved into the factory. This creates a bond.

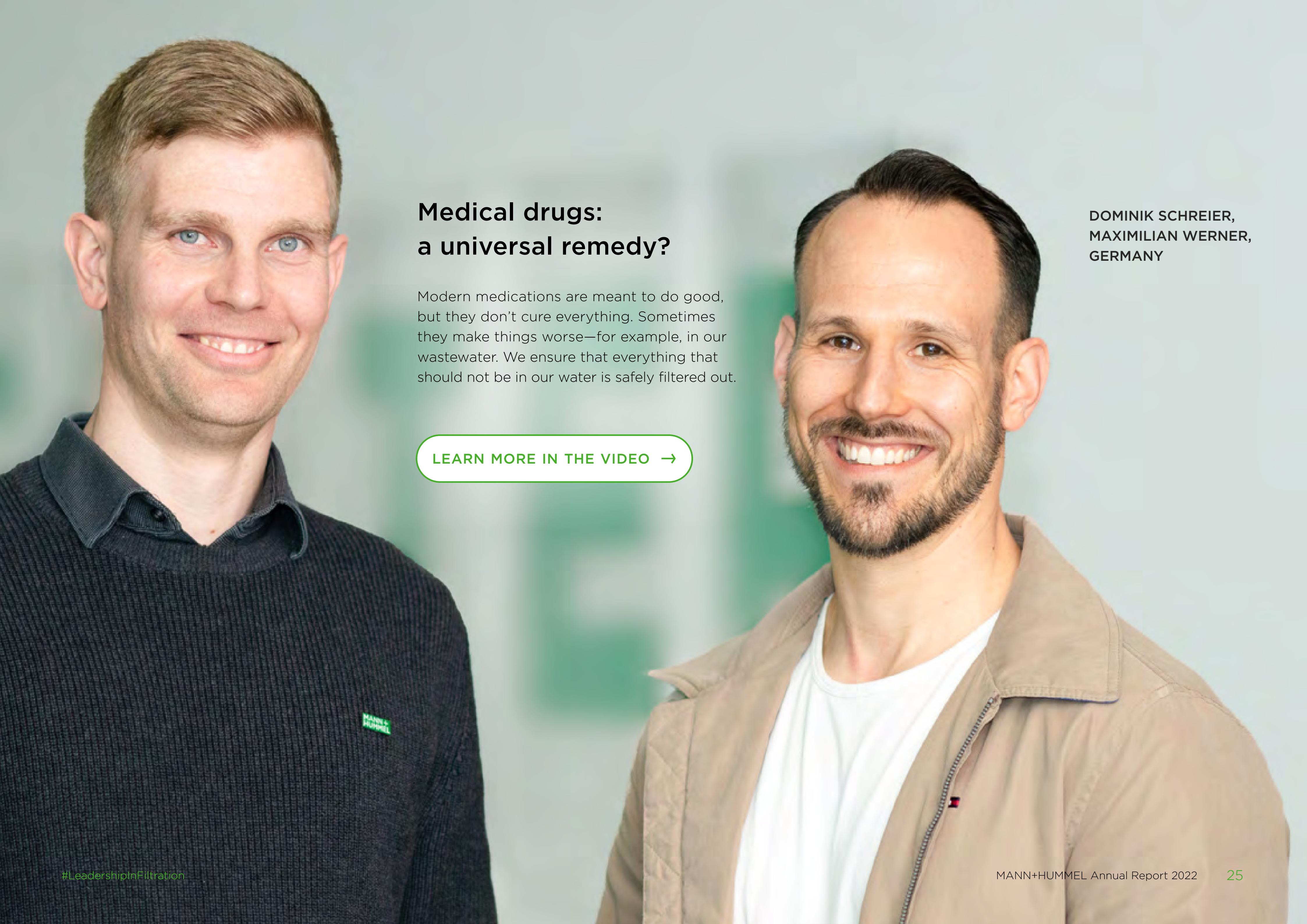
LEARN MORE IN THE VIDEO →

It takes two to tango

For amazing partnerships, the chemistry must be right.
This applies not only to successful cooperation with customers,
but also when it comes to binding odors permanently.
We take care of that. In the kitchen. In the restroom.
And wherever else the air smells bad.

LEARN MORE IN THE VIDEO →

SABRINA HERRMANN,
GERMANY

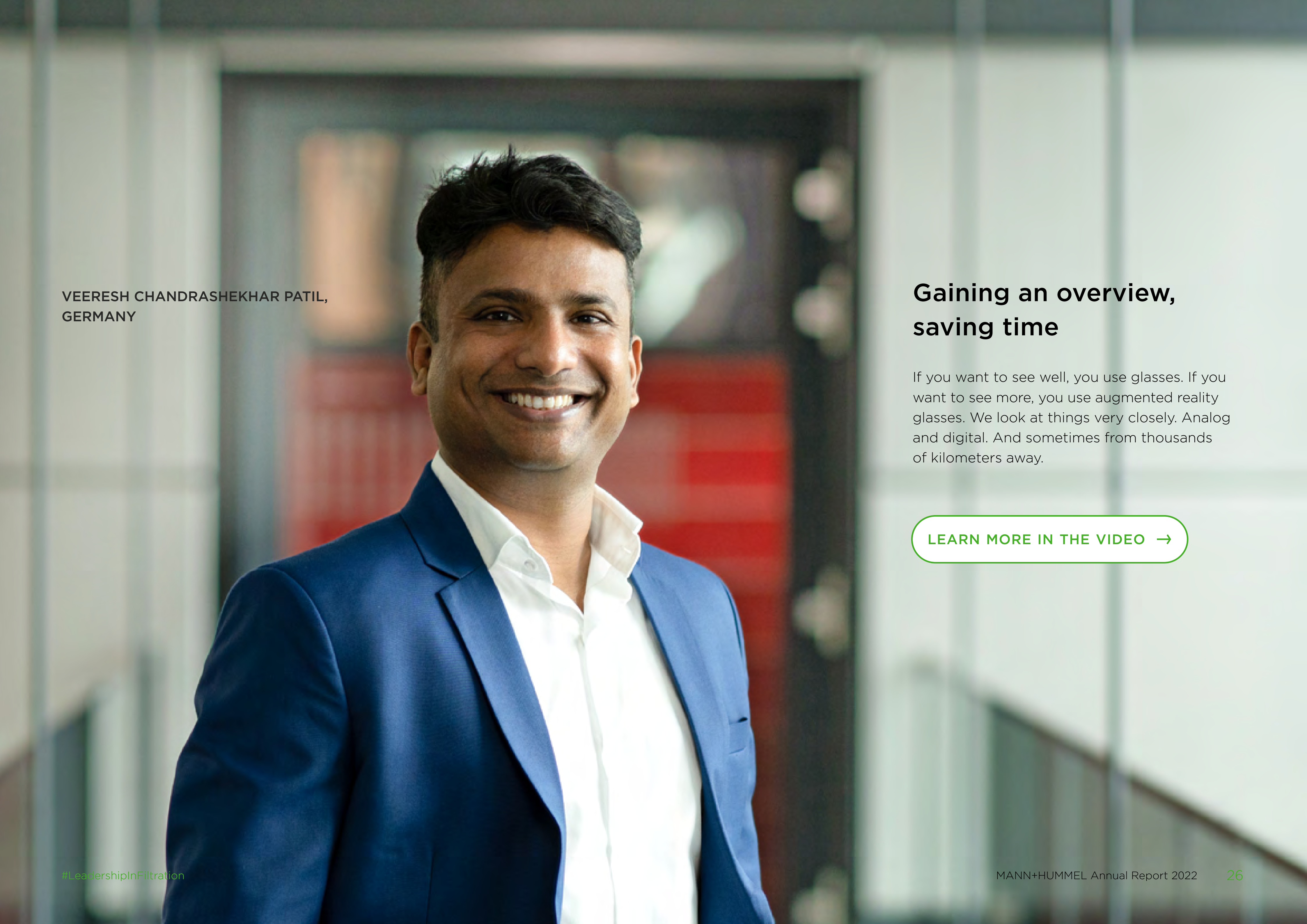


Medical drugs: a universal remedy?

DOMINIK SCHREIER,
MAXIMILIAN WERNER,
GERMANY

Modern medications are meant to do good, but they don’t cure everything. Sometimes they make things worse—for example, in our wastewater. We ensure that everything that should not be in our water is safely filtered out.

LEARN MORE IN THE VIDEO →



VEERESH CHANDRASHEKHAR PATIL,
GERMANY

Gaining an overview, saving time

If you want to see well, you use glasses. If you want to see more, you use augmented reality glasses. We look at things very closely. Analog and digital. And sometimes from thousands of kilometers away.

LEARN MORE IN THE VIDEO →

Combined management report of MANN+HUMMEL International GmbH & Co. KG, Ludwigsburg, and the Group for the 2022 fiscal year[1]

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

1. Business model of the Group

MANN+HUMMEL stands for filtration. As part of its focus on this core competence, the company divested the high-performance plastic parts segment in the reporting year and sold its global business in this area to Mutares SE & Co. KGaA. As part of the transaction, the MANN+HUMMEL production sites in Bad Harzburg, Sonneberg (both Germany), and Laval (France), with around 1,500 employees, were also transferred to Mutares.

This **streamlining of our technology portfolio** and the associated sharpening of the strategic profile creates new space and potential for investments and research activities more focused on sustainability and alternative drive concepts. Our commitment to cleaner mobility, cleaner air, and cleaner water will thus be further emphasized and expanded.

The current business model consists of two business units: **Transportation and Life Sciences & Environment**.

- **Transportation** comprises the **Original Equipment** (OE) and **Aftermarket** (AA) businesses. We thus serve the automotive industry (Automotive Solutions), among others, with air filter systems, intake systems, liquid filter systems, and engineering plastic parts. Manufacturers of construction and agricultural machinery, rail vehicles, ships, and energy technology also rely on MANN+HUMMEL technologies.
- **Life Sciences & Environment (LS&E)** comprises the **Air Filtration** and **Water & Fluid Solutions** business units.
- In LS&E, we develop pioneering solutions for air and water filtration. These include filters for indoor and outdoor use, clean rooms and industrial applications, and stationary and mobile air purifiers with HEPA filters for the safe separation of viruses, bacteria, and other microorganisms. Some of the cabin air filters have anti-allergenic and antimicrobial functionalities.
- Air filtration solutions from MANN+HUMMEL are utilized in a variety of settings, including offices, schools, commercial and industrial buildings, and even in hazardous locations like offshore oil platforms. Stationary systems for the filtration of fine dust and nitrogen dioxide and improving outdoor air quality are also part of our product portfolio.
- Our water filtration systems have many uses, from treating water and wastewater in municipal and industrial applications to conserving scarce freshwater resources through efficient use and recycling. Additionally, our systems are suitable for specialized applications in industries such as food, biotechnology, and ultrapure water areas like microelectronics.

Our portfolio increasingly includes **digital services** and **intelligent solutions** designed to meet the unique needs of our customers. Among these are the Internet of Things (IoT), cloud-based data analysis, specially developed algorithms, and user-friendly apps.

The Transportation business unit generates approximately 91% of our sales, while the LS&E business unit accounts for the remaining 9%. Both units are strategically focused on meeting the increasing demand for innovative filtration products that support **cleaner mobility, cleaner air, and cleaner water**.

At MANN+HUMMEL, customer satisfaction is the top priority, and we prioritize customer orientation in all our activities.

To achieve this, we have standardized certain processes and combined them under Global Business & Technical Solutions (GBTS). This saves costs and promotes a strong service culture, and is a necessary building block for **digitalization**.

In addition to the business units and GBTS, production is bundled in organizational terms. A group-wide management system leads to faster decisions and increases momentum in the company. We will continue leveraging global synergies and best practices to work more efficiently and better serve our current and future markets.

2. Research and development

In the reporting year, MANN+HUMMEL launched numerous new products for vehicles with internal combustion engines and electric drives worldwide. The volume of intangible property rights also increased significantly: **103 patent applications** increased the MANN+HUMMEL patent pool to over **4,600 patents**; in addition, there are approximately **3,200 trademark applications and registered trademarks** worldwide.

Transportation

In 2022, the transformation of drive systems again prompted our company to expand its portfolios for fuel cell, battery, and e-drive systems, both with customer-specific developments and for the aftermarket. During the reporting year, we further developed many products, and some sample solutions are now ready for series production. Our company is thus taking decisive steps forward, particularly in fuel cell technology, and is supporting customers in setting up demonstrators and initial series production.

Across drive systems, MANN+HUMMEL's research and development teams launched numerous new products for combustion engines and e-vehicles worldwide in 2022. For the Asian markets in particular, we developed many new air, oil, fuel, and cabin filters and launched them on the independent aftermarket (IAM) under the various MANN+HUMMEL brands. Intensive and close technical cooperation with our suppliers has made it possible to accelerate development times significantly and thus also market launches.

MANN+HUMMEL also stands for openness to technology: in 2022, we launched the first IAM fuel filters that are 100% compatible with fully synthetic fuels and e-fuels. Our filter elements are used in the "Zero Emission Drive Unit 1" (ZEDU-1), the cleanest vehicle concept in the world, developed by the German Aerospace Center (DLR) and HWA AG.

By consistently expanding our standard product portfolio with new variants and families in all segments, we are constantly expanding our expertise in numerous filtration technologies and contributing to the further growth of the MANN+HUMMEL Group.

The ENTARON FC cathode air filters have been introduced with new sizes specifically for Heavy Duty & Industry applications (including special media for improved pollutant gas adsorption). The new sizes are optimized for dusty applications and high volume flows, e.g., in the mining sector.

Also launched in the reporting year were the second-generation AirPure cathode air filters, which protect fuel cells from air contaminants. The second product generation of filters absorb more "dirt" without clogging, thanks to the improved ratio of adsorption capacity to pressure drop.

Our team has successfully developed the second generation of IonFree ion exchange filters for fuel cell drives to production maturity. IonFree filters prevent short circuits in the fuel cell and reduce system costs, while the more compact design saves installation space, reduces pressure drop, and increases maximum system pressure.

Advances in automotive filter technology also benefit industrial fuel cell technology. One such example is our OmniFlow filters, which keep the conductivity of the coolant at a low level, avoiding potential short circuits across the cooling circuit, thus increasing stability and reducing costs.

For battery systems, we have continued to develop advanced pressure equalization elements. They reduce the necessary emergency degassing pressure or increase the cross-section to increase the maximum emergency degassing volume flow.

In our E-Mobility-Onlineshop, which also met with steadily increasing interest in 2022, we offer many products for e-mobility, such as the CoolantClean coolant particle filter for fuel cells and high-voltage battery systems.

Filter media are a MANN+HUMMEL core competence. The Association of the Nonwoven Fabrics Industry (INDA) recognized the innovative achievements of our teams for the development of the latest nano-fiber filter media with the IDEA® Long-Life Product Achievement Award. In 2022, we launched the **Filter Media Academy as an online learning and exchange tool** for MANN+HUMMEL engineers to deepen our know-how in numerous filtration technology product categories and quickly make our comprehensive technical knowledge available worldwide. This concentrated knowledge is thus available to all Group employees in real time.

During the previous year, we implemented digital monitoring for air and fuel filters in commercial vehicles in our Asian markets. This monitoring not only tracks the level of contamination but also verifies that the filter is the appropriate original one. This monitoring ensures maximum uptime of the vehicles and stationary filter systems (e.g., compressors), and downtime is thus significantly reduced.

To further strengthen our development expertise in the areas of simulation and virtual characterization of filter media, we have introduced the **"smartFE" online tool** worldwide. It enables the selection of the optimum filter media and the best design for a cabin air filter within seconds. These research and development (R&D) achievements are due not least to the ongoing digitalization within engineering: the first laboratories are now equipped with digital task processing and data handling, including a big data database; other processes will be introduced to further increase speed and efficiency.

One focus in 2022 was calculating the carbon footprint of our products. **Life cycle assessments (LCAs) on all product groups worldwide** were carried out using current and recognized methods and calculation programs that include all influences from raw materials to intermediate products and the manufacture of the product, as well as transport, use, and recycling at the end of the product's life. This guided us on material and process improvements to further reduce the carbon footprint.

In 2022, we completed the development of the second generation of the fine particulate filter system integrated into a roof box and released it for production. We also successfully completed the first phase of a pilot application as part of a fleet trial by a vehicle manufacturer.

The new product category of brake dust particle filters was systematically developed further in the reporting year in response to strong customer interest. Numerous test vehicles were equipped with these pioneering solutions and fine dust particulate filters.

The future EURO 7 standard allows a positive business outlook for future developments; the further reduction in permitted pollutant emissions requires advanced filter technologies, such as those offered by MANN+HUMMEL, in pioneering quality.

The air in vehicle interiors was continuously improved in 2022 thanks to many series nominations and further developments in cabin air filter systems and air quality systems. Systems with multiple filter stages (e.g.: 1. particle filter, 2. activated carbon filter, 3. HEPA filter) increase the filtering effect; especially in recirculation mode, and CMS (Cyclo-Multi-Sorber) significantly optimizes air quality by adsorbing moisture and CO_2 and also saves energy that would otherwise have to be taken from the traction battery for heating or cooling fresh air.

Demonstrating our claim of "Leadership in Filtration," we spread our knowledge of the latest filtration technologies and keep our products ahead of the competition by participating in the most important industry conferences such as the World Filtration Congress, FILTECH, FILTREX, The Battery Show, and Wiener Motorensymposium. We are also actively involved in over 20 national and European public research projects.

Since 2020, MANN+HUMMEL has actively participated in the Hydrogen Council, which aims to advance fuel cell technology, establish its position in the field, and increase public awareness.

Life Sciences & Environment

Air Filtration

The MANN+HUMMEL Group prioritizes sustainability in all aspects of its business, including the development of air filtration solutions. The company's overall corporate goals towards sustainability are also reflected in the composition of our portfolio: MANN+HUMMEL offers many A- and A+-certified filters in the heating, ventilation, and air-conditioning (HVAC) market across all product groups in Europe.

In the reporting year, we also brought 18 new filter models to series production readiness, including six with A+ certification—a clear advantage in times of high energy costs.

For two major customers in the kitchen technology sector, seven new molecular filter products reached the start of series production in 2022.

In China, we launched six new product lines for gas turbine applications. In India, together with the architectural firm Studio Symbiosis, we were able to develop a whole new **design air purification column**, VERTO. It is based on the Aircubes and cleans 600,000 m^3 of air daily in New Delhi, reducing the pollutant content of fine dust and nitrogen dioxide by more than 80%.

Water & Fluid Solutions

Development of the BIO-CEL® M+ membrane filter system, ideal for medium-sized and mobile wastewater treatment plants, was completed in the reporting year. The extremely versatile system features the high-performance and durable BIO-CEL® UV400T ultrafiltration membrane, which reliably prevents antibiotic-resistant bacteria from entering the environment. The BIO-CEL® M+ is a highly efficient system, **with a single unit capable of treating the wastewater of up to 115 households per day**, and produces around 75 m^3 of filtrate. It also fits perfectly into a high-cube container and is expandable; there is no need for custom-built filter tanks for a mobile MBR system. The ultrafiltration technology ensures higher filtration quality and reliable retention against (antibiotic-resistant) bacteria and viruses. Thanks to BIO-CEL® UV400T, solids and bacteria are efficiently removed from wastewater. Activated carbon can be added directly to the membrane tank, eliminating the need for separate fourth and fifth treatment stages to eliminate trace substances. **With BIO-CEL® M+, the space required for a wastewater plant is reduced by 60%.**

In the field of under-sink filters for local use, we have developed the new Seccua MK7 to production maturity. It combines a micro filter with activated carbon filtration and is thus uniquely suited to removing harmful substances from water.

Corporate Ventures

In 2022, we focused on start-ups in the areas of cleaner mobility, cleaner air, cleaner water, and cleaner energy.

Looking across the board, the reporting year was a year of expanding our investments in high-performing portfolio companies such as Kaiterra, Spiffy, and ZwitterCo. At the end of the year, we invested in a start-up company in the food and beverage membranes sector, which opens up new opportunities for MANN+HUMMEL in this sector.

3. Macroeconomic and sectoral framework conditions

Global economic development in 2022

The year 2022 saw many challenges that hindered global economic growth. These included high inflation rates, decreasing real wages, increasing interest rates, tighter central bank policies, the conflict in Eastern Europe, high energy prices, the ongoing Covid-19 pandemic, and persistent supply bottlenecks and supply chain issues. Together, these factors created a complex set of problems.[1, 2, 3, 4, 5]

The result of these developments was further increases in purchasing prices for various raw materials such as steel and stampings, resins and chemicals, filter media and packaging, particularly in Europe.

1 World Economy Winter 2022 | Kiel Institute (ifw-kiel.de).
2 World Economy Autumn 2022: Global growth falters | Kiel Institute (ifw-kiel.de).
3 World economy in summer 2022: Inflation is curbing global growth | Kiel Institute (ifw-kiel.de).
4 World economy in spring 2022: Slower growth amid higher inflation | Kiel Institute (ifw-kiel.de).
5 World economy in spring 2023: Stubborn inflation, moderate growth | Kiel Institute (ifw-kiel.de).

Despite all these challenges, we were able to maintain stable and good relationships with our suppliers. As a token of our appreciation, we honored selected suppliers in various categories during our "Global Supplier Day 2022".

The Kiel Institute for the World Economy lowered its previous estimates for global growth in 2022 by one percentage point. The updated forecast, therefore, predicted global economic output, measured on a purchasing power parity basis, at 3.2%.

In the reporting year, price-adjusted gross domestic product in Germany grew by 1.9% and in the USA by 2.1%. In China, growth of 3.1% was significantly lower than the government's target, which was 5.5%.

Transportation

The international automotive markets were characterized by very different dynamics in 2022. While the European markets (EU27, EFTA, and UK), Japan, and the USA were down from the previous year, sales in China grew significantly. In particular, shortages of starting products and raw materials, significantly higher prices for energy and logistics, and uncertainty triggered by the armed conflicts in Eastern Europe prevented a better performance in many automotive markets. Overall, the world passenger car market in 2022 remained at the prior-year level. More than 71 million passenger cars were sold; battery electric vehicles (BEVs) in particular had increasing market shares thanks to outsized growth.

The European passenger car market accounted for just over 11 million new vehicles, a slight decline from the previous year. This means there was again no recovery in the reporting year from the pandemic-related declines of the two previous years. Compared with the pre-crisis year 2019, sales were down by almost a third. The majority of Europe's five largest individual markets performed negatively in the past year: while new registrations increased slightly in Germany, market volumes declined in the United Kingdom, Spain, France, and Italy. The heavy-duty on-road sector was stable at the prior-year level; off-road grew slightly.

In the USA, light-vehicle sales (cars and light trucks) fell significantly year on year in 2022 to just under 14 million vehicles in 2021. Compared with the pre-crisis year 2019, the market shrank by more than 3 million vehicles in 2022.

The Chinese passenger car market proved strong, with more than 23 million new vehicles sold in the reporting year, an increase of around 10% year on year. The declines from the spring, when lockdowns in key regions resulted in severely restricted sales, were offset in the second half of the year, also thanks to a tax reduction on a large proportion of vehicles sold. By contrast, volumes in the heavy-duty on-road segment shrank significantly—the delayed introduction of the stringent emissions standard 6 reduced demand for more effective filter solutions. The off-road segment also declined sharply.

Demand developed very differently in India (more than 20% growth), Japan (slight decline), and Russia (significant slump of almost 60%). Due to Russia's aggression against Ukraine, numerous international automakers had withdrawn from Russia as of March 2022.

The Brazilian light-vehicle market ended 2022 just below the weak prior-year level. Slightly less than two million newly registered vehicles represented a slight year-on-year decline.

While the Heavy Duty On-Road segment declined by 20% globally, the Heavy Duty Off-Road business grew slightly. In the Asian markets outside China, Heavy Duty On-Road sales remained stable, while Off-Road grew slightly. In the Americas, the Heavy Duty segment grew in both On-Road and Off-Road.

In the industrial segment, the marine market is developing positively after a prolonged period of stagnation. The rail segments are also growing as a result of efforts to achieve an energy turnaround; many countries are once again focusing on the advantages of rail as a means of public transport and are actively supporting this sector.

The global machine tool market also showed slight growth in the reporting year. Germany outperformed the global market trend with an increase of 4%.

Worldwide, industrial demand for compressed air and vacuum is increasing; compressors were in greater demand in 2022. This led to significant growth in the spare parts business in this area.

Life Sciences & Environment

MANN+HUMMEL is committed to steadily expanding its market share in the global air filtration market.

Growing awareness of the importance of indoor air quality and rising demand for heating and air-conditioning systems are driving steady growth in the market. In addition, global coverage of Covid-19 and ways in which the coronavirus is spread generated a further increase in growth in the filtration markets.

The global commercial heating, ventilation, and air-conditioning (HVAC) market growth exceeded 5% in 2022.

The strongest growth in this context was in the Asia-Pacific region, with more than 7%. The high demand is attributable to rising incomes, rapid industrialization, and the influx into major cities in Asian countries.

The North American market saw growth in this segment of just over 5%, while in the European region it was just over 3%. Europe is anticipated to experience significant growth in the coming years due to stricter regulations being planned to combat indoor air pollution, combined with harmful pollutants emitted by building materials and coatings, which can only be effectively removed through proper filtration.

In Europe, public air quality is of particular concern. The goal is to decrease particulate matter pollution in public areas significantly, but how each EU state achieves this will be up to them. Due to these new limits, MANN+HUMMEL solutions will likely gain more attention in this area.

Another market in which LS&E is involved is molecular filtration. This market grew by more than 5% worldwide. The fastest-growing market region is Asia-Pacific with about 6% and a global market share of just over 40%; the Americas grew by more than 5% and the European Union by just under 5%. Electronics and life sciences are the fastest-growing demand segments in the molecular filtration market, each with more than 7%; heating, ventilation, and air-conditioning has a share of more than 6%.

In 2022, the market for reverse osmosis, ultrafiltration, and microfiltration membrane elements experienced a growth of approximately 7% globally. The submarket for process and drinking water treatment saw an even more significant growth of over 12%. The largest market for membrane filtration is Asia-Pacific (with approximately 75% of the global market), with North America experiencing the highest growth rate of more than 13%. Growth in Europe was about half of this increase.

The market is dominated by wastewater treatment; this segment accounts for almost two-thirds of all applications.

The fastest-growing market is microelectronics applications: nearly 20% growth in 2022. The food and beverage segment also grew by nearly 9%.

The growth drivers in the membrane market were increasingly stringent limits for drinking water treatment and mandatory requirements for water reuse.

Cost increases for energy and within global supply chains led to price increases and thus also played their part in the revenue expansion of market players.

4. Business performance

In the 2022 reporting year, FINANCE magazine named MANN+HUMMEL Chief Financial Officer Emese Weissenbacher CFO of the Year 2022. According to the magazine, the decisive factors for her victory were the company's successful transformation process, its green financing, and its strong commitment to women in management positions.

In 2022, she had already established the fourth green financing in MANN+HUMMEL's corporate history; a revolving EUR 800 million loan with a sustainability component.

Emese Weissenbacher is thus the second female winner of the "CFO of the Year" award. The magazine awarded the title for the 18th time.

A billionth anniversary: in Marklkofen, Germany, the production site celebrated a significant milestone as they produced their five billionth filter since their establishment in 1962. The cabin air filter combines MANN+HUMMEL's concentrated expertise, featuring a spunbond medium with nanofiber coating, coated activated carbon, and a laminated protective layer. This high-tech filter is a fitting tribute to the special occasion.

In 2022, we achieved significant accomplishments in the area of continued professional development: we launched **LinkedIn Learning** and the Leadership Principles, including accompanying workshops. Additionally, we further facilitated employee development through the **Leadership Talent Pool**, which includes the **first Development Center** with new self-application alternatives. This encourages employees to take control of their career advancement.

As part of Global Supplier Day 2022, we thanked and recognized various supplier companies for outstanding performance. For supply chain stability: ARGOMM S.P.A.; for innovation: Sandler AG; for sustainability: Wallstabe & Schneider GmbH & Co. KG; for digitalization: Dow Polyurethanes; and for commercial business development: Shandong Longde.

Our customers are also impressed: **MANN+HUMMEL's achievements were again recognized worldwide in this reporting year, with numerous awards in Europe, North and South America, and China.**

Digital transformation

Digitalization is a key driver for enabling and accelerating MANN+HUMMEL's transformation into a future of sustainable, optimal, and efficient filtration. Our activities are divided into three interlocking areas: **the direct impact on our interaction with customers, the provision of innovative digital products and services, and the optimization and automation of internal processes.** In addition, we are working on digitalization enablers, which are the basis for many other activities.

In the reporting year, we expanded the digitalization organization: with the **Digital Transformation Office**, we created a team that orchestrates company-wide activities. With the expansion of our Digital Hubs, we are revolutionizing collaboration and innovation. They bring together digital talent from the areas of digital ventures, data analytics, and IoT (Internet of Things) with MANN+HUMMEL colleagues from other teams and departments.

FOR THE CUSTOMERS

Our digitalization measures aim to benefit our customers both directly and indirectly. We strive to make customer interactions as efficient as possible, ensuring they have access to important information anytime and through any channel.

Our company has established a digital ecosystem that provides standardized access to all business units and regions. In the reporting year, we concentrated on **harmonizing global product information and incorporating external systems**. This resulted in a significant reduction in complexity for numerous processes and system services. Customers can experience this, for example, in the online store for our OE customers or by means of our "FilterWizard," in which they can configure and order their product variants themselves.

The Digital Ventures and IoT teams work directly with customers and closely with internal teams to develop solutions for current and future challenges. We combine comprehensive filtration knowledge with digital, data-driven solutions for efficient, customized, and intelligent products. This has resulted in IoT solutions such as qlair (air quality monitoring and analysis), STREAMETRIC (data management for water and wastewater treatment), and Senzit (filtration monitoring system for heavy-duty vehicles).

By digitalizing our product and portfolio road maps, we can further increase the specific added value of our innovative products for our customers and reduce the development time to market. A key component in meeting customer requirements more quickly and accelerating the start of series production of new products, in general, is also digital product development, known as "design to cost." Our data-driven platform drastically shortens the path from strategic decisions to series production.

OPERATIONAL EFFICIENCY

To further optimize the efficiency and collaboration of our global production sites, we continued to **roll out the SAP S4 Hana platform** across all LS&E subsidiaries. The LEAN philosophy in our production and distribution network sets the goals and paths for this.

We also made decisive progress in the area of Smart Factory & Digital Operations in the reporting year. Via the central **Manufacturing Execution System (MES)** for controlling global production, more than two-thirds of the machines in the Transportation unit are now connected to a uniform system. With the **Industrial IoT Cloud**, the status and process parameters of our machines and production lines are transparent at all times. This allows us to respond to malfunctions at an early stage and anticipate maintenance. We have also started the global rollout of our **Energy Monitoring System** and massively expanded the meter infrastructure. This enables us to control and reduce energy consumption to machine level and lay the **foundation for CO_2-neutral production**.

ENABLER

Our Data Analytics team supports the global MANN+HUMMEL organization with analytics. They also help optimize processes by reviewing the efficiency of operations or analyzing the performance of IoT devices to develop new digital products.

IT is driving digital transformation by implementing a secure, primarily cloud-based system and process landscape focused on employee benefits and productivity. This requires turning large amounts of data into insights. Among other things, we use the **Celonis Execution Management Platform for process mining** to capture, reduce, and automate non-value-added, manual tasks.

People—our employees and managers—are the most important factor in digital transformation. Within HR, we successfully completed a major harmonization at the technical and process level: **SAP SuccessFactors Employee Central** went online in the reporting year and offers our employees a user-friendly, future-proof HR platform. In addition, we offer a broad-based training program in which employees learn the background to digital technologies and, above all, their application and the resulting added value, and can then use the application effectively. In this way, we have steadily expanded our career paths and are increasingly offering expert careers in digital areas. In the medium and long term, we are thus relying more on our own employees in digital professions and reducing the use of external partners.

Transportation

In the Original Equipment business, market conditions in the reporting year were similarly challenging as in the previous year. The underlying conditions are very heterogeneous worldwide.

While 2021 was dominated by the pandemic and its consequences for the economy, business performance in the reporting year suffered above all from the conflict in Europe, high inflation rates, and exploding energy costs. Due to a challenging market environment, we had to take measures to stabilize our supply chains, cushion high fluctuations in the supplier base, and ultimately pass on increased costs through price increases to our original equipment manufacturers (OEMs).

MANN+HUMMEL met these challenges and **focused exclusively on filtration**, divesting our High-Performance Plastic Parts business for strategic reasons (see also Business Model of the Group).

In the reporting year, we created a specific business unit for the industrial applications sector to serve this segment's requirements in a precise and targeted manner.

This is in line with the strategic objective of strongly expanding this sector.

We optimized the supply chains in cooperation and close coordination with our suppliers, making them significantly more robust.

Customer interest in the Heavy Duty Off-Road segment in self-cleaning filters such as the ENTARON XR and the innovative WAVELOCK bayonet lock for oil and fuel filters is growing continuously. In this segment, the strategic goals clearly lie in a significant expansion of market share in the mobile hydraulics and fuel prefiltration sectors.

Globally, MANN+HUMMEL increased sales more strongly than the overall passenger car market. While this market only grew in single digits in the reporting year, MANN+HUMMEL achieved double-digit growth. In the Heavy Duty sector, our sales grew in the high single digits, while the overall market contracted by just under 20% (On-Road), or grew only slightly (Off-Road).

EUROPE

The European business was characterized by high inflation costs and unstable supply chains. This was also reflected in sharp fluctuations in customer call-offs with changes at short notice. The overall passenger car market contracted slightly, while our sales increased at a double-digit rate.

The trend for heavy-duty vehicles was similar: On-Road grew at MANN+HUMMEL by a clear double-digit rate; the overall market showed a slight decline. **In Off-Road vehicles, MANN+HUMMEL OE sales grew almost twice as fast as the market**, mainly due to strong growth in the construction and agricultural machinery sectors.

THE AMERICAS

In the American markets, sales of passenger cars grew by almost 10%. Our sales more than doubled and **we were able to gain market share**. We had similar success in the Heavy Duty segment: we increased On-Road sales by more than 20%, while the overall market grew by only 5%. **In the Off-Road segment, we had growth of around 30%, while the overall market grew by only 8%.**

The reasons for the growth were successful acquisitions and short-term takeovers of competitor projects in the Heavy Duty Off-Road sector.

CHINA

The positive development of sales in the passenger car segment in China slightly exceeded market growth thanks to increases in the NEV segment. While the overall market grew by 6%, MANN+HUMMEL was able to increase slightly more. The On-Road business fell short of expectations due to the Covid pandemic, but we still outperformed the overall market. **MANN+HUMMEL outperformed in the medium-weight Off-Road business, achieving double-digit growth**, despite the impact of the Covid crisis on the market.

ASIA (EXCEPT CHINA)

Despite the global challenges, the Asian markets outside China achieved consistent growth well above market growth; India and Southeast Asia grew very significantly. **The Heavy Duty segment in India and the Off-Road sector in India, Japan, and Korea made significant gains in the area of traditional MANN+HUMMEL filtration technologies.**

However, our innovative strength in the field of electromobility and strong focus on transformation also make MANN+HUMMEL a recognized partner in these markets.

Several ongoing development partnerships and significant business awards recognize our dynamic and future-oriented strategy.

> The global aftermarket developed predominantly positively for MANN+HUMMEL in 2022, with global sales growth of just under 10% compared with 2021.

EUROPE

The Independent Aftermarket (IAM) business remains strong, albeit impacted by geopolitical disputes. Our sales in the European markets (excluding Russia, Ukraine, and Belarus) showed double-digit growth.

The success story of our brands in the IAM continued in the reporting year: for the sixth time in a row, the MANN-FILTER brand was voted “Best PROFI Workshop Brand.” We also won the ETM Award 2022.

For vans and light commercial vehicles, we now achieve market coverage of just under 95% with more than 670 filter products. For the overall market including passenger cars, even greater market coverage is achieved: more than 97% with our main brands MANN-FILTER and FILTRON.

In the Original Equipment Supplier (OES) area, there was increased interest in cabin air filters; market share grew significantly thanks to more than 20 new project cooperations. There was also an increase in sales in the area of filters for heavy-duty vehicles.

THE AMERICAS

The US market was challenging, especially in delivery and logistics. The labor market situation and supply chain issues limited opportunities. However, the overall market was strong due to pent-up demand from 2021.

To reduce delivery times and increase product availability, we consolidated our US delivery stations into **two new delivery centers** (East Coast and West Coast), **which are now among the largest aftermarket delivery centers for filter elements in the United States**.

The Brazil, Argentina, and Colombia operations experienced significant growth during the reporting year. In particular, the growth of the Off-Highway segment in the **Latin America region is more than 35% above our own planning**. To further strengthen our business in Brazil, we also commissioned a new distribution center with TK-Logistics in the fourth quarter.

The Original Equipment Supplier spare parts segment was hit hard by rising costs. Fast response times were the key advantages for MANN+HUMMEL in the reporting year to secure this sector's long-term profitability.

INDIA, MIDDLE EAST, AND AFRICA

In India, we expanded our product range by 100 new product types. The resulting increase in market coverage led to a **doubling of sales in the reporting year**.

Despite increasing economic uncertainty and political challenges in the Middle East and Africa, we increased our sales by 30% compared to 2021.

TURKEY

Despite Forex devaluations and hyperinflation, we achieved a **+70% increase in sales** year on year due to the flexibility and dedicated efforts of the national team in Turkey.

CHINA

Our Chinese aftermarket business was slightly down due to the pandemic and decreased consumer demand. However, we were able to further expand our business in the important segment of Chinese IAM e-commerce platforms.

In the reporting year, we entered into a **strategic cooperation with TUHU**, a commercial platform for vehicle maintenance, and jointly launched a new filter production line. In cooperation with TUHU, we achieved strong growth of 25% in this online-to-offline channel.

We also entered into a cooperation agreement with NIO, the manufacturer of innovative electric vehicles, in the cabin filter segment.

ASIA EXCEPT CHINA

IAM sales in Asian markets grew by more than 10% in 2022.

Life Sciences & Environment

Air Filtration

Sales in the Molecular Filters segment grew by a significant double-digit rate in the reporting year; the order situation for 2023 indicates further growth.

We have strengthened our High-Purity-portfolio with combined FanFilterUnits (FFUs) and have already received initial orders. MANN+HUMMEL is thus becoming an integrated supplier in clean-room filtration.

EUROPE

The European HVAC market saw a steady 6% growth in the past year. The Covid situation has improved in Europe, leading to a decrease in demand for related products like HEPA filters for air purification. The conflict in Ukraine is causing uncertainty and restricting activities.

> Increased energy costs are driving stronger demand for our high-efficiency filter solutions, which significantly reduce energy consumption through lower flow resistance.

An expansion of product lines allows us to meet consumer needs and market requirements with pinpoint accuracy.

In 2022, we were nominated to equip all European plants of one of the largest semiconductor manufacturers with clean-room filtration solutions.

In the reporting year, we were also able to offer more analysis tools for determining product life cycles. In some Western European countries, we won important tenders for **outdoor air filtration solutions**.

In Switzerland, as part of a project for the Mobiliar Arena, we **significantly reduced energy costs by using state-of-the-art sensor technology and analyzing the data, and adapting the filter plans**. In an initial optimization step, energy requirements were reduced by over 1,500 kWh (more than 20%) per month. This is a convincing example of how our proprietary development qlair expands our filtration expertise and offers customers real added value.

In molecular filtration, we have made all preparations for a **new site in Himmelkron**. Equipped with the latest R&D technologies, this site will become our new global competence center for molecular filtration. The production capacities will allow us to realize our growth targets and strengthen our position in the molecular filtration market.

THE AMERICAS

In the reporting year, MANN+HUMMEL acquired the remaining shares in Pamlico Air and is now a 100% shareholder. The integration process under commercial law has thus been largely completed. We successfully transferred the previous direct sales model to the former Pamlico sales model to establish the Air Filtration Americas business unit in line with our strategy and we divested the non-filtration-related activities as planned.

All former Tri-Dim, Tri-Dim Hardy, and Pamlico Air product lines are now consolidated in the new business unit. We have adapted the naming of the products to effectively implement the new brand strategy under the MANN+HUMMEL Air Filtration Americas brand.

ASIA

The Covid situation remained critical in the first half of 2022; manufacturing in Kunshan was completely shut down throughout the month of April. However, the local teams on site were able to successfully compensate for the downtime to the benefit of our customers and avoid delivery failures or delays.

Water & Fluid Solutions

According to forecasts, water utilities worldwide will invest USD 387.5 billion in digital solutions this decade. This represents annual growth of 8.8% for hardware, software, and services in this area.

MANN+HUMMEL addresses this growing demand with STREAMETRIC, the digital platform that combines artificial intelligence and predictive maintenance with easy implementation and cost efficiency. In addition, STREAMETRIC is also an important component for MANN+HUMMEL to offer end-to-end solutions for the water and wastewater market.

In general, all efforts in MANN+HUMMEL Water & Fluid Solutions are focused on meeting Goal 6 of the United Nations Sustainable Development Goals: "Ensure availability and sustainable management of water and sanitation for all."

We support the proposal for the renewal of the Urban Wastewater Treatment Directive (UWWTD). This is about the removal of micropollutants and antibiotic-resistant germs and bacteria. The MANN+HUMMEL BIO-CEL® activated carbon solution meets all the requirements of this planned directive and opens up new sales potential. The advanced technology is leading to growing business, particularly in Europe. The reporting year saw the launch of the new BIO-CEL® M+ product line, which was specially developed for medium-sized wastewater plants and container plants.

Globally, MANN+HUMMEL Water & Fluid Solutions recorded double-digit growth in sales.

In the Middle East, MANN+HUMMEL is now represented by its own teams in order to provide increased support for expansion in this region as well.

5. Net assets, financial position, and results of operations

Profit situation of the MANN+HUMMEL Group

The MANN+HUMMEL Group's sales revenue increased by 14.9% or EUR 626.50 million to EUR 4,826.4 million (previous year: EUR 4,199.9 million) in the past fiscal year. Sales growth was influenced by positive exchange rate effects. Adjusted for these currency effects in the amount of EUR 188.6 million, sales growth was 10.4% and thus slightly below the growth in the previous year (11.2%). The MANN+HUMMEL Group thus continues to confirm its steady growth course of recent years. As in the previous fiscal year, the Group encountered further challenges in 2022. The Covid crisis aftermath, supply chain issues, China's declining growth, inflation acceleration influenced heavily by energy price spikes, and the outbreak of the war in Ukraine impacted the general economic environment and MANN+HUMMEL.

In the traditional automotive business (Transportation business unit), sales in 2022 were 14.6% higher than in the previous year. We achieved growth in both the original equipment business and the aftermarket business compared with the previous year 2021. In addition to the positive development in sales, positive exchange rate effects contributed 4.1% to growth in the fiscal year. Sales growth adjusted for these currency translation effects amounted to 10.5%. In addition to increased volumes, positive selling price effects also boosted sales. Thus, we could pass on part of the inflationary cost trend to the market. It should also be noted that due to the sale of the global high-performance plastics parts business to Mutares SE & Co. KGaA with effect from October 1, 2022, sales in the 4th quarter decreased by approximately EUR 30 million compared to the previous year.

The **Life Sciences & Environment** business unit grew even more strongly than in the previous year. **Here, sales revenue increased by 18.0%. MANN+HUMMEL thus generated 9.3% of consolidated sales (previous year: 9.0%), further strengthening its activities in this area.** One of the most significant factors in this growth was CleanAire, LLC (Pamlico Air), a manufacturer and supplier of high-quality air filtration products acquired in March 2021 and based in the USA. Its contribution to total business unit sales increased from EUR 40.5 million in 2021 to EUR 95.3 million in the past fiscal year. This means that sales in this company alone grew by 135.2%. Most companies within the Water & Fluid Solutions business unit experienced significant growth, with many posting double-digit growth.

The decline in EBIT in the reporting year was mainly due to gross margin development. Significantly higher global costs for the procurement of raw materials and supplies such as steel and stampings, resins, chemicals, filter media, and packaging, as well as sharp increases in freight, logistics, and energy costs, could not be fully offset by selling price adjustments. In addition, continuing efficiency problems, particularly at our American sites, had a negative impact on gross margin. A further challenge for our production sites was the high volatility of customer inquiries, which resulted in inefficiencies in production planning. In the Life Sciences & Environment business area, our most important goal is to improve margin quality in addition to growth. In addition to economies of scale, we are also focusing on adjustments to distribution models and an adjustment of selling prices. For this reason, however, we have not yet been able to develop the gross margin sufficiently in the reporting year. The effects described above are also reflected in the percentage development of cost of sales.

While the cost of sales in 2021 was still 76.6% of sales, it increased to 77.4% in the 2022 fiscal year. As a result, the gross margin, i.e., the gross profit in relation to sales, decreased from 23.4% to 22.6%. In absolute terms, the gross profit increased to EUR 1,092.7 million (previous year: EUR 984.3 million) and thus by 11.0% compared to the 2021 fiscal year.

EBIT—operating earnings before interest and taxes—decreased by EUR 14.8 million or 7.7% to EUR 176.3 million in the reporting year 2022 (previous year: EUR 191.1 million) due to the challenging market environment already described. The operating margin achieved (EBIT in relation to sales) thus amounted to 3.7% (previous year: 4.6%). In the previous and past fiscal year, special items impacted the operating result. In 2021, these were mainly earnings effects from ongoing restructuring measures and the sale of real estate in connection with a plant closure in the United Kingdom. With effect from the beginning of the 2022 fiscal year, MANN+HUMMEL had sold a large portion of its real estate at the Ludwigsburg site to an investor. This sale is directly related to the phaseout of production at the Ludwigsburg plant, which had already been decided and communicated in 2020. This sale resulted in total extraordinary income of EUR 33.3 million. In addition, significant impairment losses had to be recognized on trade receivables from an American customer in the amount of EUR 6.6 million. As communicated in the press release dated October 4, 2022, MANN+HUMMEL completed the sale of its global high-performance plastic parts business in the reporting year, effective October 1, 2022. The resulting loss from the sale of the business amounted to EUR 40.8 million, of which EUR 2.0 million affected operating profit. In addition, negative effects of EUR 4.5 million from the business in hyperinflationary economies, from the payment of an inflation compensation premium in Germany, and from restructuring measures affected the operating result.

As a result, extraordinary expenses and income totaling EUR 20.2 million (previous year: EUR 4.2 million) were incurred in the 2022 fiscal year. Adjusted for these effects, the operating result amounted to EUR 156.2 million (previous year: EUR 195.3 million). The operating adjusted EBIT margin was 3.2% (previous year: 4.7%). The year-on-year decline in EBIT and operating EBIT margin was due to the significant cost increases described above and the fact that we were unable to fully compensate for them in the market.

In the previous year, we had forecast significant sales growth for the reporting year. With a currency-adjusted increase in sales of 10.4%, we were thus able to achieve the forecast growth. This applies to both the Transportation business unit and the Life Sciences & Environment unit. We were unable to meet our targets for margin quality in the reporting year due to the difficult market environment. We have already gone into the reasons for this in the individual areas. For the coming fiscal year, however, we expect to continue to systematically pursue and implement our growth targets and also to return to the already set target of a mid-single-digit margin in terms of margin quality.

In addition to EBIT, ROCE (return on capital employed) serves as the Group's key performance indicator. ROCE is defined as the return on capital employed to generate the reported EBIT. Return on capital employed decreased to 8.8% in the reporting year (previous year: 10.0%). In both the past and the previous fiscal year, it was impacted by special effects. Due to the special effects already described, ROCE also decreased compared with the previous year and was below the forecast of around 13% defined for 2022. Adjusted for all special items, ROCE was 7.8% (previous year: 10.2%).

The open order backlog amounts to approximately EUR 2,261 million (previous year: EUR 2,339 million) and is thus EUR –77.9 million or –3.3% below the previous year.

Research and development costs amounted to EUR 114.3 million in the reporting year (previous year: EUR 113.3 million). In relation to sales, they decreased slightly from 2.7% in 2021 to 2.4% in 2022. The MANN+HUMMEL Group's expenditure on research and development is thus at a consistently high level. This continues to demonstrate the importance of investments in new technologies and the associated strategic orientation of our company in existing and new business areas. In this business area in particular, the development of sustainable filtration solutions is an important focus of research and development activities.

We recorded a significant increase in selling expenses compared with the previous year. These rose to EUR 546.7 million in the reporting year (previous year: EUR 460.2 million). The sharp increase of 18.8% is mainly due to the sharp rise in logistics and freight costs. On the one hand, this is due to the increase in sales; on the other hand, we had to absorb significantly rising freight costs in the past fiscal year, as in previous years. In addition, the need for special freight, higher marketing expenses, and, not least, rising personnel expenses led to an increase in selling expenses. As a result, selling expenses as a percentage of sales rose from 11.0% in the previous year to 11.3% in the past fiscal year.

General and administrative expenses increased by EUR 37.9 million or 20.2% from EUR 187.5 million to EUR 225.4 million. In relation to sales, this is an increase from 4.5% to 4.7%. This is mainly due to increased personnel costs, rising rental and leasing costs, higher depreciation and amortization, rising travel expenses, and expenses for other taxes.

We recorded a significant increase in other operating income. This rose to EUR 192.0 million in 2022 (previous year: EUR 148.9 million). This was due to income realized from the sale of buildings and land at the Ludwigsburg site. In total, we generated sales proceeds of EUR 54.5 million. This resulted in other operating income of EUR 33.3 million. In addition, other operating income includes positive effects from the recognition of inflation effects in Argentina and Turkey.

Other operating expenses developed in the opposite direction compared to the previous year. These increased by EUR 40.9 million to EUR 222.0 million. However, this year's figure also includes restructuring expenses of EUR 1.9 million (previous year: EUR 13.4 million). In addition, due to inflationary developments, additions to provisions for anticipated losses were significantly higher than in the previous year at EUR 24.5 million. These amounted to only EUR 9.3 million. As in previous years, expenses from currency translation, at EUR 66.2 million, were virtually unchanged from the previous year (EUR 72.5 million). In addition, other operating expenses include negative effects of EUR 18.9 million from the foreign currency translation of countries with hyperinflation. There is no offsetting against income from foreign currency translation here. Costs for consulting services also increased by EUR 9.2 million. Write-downs of EUR 6.6 million on a customer receivable due to insolvency proceedings initiated in the USA have already been discussed in a previous section. In addition, other operating expenses include an expense from the disposal of property, plant, and equipment in connection with the sale of the production of plastic parts in the amount of EUR 2.0 million.

The financial result developed negatively in the reporting year compared to the previous year. It deteriorated by EUR –118.7 million and thus amounted to EUR –156.2 million (previous year: EUR –37.5 million). This includes a significant effect from realized expenses from securities amounting to EUR –45.0 million, which is attributable to the negative developments on the stock markets and the associated devaluations of our portfolio. In addition, the loss on the disposal of the global high-performance plastic parts business had a significant impact of EUR –38.8 million on the level of the financial result.

As a result of the business development in recent years not meeting expectations, it was necessary to write down shares and loans in the nonconsolidated Seccua Holding AG, Steingaden/Germany, by EUR 17.2 million. In addition, further impairments of EUR 4.2 million on other investments were necessary. Due to the increase in the general interest rate level, the combined interest expenses and income included in the financial result deteriorated by EUR –8.5 million. The deterioration is attributable to the increase in factoring (EUR –8.6 million) and pension interest (EUR –5.2 million), which was partially offset by higher interest income (EUR +7.2 million).

In addition to expenses and income from hedging transactions and leasing transactions, the financial result also includes expenses due to inflation effects in connection with MANN+HUMMEL's activities in Argentina and Turkey. The resulting impact on the financial result amounted to EUR –12.3 million.

The tax expense as of December 31, 2022, increased year on year from EUR 39.8 million to EUR 70.0 million. This results, among other things, from the valuation allowance of previously capitalized deferred tax assets on loss carryforwards and tax credits.

Financial position of the MANN+HUMMEL Group

MANN+HUMMEL's equity ratio, including the capital economically attributable to the shareholders, remained virtually unchanged in the 2022 fiscal year, from 23.5% to 23.3%. In absolute terms, the economic equity (sum of equity and capital economically attributable to the shareholders) also remained almost unchanged at EUR 1,012.1 million (previous year: EUR 1,020.2 million).

To ensure sufficient liquidity, the MANN+HUMMEL Group has short-term credit lines of EUR 867.6 million (previous year: EUR 845.9 million) available with banks. As of the balance sheet date, EUR 355.3 million (previous year: EUR 39.6 million) of these credit lines had been drawn down and were therefore reported as liabilities to banks. The majority of the credit lines amounting to EUR 512.3 million (previous year: EUR 806.3 million) were not utilized.

MANN+HUMMEL prematurely extended a revolving credit facility of EUR 800 million in 2022. The credit line has a term of five years and includes two options to extend the term by one year each.

For the first time, the new credit line has a sustainability component that links the interest rate to an ESG score, i.e., to environmental, social, and governance criteria.

The interest margin is increased or decreased depending on the rating of MANN+HUMMEL by EcoVadis. In 2022, the Group repaid the obligations due under promissory note loans and bilateral loans. Nevertheless, there was a net increase in financial liabilities to banks of EUR 138.1 million (previous year: EUR 63.2 million).

In addition, lease liabilities of EUR 55.4 million (previous year: EUR 39.0 million) were paid.

The MANN+HUMMEL Group continues to operate conservatively with financial instruments that have long maturities and essentially fixed interest rates. The loans taken out are predominantly denominated in euros. In addition, we have also taken out foreign currency loans in US dollars.

The maturities of these financings are mainly spread out over the next six years. Our registered bond (NSC) and individual tranches of our green promissory bills have maturities of up to 2034. The associated interest rates are mainly fixed.

The MANN+HUMMEL Group's balance sheet shows the maturity structure of liabilities to banks broken down into noncurrent and current liabilities. The loan repayments due in 2023 have been reclassified from noncurrent to current liabilities in these financial statements. Due to the additional drawing of credit lines, there was a significant increase in current financial liabilities.

Off-balance sheet commitments and contingencies increased significantly compared with the previous year. This is due to an increase in purchase commitments and off-balance sheet rental and leasing obligations. The major part of the obligations under leases is recognized in the statement of financial position due to the application of IFRS 16 “Leases.” The individual items of contingent liabilities and other financial obligations are presented in the notes to the consolidated financial statements under notes 34 and 35.

Capital expenditure amounted to EUR 266.4 million in the reporting year (previous year: EUR 180.9 million) and was thus EUR 85.5 million or 47.3% higher than in the previous year. In relation to sales, the Group thus invested 5.5% (previous year: 4.3%) in property, plant, and equipment, and intangible assets. In addition, capital expenditure and the investment ratio include EUR 121.1 million (previous year: EUR 59.5 million) from the conclusion of new leases.

Among other things, MANN+HUMMEL made **significant investments at our Italian site in water filtration** during the past fiscal year. Significant **investments were made at the Himmelkron site**, where MANN+HUMMEL is building a new logistics center to turn the site into a **center of competence for molecular filtration**. Further investments were made for the installation of equipment, among other things, for customer projects in all regions in which the company is active.

Sufficient liquidity was available for our investments in new customer projects in the reporting year. As in previous years, we financed these through operating cash flow.

Cash flow from operating activities deteriorated from EUR 276.1 million in the previous year to EUR 133.2 million. One of the main reasons for this is that earnings before income taxes in the reporting year, at EUR 20.1 million, were significantly lower than in the previous year (EUR 153.6 million). The weaker earnings before interest and taxes and the significantly worse financial result led to this reduction in 2022. In addition, cash flow from operating activities was significantly influenced by the decrease in noncurrent provisions. These decreased by EUR –51.8 million in the reporting year, with the most significant impact of EUR 46.7 million resulting from payments for restructuring measures already deferred in previous fiscal years. Current provisions developed in the opposite direction. Among other things, provisions of EUR 9.1 million (previous year: EUR 2.4 million) were recognized for restructuring measures to be paid in the next fiscal year. In addition, higher provisions for anticipated losses from pending transactions had to be recognized in the statement of financial position as of December 31, 2022, due to the increase in prices on the procurement market. This effect amounted to EUR 24.2 million (previous year: EUR 8.6 million).

As in the previous year, the consequences of the global supply chain disruptions were still felt in 2022. In addition, we continue to see high demand in the spare parts business, which, combined with a high delivery capability meant that inventories had to be built up to cover customer requirements. Overall, the increase in inventories led to outflows of EUR 94.4 million (previous year: EUR 107.3 million). In addition, a further increase in receivables resulted in a decrease in cash and cash equivalents of EUR 14.3 million (previous year: EUR 140.7 million). The increase resulted, among other things, from the growth in business volume. In addition to rising inventories and trade receivables, an increase in sales tax receivables and notes receivable, among other things, led to a reduction in cash and cash equivalents.

Trade accounts payable and other liabilities also decreased by EUR 39.4 million, which also had a negative impact on operating cash flow. In the previous year, liabilities had increased by EUR 167.1 million. Despite the increased volume of business, trade accounts payable alone did not change significantly compared to the previous year and only increased by EUR 3.6 million (previous year: EUR 137.5 million). The changes in other liabilities include items such as liabilities from customer rebates, liabilities from sales taxes and other taxes, and liabilities from performance-based remuneration.

At EUR –65.5 million, cash flow from investing activities was EUR 75.4 million lower than in the previous year (EUR –140.9 million). MANN+HUMMEL is investing in a sustainable future for the company and, thus, in strategically important new business activities. For this reason, cash outflows for investments in property, plant, and equipment were approximately 18.2% higher than in the previous year at EUR –142.2 million (previous year: EUR –120.3 million). The payments for noncurrent assets amounting to EUR –6.8 million (previous year: EUR –6.7 million) relate to investments in venture capital for smaller and flexible start-up companies. These investments open up new business fields and product areas in the field of filtration for the MANN+HUMMEL Group. Cash flow from investing activities in the reporting year was positively influenced by the proceeds from the sale of the real estate at the Ludwigsburg site. Here, the MANN+HUMMEL Group was able to realize EUR 54.5 million. In addition, the Group realized EUR 21.2 million from the sale of the sites for the production of high-performance plastic parts. With an agreed purchase price of EUR 26.8 million, MANN+HUMMEL also sold cash and cash equivalents of EUR 5.6 million to the companies.

Combining the cash flow from operating activities and the cash flow from investing activities results in the free cash flow. In the reporting year, free cash flow totaled EUR 67.7 million, EUR 67.5 million less than in the previous year.

Cash flow from financing activities amounted to EUR –52.4 million in 2022 (previous year: EUR –161.3 million). Among other things, cash flow from financing activities includes EUR 6.3 million (previous year: EUR 5.7 million) in dividend payments to shareholders. In addition, MANN+HUMMEL has taken up liabilities to banks in the amount of EUR 343.0 million (previous year: EUR 204.9 million). This includes the partial utilization of a revolving syndicated credit line, which MANN+HUMMEL successfully concluded with a consortium of nine core banks in the reporting year for a total volume of EUR 800 million, in the amount of EUR 247.0 million. In contrast, repayments of EUR 207.7 million (previous year: EUR 282.6 million) were made in the 2022 fiscal year. In addition, payments of EUR 53.9 million were made to settle realized forward exchange transactions, which are also attributable to cash flow from financing activities. On January 8, 2022, MANN+HUMMEL announced that it had entered into an agreement to acquire the remaining shares, specifically the remaining 45% of the shares in CleanAire, LLC (Pamlico Air), a US manufacturer and supplier of high-quality air filtration products, thus acquiring 100% of the shares in the company. The MANN+HUMMEL Group had already acquired 55% of the shares in the 2021 fiscal year. The associated cash outflows amounted to EUR 45.2 million.

As MANN+HUMMEL has stable, sufficient liquidity, no liquidity bottlenecks occurred in the reporting year. In addition, as already described, the Group has sufficient credit lines available to meet financial obligations in full when they fall due.

There are no early repayment obligations. These would only arise in the event of a breach of applicable contractual provisions, so that no risk arises for MANN+HUMMEL as a result.

In our view, the Group's liquidity is secured by the existing credit agreements.

For additional information, please refer to our disclosures in the notes.

Net asset position of the MANN+HUMMEL Group

Total assets remained almost the same as in the previous year and amounted to EUR 4,346.7 million (previous year: EUR 4,346.6 million).

Intangible assets fell by EUR –29.1 million from EUR 906.2 million in the previous year to EUR 877.1 million. Intangible assets still include significant components from company acquisitions made in recent years. Thus, capitalized goodwill amounts to EUR 709.5 million (previous year: EUR 695.8 million).

In addition, EUR 3.1 million (previous year: EUR 1.2 million) was invested in intangible assets such as licenses, software, and similar rights, as well as development costs. In the opposite direction, intangible assets amounting to EUR 56.5 million (previous year: EUR 74.2 million) were subject to scheduled amortization. The amount of this amortization is due to the acquisition of intangible assets from company acquisitions such as WIX-FILTRON in 2016, Tri-Dim Filter Corporation in the 2018 fiscal year, and CleanAire, LLC (Pamlico Air) in 2021. However, depreciation and amortization decreased significantly in the reporting year compared with the previous year, as the capitalized business relationships from the acquisition of FILTRON have now been fully written off. In addition, significant fluctuations in exchange rates amounting to EUR 24.4 million (previous year: EUR 41.9 million) led to an increase in this balance sheet item.

Property, plant, and equipment increased by EUR 21.6 million to EUR 1,061.7 million. The total investment volume in property, plant, and equipment included in this figure amounted to EUR 263.3 million (previous year: EUR 179.7 million).

Working capital is a key performance indicator at MANN+HUMMEL and is the difference between current assets and current liabilities. Overall, working capital increased by EUR 60.0 million or 8.5% year on year to EUR 769.7 million. In relation to sales, working capital amounts to 15.9% (previous year: 16.9%). The increase was mainly caused by a rise in inventories to EUR 717.5 million (previous year: EUR 650.5 million). Disruptions in global supply chains and growing demand, particularly in the spare parts business, led to this necessary increase in inventories. There was a substantial buildup of inventories, particularly at the American locations. As part of consistent inventory management, one of the prioritized goals for the 2023 fiscal year is to further adjust and optimize the level of inventories without restricting our ability to supply our customers. In addition to inventories, both current trade receivables and trade payables changed only insignificantly. Receivables decreased to EUR 817.4 million (previous year: EUR 823.2 million). In contrast, current liabilities to suppliers increased by EUR 1.3 million to EUR 765.3 million (previous year: EUR 763.9 million).

The MANN+HUMMEL Group's cash and cash equivalents amounted to EUR 205.0 million in 2022 (previous year: EUR 192.0 million). They were thus EUR 13.0 million higher than in the previous year. Current investments, payments to company owners, company acquisitions, and loan repayments were financed from current cash flow.

With effect from January 1, 2016, MANN+HUMMEL International GmbH & Co. KG became the ultimate parent company of the MANN+HUMMEL Group. In this case, there are nonexcludable termination rights for the shareholders under German commercial law that do not meet the requirements for recognition as equity under International Financial Reporting Standards (IFRSs). Accordingly, as in the previous year, this item is shown under liabilities as "Capital economically attributable to the shareholders."

In the reporting year, the equity reported in the balance sheet includes the shares of other shareholders of MANN+HUMMEL International GmbH & Co. KG. These hold a direct interest of 16.67% in MANN+HUMMEL Holding GmbH, but without voting rights. This also includes the noncontrolling interests of Changchun MANN+HUMMEL Faway Filter Co., Ltd., Changchun/PR China and the US shareholders totaling EUR 169.1 million (previous year: EUR 170.5 million).

Noncurrent and current financial liabilities increased by EUR 201.5 million year on year to EUR 1,698.5 million (previous year: EUR 1,497.0 million). As a result of the utilization of short-term credit lines in excess of scheduled repayments, liabilities to banks increased by EUR 138.2 million to EUR 1,138.0 million. In addition, liabilities from leases increased by EUR 73.6 million as a result of the application of IFRS 16 (Leases). This increase is primarily due to the conclusion of a lease agreement for the rental of building space in Ludwigsburg, Germany.

The general interest rate level on the financial markets has changed significantly due to the inflationary situation in 2022, leading to a substantial increase in interest rates. This also resulted in an increase in the discount factor used to calculate pension provisions from 1.10% in the previous year to 3.70%. As a result of the significantly higher discount rate, this led to a reduction in the amount of provisions. Pension obligations thus decreased overall by EUR –129.6 million from EUR 464.0 million to EUR 334.4 million.

Other current and noncurrent provisions decreased by EUR –17.2 million to EUR 213.9 million. This is mainly due to the utilization of the provision for restructuring measures recognized in previous years. These have decreased by EUR 36.8 million. In addition, warranty and personnel provisions also decreased year on year. Provisions for onerous contracts developed in the opposite direction. Due to the further increase in material prices as well as freight and production costs, the expected losses for individual products also increased. These had to be accounted for by additional provisions of EUR 13.1 million.

Noncurrent and current other liabilities decreased from EUR 214.3 million to EUR 192.4 million. Among other things, this is due to the reduction in personnel obligations, advance payments received, commission obligations, and deferred income. In contrast, liabilities for taxes and for annual audit fees increased.

Provisions for existing transfer pricing risks were remeasured in the annual financial statements as of December 31, 2022, and taken into account accordingly, as in the previous year's financial statements.

Group balance sheet structure

The MANN+HUMMEL Group has a balanced balance sheet structure. The existing short-term financing obligations can be serviced with the existing cash and cash equivalents and the available lines. The Group's combined equity ratio (sum of equity and the capital economically attributable to the shareholders) is 23.3% (previous year: 23.5%). In addition to sustainable growth and a further improvement in the operating margin, our focus in the coming fiscal years will also increasingly be on optimizing working capital, optimizing cash flows, improving return on capital, and further strengthening the equity ratio.

Overall statement on business performance

In view of the far-reaching challenges of the past reporting year, we consider the development of operating profit to be good despite the fact that last year's forecast was not achieved. Sustainable cost management and the partial passing on of inflationary effects to the market were able to offset some of the very significant inflation-related cost increases. In terms of cash flow, the buildup of working capital tied up substantial amounts of cash. We will focus on this development in the 2023 fiscal year.

Our Life Sciences & Environment business unit is still in its early stages of development and growth. We remain committed to focusing on this area to enhance our operating margins. This area now accounts for almost 10% of the Group's total sales and continues to gain in importance for our company. Thus, as we continue to grow, we also expect to see a sustained improvement in margins and earnings in the coming fiscal years.

Even if we were not able to fully achieve the forecast targets, MANN+HUMMEL can look back on a satisfactory fiscal year 2022, taking into account the current circumstances.

Development and position of MANN+HUMMEL International GmbH & Co. KG

All figures below relate to the separate financial statements of MANN+HUMMEL International GmbH & Co. KG in accordance with the accounting provisions of the German Commercial Code (HGB).

MANN+HUMMEL International GmbH & Co. KG is the parent company of the MANN+HUMMEL Group. The company has its registered office in Ludwigsburg, Germany. MANN+HUMMEL International GmbH & Co. KG had an average of 123 employees in 2022 (previous year: 111). These mainly comprise the Group's Legal, Treasury, Reporting, Finance, Human Resources, and Communications departments.

The company's main income results from its function as the parent company of the MANN+HUMMEL Group. The services plus an appropriate profit margin are charged to the domestic affiliated companies under a business, service, and management agreement. Furthermore, a profit and loss transfer agreement exists with MANN+HUMMEL East European Holding GmbH.

In the 2022 fiscal year, MANN+HUMMEL International GmbH & Co. KG generated sales revenue of EUR 40.4 million (previous year: EUR 36.4 million), which resulted primarily from the offsetting of intragroup services.

The company generated profits of EUR 1.7 million (previous year: EUR 43.0 million) through profit and loss transfer agreements with its Group subsidiaries. Other operating expenses totaling EUR 23.0 million (previous year: EUR 15.7 million) mainly include costs for services provided by affiliated companies, corporate and legal consulting costs, and IT expenses.

Personnel expenses decreased by EUR 2.0 million year-on-year to EUR 16.1 million (previous year: EUR 18.1 million).

Net interest income amounted to EUR 0.7 million (previous year: EUR –0.2 million) and includes the reduction in the discount rate for pensions as well as interest income for IC loans.

Taking into account income taxes of EUR 0.2 million (previous year: EUR 1.2 million), net income for MANN+HUMMEL International GmbH & Co. KG in the 2022 fiscal year amounted to EUR 4.6 million (previous year: EUR 44.3 million).

Of this, a profit amount of EUR 1.7 million was included in the special reserves (previous year: EUR 43.0 million).

Total assets amounted to EUR 499.3 million (previous year: EUR 531.8 million). This is due to the reduction in special reserves to EUR 199.6 million (previous year:

EUR 206.0 million) and results from withdrawals and the profit transfer of MANN+HUMMEL East European Holding GmbH.

Receivables from affiliated companies increased by EUR 106.3 million to EUR 152.9 million (previous year: EUR 46.6 million). The main components are cash pooling balances with MANN+HUMMEL Holding GmbH and receivables from loans to MANN+HUMMEL East European Holding GmbH. Other assets amount to EUR 7.4 million (previous year: EUR 12.1 million) and mainly include input tax refunds.

Equity amounts to EUR 465.7 million (previous year: EUR 472.4 million).

Provisions amount to EUR 12.9 million (previous year: EUR 13.1 million). Provisions for pensions and similar obligations amount to EUR 9.6 million (previous year: EUR 8.0 million). The increase in the pension provision of EUR 1.6 million is mainly due to the regular addition to the provision. The adjustment of the discount rate for pension provisions from 1.87% to 1.78% led to an increase of EUR 0.3 million. Other provisions amount to EUR 2.6 million (previous year: EUR 4.3 million) and mainly include the utilization of provisions for performance-related additional payments and severance payments.

Liabilities to affiliated companies amount to EUR 16.8 million (previous year: EUR 43.9 million) and mainly include sales tax liabilities for taxable entities and intercompany recharges for services and costs.

In summary, sales increased by 11% in the past fiscal year. The slight increase in sales forecast in the previous year was thus exceeded. Due to the significant increase in other operating expenses, the earnings before financial result and taxes achieved were slightly lower than the forecast made in the previous year.

For the 2023 fiscal year, we are currently assuming a slight increase in sales compared to the previous year for MANN+HUMMEL International GmbH & Co. KG as the ultimate parent company of the MANN+HUMMEL Group, and thus also in EBIT.

6. Opportunity and risk report

In the reporting year, the global economy recovered slightly from the economic slump caused in particular by the COVID-19 pandemic. Nevertheless, the past fiscal year continued to be characterized by strongly fluctuating markets, structural changes, and, above all, the massive economic impacts of the corona pandemic, the associated chip shortage and further supply chain disruptions, and the Russia-Ukraine war. The effects of the war in Ukraine resulted in sharply rising energy prices, among other things. Added to this are the tight supply situation for semiconductor components, the ongoing strict measures to contain the coronavirus in China in 2022 that led to ongoing disruptions in global supply chains, as well as rising inflation rates and rising interest rates, which made conditions increasingly difficult for consumers.

Internationally interwoven companies with complex supply and production chains suffer particularly from such developments. **Against this backdrop, every business decision at MANN+HUMMEL is made with due consideration of the associated risks and opportunities.**

At MANN+HUMMEL, we consider potential future events that may prevent us from achieving our financial targets as risks, which we include in our internal risk reporting. Conversely, we identify opportunities as events or developments that are likely to have a positive impact on our financial targets.

As a globally operating company, we counter these risks on the one hand through **diversification**, i.e., a diverse product range, and on the other hand by **continuously improving our products and processes**.

We create opportunities by continuously enhancing our competitiveness. This is achieved through product development, expanding our development competencies, and establishing and expanding new markets. Pioneering technologies and media, vertical integration, digital and intelligent business models, and various service solutions also open up new opportunities for us.

Through strategic acquisitions in the Life Sciences & Environment (LS&E) industry, we are able to generate synergies and gain new market access. This positions us well for promising future markets.

The Sustainability Report makes it clear that we are already aligning our vision, "Leadership in Filtration," and our mission, "Separating the useful from the harmful," to applications in the LS&E segment and will continue to do so in the future.

In the course of the global trend towards alternative drive systems, especially in passenger cars, there are numerous opportunities and risks. We are preparing for this with various scenarios and precautions.

To date, our product portfolio in the Transportation business unit has focused mainly on the power train of the internal combustion engine. As alternative drives begin to displace these engines, there is a risk of losing sales and market share. That is why we are investing in developing innovative filtration solutions for the new drive forms.

A key driver of our business is sustainability. With our core competence in filtration, we contribute to cleaner mobility, cleaner air, and cleaner water. On this basis, we have developed a strategic approach to sustainable corporate action and published this approach in our 2021 Corporate Sustainability Report.

This opens up opportunities to offer new products for future technologies and to develop this market. In addition, the increased environmental awareness of all market participants and end consumers is also creating opportunities to offer new products outside the drive or power train sector. These include, for example, all products that fall under the umbrella term "fine dust eaters": brake dust particulate filters, fine dust filters for vehicle interiors, or stationary fine dust and nitrogen oxide filter columns. These innovative products have great growth potential and are expected to open up new market segments for us as well as new customers.

Risk and opportunity management represents an integral part of MANN+HUMMEL's planning and control processes, with the aim of supporting the achievement of corporate goals in the long term and strengthening/ensuring risk awareness within the company.

Risk Management

MANN+HUMMEL's risk management system aims to regularly and continuously identify all material risks to the Group at an early stage, assess them, and estimate their consequences (including countermeasures), as well as to ensure that the risk management process and its results are adequately documented. **In order to comprehensively address the rapidly changing market conditions and corporate changes (e.g., establishment of plants or the acquisition of new companies), the project to further develop the existing risk management system, launched in 2019, was continued.** In 2022, it was optimized and adapted, taking into account the prevailing circumstances, particularly with regard to the chip shortage and the Russia-Ukraine war.

In 2022, we further developed the risk management system and automated the standard process to a high degree by implementing a risk management tool. To increase the precision of the risk assessment, we have expanded the process so that reported risks are validated in a two-stage process. As part of this process, risk coordinators check the extent to which risks already reported are still valid and the extent to which new risks reported by risk owners are appropriate, taking into account the context of the area of responsibility. After the initial validation, a final review of the reported risks is carried out by central Group Risk Management, taking into account the organization as a whole.

Risk management is integrated into the existing MANN+HUMMEL organization. It covers all organizational units, functions, and processes, is based on common standards such as COSO and ISO, and is precisely adapted to MANN+HUMMEL's conditions. It provides optimum support for all those responsible by means of a company-wide planning, reporting, and controlling system and precisely defines responsibilities as well as targets and processes. The risk officers are responsible for identifying, assessing, managing, and reporting risks. They reassess their risk situation annually and report their risk portfolio to Group Risk Management.

The organizational framework for our risk management is provided by the Group Treasury & Risk Management function. It reports directly to the Group Chief Financial Officer.

Based on the information reported, Group Risk Management determines the Group's current risk portfolio, which is made available to the Executive Board and Supervisory Board in an annual report with detailed explanations. This also includes the mathematical aggregation of risks at Group level. This involves aggregating similar risks and taking into account their group-wide dependency or impact to ensure that overarching risks are identified and managed with overarching measures. In addition, significant changes in the assessment of already known risks as well as new significant risks are reported at any time and reported ad hoc to the Executive Board.

Potential risks are classified on the basis of two criteria: **probability of occurrence and extent of risk**. The extent of risk, in turn, is divided into five categories—classified according to possible impact on business performance within two years:

- **Going-concern risk** (possible costs of more than EUR 40 million).
- **Significant risk** (possible costs of up to EUR 40 million).
- **High risk** (discernible effect on business activity, possible costs of up to EUR 25 million).
- **Moderate/medium risk** (possible costs of up to EUR 15 million).
- **Low risk** (possible costs of up to EUR 5 million).

Due to the continuing tense general economic situation, we have kept the probability of occurrence intervals at the previous year's level, so that the prudence principle continues to be taken into account.

Likewise, risk-limiting measures (mitigation measures) are reported and assessed. The effectiveness and planned timing of implementation of these measures are monitored by Group Risk Management.

The remaining risk after implementation of the measures is presented as net risk in the internal risk report.

A standard process has been defined for reporting risks with regard to their potential negative impact, as well as an ad hoc process for risks arising at short notice. The time frame relevant for internal risk reporting is a maximum of 2 years. In addition, the impact of risks presented in the opportunity and risk report is presented as annual values.

Internal auditing regularly reviews the functionality of the internal risk management processes and at the same time the transfer of information on relevant risks from the operating business areas to Group Risk Management.

Current geopolitical and trade policy developments may give rise to uncertainties for the further business development of the MANN+HUMMEL Group and thus necessitate a changed presentation of the Group's risk situation. In particular, a further escalation of the Russia-Ukraine war or stricter EU regulations (e.g., EU Supply Chain Obligations Act, CO_2 requirements for car manufacturers) could lead to far-reaching consequences. With regard to the Russia-Ukraine war, we have so far tried to keep the impact on our sites in the crisis regions in particular within bounds and as low as possible. We have also initiated appropriate measures to safeguard the continued existence of MANN+HUMMEL's assets and, if necessary, to counter the threat of expropriation. Otherwise, the risk structure of our company has not changed significantly compared with the previous year, with the exception of the risks already mentioned. By implementing far-reaching measures, we have succeeded in countering the risks of the Covid pandemic and currently in containing or mitigating the effects of the Russia-Ukraine war on MANN+HUMMEL. As a result of these measures, we do not currently see any further risks that could have a sustained and material adverse effect on the Group's development in the future. We currently anticipate a recovery in 2023.

The assessment of the risks presented relates to November 30, 2022.

To date there have been no relevant changes after the balance sheet date which would have necessitated a change in the presentation of the Group's risk situation. Compared with the previous year, the risk structure of our company has not changed significantly with the exception of individual risks and the current ongoing economic crisis in connection with the Russia-Ukraine war.

Financial risks

For our Group, exchange rate fluctuations and interest rate changes are among the narrower group of financial risks. For this reason, these currency risks are continuously and regularly monitored, assessed, and hedged by derivative financial instruments taking into account a risk limit. We generally use derivative financial instruments to hedge risk-bearing underlying transactions from the Group's operating activities. We also continuously review the interest rate risk and minimize it by keeping the proportion of financial liabilities with long-term fixed interest rates as high as possible.

This limitation of financing and liquidity risks is the responsibility of the MANN+HUMMEL Group Treasury & Risk Management department. Our long-term financing largely counteracted interest rate developments in the past fiscal year. Nevertheless, the current interest rate development will naturally have an impact on future financing. It is to be expected that higher interest expenses will be incurred in the future. Nevertheless, we expect to be able to keep our financing and liquidity risk at a low level in the future.

In addition to currency and interest rate risks, we also regularly review default risks of financial partners and initiate appropriate measures.

Sufficient financial resources form the basis on which MANN+HUMMEL can drive forward its future strategic alignment.

We keep financial risks low through solid financing, a stable liquidity position, and sufficient reserve liquidity. As far as our liquidity is concerned, consistent monitoring of cash and cash equivalents is an effective tool for minimizing risk. We continuously and regularly monitor receivables, payables, and inventories and can thus implement necessary measures to avoid risks, even at short notice.

Part of our reserve liquidity is invested in a master fund with several segments (four subfunds and one overlay). This means that the defined return and risk parameters can always be complied with accordingly.

The investment guidelines stipulate that the subfunds are equipped with a risk limitation system. Accordingly, one fund has a fixed value floor of –5% and another has risk control without a fixed floor. The two remaining funds are absolute return funds, which may not fall below a performance of –10% due to an appropriate risk overlay.

We continuously monitor the current assets tied up and adjust them to the development of sales if necessary.

We counter balance sheet–relevant risks, such as the valuation of our fixed assets, the assessment and recognition of provisions in the individual business areas, or the recognition and accrual of sales on an accrual basis, with regular and close coordination between the responsible central units and the individual business areas, and a forecasting process closely coordinated with the business areas and management. Meaningful key figures round off the process.

In this way, we ensure that relevant issues are identified at an early stage and mapped correctly.

Operational opportunities and risks

Market environment

In order to respond quickly to a potential further weakening of economic development in relevant markets, we have defined possible scenarios in advance.

From these scenarios, we derive measures to adjust the cost level as far as possible to declining sales volumes. In addition, we continuously validate our markets and competitive behavior in order to identify such developments at an early stage and counter them with suitable, if necessary, market-specific, measures. Against this backdrop, we have strengthened our measures in the "IP rights implementation" process, particularly via a corresponding project, and will continue this in 2023, expanding the measures as required.

In connection with the progressive sensitization of society to the issue of sustainability, our focus in product development is on cleaner mobility, cleaner air, and cleaner water. In Transportation, we are therefore increasingly working on filtration solutions for fuel cells and electric vehicles. At the same time, we are making an important contribution to reducing particulate matter with our brake dust particle and front-end filters. Our filtration and separation solutions in the Life Sciences & Environment segment round off our product portfolio and thus actively and positively contribute to protecting our environment.

The historically grown and still significant dependence on the automotive industry also harbors risks. As a Tier 1 supplier in particular, we are feeling the cost pressure in the series production business strongly.

The cost pressure and risks are influenced by a multitude of factors, including, but not limited to, the advance of alternative drive systems (such as electric motors), the risk of a production stoppage at the automotive manufacturer due to the failure of individual automotive suppliers (due to under-capacity), the Russia-Ukraine war and the associated negative impact on production, purchasing, and logistics processes, and start-up difficulties with the new technologies (including overcapacity) resulting in a negative impact on sales at MANN+HUMMEL. In addition, there is a risk that the Russia-Ukraine war will have a negative impact on the development of sales in the region, particularly in the spare parts business. However, at the moment it can be assumed that this will not have a significant effect on the business development of the MANN+HUMMEL Group.

We're preparing for the internal combustion engine's eventual phaseout by shifting our focus towards new business areas and drive technologies. This will help diversify our product range and enable us to explore new markets.

The focus here is on competitive behavior. This is ensured, for example, by internal processes checking for any third-party rights or by management processes to ensure compliant behavior.

The rapid and far-reaching changes and the constant transformation brought about by the digital age challenge everyone equally: MANN+HUMMEL as a company, our management personnel, and all our employees. For example, we are facing new challenges with transportation solutions beyond the combustion engine, the digital transformation of the economy and society, and the growing demands for sustainable business.

Our company has been able to explore new opportunities with these recent changes. With our 80+ years of experience and core competence in filtration, we have a significant advantage in creating innovative filtration products and solutions for new business areas. A great example of this is our success in the Life Sciences & Environment sector.

Diversification also gives us greater independence from the automotive sector and opens our company further to new technologies and innovations.

Attracting and retaining skilled employees is an integral part of our corporate philosophy. Measures such as the talent management program and the application of leadership principles enable us to stay close to our employees and help develop them individually.

Purchasing

In our procurement markets, price fluctuations for raw materials and supplies entail risks that we have to factor in. We minimize the risk of cost increases as far as possible through long-term contracts. In addition, we work with globally active and strategically broad-based suppliers as part of our group-wide commodity group management. We are also constantly confronted with supply bottlenecks. Due to the continuing effects of the Covid pandemic and the current Russia-Ukraine war, we are exposed to an increased risk of supply chain disruptions, possible production interruptions, and bottlenecks in energy supplies. Appropriate measures and cooperation with our suppliers largely averted supply bottlenecks and disruption in the reporting year. In addition, we could pass on price fluctuations to our customers, at least in part. However, the situation may change at any time.

Our central purchasing control system contributes to transparency, control, and risk minimization. One instrument for minimizing risk is permanent monitoring (using performance and logistics indicators) and control, as well as close, ongoing coordination with our suppliers, particularly those of system relevance. In material development, we succeeded in making the supply chains more flexible by defining, validating, and approving alternative materials for a wide range of product groups. **Increasingly, MANN+HUMMEL must meet the demands of sustainability in the area of procurement. We prioritize sustainability within our corporate goals, not only because specific elements are required by lawmakers, stakeholders, and society but also because they are truly important to us. The fulfillment of environmental and social standards in our own business area as well as in the supply chain has always been part of MANN+HUMMEL's philosophy.**

For us, sustainability does not end with our products; rather, it begins with the responsible and sustainable procurement of materials throughout the supply chain. A nontransparent supply chain represents a risk. For this reason, we conduct regular supplier audits and oblige our suppliers to comply with or improve sustainable actions. Thus, we already fulfill the operational requirements of the Supply Chain Obligations Act to a high degree. In 2022, specific facts and requirements from the Supply Chain Obligations Act were validated by our company, and measures for compliance were defined and implemented. A corresponding policy statement was thus drawn up and the procedure for complying with the requirements from the Supply Chain Obligations Act was defined in detail, with MANN+HUMMEL's existing processes supplemented accordingly. In particular, the direct supplier base was analyzed against the requirements with the aid of a systematic risk analysis. Appropriate prevention, supplier enablement, and remedial measures were defined and responsibilities were specified in detail.

Due to the significance of the Supply Chain Obligations Act, activities will continue in 2023 to successively/continuously expand transparency regarding compliance with the supply chain requirements and to further advance implementation in the supply chain.

Quality

High-quality products and customer satisfaction are the central goals of our company. That is why quality problems and the resulting customer complaints and warranty claims would represent a significant risk and would have an impact on our reputation and the financial situation of our company.

To counteract this risk, we have implemented high quality standards within the framework of the IATF 16949–certified MANN+HUMMEL Management System, which is applicable for product and process development as well as production in all plants of the Transportation business unit. The core element here is our quality targets, which we define top-down, substantiate bottom-up, and consolidate across our operating divisions (also known as our group-wide quality management system, which extends across all our business processes). However, we already use the greatest opportunity to identify and prevent defects in advance: through balanced and conscientious planning.

Our customer quality and warranty teams collaborate closely with customers, development teams, and production plants to ensure product quality and promptly address any quality issues that may arise.

We also adequately cover warranty risks financially through provisions and appropriate insurance coverage for possible damage caused by recalls and product liability cases.

Sustainability

For MANN+HUMMEL, sustainability means creating lasting economic, ecological, and social added value—for our customers, employees, investors, business partners, and our company as a whole. This approach is part of our corporate strategy, defined as a core objective, anchored in our guidelines and business processes, and reflected in our products.

Against this background, we will evaluate the taxonomy capability as well as the taxonomy compliance for MANN+HUMMEL in order to identify any need for action.

We have developed a CO_2 strategy for the year 2050 that includes the following fields of action:

- Exclusively sourcing renewable and regenerative energy sources for all our sites.
- Increasing energy efficiency (e.g., through targeted individual measures/energy efficiency measures at the production sites).
- Striving to further minimize the share of CO_2 emissions within our value chain through a focus on energy efficiency, secondary materials, and renewable energies.
- Driving forward the further development of sustainable products, and this, among other things, through the use of secondary raw materials, a high level of energy efficiency, a long product life, and a high level of recyclability.

Risks may arise in this context from changes and tightening of regulations and relevant laws on emissions. MANN+HUMMEL stays close to these developments through the projects and measures already initiated, regular validation of any pending changes and draft legislation, and membership of relevant associations and initiatives. We can therefore incorporate these into current projects and measures at short notice if necessary, which means that these risks can be managed/proactively controlled.

Information technology

The global digital networking of our organization forms the basis for the worldwide presence of our group of companies. Fast and secure data traffic offers opportunities to continuously optimize processes and improve collaboration with customers and suppliers. However, the constant availability of secure data that this requires also places high demands on our information technology. On the one hand, this applies to data availability, which we ensure via a secondary data center in Ludwigsburg, and on the other hand, to our IT landscape/architecture. This must be continuously checked, built up, and extended with regard to aspects such as data security, data retrieval at any time, and acceleration of processes (new software solutions, additional IT/system interfaces). Digitalization and digital transformation are core elements of our corporate strategy in this regard, as they offer a wide range of opportunities, such as streamlining operational processes or state-of-the-art partners. To achieve/ensure this, we continuously invest in our systems and IT environment. We have also implemented standards for change management and dedicated training and communication programs.

In general, the steadily increasing threat of cybercrime and the spread of malware give rise to risks that can impact the availability and confidentiality of information and IT systems. The current conflict between Russia and Ukraine in particular has further increased the potential danger in terms of cybercrime. Although extensive precautions have been taken, in a worst-case scenario, cybercrime may lead to a temporary interruption of IT-supported business processes.

For this reason, we gave the go-ahead in April 2019 for a three-year IT security project, which we completed in 2022. Thanks to this project and our Security Operation Center (SOC) in Bengaluru, India, we ensure that global firewall and antivirus operational issues are constantly and timely handled by a team in shift operation via implemented security processes and defined operational tasks, thus directly solving potential problems or threats.

We also conduct regular preventive training sessions with employees to sensitize them and create awareness. In addition, contingency plans are regularly updated in order to remain capable of action in the event of a threat. At the same time, we continuously conduct IT security audits and penetration tests to identify and close any security gaps. Furthermore, organizational mechanisms have been implemented to ensure and continuously monitor the implementation of the defined measures. The protection of IT systems at MANN+HUMMEL is continuously being expanded. However, should a system failure, data loss or comparable damage occur, we are covered by appropriate insurance up to a certain amount of damage.

In another project, MANN+HUMMEL introduced an Identity and Access Management (IAM) system. Compromised login data and access authorizations are often a weak point in corporate networks. With the IAM system, the roles, access authorizations, and requirements of individual users are managed and the data is thus supported.

Fraud and Code of Conduct violation

In many countries, investigations are increasingly being carried out by antitrust authorities. Penalties may be incurred for competition violations or other illegal behavior. To counter this, our corporate policies, together with our Code of Conduct, regulate the correct approach to antitrust issues, export control, corruption, and other violations of the law. We also raise awareness of these issues among all employees worldwide through continuous training. Through this training, we cannot completely avoid risks, but we can greatly reduce them.

Furthermore, process controls and corresponding guidelines serve to reduce compliance violations (both internal and external) to a minimum. Through our whistleblowing system, which is publicly accessible on our website, every employee and third party has the appropriate platform to address compliance suspicions and risks at any time.

Performance risks

Performance risks include possible damage from business interruptions and loss of property, plant, and equipment.

Natural disasters, acts of terrorism, or other disruptions in production facilities or within supply chains—both at customers' and at suppliers' facilities—can cause significant damage and losses. To limit these risks, we have taken out insurance policies in an amount that is appropriate from a commercial point of view.

The coronavirus pandemic continues to cause great uncertainty in companies, even if the situation is increasingly easing due to the already widespread immunization. **In order to keep the risk for MANN+HUMMEL as low as possible, the measures initiated for this purpose will be continued and adjusted as required.** Despite the existing measures, the further development of the situation is difficult to assess and may have further negative influences on the company.

Taxes

As an internationally active group, MANN+HUMMEL operates in a large number of different country-specific tax systems. This represents a high level of complexity within the Group. Compliance with the respective tax regulations is ensured by additional local tax advisors commissioned by the individual companies. In addition, the Group is optimizing its internal tax control systems throughout the Group, for example in the case of indirect taxes and cross-border relationships. The optimization of tax processes and ongoing controls are a core element in identifying and mitigating any tax risks at an early stage. Group-wide policies—for example on transfer pricing—are therefore continuously updated and communicated transparently to our employees worldwide. In addition, the Group follows a uniform group-wide approach to transfer pricing documentation in order to meet the increased requirements of tax authorities worldwide.

The CO_2 tax issue is considered and evaluated across all business processes.

For MANN+HUMMEL, sustainability means creating lasting economic, ecological, and social added value—for our customers, employees, investors, business partners, and MANN+HUMMEL as a whole.

This approach is part of our corporate strategy, defined as a core objective, anchored in our guidelines and business processes, and reflected in our products.

Failure of important customers

Both as a Tier 1 supplier and in the Aftermarket business, our company aligns its cooperation with customers for the long term. We monitor our risks on an ongoing basis and dynamically adjust our credit limits to our customers' payment behavior and creditworthiness. The loss of one of our major customers would probably slow down the development of our Group, but would not jeopardize its continued existence.

To reduce our dependencies, we use diversification strategies and offer a wide range of products in various filtration markets. We also provide trade credit insurance, which has recently been significantly expanded with the limitation to individual countries/customer groups having been lifted. This insurance is being rolled out globally and only excludes OEMs with very good credit ratings.

Overall statement on the opportunity and risk situation

We continuously monitor opportunities and risks, with risks assessed in an iterative process. This enables us to identify opportunities and minimize risks at an early stage. Despite the current difficult geopolitical situation, there are currently no identifiable risks that could jeopardize the continued existence of the Group.

7. Forecast report

The 2022 fiscal year was characterized by various challenges for MANN+HUMMEL. Nevertheless, we were almost able to achieve the expected sales growth. Only the operating result (EBIT) and ROCE were below our expectations.

The MANN+HUMMEL Group anticipates currency-adjusted sales growth of between 6% and 7% in the 2023 fiscal year. In this context, we assume that the developing Life Sciences & Environment business unit will achieve disproportionately high growth and, at the same time, that the Transportation business unit will grow in the mid-single digits. At the same time, we currently expect MANN+HUMMEL to achieve an EBIT margin adjusted for nonoperating one-off effects in the mid-single digits. This would correspond to a slight increase compared with the previous year. Our current expectation in terms of operating profit in relation to capital employed (ROCE) is in a range between 10% and 12%. In addition, we expect an operating free cash flow of approximately EUR 125 million in the 2023 fiscal year. This takes into account moderate growth in working capital and a significantly higher investment volume in addition to the operating profit compared with the previous year.

With its 10th sanctions package from February 24, 2023, the European Union has introduced further far-reaching sanctions against the Russian state. This means that deliveries to Russia are no longer possible under the current framework conditions. Due to the current situation, it is not possible at the moment to predict an exact time frame for the application of the sanctions measures. However, we assume that the Russian crisis will continue in the longer term. For this reason, we have currently suspended activities in our Russian company. However, due to the existing uncertainty, this has not yet been included in our planning for the 2023 fiscal year. Compared to the previous fiscal year, we assume that the discontinuation of business activities will reduce the expected sales volume by approximately EUR 60 million, which will also be reflected in the operating margin in the double-digit range for the business in Russia. Also with regard to the valuation of assets and liabilities, the Group does not anticipate any significant need for impairment.

Current macroeconomic and geopolitical developments harbor considerable uncertainties and risks. Therefore, our primary objective is to increase the efficiency of the business through appropriate measures and thus sustainably improve our margin quality. For this reason we continuously review and scrutinize our site strategy and product portfolio. Any necessary measures are introduced as quickly as possible.

Ludwigsburg, April 25, 2023

MANN+HUMMEL International GmbH & Co. KG

The Management Board

Kurk Wilks CEO	Emese Weissenbacher EVP & CFO

MANN+HUMMEL consolidated financial statements in accordance with IFRS[1]

1 All figures are rounded. This may lead to minor discrepancies when totaling sums and when determining percentages.

Consolidated profit and loss statement January 1 to December 31, 2022

In EUR million	Notes	2022	2021
Sales	(10)	4,826.4	4,199.9
Cost of sales	(11)	3,733.7	3,215.6
Gross margin on sales		**1,092.7**	**984.3**
Research and development costs	(11)	114.3	113.3
Selling expenses	(11)	546.7	460.2
General administrative expenses	(11)	225.4	187.5
Other operating income	(12)	192.0	148.9
Other operating expenses	(13)	222.0	181.1
Operating profit or loss (EBIT)		**176.3**	**191.1**
Share in the result from associates	(14)	0.9	0.6
Financial expenses	(14)	282.5	110.8
Financial income	(14)	125.4	72.7
Net financial result		**–156.2**	**–37.5**
Net profit or loss before income tax and changes in capital economically attributable to the shareholders		**20.1**	**153.6**
Income taxes	(15)	70.0	39.8
		–49.9	113.8
Changes in capital economically attributable to the shareholders		**–41.2**	**96.5**
Consolidated net income		–8.7	17.3
Result attributable to noncontrolling interests		–8.7	17.3

Consolidated statement of comprehensive income January 1 to December 31, 2022

In EUR million	Notes	2022	2021
Consolidated net income		**–8.7**	**17.3**
thereof attributable to noncontrolling interests		–8.7	17.3
Items that may be reclassified to profit/loss			
Exchange rate differences from the conversion of foreign business operations			
Exchange rate differences occurring during the fiscal year	(26)	2.2	60.0
Equity and borrowing instruments			
Changes in fair value of financial assets available for sale	(26)	–6.5	1.6
Reclassifications to profit and loss	(26)	–1.1	–3.0
Cash flow hedge (currency hedging)			
Gains/losses recorded during the fiscal year	(26)	3.3	4.4
Income taxes attributable to these components	(26)	3.4	–1.1
Items that will not be reclassified to profit/loss			
Revaluation of defined benefit obligations and similar commitments	(26)	115.9	28.6
Income taxes attributable to these components	(26)	–32.5	11.0
Equity instruments			
Changes in fair value of financial assets available for sale	(26)	1.5	2.5
Income taxes attributable to these components	(26)	0.8	–1.4
Changes in other income attributable to shareholders		–73.6	–82.9
Other income		**13.4**	**19.8**
Total consolidated comprehensive income		**4.6**	**37.1**
thereof attributable to noncontrolling interests		4.6	37.1

Consolidated balance sheet as of December 31, 2022

In EUR million	Notes	12/31/2022	12/31/2021
Assets			
Noncurrent assets			
Intangible assets	(17)	877.1	906.2
Tangible assets	(19)	1,061.7	1,040.1
Investments in associates	(20)	4.9	2.6
Financial assets	(21)	30.3	35.6
Income tax receivables		0.7	0.1
Other assets	(22)	16.9	16.9
Deferred tax assets	(15)	126.8	182.5
		2,118.4	**2,184.0**
Current assets			
Inventories	(23)	717.5	650.5
Trade receivables	(24)	817.4	823.2
Financial assets	(25)	347.9	343.0
Income tax receivables		18.1	24.0
Other assets	(22)	122.4	116.8
Cash		205.0	192.0
		2,228.3	**2,149.5**
Noncurrent assets held for sale	(19)	0.0	13.1
		4,346.7	**4,346.6**

In EUR million	Notes	12/31/2022	12/31/2021
Liabilities			
Equity			
Noncontrolling interests	(26)	169.1	170.5
		169.1	**170.5**
Noncurrent liabilities			
Capital economically attributable to the shareholders	(26)	843.0	849.7
Financial liabilities	(28)	920.1	1,038.3
Provisions for pensions	(32)	334.4	464.0
Other provisions	(31)	38.0	85.9
Other liabilities	(30)	5.8	9.3
Income tax liabilities		4.1	4.2
Deferred tax liabilities	(15)	54.9	80.4
		2,200.3	**2,531.8**
Current liabilities			
Financial liabilities	(28)	778.4	458.7
Trade payables	(29)	765.3	763.9
Other liabilities	(30)	186.6	205.0
Other provisions	(31)	176.0	145.2
Income tax liabilities		71.0	71.5
		1,977.3	**1,644.3**
		4,346.7	**4,346.6**

Consolidated cash flow statement January 1 to December 31, 2022

In EUR million	Notes	2022	2021
1. Cash flow from operating activities			
Consolidated net income		–8.7	17.3
Changes in capital economically attributable to the shareholders		–41.2	96.5
Income taxes		70.0	39.8
Net profit or loss before income tax and changes in capital economically attributable to the shareholders		20.1	153.6
Paid (–)/refunded (+) taxes on income		–54.4	–52.1
Depreciation (+) of fixed assets		218.0	228.1
Increase (+)/reduction (–) in noncurrent provisions		–51.8	–5.9
Other expenditure (+)/income (–) not affecting payments		–0.4	–11.1
Financial expenses (+)/financial income (–)		156.2	37.5
Increase (+)/reduction (−) in current provisions		42.8	13.6
Profit (−)/loss (+) from disposal of assets		–28.5	–9.9
Increase (−)/reduction (+) in inventories, trade debtors and other assets		–130.2	–244.8
Increase (+)/reduction (−) in trade creditors and other liabilities		–39.4	167.1
Cash flow from operating activities	(33)	**133.2**	**276.1**
2. Cash flow from investment activities			
Receipts (+) from the disposal of tangible assets		12.8	27.9
Payments (–) for investment in tangible assets		–142.2	–120.3
Receipts (+) from the disposal of intangible assets		0.0	0.0
Payments (–) for investment in intangible assets		–3.2	–1.3
Receipts (+) from the disposal of noncurrent financial assets		1.7	4.7
Payments (–) for investment in noncurrent financial assets		–6.8	–6.7
Receipts (+) from the disposal of assets held for sale		54.5	0.0
Receipts (+) from the sale of consolidated entities, less cash and cash equivalents		21.2	0.0
Payments (–) for the acquisition of consolidated companies, less cash and cash equivalents acquired		0.0	–45.9
Receipts (+) from loans granted		0.0	2.4
Payments for loans granted (–)		–9.2	–8.2
Interest received (+)		5.5	6.5
Cash flow from investment activities	(33)	**–65.5**	**–140.9**
Free cash flow		**67.7**	**135.2**

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Consolidated cash flow statement January 1 to December 31, 2022 (continued)

In EUR million	Notes	2022	2021
3. Cash flow from financing activities			
Receipts (+) from equity increases		18.2	0.0
Payments (–) to company shareholders		–10.8	–8.5
Receipts (+) from acceptance of (financial) credits and from realized forward exchange transactions on financial loans	(33)	343.0	211.7
Repayment (–) of (financial) credits and of realized forward exchange transactions on financial loans	(33)	–265.2	–284.2
Payments (–) for the acquisition of noncontrolling interests		–45.2	0.0
Payments (–) from the repayment of leasing liabilities	(33)	–55.4	–39.0
Interest paid		–37.0	–41.3
Cash flow from financing activities	(33)	**–52.4**	**–161.3**
4. Cash funds at end of period			
Payment-effective change to cash funds (subtotal 1–3)		15.4	–26.1
Changes in cash funds from exchange rate movements, valuation differences and changes in Group structure		–2.4	4.5
Cash funds at beginning of period		192.0	213.6
Cash funds at end of period		**205.0**	**192.0**
5. Composition of cash funds			
Cash	(33)	205.0	192.0
Composition of cash funds		**205.0**	**192.0**

Consolidated changes in equity January 1 to December 31, 2022

	Parent company							Noncontrolling interests	Total equity
	Revenue reserves	Total other shareholders' equity					Total equity of the partners of M+H International GmbH & Co. KG		Total
		Financial assets available for sale	Equity and borrowing instruments	Fair value measurement of cash flow hedges	Actuarial gains and losses	Difference from foreign currency translation			
As of 12/31/2020								**123.4**	**123.4**
Changes in capital economically attributable to the shareholders	92.7		0.1	2.4	33.3	47.1	175.6		175.6
Reclassification to borrowed capital	–92.7		–0.1	–2.4	–33.3	–47.1	–175.6		–175.6
Other comprehensive income								19.8	19.8
Consolidated net income								17.3	17.3
Total consolidated comprehensive income								**37.1**	**37.1**
Paid dividends								0.0	0.0
Changes to the consolidated Group								9.1	9.1
Other								0.9	0.9
As of 12/31/2021								**170.5**	**170.5**
Changes in capital economically attributable to the shareholders	–82.8		–2.6	3.8	69.9	2.5	–9.2		–9.2
Reclassification to borrowed capital	82.8		2.6	–3.8	–69.9	–2.5	9.2		9.2
Other comprehensive income								13.4	13.4
Consolidated net income								–8.7	–8.7
Total consolidated comprehensive income								**4.6**	**4.6**
Paid dividends								–4.9	–4.9
Changes to the consolidated Group								–2.1	–2.1
Other								0.9	0.9
As of 12/31/2022								**169.1**	**169.1**

Notes to the consolidated financial statements

Fundamental principles
1. Corporate structure
2. General information
3. Application of IFRS
4. Adjustment of the accounting methods as well as new standards and interpretations
5. Consolidated group
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7. Foreign currency translation
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Other disclosures

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Fundamental principles

1. Corporate structure

MANN+HUMMEL International GmbH & Co. KG (hereinafter also referred to as the "Company," "Parent Company," or "MH International Holding") is organized in the legal form of a partnership. The Company has its registered office at Schwieberdinger Straße 126, 71636 Ludwigsburg, Germany, and is entered in the Commercial Register of the Stuttgart Local Court under the Commercial Register number HRA 730217. The Company has been the ultimate parent company of the MANN+HUMMEL Group (hereinafter also referred to as the "Group," "MANN+HUMMEL," or the "MANN+HUMMEL Group") since January 1, 2016.

The product portfolio includes filtration solutions for automotive and industrial applications, clean indoor and outdoor air, and the sustainable use of water. The MANN+HUMMEL Group's products include air filter systems, intake systems, liquid filter systems, technical plastic parts, filter media, cabin air filters, and industrial filters. In process engineering, industrial applications, and water filtration, the portfolio is supplemented by high-performance membranes, membrane bioreactors, and reverse osmosis technologies. Stationary and mobile systems for the filtration of fine dust and nitrogen dioxide also expand the product range for improving outdoor air quality. The Group increasingly offers digital services and intelligent solutions that meet customers' individual needs. The MANN+HUMMEL Group has more than 80 locations on six continents.

2. General information

The items of the consolidated profit and loss statement, the consolidated statement of comprehensive income, the consolidated balance sheet, the consolidated cash flow statement, and the consolidated statement of changes in equity are broken down or explained in the notes to the consolidated financial statements.

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The fiscal year of MANN+HUMMEL corresponds to the calendar year. The Group currency is the euro. Unless otherwise stated, all amounts are shown in millions of euros (EUR million).

The company's management released the consolidated financial statements for distribution to the Supervisory Board on April 24, 2023.

The consolidated financial statements prepared as of December 31, 2022, and the Group management report are published in the Federal Gazette.

The consolidated balance sheet is structured in accordance with terms. Balance sheet items are divided into noncurrent and current assets or liabilities if they have a remaining term of more than one year or up to one year.

Assets and liabilities held for sale or included in a disposal group classified as held for sale are presented separately from other assets and liabilities in the balance sheet.

Assets and liabilities are generally recognized according to the historical cost principle. This does not apply to derivative financial instruments, securities, and shares in investments, which are recognized at fair value if they can be reliably determined.

3. Application of IFRS

As a noncapital market-oriented company, the Company uses the option pursuant to section 315e (3) of the German Commercial Code (HGB) to prepare the consolidated financial statements according to IFRS.

The consolidated financial statements are in accordance with the standards and interpretations of the International Accounting Standards Board (IASB), London, as applicable in the European Union (IFRS), and the supplementary provisions of commercial law applicable in accordance with section 315e (1) of the German Commercial Code (HGB).

4. Adjustment of the accounting methods as well as new standards and interpretations

The accounting and valuation methods applied are the same as those applied in the previous year, with the following exceptions. In the current fiscal year, the following new or amended standards were applied for the first time, which had no effect on the consolidated financial statements.

- Amendments to IFRS 3: Business Combinations: Reference to the Conceptual Framework.
- Amendments to IAS 16: Property, Plant and Equipment—Proceeds before intended use.
- Amendments to IAS 37: Provisions, Contingent Liabilities and Contingent Assets: Onerous Contracts—Cost of Fulfilling a Contract.

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The following new or revised standards and interpretations have been published but were not yet mandatory for the fiscal year beginning on January 1, 2022, and have not been applied early:

IFRS 17[1]	Insurance Contracts
Amendments to IAS 1[1, 3]	Disclosure requirements on accounting policies
Amendment to IAS 8[1]	Change in the definition of accounting estimates
Amendment to IAS 12[1]	Change in Deferred Tax related to Assets and Liabilities arising from a Single Transaction
Amendment to IAS 16[2, 3]	Regulation of the subsequent measurement of sale and leaseback transactions for lessees accounted for as a sale in accordance with IFRS 15

1 Effective for fiscal years beginning on or after January 1, 2023.
2 Effective for fiscal years beginning on or after January 1, 2024.
3 An EU endorsement is still pending.

MANN+HUMMEL has not early adopted standards and interpretations that have already been issued but are not yet effective. The Group will apply the new or amended standards and interpretations at the latest when their application becomes mandatory following their adoption by the EU. We expect the new standards and interpretations to have either no or very little effect on the MANN+HUMMEL Group.

5. Consolidated group

As part of the reorganization of the Group structure, MANN+HUMMEL International GmbH & Co. KG was founded as the managing holding company on January 1, 2016. This company holds 83.3% of the shares in MANN+HUMMEL Holding GmbH, Ludwigsburg, and, as the ultimate parent company, prepares the consolidated financial statements for the MANN+HUMMEL Group.

The consolidated financial statements include 17 (previous year: 20) domestic and 68 (previous year: 70) foreign group companies. In addition to the parent company, the scope of consolidation includes all domestic and foreign companies that the parent company directly or indirectly controls or over which it has a significant influence. Subsidiaries are companies in which the parent company, due to the actual or a de facto majority of voting rights, has control over the business and financial policies to benefit from their activities and thus has the possibility of control. In addition, the parent company is exposed to and can affect variable returns from its involvement with investees. Associates are entities in which the parent company has significant influence over operating or financial policies, but which are neither subsidiaries nor joint ventures.

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	01/01/2022	Initial consolidations	End consolidations/ Mergers	12/31/2022
Consolidated companies	90	1	-6	85
thereof domestic	20	0	-3	17
thereof abroad	70	1	-3	68
Associated companies	1	0	0	1

	01/01/2021	Initial consolidations	End consolidations/ Mergers	12/31/2021
Consolidated companies	91	1	-2	90
thereof domestic	20	0	0	20
thereof abroad	71	1	-2	70
Associated companies	2	0	-1	1

CHANGES IN THE SCOPE OF CONSOLIDATION

COMPANY FOUNDATIONS AND FIRST-TIME CONSOLIDATION

FIRST-TIME CONSOLIDATION AND DECONSOLIDATION

In the past fiscal year, MANN+HUMMEL sold its global business in high-performance plastic parts to Mutares SE & Co. KGaA. This involves products that are not filtration and separation solutions. As part of this transaction, the acquirer took over three production sites in Europe (Bad Harzburg/Germany, Sonneberg/Germany, Laval/France) with a total of around 1,500 employees. This was associated with the deconsolidation of MANN+HUMMEL AUTOMOTIVE GmbH, Bad Harzburg/Germany, and MANN+HUMMEL FRANCE S.A.S., Laval/France, in the 2022 fiscal year. A result of EUR 40.8 million arose from these deconsolidations. In the context of the sale, the total consideration received amounted to EUR 21.2 million (purchase price paid in cash). The liquid funds disposed of (corresponding to the cash and cash equivalents disposed of) amount to EUR 5.6 million. At the date of deconsolidation, assets and liabilities were disposed of in the following main categories: noncurrent assets (EUR 89.3 million), current assets (EUR 72.3 million), noncurrent liabilities (EUR 25.9 million), and current liabilities (EUR 59.5 million).

MANN+HUMMEL Filtration France S.A.S., Paris/France, was founded in the 2022 fiscal year for the remaining filtration business in France.

Furthermore, MANN+HUMMEL Atex Filter Verwaltungsgesellschaft mbH, Sprockhövel/Germany, MANN+HUMMEL MRH Filter Beteiligungsgesellschaft mbH, Sprockhövel/Germany, and JFI Service Kft., Polgárdi/Hungary, as well as Tri-Dim Canada Inc. were merged within the Group.

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As of March 2, 2021, 55% of the shares in CleanAire, LLC, Washington, were acquired for a price of EUR 45.9 million. At the date of initial consolidation, assets and liabilities were added in the following main categories: noncurrent assets (EUR 41.8 million), current assets (EUR 14.3 million), cash and cash equivalents (EUR 0.1 million), current liabilities (EUR 35.1 million), and goodwill of EUR 34.8 million.

In the reporting year, a further 45% of the shares in CleanAire, LLC, Washington, were acquired for a price of EUR 55.6 million (including an earn-out obligation of EUR 10.4 million (discounted), which is linked to the achievement of agreed sales and earnings figures in the period up to 2026).

6. Principles of consolidation

The capital consolidation is carried out according to the purchase method. The subsidiaries are fully consolidated from the date of acquisition, i.e., from the date the parent company acquires a controlling influence. Inclusion in the consolidated financial statements ends as soon as control by the parent company no longer exists. At the time control is obtained, the revalued assets and liabilities of the subsidiary and contingent liabilities, insofar as they do not depend on a future event, are offset against the fair value of the consideration paid for the shares. Contingent purchase price payments are recognized at fair value.

Subsequent adjustments to contingent consideration are recognized in profit or loss. Incidental costs incurred in connection with the acquisition are expensed as incurred.

Any difference on the assets side remaining after capital consolidation is capitalized as goodwill and reported under intangible assets. Goodwill is tested for impairment on the balance sheet date. A test is carried out during the year if there are indications of impairment. Negative differences arising from capital consolidation are recognized in the consolidated income statement under other income, provided that the reassessment of the carrying amounts does not lead to a different result.

If not, all shares are acquired as part of the business combination. The noncontrolling interests may be recognized at the proportionate share of the revalued net assets or at their proportionate share of the total enterprise value, including their goodwill. The option can be exercised anew for each company acquisition. The noncontrolling interests were mainly recognized at the proportionate net assets (partial goodwill approach) and only in one case at the fair value of the shares (full goodwill approach).

In the case of a successive share acquisition, existing shares in the company to be consolidated are revalued at the fair value when control is obtained. The difference to the carrying amount of the investment is recognized in profit or loss.

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The acquisition of additional shares in already fully consolidated subsidiaries is accounted for as an equity transaction. The difference between the acquisition cost of the shares and the carrying amount of the noncontrolling interest is offset against retained earnings. The effects of share disposals that do not lead to a loss of control of a subsidiary are recognized directly in equity by offsetting the gain or loss on disposal against retained earnings and increasing the noncontrolling interests in the amount of the proportionate net assets.

The deconsolidation of subsidiaries occurs at the time of loss of control or at the time of liquidation. The result of the deconsolidation is reported in the financial result. The remaining shares are capitalized at fair value under shares in investments.

Receivables, liabilities, provisions, sales revenue, and other income and expenses between the companies included in the consolidated financial statements are consolidated. Intercompany profits from intragroup transactions that were not realized by sale to third parties outside the Group are eliminated. Intragroup sureties and guarantees are eliminated.

7. Foreign currency translation

The financial statements of the consolidated Group companies prepared in foreign currencies are translated into euros based on the functional currency concept using the modified closing rate method. Since the subsidiaries conduct their business independently in financial, economic, and organizational terms, the functional currency is basically identical to the respective national currency of the company. In the consolidated financial statements, expenses and income from the financial statements of subsidiaries prepared in foreign currencies are translated at the average exchange rate. In contrast, assets and liabilities are translated at the closing rate. The currency difference resulting from the translation of equity at historical rates and the translation differences resulting from the translation of the income statement at the average rate are recognized directly in accumulated other equity.

In the individual financial statements, foreign currency receivables and liabilities are initially valued at the exchange rate valid on the transaction date. The exchange rate on the balance sheet date is used for subsequent valuation. Currency gains and losses from the reporting date valuation of trade receivables and payables are included in other income and expenses. Other financial income and expenses are recognized as currency gains and losses attributable to financial assets and liabilities. The exchange rates used for currency translation with a significant impact on the consolidated financial statements have changed in relation to the euro as follows:

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	Spot rate on reporting date		Annual average rate of exchange	
	12/31/2022	**12/31/2021**	**2022**	**2021**
Argentine peso [ARS]	188.67925	116.27907	136.61202	112.86682
Brazilian real [BRL]	5.64570	6.30730	5.39354	6.36487
Renminbi yuan [CNY]	7.37325	7.18930	7.07427	7.60126
Czech koruna [CZK]	24.14357	24.85065	24.54301	25.64569
Pound sterling [GBP]	0.88645	0.84021	0.85413	0.85823
Indian rupee [INR]	88.22621	84.18784	82.64941	87.29431
Japanese yen [JPY]	140.78558	130.32712	137.92723	130.26261
South Korean won [KRW]	1,338.22231	1,345.67768	1,353.17997	1,355.41760
Mexican peso [MXN]	20.87870	23.14970	21.01507	24.05355
Russian ruble [RUB]	76.11972	85.16799	69.48546	87.26689
Singapore dollar [SGD]	1.43207	1.52894	1.44622	1.58622
Thai baht [THB]	36.89506	37.55996	36.81912	37.86559
US dollar [USD]	1.06805	1.13235	1.04848	1.18092

8. Accounting policies

The companies' financial statements included in the consolidated financial statements are prepared as of December 31 of each fiscal year in accordance with uniform Group accounting and valuation principles in accordance with IFRS.

RECOGNITION OF INCOME AND EXPENSE

Revenue is recognized when control of identifiable goods or services is transferred to the customer, i.e., when the customer can direct the use of the transferred goods or services and substantially obtains all the remaining benefits from them. The prerequisite for this is that a contract with enforceable rights and obligations exists and, among other things, the receipt of the consideration—considering the customer's creditworthiness—is probable. Revenue corresponds to the transaction price to which the Group is expected to be entitled. Variable consideration is included in the transaction price when it is highly probable that there will not be a significant revenue reversal once the uncertainty associated with the variable consideration no longer exists. The amount of variable consideration is determined using either the expected value method or the most likely amount, depending on which value most accurately estimates the variable consideration. If the period between the transfer of the goods or services and the payment date exceeds twelve months and a significant benefit from the financing results for the customer or the MANN+HUMMEL Group, the consideration is adjusted by the time value of money. If a contract includes multiple separable goods or services, the transaction price is allocated to the performance obligations based on the relative individual selling prices. If standalone selling prices are not directly observable, the Group estimates selling prices reasonably. For each performance obligation, revenue is recognized either at a specific point in time or over a specific period.

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Revenue from the sale of goods is recognized when control is transferred to the buyer, usually upon delivery of goods. Invoices are issued at this time; the payment terms usually provide for payment within 30 days of issuance of the invoice.

For license agreements that grant the customer the right to use the intellectual property of the MANN+HUMMEL Group, invoices are issued in accordance with the contractual terms; the payment terms usually provide for payment within 30 days of invoicing.

Revenue from the provision of services is recognized on a straight-line basis over a period of time. Invoices are issued in accordance with the terms of the contract; the payment terms usually provide for payment within 30 days of invoicing.

The **cost of sales** includes the manufacturing costs of the products sold as well as the purchase costs of the merchandise sold. In addition to the directly attributable material and production costs, it also includes the indirect, production-related overheads, including depreciation on the property, plant, and equipment, and intangible assets used. Cost of sales also includes expenses from the write-down of inventories to the lower net realizable value.

Research and noncapitalizable **development costs** are expensed as incurred.

Borrowing costs that are directly attributable to the acquisition or construction of an asset that takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the asset's cost. All other borrowing costs are recognized immediately as an expense.

Interest income is recognized in the income statement as it accrues.

Dividend income is recognized when the legal claim to payment arises.

INCOME TAXES

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authority. The amount calculated is based on the tax rates and tax laws applicable at the balance sheet date.

Deferred tax assets and liabilities are recognized on temporary differences between the tax bases and the IFRS carrying amounts. Deferred tax assets also include tax reduction claims resulting from the expected use of existing loss carryforwards and tax credits in subsequent years. Deferred taxes are calculated based on the tax rates that apply or are expected with sufficient probability to apply under the current legal situation in the individual countries at the time of realization.

Deferred tax assets on temporary differences and on tax loss carryforwards are only recognized if it is sufficiently probable that the resulting tax reductions will occur in the future.

The carrying amount of deferred tax assets is reviewed at each balance sheet date. It is reduced to the extent that it is no longer probable that sufficient taxable profit will be available against which the deferred tax asset can be at least partially utilized. Unrecognized deferred tax assets are reviewed at each balance sheet date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.
In addition, deferred tax assets and liabilities are not recognized if they result from the initial recognition of good-

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will, an asset, or a liability in a transaction that is not a business combination and if neither the accounting profit before income taxes nor the taxable profit is affected by this initial recognition.

Deferred taxes relating to items recognized directly in equity are also recognized in equity and not in the consolidated income statement.

Deferred tax assets and deferred tax liabilities are offset against each other if the MANN+HUMMEL Group has a legally enforceable right to set off current tax assets against current tax liabilities. These relate to income taxes levied by the same taxation authority on the same taxable entity.

INTANGIBLE ASSETS

Acquired and internally generated intangible assets are capitalized if it is probable that future economic benefits associated with the use of the asset will flow to the entity, and the cost of the asset can be measured reliably.

Regarding the **accounting and valuation of goodwill**, reference is made to explaining the consolidation principles and impairment tests.

The intangible assets identified as part of the significant business acquisitions mainly include customer relationships and brand names. The fair values of the customer lists/relationships were determined using the residual value method based on corporate planning with a useful life of 6 to 15 years.

Tooling subsidies paid to suppliers are capitalized if they represent a right granted by the supplier or payment for a service yet to be rendered by the supplier. Tooling subsidies are amortized over a period of one to six years.

Development costs are capitalized at production costs under the conditions of IAS 38 if, among other criteria, technical feasibility and marketability are assured. Furthermore, the development activity must generate a future economic benefit with sufficient probability. Capitalized development costs include all costs directly attributable to the development process. Capitalized development costs are amortized over an expected product life cycle of five years from the start of production.

Other intangible assets are recognized at cost and, as in the previous year, are amortized on a straight-line basis over the following useful lives:

	In years
Independently developed software	4
Software—general (individual licenses)	4
Software—version change, e.g., product data management (PDM) and CAD (CATIA, ProEngineer, NX, etc.)	8
Patents	10

Intangible assets with indefinite useful lives exist only in the form of goodwill as of the balance sheet date.

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TANGIBLE ASSETS

All **tangible fixed assets** are subject to operational use and are valued at acquisition or production cost less scheduled depreciation based on usage. Depreciation on property, plant, and equipment is calculated using the straight-line method. As in the previous year, scheduled depreciation is based on the following useful lives throughout the Group:

	In years
Buildings	20 to 40
Components	20 to 25
Building parts	15 to 33
Outdoor facilities	20 to 33
Machines	8 to 20
Operating equipment	12 to 20
Vehicles	6 to 10
Tools	5
Machines/devices in general	8 to 15
Tools and equipment	6 to 10

For machines used in multishift operations, shift surcharges increase depreciation accordingly.

The assets' residual values, depreciation methods, and useful lives are reviewed annually and adjusted if necessary.

GOVERNMENT GRANTS

Government grants are recognized only when there is reasonable assurance that the conditions attached to them will be complied with and that the grants will be received. Investment grants are deducted from fixed assets in the period they are incurred. Expense grants are recognized as income in the same period in which the expenses they were granted to compensate are incurred.

Interest rates customary in the market are used for the valuation of non-interest-bearing and low-interest-bearing public-sector loans. The difference between the discounted and repayment amounts is deferred and reported under other receivables. The deferred amount is amortized over the term of the loan agreement, which is substantially the same as the useful life of the asset and is included in interest expense.

INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

Investments in associates and joint ventures are generally accounted for using the equity method of accounting and are initially recognized at cost, including transaction costs. An impairment test is carried out if there are objective indications of an impairment of the shares as of the balance sheet date. The Group's share in the profit or loss of the associated companies or joint ventures is reported separately in the consolidated income statement as part of the financial result. Income and expenses recognized directly in the equity of the associated company or joint

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venture are also recognized directly in equity in the MANN+HUMMEL Group and presented separately in the consolidated statement of comprehensive income. The cumulative changes after the acquisition date increase or decrease the carrying amount of the investment in the associate/joint venture accordingly. Gains and losses from transactions between the MANN+HUMMEL Group and associates/joint ventures are eliminated in proportion to the share held.

IMPAIRMENT TESTS

In the case of **shares in associated companies and joint ventures**, **intangible assets already in use**, and **property, plant, and equipment**, a review is carried out on the balance sheet date to determine any indications of possible impairment. If such indications exist, the value is reviewed (impairment test). Intangible assets not yet ready for use and intangible assets with indefinite useful lives are subject to an annual impairment test.

The impairment test determines the recoverable amount. This is the higher of the asset's fair value or the smallest cash-generating unit, less any costs to sell and its value in use. Cash-generating units are defined as the smallest units whose cash flows are forecast as part of corporate planning.

The fair value is the amount obtainable from the sale of an asset in an arm's-length transaction less the disposal costs.

The value in use was determined as the present value of future cash flows. The future cash flows were derived from the Group's planning. The calculation of the current value of estimated future cash flows is based primarily on assumptions about future sales prices or volumes and costs, considering changes in economic conditions where applicable. Beyond the detailed planning period, net cash inflows are determined using individual growth rates derived from respective market information based on long-term business expectations. The planning for the business units is based on a detailed planning period for the 2022 to 2026 fiscal years.

An impairment loss is recognized if the recoverable amount is less than the carrying amount of the asset or cash-generating unit.

The carrying amount of each business unit is determined by allocating the assets and liabilities, including attributable goodwill and intangible assets. An impairment loss is recognized whenever the recoverable amount of an operation is less than its carrying amount.

If the reason for a previously recognized impairment loss no longer exists, the impairment loss is reversed, but not to more than amortized costs. Impairment losses and reversals of impairment losses on intangible assets and property, plant, and equipment are allocated to the functional areas of the consolidated income statement.

Goodwill from business combinations is allocated to the groups of cash-generating units that derive the benefit from the combinations.

In accordance with IAS 36, goodwill is not amortized over its useful life, but is tested for impairment at least annually at the end of the year using the methods described above, which may lead to a write-down (impairment-only approach).

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Impairment losses on goodwill are recognized if the recoverable amount of the corresponding cash-generating unit is less than its carrying amount. Impairment losses on goodwill are recognized in other expenses. Goodwill is not written up.

In order to comply with the regulations of IFRS 3 in conjunction with IAS 36 and to determine any impairment of goodwill, cash-generating units are determined according to internal reporting. Goodwill is therefore allocated to the business units (= cash-generating units) Transportation and Life Sciences & Environment. For impairment testing, the carrying amount of each division is determined by allocating the assets and liabilities, including attributable goodwill and intangible assets. An impairment loss is recognized whenever the recoverable amount of an operation is less than its carrying amount. The recoverable amount is determined as the higher of the fair value less costs to sell and the value in use of a cash-generating unit. The impairment tests to be performed determine the recoverable amount based on the value in use of the respective cash-generating unit.

FINANCIAL INSTRUMENTS

Under IFRS 9, financial assets are categorized into three measurement categories:
(1) financial assets measured at amortized cost (AC),
(2) financial assets at fair value through other comprehensive income (FVOCI), and
(3) financial assets at fair value through profit or loss (FVPL).

Financial assets are classified according to the underlying business model and the contractual cash flows of the financial assets. MANN+HUMMEL's basic business model is to hold financial assets to collect contractual cash flows. Regular purchases or sales of balance sheet assets are recognized on the settlement date.

Financial assets are measured at amortized cost (AC) if they correspond to the “hold” business model and their contractual cash flows consist exclusively of interest and principal payments.

Financial assets whose cash flows do not consist exclusively of principal and interest payments, such as shares in investment funds and derivatives, are measured at fair value through profit or loss (FVPL). At the MANN+HUMMEL Group, shares, investment funds, and derivatives not included in hedge accounting do not meet the cash flow criterion and are measured at fair value through profit or loss. Further information can be found in note 37 to the consolidated financial statements. For equity instruments, IFRS 9 optionally permits measurement at fair value through other comprehensive income (FVOCI). The MANN+HUMMEL Group applies this option to measure its investments at fair value through other comprehensive income.

The impairment model under IFRS 9 includes expectations about the future and is based on expected credit losses. The impairment model under IFRS 9 provides for three levels and applies to all financial assets (debt instruments) that are measured either at amortized cost or at fair value through other comprehensive income:

Level 1: includes all contracts without a significant increase in credit risk since addition. The impairment is measured based on the expected credit loss within the next twelve months.

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Level 2: includes financial assets that have experienced an increase in credit risk but are not yet impaired. The impairment is measured based on the expected credit loss over the entire remaining term. The Group considers an increase in credit risk to be a deterioration in the rating by at least two rating grades compared to the forward rating and a rating that is no longer in the investment-grade range.

Level 3: includes financial assets that show objective evidence of impairment or are in default status. The expected credit losses over the entire term of the financial asset are recognized as an impairment and other qualitative information that indicates significant financial difficulties of the debtor.

The MANN+HUMMEL Group uses the simplified approach (loss rate approach) for trade receivables, i.e., these receivables are immediately allocated to level 2. A grouping or reclassification to level 3 occurs if the rating is no longer in the investment-grade range or if there are objective indications of an impairment of creditworthiness.

MANN+HUMMEL applies a uniform impairment model that considers the business partner's or a group of comparable business partners' default probability.

The calculation is carried out using a credit risk parameter approach.

Accordingly, the expected credit loss (ECL) is determined by multiplying the credit risk parameters exposure at default (EAD), probability of default (PD), and loss given default (LGD). The parameters are determined so that they reflect relevant events in the past, the current situation, and forward-looking information. In principle, this can be done through an economic model that includes all the listed information or by adjusting existing parameters to reflect the current economic environment and forecasts of future changes. This information includes macroeconomic factors (e.g., GDP growth, unemployment rate) and forecasts of future economic conditions.

In the simplified approach for receivables, impairment is determined using external default probabilities by the customer group. In the general approach, the determination is based on credit ratings of the respective business partners.

A financial instrument is derecognized if a financial asset is not reasonably expected to be realizable in whole or in part, e.g., after the termination of insolvency proceedings or court decisions. Currently, nonsignificant modifications are only carried out to a small extent. In these cases, the contract adjustment does not lead to a de-recognition of the asset. The difference between the gross carrying amount of the original contract and the present value of the modified contract is recognized in the income statement.

After initial recognition, financial liabilities are generally measured at amortized cost using the effective interest method. Gains or losses are recognized in profit or loss upon de-recognition and amortization. Financial liabilities at fair value through profit or loss are measured at fair value after initial recognition. Gains or losses arising from changes in fair value are recognized in profit or loss.

HEDGE ACCOUNTING

Derivative financial instruments are used in the MANN+HUMMEL Group for hedging purposes to reduce currency and interest rate risks. According to IFRS 9, all derivative financial instruments are recognized at fair value.

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Hedging relationships are shown in accordance with the regulations of hedge accounting. They are accounted for as cash flow hedges or fair value hedges.

Cash flow hedges are used to hedge against the risk of changes in the value of future cash flows. In the case of changes in the market value of derivative financial instruments used in cash flow hedges, the unrealized gains and losses in the amount of the effective portion are initially recognized directly in retained earnings. A transfer to the consolidated income statement is made at the same time as the hedged underlying transaction affects the result. The ineffective portion of changes in fair value is recognized directly in the consolidated income statement.

Fair value hedges are used to hedge against the risk of changes in the value of balance sheet items. If the criteria are met, the results from the market valuation of derivative financial instruments are recognized in profit or loss at the same time as the related underlying transactions.

Effects on profit or loss from hedging transactions entered into to hedge risks from changes in commodity prices are recognized in cost of sales. Gains and losses from currency hedging transactions are recognized in revenue or in the financial result or are recognized as part of the acquisition cost. Gains and losses from derivative financial instruments used to hedge interest rate risks and price risks from securities are reported in other financial results.

INVENTORIES

Raw materials, supplies, and wares are generally valued using the standard cost method: considering lower net achievable values at the balance sheet date. Work in progress and finished goods are recognized at the lower cost or net realizable value, considering consumption at the balance sheet date. Production costs include all costs directly attributable to the production process and appropriate portions of production-related overheads. These include production-related depreciation, pro-rata administrative expenses, and pro-rata social security expenses.

LEASING

For lessees, IFRS 16 introduced a uniform approach for the accounting treatment of leases, according to which assets for the rights to use the leased assets and liabilities for the payment obligations entered into must be recognized in the balance sheet for all leases. The rights of use are included in land, land rights and buildings, in technical equipment and in other equipment, factory, and office equipment. The lease liability is shown in the financial liabilities to third parties.

The main leases relate to production, warehouse, and office buildings as well as land with terms of up to 30 years. Some contracts contain price adjustment clauses that provide for an annual fixed percentage increase. Some contracts include renewal options, termination options, automatic contract extensions, or purchase options.

Other leases relate to vehicle fleets, machinery, hardware and software, and other operating and office equipment with terms of up to five years. For some of these contracts, there are renewal options or automatic contract extensions and options to purchase the leased objects at market value at the end of the contract term. The leasing installments are partly linked to the service used.

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For leased assets of low value (less than EUR 5,000) and for short-term leases (less than 12 months), use is made of the application relief. Furthermore, the option to separate leasing and nonleasing components (service) is used. Nonlease components are not included in the right-of-use asset to be recognized.

Assets and liabilities from leases are initially recognized at present value. The lease liabilities correspond to the present value of the following lease payments not yet made for the right to use the underlying asset:

- Fixed payments, including de facto fixed (in substance fixed) payments, less any lease incentives to be received.
- Variable lease payments linked to an index or (interest) rate, initially measured at the index rate at the commitment date.
- Expected payments by the Group from the utilization of residual value guarantees.
- The exercise price of a call option or a renewal option that is reasonably certain to be exercised by the Group.
- Penalty payments in connection with the termination of a lease, provided that the term considers that the Group will exercise the relevant termination option.

The discount rate used is the interest rate implicit in the lease if it is readily determinable. Otherwise—and this is usually the case in the Group—discounting is carried out at the lessee's marginal borrowing rate, i.e., the interest rate that the respective lessee would have to pay if it had to borrow funds to a comparable extent for a comparable term with comparable security under comparable conditions.

The rights of use are measured at cost on the date of provision, which is as follows:

- The amount of the initial measurement of the lease liability.
- Any lease payments made at or before the date of commitment less any lease incentives received.
- Any initial direct costs incurred by the lessee.
- Estimated costs incurred by the lessee in dismantling or removing the underlying asset, restoring the site on which it is located or returning the underlying asset to the condition required by the lease agreement.

The subsequent measurement of the rights of use is at amortized cost. Depreciation is calculated on a straight-line basis over the shorter of the useful life and the underlying lease term. If the exercise of a purchase option is sufficiently specific from the Group's point of view, the asset is depreciated over the useful life of the underlying asset. Leases for buildings and office space contain renewal and termination options. The measurement of the lease liability requires assessing whether the exercise of these options is considered reasonably certain. The Group considers all facts and circumstances that influence the exercise or nonexercise of these options.

For the presentation of leases in the balance sheet, we refer to our comments in notes 19, 28, and 35. In the income statement, expenses from leases are reported under depreciation and other interest expenses.

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The Group is exposed to possible future increases in variable lease payments that may result from a change in an index or interest (rate). These potential changes in lease payments are not reflected in the lease liability until they become effective. However, when changes in an index or interest (rate) affect the lease payments, the lease liability is adjusted against the right of use. Lease payments are divided into principal and interest payments.

The MANN+HUMMEL Group does not act as lessor.

SALE AND LEASEBACK

In a sale and leaseback transaction, criteria from IFRS 15 must first be used to determine if the transfer of an asset should be accounted for as a sale. If the transfer of an asset does not meet the requirements for sale accounting set out in IFRS 15, the asset continues to be recognized and the proceeds received are recognized as a financial liability in accordance with IFRS 9. If the asset transfer constitutes a sale, the leased back assets are reflected in the consolidated financial statements in accordance with the lessee accounting principles outlined above. Accordingly, any gain or loss is recognized only to the extent that it relates to the rights transferred to the buyer/lessor.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include cash on hand, bank balances available at any time, and short-term overnight deposits.

ASSETS AND DISPOSAL GROUPS HELD FOR SALE

Assets and liabilities are reported as a disposal group if they are to be sold as a group in a transaction that is highly probable. Individual assets are shown as assets held for sale on the balance sheet. The assets and liabilities are presented separately on the balance sheet within current assets and liabilities as "assets of disposal groups held for sale" or "liabilities of disposal groups." The income and expenses of the assets and liabilities concerned are included in the result from continuing operations until disposal if they do not meet the definition of a discontinued operation. When classified as a disposal group for the first time, it is initially measured in accordance with the relevant IFRS standards, after which the resulting carrying amount of the disposal group is compared with the fair value less costs to sell to determine the lower value to be recognized.

FINANCIAL AND OTHER LIABILITIES

The capital economically attributable to the shareholders is shown within the noncurrent liabilities. According to German commercial law, commercial partnerships such as MANN+HUMMEL International GmbH & Co. KG have nonexcludable termination rights for the shareholders. However, according to IAS 32.16, equity capital only exists for the most subordinate class of shareholders to the extent that a company has neither an unconditional nor a conditional obligation to deliver money or other assets. Due to regulations in the articles of association regarding shareholders' compensation, the shares in MANN+HUMMEL International GmbH & Co. KG do not meet the requirements of IAS 32.16A for the reporting of puttable shares as equity. To this extent, they are reported within the

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noncurrent liabilities as "Capital economically attributable to the shareholders." Insofar as IFRS requires the presentation of items in other comprehensive income, this also applies to partnerships that do not have equity according to IFRS. Therefore, such items are not shown in the period result for the MANN+HUMMEL Group either.

The valuation of the capital economically attributable to the shareholders is carried out at the fair value of the obligation. In the present case, this corresponds to the pro rata book value of the respective shareholder in the IFRS Group equity.

Financial liabilities and other liabilities are initially recognized at cost, which corresponds to the fair value of the consideration received. Transaction costs are also considered. Subsequently, liabilities are measured at amortized cost using the effective interest method. If the financial liabilities have not yet been utilized, the transaction costs are accrued within other assets. They are recognized in the income statement under other financial expenses. Financial liabilities and other liabilities are derecognized as soon as the underlying obligations are fulfilled, terminated, or expire.

For financial guarantees issued by the Group, the risk of utilization is assessed as best as possible, insofar as such guarantees exist on the balance sheet date. If the guarantee is probable to be called, a liability is recognized under financial liabilities in the amount of the expected cash outflow.

The MANN+HUMMEL Group generally does not apply the fair value option of classifying financial assets and liabilities as "at fair value through profit or loss" upon initial recognition.

TOOLING COST CONTRIBUTIONS RECEIVED

Tooling subsidies received represent consideration for rights granted or services yet to be rendered to the grantor. The grants are accrued as tooling cost subsidies received under other liabilities. They are released over the term of the project.

OTHER PROVISIONS

Other provisions are formed if an obligation to third parties exists due to a past event, the utilization of which is probable, and the probable amount of the necessary provision can be reliably estimated.

In the valuation of provisions from sales—especially for warranties and expected losses from pending transactions—all cost components are generally included that are also capitalized in inventories. The valuation is carried out at the amount of the best possible estimate of the expenses required to fulfill the obligation on the balance sheet date. Warranty provisions are measured based on actual warranty expenses incurred, considering warranty and goodwill periods and the sales development of the products concerned in the period to be considered.

The personnel-related obligations relate to restructuring measures, long-service awards, and partial retirement obligations. Provisions for long-service anniversaries are determined according to actuarial principles. The provisions for partial retirement obligations include the individually or collectively agreed top-up amounts for pension insurance and the remuneration payments to be made during the release phase. Accruals are made in installments from the beginning of the obligation.

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The partial retirement obligations are secured against insolvency through a trust model. Shares in a special fund were assigned to a trustee for this purpose. The shares in the special fund are valued at fair value. The assets that serve exclusively to fulfill the partial retirement obligations and are not accessible to all other creditors are netted against the provisions (plan assets). If these exceed the value of the provisions, the excess amount is reported under noncurrent other financial receivables. The income from plan assets is netted with expenses from compounding provisions in the income statement.

Noncurrent provisions with a remaining term of more than one year are recognized at their settlement amount discounted to the balance sheet date. Discounting is carried out at an interest rate that corresponds to the risk and the term of the fulfillment, insofar as the interest effect is material.

PROVISIONS FOR PENSIONS

Provisions for pensions are recognized using the projected unit credit method. This method considers not only the pensions and vested rights known on the balance sheet date but also expected future increases in pensions and current payments. The calculation is based on actuarial reports considering current biometric calculation principles. Actuarial gains and losses are recognized in full in other comprehensive income in the period in which they occur. The expenses from compounding and the expected income from the fund assets are netted and recognized in interest expenses. All other expenses from the funding of pension obligations are allocated to the relevant functional areas in the consolidated income statement.

9. Judgments and uncertainties in connection with estimates

The preparation of the consolidated financial statements requires assumptions and estimates to be made that affect the reported amounts of assets and liabilities, income and expenses, and contingent liabilities. Significant assumptions and estimates used in recognizing and measuring balance sheet items are explained below.

The **capitalization of development costs** (note 17 to the consolidated financial statements) is based on the management's assessment of the technical and commercial feasibility of the development projects. The measurement of capitalized development costs depends on assumptions about the amount and period of the expected future cash flows and the discount rates to be applied.

Some **leases** contain renewal, termination, or purchase options. The measurement of the lease liability requires an assessment of whether the exercise of these options is reasonably certain. If the interest rate underlying the lease cannot be determined, the marginal interest rate is used for discounting. This is derived for different terms from country-specific interest rate swaps and adjusted by a risk premium. Non-current leases are recognized for a maximum period of 15 years.

In accounting for other **intangible assets** and **property, plant, and equipment** (notes 17 and 19 to the consolidated financial statements), assumptions and estimates mainly relate to determining useful lives. Insofar as intangible

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assets are concerned that are recognized for the first time as part of a company acquisition (note 5 to the consolidated financial statements) (e.g., customer base), the fair value of these assets is determined as part of a purchase price allocation in accordance with IFRS 3. If a market price–oriented method cannot be applied, the Group generally determines the fair value of intangible assets using capital value–oriented methods. In this case, the value of an asset is the sum of the present values of the future cash flows at the valuation date. The forecast of the valuation-relevant cash flows and the derivation of the cost of capital rate reflecting the risk of the intangible asset in question significantly influences the valuation. The Group essentially applied the license price analogy method within the capital value–oriented method (e.g., for brand names) and the residual value method (e.g., for the customer base).

Intangible assets were identified during purchase price allocations. Regarding the newly acquired companies, these mainly include know-how and customer relationships. The determination of the fair values of the identified customer lists/relationships was made based on the residual value method and corporate planning with a useful life of 6 to 15 years. The brands were valued using the license price analogy method. Key assumptions here were the expected brand sales and the expected license rate. The useful life was set at 10 years.

Within the framework of the **impairment tests** (note 18 to the consolidated financial statements), assumptions and estimates are used to determine the expected future cash flows and the discount rates. Especially in intangible assets and liabilities, this can influence the respective value.

The assessment of the recoverability of **trade receivables** (note 24 to the consolidated financial statements) is subject to discretionary decisions regarding the estimation of the future solvency of the debtors.

The fair values of **securities** (note 37 to the consolidated financial statements), which are allocated to level 3 of the fair value hierarchy, are determined based on inputs that are not observable in the market. The calculation, which is performed using the discounted cash flow method, is based on estimates regarding the expected cash flows and discount rates used.

The amount of impairment losses for **financial assets** (note 37 to the consolidated financial statements) is influenced by discretionary decisions, e.g., regarding the assessment of whether the price losses are significant or prolonged and regarding the evaluation of the creditworthiness of the issuers.

The amounts related to **reverse factoring** agreements in the balance sheet and cash flow statement are not reclassified to financial liabilities and financial cash flow, respectively, based on judgment (note 29 to the consolidated financial statements).

In accounting for **deferred tax assets** (note 15 to the consolidated financial statements), assumptions and estimates essentially relate to the probability that the expected tax reductions will occur in the future.

The actuarial valuation of **provisions for pensions** (note 32 to the consolidated financial statements) is based on assumptions regarding discount rates, future pension trends, age shifts, and the general cost of living development. The calculation of **warranty provisions** (note 31 to the consolidated financial statements) is subject to assumptions and estimates that relate to the period between the delivery date and the occurrence of the warranty event, warranty and goodwill periods, and future warranty charges.

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The determination of **non-current provisions for impending losses** (note 31 to the consolidated financial statements) is subject to discretionary decisions regarding the interpretation of supply contracts. Significant decision-making criteria are the binding determination of the delivery period, quantities, and prices.

Provisions for **restructuring measures** (note 31 to the consolidated financial statements) are recognized as soon as a formal plan is available and has been communicated to the affected parties or the plan's implementation has begun. In addition to the scope of the planned capacity adjustments, the valuation also considers country- and site-specific regulations and the corresponding remuneration level.

When **recognizing revenue**, assumptions and the exercise of discretion are applied when it is necessary to assess whether there is revenue related to a specific period or point in time. Furthermore, determining the amount of revenue for variable transaction prices is discretionary and subject to certain assumptions (notes 10 and 22 to the consolidated financial statements).

Provisions were made for **tax risks from ongoing tax audits** if the facts are sufficiently concrete and their occurrence is probable.

No other significant discretionary decisions and estimates were made.

In individual cases, the actual values may deviate from the assumptions and estimates made. Changes are recognized in profit or loss when better knowledge becomes available.

At the time of the preparation of the consolidated financial statements, the underlying estimates were not subject to any significant risks, so no material adjustment of the assets and liabilities reported in the consolidated balance sheet is to be expected in the following fiscal year.

HYPERINFLATION

Since July 1, 2018, Argentina has been classified as a hyperinflationary economy. In addition, Turkey has been classified as a hyperinflationary economy since May 2022. Accordingly, the provisions of IAS 29 are relevant. Accordingly, the financial statements of an entity whose functional currency is that of a hyperinflationary economy, whether based on the historical cost concept or the current cost concept, must be expressed in terms of the measuring unit current at the balance sheet date. Certain procedures must be followed to restate the financial statements. Amounts in the balance sheet that are not yet expressed in terms of the measuring unit current at the balance sheet date are adjusted using a general price index. Monetary items are not adjusted because they are already expressed in terms of the monetary unit current at the balance sheet date.

Monetary items are funds held or items for which the entity pays or receives money. Receivables and payables that are contractually linked to price changes, such as index-linked bonds and loans, are contractually adjusted to determine the amount outstanding at the balance sheet date. These items are carried in the restated balance sheet at this adjusted amount. All other assets and liabilities are nonmonetary. Some of these nonmonetary items are carried at the amounts applicable at the balance sheet date, for example, net realizable value and fair value, and are therefore not restated. All other nonmonetary assets and liabilities are adjusted. Most nonmonetary items are carried at cost or amortized cost and are therefore stated at the amount applicable at the date of acquisition. The

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adjusted or amortized cost of each item is determined by applying to the historical cost and accumulated depreciation the change in a general price index that has occurred between the date of acquisition and the balance sheet date. Property, plant and equipment, inventories of raw materials and merchandise, goodwill, patents, trademarks, and similar assets are thus adjusted from their acquisition date. Inventories of semifinished and finished goods are adjusted from the date on which the acquisition and production costs were incurred. The adjusted value of a nonmonetary item is lowered if it exceeds the recoverable amount. For this reason, the adjusted value reported for property, plant, and equipment, goodwill, patents, and trademarks is reduced to the recoverable amount in such cases, while the figure used for inventories is the net realizable value.

All items in the income statement shall be expressed in the measuring unit current at the balance sheet date. This means that all amounts are to be adjusted using the general price index, starting from the time when the respective income and expenses were first recognized in the financial statements.

The price indices published by Argentina (Índice de Precios al Consumidor, Nivel General) and Turkey (Turkish Statistical Institute's Consumer Price Index) are used to adjust nonmonetary assets and liabilities and income statement items. In Argentina, the general price index is 147.0% (2021: 692.5%; 2020: 1,875.0%). In Argentina, official inflation rates have been announced by the government as of December 31, 2022, with a change in general purchasing power of 94.8% (2021: 50.9%; 2020: 36.1%). In Turkey, the general price index used was 64.3% (2021: 36.1%; 2020: 14.6%).

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The consolidated income statement has been prepared using the cost of sales method.

10. Sales

In EUR million	2022	2021
Europe	2,098.0	1,986.4
America	2,052.9	1,585.8
Asia	629.8	581.3
Rest of the world	45.7	46.4
	4,826.4	**4,199.9**

Of the turnover, EUR 4,796.7 million (previous year: EUR 4,169.4 million) was generated from the sale of goods and EUR 29.7 million (previous year: EUR 30.5 million) from the provision of services. All turnover is revenue from contracts with customers.

11. Cost of sales and other costs

In EUR million	2022	2021
Materials expense	2,749.0	2,296.6
Personnel expenses	674.0	630.5
Amortization	142.8	158.2
Other operating expenses	167.8	130.3
	3,733.7	**3,215.6**

Research and development costs include expenses for the in-house research department and external research and development services and testing activities. The activities in this area serve to develop products for the generation of sales revenues. The fiscal year's research and development expenses amounted to EUR 114.3 million (previous year: EUR 113.3 million).

Selling expenses mainly include expenses for outbound logistics, advertising, customer support, and commissions and licenses.

Administrative costs mainly include expenses for information technology, finance and controlling, taxes, legal, and human resources.

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12. Other operating income

In EUR million	2022	2021
Income from foreign currency translation	64.0	74.1
Income from the disposal of property, plant, and equipment	34.2	12.8
Other	93.8	62.0
	192.0	**148.9**

13. Other operating expenses

In EUR million	2022	2021
Income (previous year expenses) from restructuring	-2.0	7.7
Expenses from foreign currency translation	66.2	72.5
Expenses from the disposal of property, plant, and equipment	5.6	3.0
Warranty expenses	3.2	2.5
Other	149.0	95.4
	222.0	**181.1**

Other expenses include costs in connection with consulting services of EUR 39.0 million (previous year: EUR 29.8 million), expenses for provisions for impending losses of EUR 24.5 million (previous year: EUR 9.3 million), and expenses from the write-off or value adjustment of receivables of EUR 7.3 million (previous year: EUR 1.2 million). In addition, unscheduled depreciation on tangible and intangible assets of EUR 0.1 million (previous year: EUR 0.3 million) is included.

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14. Net financial result

In EUR million	2022	2021
Share in the result from associates	**0.9**	**0.6**
Accrued interest of non-current items	9.2	4.0
Interest and similar expenses	76.4	75.5
Currency losses	108.0	24.3
Depreciations on lending, financial assets and securities	25.6	0.1
Losses from sale of financial assets, securities and hedging transactions	63.3	6.9
Financial expenses	**282.5**	**110.8**
Interest and similar income	23.8	11.4
Currency gains	99.5	31.3
Expenses (previous year income) from lending, financial assets and securities	–12.1	26.8
Income from sale of financial assets, securities and hedging transactions	14.2	3.2
Financial income	**125.4**	**72.7**
Net financial result	**–156.2**	**–37.5**

The adjustments of the balance sheets and income statements of our subsidiaries in Argentina and Turkey, due to hyperinflation, resulted in an effect on earnings of EUR 12.3 million (previous year: EUR –4.6 million) in the fiscal year, which was recognized in the financial result.

15. Income taxes

In EUR million	2022	2021
Current tax expenses	59.7	72.1
Deferred taxes from temporary differences	–33.0	–6.4
Deferred taxes from loss carryforwards and tax credits	43.3	–25.9
Total income tax expense	**70.0**	**39.8**
thereof tax revenues previous years	–14.2	–17.8
thereof tax expense previous years	17.5	47.9

A weighted Group tax rate was calculated for the MANN+HUMMEL Group based on the individual Group companies' profit amounts and tax rates. The Group tax rate is 21.3% (previous year: 26.1%). This income tax rate is used as the applicable tax rate for the tax reconciliation statement. The tax rates applied abroad in the fiscal year range between 9.0% and 36.9% (previous year: 10.0% and 36.9%).

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Deferred tax assets and liabilities result from the following balance sheet items:

In EUR million	12/31/2022		12/31/2021	
	Assets	**Liabilities**	**Assets**	**Liabilities**
Intangible assets	27.5	37.1	5.6	44.1
Tangible assets	0.9	67.7	3.2	72.1
Financial assets	11.6	2.2	5.7	0.9
Inventories	15.2	1.6	14.5	1.9
Trade receivables	5.3	0.6	4.8	0.6
Other current assets	11.7	15.0	8.1	12.8
Pension provisions	31.6	10.4	52.1	4.9
Other provisions	39.3	7.8	25.6	1.8
Short-term financial debts	31.0	0.8	31.3	1.5
Trade payables	6.2	4.4	6.0	0.3
Other liabilities	18.6	5.4	25.1	2.9
Deferred taxes related to shares in subsidiaries	-0.4	-4.3	0.0	2.3
Other	-1.8	-1.8	0.6	0.0
	196.7	**146.9**	**182.6**	**146.1**
Tax losses and tax credits carried forward	22.1	0.0	65.5	0.0
Offsetting	-92.0	-92.0	-65.7	-65.7
	126.8	**54.9**	**182.4**	**80.4**

Deferred tax liabilities of EUR 1.1 million (previous year: EUR 1.6 million) from the market valuation of securities and EUR 0.0 million (previous year: EUR 1.6 million) from cash flow hedges were recognized directly in equity as of the balance sheet date. The treatment of the actuarial gains for pension obligations arising in the reporting year with no effect on profit or loss results in a deferred tax liability of EUR 4.3 million (previous year: deferred tax asset of EUR 28.9 million).

In addition, all other changes, except for changes due to initial consolidations, were recognized in profit or loss.

The amount for temporary deductible differences and unused tax losses and tax credits for which no deferred tax assets were recognized in the balance sheet was EUR 625.4 million (previous year: EUR 190.2 million). Of this amount, EUR 245.3 million (previous year: EUR 31.5 million) relates to loss carryforwards that can be used for a limited period (between 5 and 20 years). Regarding the valuation of deferred tax assets, the expected future business development at the time of preparing the consolidated financial statements was basically based on the corporate planning for the following five fiscal years. As of the balance sheet date, deferred tax assets of EUR 8.1 million (previous year: EUR 28.0 million) were recognized for Group companies that had incurred losses in the reporting or previous period. In this context, it was taken into account as a substantial indication that, due to the transfer pricing

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method, individual companies are taxed on a positive EBIT, so that the deferred tax assets are recoverable. In addition, the deferred taxes of MANN+HUMMEL Water & Fluid Solutions S.p.A. are considered to be recoverable, taking into account current investments in projects.

The retained earnings at subsidiaries of EUR 2,200.1 million (previous year: EUR 2,049.2 million) are retained based on current planning. In the event of distribution, 5% of the profits would be subject to German taxation; if applicable, foreign withholding taxes would apply. In addition, if the profits of a foreign subsidiary were distributed to a foreign intermediate holding company, further income tax consequences might have to be considered. Distributions would, therefore, generally lead to an additional tax expense. Determining the deferred tax liabilities attributable to the temporary taxable differences would involve a disproportionately high effort.

Reconciliation from expected to reported income tax expense:

In EUR million	2022	2021
Net profit or loss before income tax and changes in capital economically attributable to the shareholders	20.1	153.6
Expected income tax expense	**4.3**	**40.1**
Tax effects due to different national tax rates and group taxation systems	-4.2	2.2
Effects of tax rate changes	1.0	-0.5
Tax effects due to the nonapplication and value correction due to deferred taxes or their reversal	45.0	-30.2
Tax effects due to permanent differences	14.5	-1.5
Tax effects due to facts of past periods	3.4	30.0
Tax effects related to shares in subsidiaries	-0.2	-0.4
Deductible taxes	3.5	5.2
Other tax effects	2.7	-5.1
Recognized income tax expense	**70.0**	**39.8**

16. Other disclosures to the consolidated profit and loss statement

The consolidated income statement includes the following cost of materials:

In EUR million	2022	2021
Expenditure on raw materials, consumables, supplies, and trading goods	2,749.0	2,287.3
Expenditure on purchased services	52.2	45.3
	2,801.2	**2,332.6**

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Personnel expenses break down as follows:

In EUR million	2022	2021
Direct and indirect remuneration	935.8	879.1
Social duties and expenses for support	157.8	155.6
Expenses for provisions for pensions and similar commitments	19.4	19.1
	1,113.0	**1,053.8**

Personnel expenses include amounts for defined contribution plans of EUR 28.4 million (previous year: EUR 31.1 million). The expenditures for state plans included in this amount of EUR 27.1 million (previous year: EUR 30.3 million) essentially comprise employer contributions to pension insurance, which are included in social security contributions.

Amortization, depreciation and impairments on intangible assets and property, plant, and equipment are included in the following items of the consolidated income statement:

In EUR million	2022	2021
Cost of sales	142.8	158.2
Research and development costs	7.0	7.1
Selling expenses	10.0	9.3
Administrative expenses	55.3	49.4
Other operating expenses	2.9	4.2
	218.0	**228.2**

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17. Intangible assets

In EUR million	Goodwill	Patents, licenses, software, and similar rights and values	Development costs	Down payments made	Total
Acquisition and manufacturing costs as of 01/01/2022	**754.2**	**723.9**	**18.5**	**0.0**	**1,496.6**
Exchange rate effects	14.1	15.1	0.8	0.0	30.0
Changes in consolidated Group	0.0	–3.4	–1.0	0.0	–4.4
Additions	0.0	2.9	0.2	0.0	3.1
Transfer	0.0	1.5	0.3	0.0	1.8
Disposals	0.0	–1.1	–0.2	0.0	–1.3
Other changes	0.0	0.1	0.0	0.0	0.1
Acquisition and manufacturing costs as of 12/31/2022	**768.3**	**739.0**	**18.6**	**0.0**	**1,525.9**
Accumulated amortization as of 01/01/2022	**58.4**	**522.2**	**9.8**	**0.0**	**590.4**
Exchange rate effects	0.4	4.9	0.3	0.0	5.6
Changes in consolidated Group	0.0	–1.7	–0.8	0.0	–2.5
Additions	0.0	52.4	4.1	0.0	56.5
Impairment	0.0	0.0	0.0	0.0	0.0
Transfer	0.0	0.0	0.0	0.0	0.0
Disposals	0.0	–1.1	–0.2	0.0	–1.3
Other changes	0.0	0.1	0.0	0.0	0.1
Accumulated amortization as of 12/31/2022	**58.8**	**576.8**	**13.2**	**0.0**	**648.8**
Carrying amount as of 12/31/2022	**709.5**	**162.2**	**5.4**	**0.0**	**877.1**

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In EUR million	Goodwill	Patents, licenses, software, and similar rights and values	Development costs	Down payments made	Total
Acquisition and manufacturing costs as of 01/01/2021	**691.4**	**682.0**	**17.4**	**0.0**	**1,390.8**
Exchange rate effects	28.0	28.3	1.1	0.0	57.4
Changes in consolidated Group	34.8	15.1	0.0	0.0	49.9
Additions	0.0	1.2	0.0	0.0	1.2
Transfer	0.0	1.5	0.0	0.0	1.5
Disposals	0.0	-4.2	0.0	0.0	-4.2
Acquisition and manufacturing costs as of 12/31/2021	**754.2**	**723.9**	**18.5**	**0.0**	**1,496.6**
Accumulated amortization as of 01/01/2021	**57.9**	**441.5**	**5.5**	**0.0**	**504.9**
Exchange rate effects	0.5	14.6	0.4	0.0	15.5
Changes in consolidated Group	0.0	0.0	0.0	0.0	0.0
Additions	0.0	70.3	3.9	0.0	74.2
Impairment	0.0	0.0	0.0	0.0	0.0
Transfer	0.0	0.0	0.0	0.0	0.0
Disposals	0.0	-4.2	0.0	0.0	-4.2
Accumulated amortization as of 12/31/2021	**58.4**	**522.2**	**9.8**	**0.0**	**590.4**
Carrying amount as of 12/31/2021	**695.8**	**201.7**	**8.7**	**0.0**	**906.2**

Intangible assets in patents, licenses, software, and similar rights and values include customer relationships amounting to EUR 111.5 million (previous year: EUR 145.1 million), which have a remaining useful life of 1 to 13 years. In connection with the impairment tests carried out, the value of intangible assets acquired in company acquisitions, such as customer relationships, brands, and existing technology, was also assessed. This did not result in any need for impairment in the past fiscal year.

GOODWILL

The goodwill from company acquisitions is listed below:

In EUR million	12/31/2022	12/31/2021
Transportation	581.2	574.1
Life Sciences & Environment	128.3	121.7
	709.5	**695.8**

In connection with the impairment tests carried out on the cash-generating units, no need for impairment of goodwill was identified in the past fiscal year or in the previous fiscal year.

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18. Impairment tests

The goodwill included in the consolidated financial statements relates to the differences between the respective purchase prices and the revalued net assets of the acquired businesses arising from the business combinations.

Goodwill is allocated in full to the smallest cash-generating unit.

The respective recoverable amount is determined in all cases by calculating the value in use using the discounted cash flow method.

In performing the impairment test, the Group performed various sensitivity analyses for possible changes in the WACC or the planned revenue development.

Cash flows from the five-year plan (2023 to 2027) prepared by the responsible management for all business segments are used as a basis. For the calculation of the impairment tests, assumptions were made regarding the development of turnover, among other things. The average sales increases in turnover assumed in the detailed planning period for Transportation were between 3.4% and 6.5% (previous year: 3.1% and 7.8%) and for Life Sciences & Environment between 12.4% and 45.8% (previous year: 15.2% and 57.3%).

Growth rates of 1.0% to 1.3% (previous year: 1.0% to 1.5%) were used to measure the perpetual annuity. The calculated cash flows were discounted with weighted cost of capital rates after taxes of 9.7% to 10.4% (previous year: 8.0% to 8.9%) and before taxes of 12.6% to 13.8% (previous year: 10.4% to 11.7%). The weighting of equity and debt capital costs was carried out using a capital structure derived from a group of comparable companies. Capital market data and data from comparable companies were used to determine the cost of equity and debt capital.

In %	2022		2021	
	Weighted capital costs	Growth rate	Weighted capital costs	Growth rate
Transportation	10.4	1.3	8.9	1.5
Life Sciences & Environment	9.7	1.0	8.0	1.0

As a result of the impairment test carried out, no goodwill allocated to the various cash-generating units had to be adjusted.

For the cash-generating unit Transportation, the value in use exceeds the carrying amount by EUR 1,755.3 million (previous year: EUR 1,935.6 million). If the WACC increases by 8.7 percentage points or the sustainable EBIT margin decreases by 4.7 percentage points, the value in use corresponds to the carrying amount. As in the previous year, an increase in the WACC by 0.5 percentage points or a decrease in the sustainable EBIT margin by –0.5 percentage points would not require impairment.

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For the cash-generating unit Life Sciences & Environment, the value in use exceeds the carrying amount by EUR 33.8 million (previous year: EUR 162.9 million). If the WACC increases by 0.4 percentage points or the sustainable EBIT margin decreases by 0.3 percentage points, the value in use corresponds to the carrying amount. An increase in the WACC by 0.5 percentage points or a decrease in the sustainable EBIT margin by –0.5 percentage points would result in a devaluation requirement of EUR 4.2 million or EUR 15.1 million (previous year: no devaluation requirement).

For the cash-generating unit Transportation, the value in use exceeds the carrying amount by EUR 3,465.4 million (previous year: EUR 3,661.8 million). The value in use for the cash-generating unit Life Sciences & Environment is EUR 432.9 million (previous year: EUR 547.4 million).

19. Tangible fixed assets and leasing

In EUR million	Land and buildings	Technical equipment, plant, and machinery	Other equipment, operational and office equipment	Advance payments and construction in progress	Total
Acquisition and manufacturing costs as of 01/01/2022	**699.6**	**1,574.1**	**261.1**	**97.6**	**2,632.4**
Exchange rate effects	6.4	25.3	3.0	1.7	36.4
Changes in consolidated Group	–8.4	–188.8	–15.7	–0.8	–213.7
Additions	110.8	28.3	19.7	104.5	263.3
Transfer	10.5	56.3	5.4	–74.0	–1.8
Disposals	–50.9	–113.1	–23.9	–0.1	–188.0
Other changes	2.1	6.8	1.8	0.0	10.7
Acquisition and manufacturing costs as of 12/31/2022	**770.1**	**1,388.9**	**251.4**	**128.9**	**2,539.3**
Accumulated depreciation as of 01/01/2022	**297.4**	**1,111.6**	**182.4**	**0.9**	**1,592.3**
Exchange rate effects	3.2	18.0	2.4	0.0	23.6
Changes in consolidated Group	–4.4	–137.3	–10.1	0.0	–151.8
Additions	51.5	84.5	25.4	0.0	161.4
Impairment	0.1	0.0	0.0	0.0	0.1
Transfer	–0.4	–0.2	0.6	0.0	0.0
Reversals of write-downs	0.0	–0.3	0.0	0.0	–0.3
Disposals	–31.8	–99.2	–21.9	0.0	–152.9
Other changes	0.3	3.9	1.0	0.0	5.2
Accumulated depreciation as of 12/31/2022	**315.9**	**981.0**	**179.8**	**0.9**	**1,477.6**
Carrying amount as of 12/31/2022	**454.2**	**407.9**	**71.6**	**128.0**	**1,061.7**

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In EUR million	Land and buildings	Technical equipment, plant, and machinery	Other equipment, operational and office equipment	Advance payments and construction in progress	Total
Acquisition and manufacturing costs as of 01/01/2021	**620.7**	**1,484.7**	**249.0**	**80.6**	**2,435.0**
Exchange rate effects	24.0	47.1	5.9	4.5	81.5
Changes in consolidated Group	18.0	7.1	0.1	2.4	27.6
Additions	49.3	31.2	22.6	76.6	179.7
Transfer	9.9	48.6	6.4	-66.4	-1.5
Reclassification to assets held for sale	-0.2	-1.7	-0.9	0.0	-2.8
Disposals	-22.1	-42.9	-22.0	-0.1	-87.1
Acquisition and manufacturing costs as of 12/31/2021	**699.6**	**1,574.1**	**261.1**	**97.6**	**2,632.4**
Accumulated depreciation as of 01/01/2021	**257.3**	**1,032.6**	**173.5**	**0.8**	**1,464.2**
Exchange rate effects	8.8	30.9	4.0	0.1	43.8
Changes in consolidated Group	0.1	0.7	0.0	0.0	0.8
Additions	40.6	86.6	26.5	0.0	153.7
Impairment	0.2	0.1	0.0	0.0	0.3
Transfer	0.0	0.0	0.0	0.0	0.0
Reclassification to assets held for sale	-0.1	-1.5	-0.9	0.0	-2.5
Reversals of write-downs	0.0	-1.3	0.0	0.0	-1.3
Disposals	-9.5	-36.5	-20.7	0.0	-66.7
Accumulated depreciation as of 12/31/2021	**297.4**	**1,111.6**	**182.4**	**0.9**	**1,592.3**
Carrying amount as of 12/31/2021	**402.2**	**462.5**	**78.7**	**96.7**	**1,040.1**

In the balance sheet, the following items are shown under tangible assets and financial liabilities in connection with leases:

In EUR million	12/31/2022	12/31/2021
Rights-of-use assets		
Land and buildings	208.2	136.6
Technical equipment, plant, and machinery	1.9	2.2
Other equipment, operational and office equipment	17.4	17.0
	227.5	**155.8**

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In EUR million	12/31/2022	12/31/2021
Lease liabilities		
Short term	42.7	31.0
Long term	202.9	141.0
	245.6	**172.0**

Additions to rights of use during the 2022 fiscal year amounted to EUR 121.1 million (previous year: EUR 59.5 million).

The income statement contains the following amounts in connection with leases:

In EUR million	12/31/2022	12/31/2021
Amortization of rights-of-use assets		
Land and buildings	35.3	24.2
Technical equipment, plant, and machinery	1.1	1.3
Other equipment, operational and office equipment	9.0	8.9
	45.4	**34.4**
Gains from sale and leaseback transactions	33.3	9.1
Interest expenses (included in finance expenses)	6.4	4.4

Payments for leases accounted for in accordance with IFRS 16 amounted to EUR 61.8 million in 2022 (previous year: EUR 43.4 million). Of this, EUR 6.4 million (previous year: EUR 4.4 million) was for interest and EUR 55.4 million (previous year: EUR 39.0 million) for the repayment of financial liabilities.

SALE AND LEASEBACK

Gains of EUR 33.3 million (previous year: EUR 9.1 million) realized in sale and leaseback transactions are fully attributable to land and buildings.

MANN+HUMMEL sold a large part of its real estate at the Ludwigsburg site to an investor and is leasing it back. The sale is directly related to the phaseout of production at the Ludwigsburg plant, which was already decided and communicated in 2020. The term of the lease agreement is between 2 and 2.5 years, depending on the property. The Group's obligations under its leases are secured by the lessor's title to the leased asset.

As of December 31, 2022, there are lease liabilities of EUR 10.6 million (previous year: EUR 0.6 million) from the sale and leaseback transaction.

A sale and leaseback transaction took place in the previous year.

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20. Investments in associates

The MANN+HUMMEL Group holds a 25.8% share in ABC S.A., Cordoba, Argentina. The proportionate net profit for the year attributable to the MANN+HUMMEL Group amounts to EUR 0.8 million (previous year: EUR 0.4 million).

21. Noncurrent financial assets

In EUR million	12/31/2022	12/31/2021
Other holdings	24.9	24.6
Other financial assets	5.4	10.3
Derivative financial instruments	0.0	0.7
	30.3	**35.6**

The other financial assets reported as of December 31, 2022, were mainly other loans.

22. Other assets

In EUR million			12/31/2022			12/31/2021
	Total	Of which noncurrent	Of which current	Total	Of which noncurrent	Of which current
Other assets	110.2	4.0	106.2	99.1	4.2	94.9
Contractual assets	11.8	10.1	1.7	14.7	10.9	3.8
Deferred income	14.9	2.8	12.1	16.8	1.8	15.0
Other	2.4	0.0	2.4	3.1	0.0	3.1
	139.3	**16.9**	**122.4**	**133.7**	**16.9**	**116.8**

Other assets mainly include VAT refund claims and payments on account. The other assets do not contain any overdue amounts that are not impaired.

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The MANN+HUMMEL Group has capitalized the following contract assets from contracts with customers in accordance with IFRS 15:

In EUR million			12/31/2022			12/31/2021
	Total	Of which noncurrent	Of which current	Total	Of which noncurrent	Of which current
Carrying amount as of 01/01	**14.7**	**10.9**	**3.8**	**18.2**	**12.9**	**5.3**
Exchange rate effects	0.3	0.3	0.0	0.7	0.5	0.2
Additions	3.7	2.0	1.7	8.1	6.2	1.8
Utilization	-3.8	-1.2	-2.6	-12.3	-8.9	-3.4
Transfer	0.0	-0.3	0.3	0.0	0.2	-0.2
Disposals	-3.1	-1.6	-1.5	0.0	0.0	0.0
Carrying amount as of 12/31	**11.8**	**10.1**	**1.7**	**14.7**	**10.9**	**3.8**

Sales that were realized in 2022 and based on performance obligations that were fulfilled in previous years did not exist in the fiscal year. As before, no costs from fulfilling or initiating contracts with customers were capitalized. There were still no adjustments to the consideration for the fair value of the financing component, as the period between the transfer of the goods and the payment date was less than 12 months. As before, there are no material repurchase obligations or guarantee obligations that exceed the statutory minimum period.

23. Inventories

In EUR million	12/31/2022	12/31/2021
Raw materials, consumables, and supplies	232.7	217.7
Work in process	60.8	73.5
Finished products and goods	421.1	356.7
Prepayments	2.9	2.6
	717.5	**650.5**

In the 2022 fiscal year, total write-ups of inventories amounting to EUR –15.6 million were made and recognized (previous year: write-down of EUR 6.1 million).

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24. Trade receivables

Trade receivables amounted to EUR 817.4 million (previous year: EUR 823.2 million).

The value adjustments on current and noncurrent trade receivables developed as follows:

In EUR million	2022	2021
Carrying amount as of 01/01	**16.4**	**14.6**
Exchange rate effects	0.3	0.8
Changes in consolidated Group	-0.1	-0.1
Additions	8.4	3.0
Utilization	-0.6	-1.2
Reversals	-1.3	-0.7
Carrying amount as of 12/31	**23.1**	**16.4**

In the fiscal year, there were reclassifications of trade receivables from level 2 to level 3 of the impairment model amounting to EUR 7.1 million (previous year: EUR 4.2 million) and reclassifications from level 3 to level 2 amounting to EUR 25.3 million (previous year: EUR 8.8 million).

There were no impaired financial assets for which enforcement proceedings were carried out.

25. Current financial assets

In EUR million	12/31/2022	12/31/2021
Derivative financial instruments	29.4	11.5
Receivables and loans	40.9	28.3
Securities	277.6	303.2
	347.9	**343.0**

The securities are shares, bonds, and fund units. For further information, see note 37 to the consolidated financial statements.

The portfolio of financial receivables does not contain any overdue amounts that are not impaired.

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26. Equity

Total other shareholders' equity

Accumulated other equity mainly includes the following components:

DIFFERENCE FROM CURRENCY TRANSLATION

This item contains the differences arising from the currency translation of the financial statements of foreign subsidiaries (non-euro area) from the date of first-time adoption of IFRS.

MARKET VALUATION OF SECURITIES AND CASH FLOW HEDGES

This item includes the effects from the valuation of financial instruments and cash flow hedges after tax, not recognized in profit or loss.

EQUITY INSTRUMENTS

This item includes the effects from the valuation of investments in nonconsolidated companies after taxes, not recognized in the income statement.

ACTUARIAL GAINS AND LOSSES

This item contains the actuarial gains and losses from pension obligations recognized directly in equity after tax.

DEFERRED TAXES ON ITEMS RECOGNIZED DIRECTLY IN EQUITY

In EUR million			2022			2021
	Before income taxes	Income taxes	After taxes	Before income taxes	Income taxes	After taxes
Difference from foreign currency translation	2.2	0.0	2.2	60.0	0.0	60.0
Equity instruments	1.5	0.8	2.4	2.5	–1.4	1.0
Borrowing instruments	–7.6	2.2	–5.5	–1.4	0.4	–0.9
Fair value measurement of cash flow hedges	3.3	1.3	4.5	4.4	–1.5	2.9
Actuarial profits and losses	115.9	–32.5	83.4	28.7	11.0	39.7
Other income	**115.3**	**–28.2**	**87.0**	**94.2**	**8.5**	**102.7**

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NONCONTROLLING INTERESTS

In the reporting year, the equity reported in the balance sheet includes the shares of other shareholders of MANN+HUMMEL International GmbH & Co. KG. These hold a direct interest of 16.7% in MANN+HUMMEL Holding GmbH, but without voting rights. The shares of noncontrolling interests in equity total EUR 169.1 million (previous year: EUR 170.5 million). They have a direct stake of 16.7% in MANN+HUMMEL Holding GmbH, Ludwigsburg, but without voting rights. In addition, 50.0% are held in Changchun MANN+HUMMEL Faway Filter Co., Ltd., Changchun/PR China, and the US shareholder.

CAPITAL ECONOMICALLY ATTRIBUTABLE TO THE SHAREHOLDERS

As the shares in MANN+HUMMEL International GmbH & Co. KG do not meet the requirements of IAS 32.16A for the presentation of puttable shares as equity due to regulations in the articles of association regarding the compensation of shareholders, they were presented as debt capital in “Capital economically attributable to the shareholders.” This item amounted to EUR 843.0 million at the end of the fiscal year (previous year: EUR 849.7 million). The valuation of the capital economically attributable to the shareholders is carried out at the fair value of the obligation. In the present case, this corresponds to the respective shareholder's proportionate book value of the IFRS Group equity.

In the annual financial statements of MANN+HUMMEL International GmbH & Co. KG, the equity capital of EUR 465.7 million (previous year: EUR 472.4 million) is made up of capital shares of the limited partners and reserves.

27. Capital management disclosures

The primary objective of the Group's management is to ensure a stable capital base to support the continuation of business activities and to preserve the benefit of the shareholders. Economic equity is used to determine the total capital ratio economically attributable to shareholders and equity to total assets. This comprises the equity capital shown in the balance sheet and the capital economically attributable to the shareholders shown in the noncurrent liabilities.

	12/31/2022	12/31/2021
Capital economically attributable to the shareholders and equity in millions of euros	1,012.1	1,020.2
Capital economically attributable to the shareholders and equity relative to total assets	23.3%	23.5%

The MANN+HUMMEL Group is not subject to any statutory capital requirements but only to contractually fixed capital requirements (see note 28).

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28. Financial liabilities

In EUR million	Carrying amount as of 12/31/2022			Carrying amount as of 12/31/2021		
	Total	Of which noncurrent	Of which current	Total	Of which noncurrent	Of which current
Liabilities to banks	1,137.9	599.0	538.9	999.8	795.2	204.5
Bonds	98.8	98.8	0.0	98.7	98.7	0.0
Payables from finance leasing	245.6	202.9	42.7	171.9	141.0	30.9
Derivative financial instruments	24.8	9.0	15.8	23.1	3.0	20.2
Other	191.4	10.4	181.0	203.5	0.4	203.1
	1,698.5	**920.1**	**778.4**	**1,497.0**	**1,038.3**	**458.7**

Other financial liabilities consist mainly of customer bonuses and notes payable.

Current financial liabilities include the repayment installments of non-current loans due within one year. Furthermore, liabilities serving short-term financing are included in this item. The country-specific interest rate for these short-term loans ranges between 1.39% (previous year: 0.00%) and 22.00% (previous year: 27.00%).

The country-specific interest rate on the loans reported under noncurrent financial liabilities ranges between 0.00% (previous year: 0.00%) and 12.30% (previous year: 4.60%). 63.7% (previous year: 86.8%) of the loans have fixed interest rates. Most of the loans are due at the end of the term. Some of the loan agreements contain clauses for the calculation of financial ratios. One of these is the gearing ratio, which is defined as the ratio of the net financial position to EBITDA. A change in the debt–equity ratio has an influence on the annually determined risk premium for some of the loans.

No contractual repayment obligations result from the calculation of the financial ratios. In addition, some loan agreements contain a sustainability component. The interest rate for these loans may be adjusted if the ESG score calculated by the sustainability agency EcoVadis exceeds or falls below certain threshold values.

29. Trade payables

In Mio. EUR	12/31/2022	12/31/2021
Trade payables	765.3	763.9
thereof occupied from reverse factoring	179.2	169.9

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MANN+HUMMEL has concluded reverse factoring agreements for EUR 223.2 million (previous year: EUR 215.9 million) of the trade payables. Under these programs, suppliers can assign their receivables from MANN+HUMMEL companies to the participating banks in return for a discount and thus receive the discounted invoice amount early on. The Group has not derecognized the reverse factoring liabilities, as neither a legal exemption was obtained, nor was the liability materially changed by entering into the agreement. The Group does not incur any additional interest for paying the suppliers' liabilities to the bank. Amounts factored by suppliers are included in trade payables as the nature and function of the liability are the same as other trade payables. Due to the relationship to the operating business, payments to the bank continue to be reported in cash flow from operating activities.

30. Other liabilities

In EUR million	Carrying amount as of 12/31/2022			Carrying amount as of 12/31/2021		
	Total	Of which noncurrent	Of which current	Total	Of which noncurrent	Of which current
Staff liabilities	98.4	0.0	98.4	100.3	0.0	100.3
Down payments received	9.5	0.0	9.5	10.9	0.0	10.9
Taxes	21.1	0.0	21.1	22.0	0.0	22.0
Other	63.4	5.8	57.6	81.1	9.3	71.8
	192.4	**5.8**	**186.6**	**214.3**	**9.3**	**205.0**

Tax liabilities mainly include VAT liabilities. Other liabilities include, among other things, outstanding debits, accrued liabilities and license, and commission liabilities. The disclosures in accordance with IFRS 15.121 are omitted because the performance obligations have an expected original term of no more than one year.

31. Other provisions

In EUR million	Carrying amount as of 12/31/2022			Carrying amount as of 12/31/2021		
	Total	Of which noncurrent	Of which current	Total	Of which noncurrent	Of which current
Liabilities from the operating area	121.1	16.7	104.4	109.1	15.1	94.0
Liabilities from the staff area	47.6	19.5	28.1	87.1	67.5	19.6
Other liabilities	45.3	1.8	43.5	34.9	3.3	31.6
	214.0	**38.0**	**176.0**	**231.1**	**85.9**	**145.2**

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In EUR million	01/01/2022	Exchange rate effects	Addition	Changes in consolidated Group	Accrued interest	Transfers	Offsetting plan assets	Utilization	Reversal	12/31/2022
Liabilities from the operating area	109.1	2.4	84.1	–13.4	0.0	0.0	0.0	–50.4	–10.7	121.1
Liabilities from the staff area	87.1	0.7	20.6	–2.1	0.0	0.0	–0.7	–49.5	–8.5	47.6
Other liabilities	34.9	0.3	22.8	–0.1	0.0	0.0	0.0	–11.8	–0.8	45.3
	231.1	**3.4**	**127.5**	**–15.6**	**0.0**	**0.0**	**–0.7**	**–111.7**	**–20.0**	**214.0**

In EUR million	01/01/2021	Exchange rate effects	Addition	Changes in consolidated Group	Accrued interest	Transfers	Offsetting plan assets	Utilization	Reversal	31/12/2021
Liabilities from the operating area	88.2	2.1	63.6	0.0	0.0	0.0	0.0	–37.6	–7.2	109.1
Liabilities from the staff area	104.2	1.3	27.6	0.0	0.0	0.0	–1.4	–40.6	–4.0	87.1
Other liabilities	21.1	0.8	25.0	0.0	0.0	0.0	0.0	–9.6	–2.4	34.9
	213.5	**4.2**	**116.2**	**0.0**	**0.0**	**0.0**	**–1.4**	**–87.8**	**–13.6**	**231.1**

Provisions for operating obligations primarily include provisions for warranty obligations and for impending losses from delivery obligations, and, to a lesser extent, provisions for litigation risks.

Personnel-related obligations mainly include profit sharing, restructuring measures, partial retirement agreements, and long-service awards. The provisions for restructuring measures mainly include expenses for severance payments that will be incurred in connection with site closures and relocations. In accordance with IAS 37.72 et seq., the conditions for forming a provision for restructuring costs (including the existence of a corresponding restructuring plan) are met.

Other obligations include other individual risks and uncertain obligations.

The short-term obligations are expected to be used up over the next 12 months.

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Provisions for pensions are formed for obligations arising from vested rights and current benefits to active and former employees of the MANN+HUMMEL Group and their surviving dependents. In accordance with the legal, economic, and tax circumstances of the respective country, there are different systems of old-age provision, which are generally based on the length of service and remuneration of the employees. In the case of company pension schemes, a distinction must be made between defined contributions and defined benefit plans.

In the case of defined contribution plans, the MANN+HUMMEL Group does not enter into any further obligations beyond the payment of contributions to earmarked funds or private pension insurance providers.

In the case of defined benefit plans, the MANN+HUMMEL Group must fulfill the promised benefits to active and former employees (defined benefit plans), whereby a distinction is made between unfunded and funded pension systems.

Approximately 98.4% (previous year: 97.9%) of the defined benefit obligations of the MANN+HUMMEL Group are based on pension plans for active and former employees of the German locations. Direct pension commitments were, and are, made to active employees in various pension schemes. Depending on the type of pension scheme, the obligations provide for retirement, disability and widow's/orphan's pensions, the payment of a fixed capital benefit or benefits in the form of capital with an annuity option. The amount of the benefits depends on the employee's salary and length of service.

There are no legal or regulatory minimum funding requirements in Germany.

The main risks for the company lie in the actuarial parameters, particularly the interest rate level and pension trend, the longevity risk, and the development of the general cost of living (inflation).

The changes in the present value of the defined benefit obligation and the fair value of the fund assets can be based on actuarial gains and losses. Their causes may include, among other things, changes in the calculation parameters, changes in estimates regarding the risk experience of the pension obligations, and differences between the actual and expected return on plan assets.

The amount of the pension obligations (defined benefit obligation) was calculated using actuarial methods for which estimates are unavoidable. In addition to the assumptions on life expectancy and fluctuation, the following premises have a significant influence on the amount of the obligation:

In %	2022	2021
Discount factor	3.70	1.10
Pensions dynamics	1.48	1.48
Pay rises	3.00	3.00

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The assumptions on life expectancy continue to be based on the "Mortality Tables 2018 G" by Prof. Dr. Heubeck.

The pension obligations resulting from the projected unit credit method are netted with the fund assets measured at fair value in the case of a funded pension scheme. If the pension obligations exceed the fund assets, this results in a liability item that is reported in the provisions for pensions. The pension commitments have the following funded status:

In EUR million	12/31/2022	12/31/2021
Cash value of the unfunded pension entitlements	331.6	457.5
Cash value of the funded pension entitlements	34.9	52.3
Benefit cash value of the funded pension entitlements	**366.5**	**509.8**
Fund assets	32.1	45.8
Net liabilities	**334.4**	**464.0**

The fund assets are composed as follows:

In EUR million	12/31/2022	12/31/2021
Cash	0.0	0.0
Securities	21.0	27.2
Equity instruments	0.0	0.0
Debt instruments	5.7	9.3
Fund shares	15.3	17.9
Other	11.1	18.6
	32.1	**45.8**

The securities are valued at prices quoted on active markets.

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The development of the present value of the pension commitments and the fair value of the fund assets in the balance sheet is as follows:

In EUR million		12/31/2022	12/31/2021
Opening balance of defined benefit obligations (DBO)		**509.8**	**539.9**
+/−	Exchange rate effects from abroad	-0.5	0.9
+	Company acquisitions	0.0	0.0
+	Current service costs	12.5	14.1
+	Past service costs to be calculated	-0.1	-1.1
+	Interest expense	5.5	4.2
−	Settlements/curtailments	0.0	0.0
−/+	Actuarial gains and losses from the change in demographic assumptions	-0.2	0.0
−/+	Actuarial gains and losses from the change in financial assumptions	-139.4	-27.7
−/+	Actuarial gains and losses from experience-based adjustments	15.9	-0.9
+	Contributions from the participants of the plan	0.0	0.0
−	Pension payments made	-20.5	-20.6
−	Reduction of the present value of the defined benefit obligations resulting from deconsolidations	-13.1	0.0
+/−	Other changes	-3.4	1.0
Closing balance of defined benefit obligations (DBO) as of 12/31		**366.5**	**509.8**
Opening balance of fair value of fund assets		**45.8**	**41.5**
+/−	Exchange rate effects from abroad	-0.8	-0.1
−	Settlements/curtailments	0.0	0.0
+	Expected income from the fund assets	0.7	0.5
+/−	Actual profit/loss on plan assets	-8.1	0.0
+/−	Actuarial gains and losses from the change in financial assumptions	0.0	0.0
+/−	Actuarial gains and losses from experience-based adjustments	0.0	0.0
+	Contributions made by the participants of the plan	0.0	0.0
+	Contributions made by the employer to the plan	2.6	3.4
−	Pension payments made	-1.9	-0.5
−	Reduction of the fair value of the plan asset resulting from deconsolidations	-3.4	0.0
+/−	Other changes	-2.8	1.0
Fair value of fund assets as of 12/31		**32.1**	**45.8**
Pension provisions as of 01/01		**464.0**	**498.3**
Pension provisions as of 12/31		**334.4**	**464.0**

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Pension obligations result in expenses recognized in profit or loss of EUR 17.2 million (previous year: EUR 16.9 million), which are made up of the following components:

In EUR million	2022	2021
Current service costs	12.5	14.2
Past service costs to be calculated	-0.1	-1.1
Settlements and curtailments	0.0	0.0
Accrued interest of the net liabilities	4.8	3.8
	17.2	**16.9**

Apart from the interest components, all components of the pension expenses recognized in profit or loss are recognized in the functional areas.

The actuarial gains (previous year: profits) of EUR 123.7 million (previous year: EUR 28.6 million) and the actual result of the plan asset in the amount of EUR –8.1 million (previous year: EUR 0,0 million) are recognized directly in the accumulated other comprehensive income.

The fund assets showed a profit of EUR –6.9 million (previous year: EUR 1.9 million). The difference between the actual and expected return of the external pension funds is recognized in the actuarial gains and losses with no effect on profit or loss.

According to the best possible estimate, the contributions to external pension funds will amount to EUR 1.5 million in the following year. The estimate in the previous year for the 2022 fiscal year was EUR 1.8 million.

The pension payments for subsequent years are as follows:

In EUR million	2022	2021
Within the next fiscal year	21.4	17.1
Between 2 and 5 fiscal years	87.7	91.4
Between 5 and 10 fiscal years	124.7	149.0
Due after more than 10 years	504.5	1,278.3

In the calculation, the actual pension payments were presented, and not only the pension modules earned on the reporting date, i.e., pension modules to be allocated in the future have already been considered. Furthermore, it was assumed that the number of active employees would remain constant. For the other calculation assumptions, the same parameters were used that were used to determine the defined benefit obligation.

The average term of the defined benefit obligations ranges from 4 to 22 years.

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The effect of a change in material assumptions on the defined benefit obligation is shown below:

	Change to pension entitlement cash value	
In EUR million	**2022**	**2021**
Discount factor		
− 1.0%-points	43.7	68.8
+ 1.0%-points	–34.5	–54.8
Pensions dynamics		
− 0.5%-points	–3.5	–1.4
+ 0.5%-points	3.7	1.5
Life expectancy		
− 1 year	–10.8	–17.9
+ 1 year	11.0	18.2

For the sensitivity analysis, the pension obligations were recalculated. It was assumed that the other factors remain unchanged. In calculating the sensitivity of life expectancy, it was assumed that the average life expectancy of a 65-year-old person would be reduced or extended by one year.

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33. General

In the reporting year, the MANN+HUMMEL Group had credit lines of EUR 867.6 million (previous year: EUR 845.9 million) at its disposal, of which EUR 512.3 million (previous year: EUR 806.3 million) had not been used by the end of the fiscal year.

The cash and cash equivalents considered in the consolidated cash flow statement include all cash and cash equivalents shown in the consolidated balance sheet, i.e., cash in hand and bank balances, to the extent that the Group can freely dispose of them.

Dividends and interest received are allocated to cash flow from investing activities. Interest paid and transaction costs for taking on financial debt are shown in the cash flow from financing activities.

As part of the indirect calculation, the changes in balance sheet items considered in connection with current business activities are adjusted for effects from currency translation and from changes in the scope of consolidation. The changes in the relevant balance sheet items can therefore not be reconciled with the corresponding values based on the published consolidated balance sheet.

CHANGES IN LIABILITIES ARISING FROM FINANCING ACTIVITIES

The change in financial liabilities from financing activities is as follows:

In EUR million	01/01/2022	Cash flows	Changes in consolidated group	Foreign exchange differences	Fair value changes	New leases	Other	12/31/2022
Leasing liabilities	172.0	-55.4	-5.9	3.4	0.0	129.5	2.0	245.6
Bonds	98.7	0.0	0.0	0.0	0.0	0.0	0.1	98.8
Third-party borrowings	690.3	77.8	-0.1	64.0	21.5	0.0	2.4	856.0
	961.0	**22.4**	**-6.0**	**67.4**	**21.5**	**129.5**	**4.5**	**1,200.4**

In EUR million	01/01/2021	Cash flows	Changes in consolidated group	Foreign exchange differences	Fair value changes	New leases	Other	31/12/2021
Leasing liabilities	125.5	-39.0	17.3	6.5	0.0	60.2	1.5	172.0
Bonds	98.5	0.0	0.0	0.0	0.0	0.0	0.1	98.7
Third-party borrowings	769.8	-72.5	10.5	2.3	-21.0	0.0	1.3	690.3
	993.8	**-111.5**	**27.8**	**8.8**	**-21.0**	**60.2**	**2.9**	**961.0**

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34. Contingent liabilities

No provisions have been made for the following contingent liabilities, which are stated at nominal value, because their utilization is considered unlikely:

In EUR million	12/31/2022	12/31/2021
Guarantees	8.6	9.6
Other	3.3	4.5
	11.9	**14.1**

If called upon, the guarantees are due in full within one year. The other contingent liabilities mainly relate to potential obligations to tax authorities.

35. Other financial liabilities

In addition to liabilities, provisions, and contingent liabilities, there are other financial obligations arising from investment projects that have been started and from procurement contracts.

In EUR million	12/31/2022	12/31/2021
Rental and lease obligations	36.8	14.6
Purchase obligations	50.0	25.5
	86.8	**40.1**

Lease agreements are accounted for in accordance with IFRS 16. Rental and lease obligations consist of expenses for short-term leases, expenses for leases of low-value assets, and expenses for variable lease payments. In the fiscal year, expenses of EUR 28.6 million (previous year: EUR 9.5 million) were incurred for short-term leases, EUR 3.2 million (previous year: EUR 4.1 million) for leases of low-value assets, and EUR 5.0 million (previous year: EUR 1.0 million) for variable lease payments.

Purchase commitments of EUR 44.0 million (previous year: EUR 24.0 million) relate to property, plant, and equipment, EUR 0.0 million (previous year: EUR 0.1 million) to intangible assets, and EUR 6.0 million (previous year: EUR 1.4 million) to other services.

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36. Legal disputes

During its ordinary business activities, the MANN+HUMMEL Group is confronted with lawsuits and court proceedings, mainly in the areas of labor law, product liability and warranty law, tax law, and intellectual property. Provisions are made for those cases in which it is probable that an obligation exists that arose from a past event, can be reliably estimated, and the settlement of which is likely to result in an outflow of resources embodying economic benefits. A provision of EUR 19.6 million (previous year: EUR 14.6 million) was made for all legal disputes pending on December 31, 2022. The management of the MANN+HUMMEL Group believes that the outcome of all claims and lawsuits brought against the MANN+HUMMEL Group, both individually and collectively, will not have a material adverse effect on its business, financial position, results of operations, or cash flows. The results of currently pending or future proceedings are nevertheless unpredictable. Expenses may arise as a result of court or official decisions or through the agreement of settlements that are not covered or not fully covered by insurance benefits, and could have a material impact on the business of the MANN+HUMMEL Group or its results.

37. Disclosures on financial instruments

BOOK VALUES OF FINANCIAL INSTRUMENTS BY CATEGORY

The balance sheet items for financial instruments are divided into classes and categories. The parent company of the Group is MANN+HUMMEL International GmbH & Co. KG. Insofar as the shares in this commercial partnership do not meet the requirements of IAS 32.16A, amounts reported in equity were reclassified to the item "Capital economically attributable to the shareholders." This item was thus included in the disclosures on the book values of the financial instruments.

Under IFRS 9, financial assets and financial liabilities are categorized according to a uniform model in the following categories:

- Financial assets measured at amortized cost (AC),
- Financial assets at fair value through other comprehensive income (FVOCI), and
- Financial assets at fair value through profit or loss (FVPL).
- Financial liabilities measured at amortized cost (AC),
- Financial liabilities at fair value through profit or loss (FVPL).

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The carrying amounts for each category are shown in the table below:

CARRYING AMOUNTS OF FINANCIAL ASSETS

12/31/2022 In EUR million	(Amortized) acquisition costs	Fair value recognized directly in equity with recycling (FVOCI)	Fair value recognized directly in equity without recycling (FVOCI)	Fair value through profit or loss (FVPL)	Not in scope of IFRS 9
Cash and short-term deposits	205.0				
Trade receivables	817.4				
Other financial assets	46.3				
Securities					
of which debt instruments of the category FVOCI with recycling		137.2			
of which debt instruments of the category FVPL				75.4	
of which shareholders' equity instruments of the category FVPL				65.0	
Holdings			19.5	3.2	2.2
Derivative financial instruments					
Part of a hedging relationship				27.0	
Freestanding				2.4	

CARRYING AMOUNTS OF FINANCIAL LIABILITIES

12/31/2022 In EUR million	(Amortized) acquisition costs	Fair value recognized in income
Capital economically attributable to the shareholders	843.0	
Trade payables	765.3	
Liabilities to banks	1,137.9	
Other financial liabilities	290.2	
Liabilities from leasing	245.6	
Derivative financial instruments		
Part of a hedging relationship		24.7
Freestanding		0.1

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CARRYING AMOUNTS OF FINANCIAL ASSETS

12/31/2021 In EUR million	(Amortized) acquisition costs	Fair value recognized directly in equity with recycling (FVOCI)	Fair value recognized directly in equity without recycling (FVOCI)	Fair value through profit or loss (FVPL)	Not in scope of IFRS 9
Cash and short-term deposits	192.0				
Trade receivables	823.2				
Other financial assets	38.6				
Securities					
of which debt instruments of the category FVOCI with recycling		128.7			
of which debt instruments of the category FVPL				81.3	
of which shareholders' equity instruments of the category FVPL				93.2	
Holdings			13.3		11.3
Derivative financial instruments					
Part of a hedging relationship				9.6	
Freestanding				2.6	

CARRYING AMOUNTS OF FINANCIAL LIABILITIES

12/31/2021 In EUR million	(Amortized) acquisition costs	Fair value recognized in income
Capital economically attributable to the shareholders	893.0	
Trade payables	763.9	
Liabilities to banks	999.8	
Other financial liabilities	302.1	
Liabilities from leasing	172.0	
Derivative financial instruments		
Part of a hedging relationship		22.7
Freestanding		0.4

The MANN+HUMMEL Group generally holds its equity instruments for strategic reasons in order to complement its operating activities. The intention to generate significant short-term income from disposals is not in the foreground. In the current fiscal year, the fair value of equity instruments whose changes are recognized in other comprehensive income amounted to EUR 19.5 million (previous year: EUR 13.3 million). In the fiscal year, no dividends were distributed from these investments to MANN+HUMMEL companies. There were no reclassifications to other comprehensive income or dividend distributions from investments sold during the fiscal year.

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The fair values of the financial assets and liabilities are allocated to the three levels of the fair value hierarchy depending on the input parameters used for the valuation. The classification and the need to reclassify are reviewed at each balance sheet date. Level 1 comprises those financial instruments for which quoted prices in active markets are available for identical assets and liabilities. Allocation to level 2 takes place if input parameters are used for the valuation of the financial instruments that are directly (e.g., prices) or indirectly (e.g., derived from prices) observable on the market. Financial instruments whose valuation is based on information that is not observable on the market are reported in level 3.

Due to the short-term maturities of cash and cash equivalents, trade receivables, and other current financial assets, their carrying amount generally approximates fair value at the end of the reporting period.

The fair values of noncurrent financial receivables, trade receivables, liabilities to banks, and other financial liabilities were calculated using the present value method. The future cash flows were discounted using the current risk-free interest rates with matching maturities plus a credit risk premium customary in the industry. The allocation is made to level 2.

Financial liabilities from finance leases are recognized using the contractually agreed interest rate. The fair value was determined considering the market interest rate (level 2).

The fair values of the financial instruments measured at fair value are allocated to the three levels of the fair value hierarchy as follows:

In EUR million				12/31/2022
	Level 1	Level 2	Level 3	Total
Assets				
Holdings	0.0	6.7	16.0	22.7
Securities				
Shares	65.0	0.0	0.0	65.0
Bonds	79.5	133.1	0.0	212.6
Derivative financial instruments	0.0	29.4	0.0	29.4
Liabilities				
Derivative financial instruments	0.0	24.8	0.0	24.8

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In EUR million				12/31/2021
	Level 1	Level 2	Level 3	Total
Assets				
Holdings	0.0	0.0	13.3	13.3
Securities				
Shares	93.2	0.0	0.0	93.2
Bonds	149.6	60.4	0.0	210.0
Derivative financial instruments	0.0	12.2	0.0	12.2
Liabilities				
Derivative financial instruments	0.0	23.1	0.0	23.1

The fair values of the financial instruments measured at amortized cost are allocated to the three levels of the fair value hierarchy as follows:

In EUR million				12/31/2022
	Level 1	Level 2	Level 3	Total
Liabilities				
Liabilities to banks	0.0	1,109.9	0.0	1,109.9
Other financial liabilities	0.0	276.4	0.0	276.4
Leasing liabilities	0.0	245.6	0.0	245.6

In EUR million				12/31/2021
	Level 1	Level 2	Level 3	Total
Liabilities				
Liabilities to banks	0.0	1,009.7	0.0	1,009.7
Other financial liabilities	0.0	319.5	0.0	319.5
Leasing liabilities	0.0	172.0	0.0	172.0

For level-1 securities, the fair value is the quoted market price in an active market at any time. An active market is either the stock exchange of the respective country or a comparable trading platform on which the liquidity and transparency of the underlying asset is given. An active market is characterized by the fact that largely homogeneous assets are traded at publicly accessible prices and, as a rule, willing buyers and sellers can be found at any time, for example, securities or commodity exchanges.

Level-1 derivative financial instruments relate to tradable derivatives such as futures. Their fair value corresponds to the value on the traded futures exchange.

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Financial instruments whose prices can be derived or modeled from parameters observable on the market are classified in level 2. Examples are observable interest rates, exchange rates, or comparable instruments. Interest-bearing securities with moderately delayed direct price quotation are also included in level 2.

Level-3 securities in the previous year relate to variable-interest bonds and derivatives whose liquidity on the public market was not given on the reporting date and which were therefore allocated to level 3. In addition to this, the investments were already included in the fair value hierarchy in the previous fiscal year. The fair values from level 3 were determined on the basis of currently available information from the fund managers and internally performed valuation procedures. A significant change in the interest rate level and the associated change in market prices would impact the fair values of the securities. A sale of the investments classified in level 3 is not planned in the short term.

The development of the securities, derivatives, and investments classified in level 3 of the fair value hierarchy is shown in the following table:

In EUR million	2022	2021
Balance at 01/01	**13.3**	**11.2**
Fair value changes recognized directly in equity	1.5	2.6
Fair value changes recognized directly in P&L	1.3	0.0
Purchases	0.0	4.4
Sales	-0.1	0.0
Reclassification	0.0	–4.9
Balance at 12/31	**16.0**	**13.3**

The corresponding financial assets were reclassified from level 3 to level 2 due to the higher number of price quotations in active markets.

Other investments of a subsidiary in Singapore were sold. The fair value on disposal was EUR 1.7 million. The gain on the sale of EUR 0.6 million was recognized in equity.

The other gains and losses are recognized in other financial income and financial expense.

Derivative financial instruments in level 1 relate to tradable derivatives such as futures. Their fair value corresponds to the value on the traded futures exchange.

Level-2 derivative financial instruments relate to nontradable derivatives. The fair values are determined based on price determinations (exchange rates, interest rates, and commodity price indices) of authorized exchanges discounted to the remaining term.

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NET GAINS AND LOSSES BY MEASUREMENT CATEGORY

In EUR million	Total net profits and losses
2022	
Assets (amortized) acquisition costs	–7.6
Liabilities (amortized) acquisition costs	–34.7
Shareholders' equity instruments of the category FVOCI without recycling	0.0
Shareholders' equity instruments of the category FVPL	–11.7
FVOCI debt instruments with recycling	–1.0
Debt instruments FVPL	–6.0
Derivative financial assets with hedge relationships (FVPL)	–8.9
Derivative financial liabilities with hedge relationships (FVPL)	–0.7
	–70.6

In EUR million	Total net profits and losses
2021	
Assets (amortized) acquisition costs	–17.3
Liabilities (amortized) acquisition costs	–34.9
Shareholders' equity instruments of the category FVOCI without recycling	0.0
Shareholders' equity instruments of the category FVPL	20.7
FVOCI debt instruments with recycling	0.5
Debt instruments FVPL	4.1
Derivative financial assets with hedge relationships (FVPL)	7.0
Derivative financial liabilities with hedge relationships (FVPL)	–35.4
	–55.3

The other net gains and losses of “Assets (amortized) acquisition costs” and “Liabilities (amortized) acquisition costs” essentially include currency gains and losses from foreign currency receivables, expenses due to value adjustments on trade receivables, and interest expenses.

The other net gains and losses in the measurement category “FVOCI debt instruments with recycling” are the balance of the realized gains and losses from the disposal of such assets, reduced by the unrealized changes already recognized in equity for this purpose in the previous year, and the unrealized gains or losses of the existing assets recognized in equity in the current fiscal year. Furthermore, currency gains and losses are also included.

The other net gains and losses in the valuation category “Investments FVOCI without recycling” essentially comprise the value adjustments of the investees to the fair value within equity.

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OFFSETTING OF FINANCIAL ASSETS AND LIABILITIES

The following are the financial assets and liabilities that are subject to offsetting agreements, enforceable master netting arrangements, and similar agreements:

In EUR million			12/31/2022
	Gross amount	Offsetting	Net amount
Trade receivables	821.9	4.5	817.4
Trade payables	760.8	4.5	765.3

In EUR million			12/31/2021
	Gross amount	Offsetting	Net amount
Trade receivables	825.7	2.5	823.2
Trade payables	761.4	2.5	763.9

The framework agreements for financial futures concluded with our banks stipulate, among other things, that in the event of insolvency of a contractual partner, the existing contracts must be terminated and settled at the respective market value. If several transactions are settled with one contractual partner, positive and negative market values are netted, and only the remaining peak is settled. As of December 31, 2022, the following offsettable amounts exist:

In EUR million			12/31/2022
	Balance sheet value	Offsetting	Net amount
Derivative assets	29.4	7.5	21.9
Derivative liabilities	24.8	7.5	17.3

In EUR million			12/31/2021
	Balance sheet value	Offsetting	Net amount
Derivative assets	12.2	3.8	8.4
Derivative liabilities	23.1	3.8	19.3

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38. Risks from financial instruments

MANAGEMENT OF FINANCIAL RISKS

The MANN+HUMMEL Group's risk management system covers, among other things, counterparty and default risks with customers, banks, and suppliers, liquidity, commodity, and interest rate risks, and currency risks.

The measurement of the price risk from securities and the currency risk is based on a value-at-risk analysis. The value-at-risk exclusively indicates the potential risk of loss that will not be exceeded with a given probability within a specified period of time (holding period). However, the method does not provide information on the time of occurrence or expected loss amount if the value-at-risk is exceeded. Consequently, the actual development may deviate from the result of the value-at-risk analysis.

The companies of the MANN+HUMMEL Group hedge their interest rate and currency risks at market conditions either through the cash management of the MANN+HUMMEL Group or directly with banks. Original transactions such as loans with long fixed interest rates are usually used, but—especially in the currency area—also derivative financial instruments with plain vanilla character are also utilized. These are concluded exclusively to hedge existing underlying transactions or planned transactions.

The risk positions of cash management are hedged externally with banks of impeccable credit standing, considering specified risk limits. Hedging transactions are concluded in accordance with uniform Group guidelines and in compliance with the regulations applicable to banks for conducting trading transactions.

DEFAULT AND COUNTERPARTY RISK

The default risk is the risk that counterparties in the area of cash investments, financial receivables, and trade receivables will not meet their payment obligations.

To reduce the counterparty risk in the case of financial investments, all financial transactions are only carried out with banks of first-class credit standing within the framework of defined limits.

In the event of counterparty default, the Group's financial assets are exposed to a maximum default risk equal to the carrying amount of the corresponding balance sheet items without considering collateral received (plus the maximum utilization for any financial guarantees and credit commitments to third parties).

To mitigate the default risk, the creditworthiness of customers with whom transactions are concluded on a credit basis, as well as our receivables portfolio, are subject to ongoing monitoring. Selectively, default risks are reduced with appropriate hedging instruments, such as trade credit insurance. The carrying amount of trade receivables covered by trade credit insurance is EUR 157.6 million (previous year: EUR 51.1 million).

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The value adjustments on cash and short-term deposits developed as follows in the fiscal year:

In EUR million	2022	2021
Carrying amount as of 01/01	**0.1**	**0.3**
Reversals	0.0	–0.2
Carrying amount as of 12/31	**0.1**	**0.1**

The following table provides information on the credit quality of the Group's financial assets by credit rating:

In EUR million	Gross carrying amount (on-balance) 12/31/2022		
Rating	Level 1 impairment model (EL)	Level 2 impairment model (LEL)	Level 3 impairment model (LEL)
Investment grade	207.2	782.7	0.0
Non-investment grade	0.0	7.1	33.9

In EUR million	Gross carrying amount (on-balance) 12/31/2021		
Rating	Level 1 impairment model (EL)	Level 2 impairment model (LEL)	Level 3 impairment model (LEL)
Investment grade	194.1	798.0	0.0
Non-investment grade	0.0	5.6	39.5

LIQUIDITY RISK

Liquidity risk describes the danger that a company will not be able to meet its financial obligations when they fall due. At MANN+HUMMEL, significant liquidity issues and developments are regularly discussed in liquidity planning. The subsidiaries are included in the central financing of the Group. For all possible fluctuations, the company maintains reserve liquidity and credit lines of several hundred million euros, which are also available to cover merger and acquisition (M&A) activities.

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The maturity structure of principal and interest payments for the financial liabilities and trade payables are shown in the following table:

In EUR million	Carrying amount as of 12/31/2022			Cash outflows
	Total	2023	2024 to 2027	2028 et seq.
Liabilities to banks	1,137.9	492.4	545.8	219.9
Lease liabilities	245.6	50.4	125.4	101.4
Derivative financial instruments	24.8	448.7	93.6	0.0
Other financial liabilities	290.9	187.7	50.0	119.5
Trade payables	765.3	765.1	0.0	0.0
	2,464.5	**1,944.3**	**814.8**	**440.8**

In EUR million	Carrying amount as of 12/31/2021			Cash outflows
	Total	2022	2023 to 2026	2027 et seq.
Liabilities to banks	999.8	251.1	661.9	147.3
Lease liabilities	172.0	40.5	95.0	53.5
Derivative financial instruments	23.1	429.0	116.0	0.0
Other financial liabilities	302.2	207.2	13.0	126.0
Trade payables	763.9	763.2	0.8	0.0
	2,261.0	**1,691.0**	**886.7**	**326.8**

PRICE RISK FROM SECURITIES

The price risk is the risk that the fair value of securities will fall.

Investments in securities are essentially investments in interest-bearing securities, shares, and fund units. This diversification reduces risk, which is a prerequisite for a continuous increase in value with as little fluctuation as possible.

The final decision on strategic asset allocation as well as the control of all investment results and risk budgets are made for the special funds by a specially created committee (investment committee). The basis for the investment decisions of the external portfolio managers are the investment guidelines defined by the investor. In formulating these guidelines, attention is paid to, among other things, a solid issuer credit rating (minimum rating requirement), high marketability of the securities, and a broad sector diversification in order to achieve a further risk reduction.

The company receives monthly reports on the development of the current market values and the performance of the individual asset classes. The performance is assessed based on comparative values, key risk figures, and attribution and allocation analyses by the portfolio managers, among other things.

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In addition to qualitative management instruments for risk minimization, such as diversification of investments in different asset classes, risk-oriented design of investment guidelines, analysis of investment results, and evaluation of changes in the capital markets, quantitative management methods and investment styles are preferably used.

Based on a value-at-risk calculation, it can be assumed that with a probability of 99% for a holding period of 10 days, the reduction in market value in the master fund, which bundles the funds with the various fund providers, will not exceed EUR 6.4 million (previous year: EUR 6.2 million). The calculations were made assuming the asset allocation does not change, and no additions are made during the year, which would then have to be reallocated. The historical correlations of the respective funds and securities were considered.

The financial investments "at fair value through profit or loss" include investments in the amount of EUR 19.5 million (previous year: EUR 24.6 million). The valuation is based on the multiplier method. The proportional enterprise value is determined based on sales multiples. Uncertainties regarding the determination of the fair value of these investments arise mainly from the change in the multiples used, as there is no quoted price on an active market. If the multiples used were to increase by 10.0%, the fair value of these investments would increase by EUR 0.8 million (previous year: EUR 1.7 million). A decrease would result in a corresponding reduction of EUR 0.8 million (previous year: EUR 1.7 million).

CURRENCY RISK

Due to its international orientation, the MANN+HUMMEL Group carries out transactions in different currencies. Currency risk is the risk that changes in exchange rates will affect the fair values or future cash flows of monetary items.

In the MANN+HUMMEL Group, hedging measures for planned foreign currency cash flows are carried out within defined maximum limits. The hedging ratio is 60% for cash flow hedges (previous year: 60%) and 100% for fair value hedges. The net principle applies to exchange rate hedging, i.e., hedges are carried out for the net positions from opposing cash flows. Exchange rate hedges are mainly carried out through forward exchange transactions. In the fiscal year, the currencies USD, EUR, SGD, TRY, CZK, and GBP accounted for more than 80% of the hedging volume. To finance the Affinia acquisition, an interest rate/currency swap of USD 400 million was concluded in 2015. This had a nominal amount of EUR 123.7 million (previous year: EUR 159.1 million) as of the reporting date and is designated as a fair value hedge with a fair value as of December 31, 2022, of EUR –9.0 million (previous year: EUR –3.0 million).

To determine the exposure to be hedged, a cash flow plan for the following fiscal year is prepared annually. Based on this planning, exposures within the approved risk limit are then hedged by forward exchange transactions.

In the MANN+HUMMEL Group, the value-at-risk is determined unchanged from the previous year based on the variance-covariance method assuming a confidence level of 95% with a holding period of 12 months.
As of the balance sheet date, with a one-sided confidence level of 95%, a potential risk of loss of EUR 16.8 million (previous year: EUR 14.1 million), based on the next 12 months, is not exceeded. The calculation was based on an average price volatility of 9.3% (previous year: 7.7%).

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The maximum risk of loss is calculated from the average exchange rate volatility of the last twelve months in relation to the open foreign currency position from the operating business. This results from the stock of cash and cash equivalents and loans in foreign currency on the reporting date, which are managed via cash flow management, and the net incoming and outgoing payments expected in the following twelve months based on the current corporate planning, considering the hedged stock.

As of 12/31/2022, the following hedging instruments are in the portfolio:

In EUR million						Maturity
Nominal amounts of hedging instruments	**Total**	**Up to 3 months**	**Over 3 months to 1 year**	**Over 1 year to 2 years**	**Over 2 years to 5 years**	**Over 5 years**
Currency hedging	858.2	494.3	362.5	1.4	0.0	0.0
Interest rate/currency hedging	123.7	0.0	0.0	0.0	0.0	123.7
	981.9					

12/31/2021:

In EUR million						Maturity
Nominal amounts of hedging instruments	**Total**	**Up to 3 months**	**Over 3 months to 1 year**	**Over 1 year to 2 years**	**Over 2 years to 5 years**	**Over 5 years**
Currency hedging	696.4	390.5	297.0	8.7	0.2	0.0
Interest rate/currency hedging	159.1	0.0	0.0	0.0	0.0	159.1
	855.5					

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The hedges at the end of the year mainly concern the currencies USD, CZK, TRY, GBP, and SGD. The average hedging rates for these currencies were as follows:

Average rate of exchange	
EUR/USD	1.0791
EUR/CZK	25.3700
EUR/SGD	1.4421
EUR/GBP	0.8743
EUR/TRY	22.2214

Average exchange rates 2021:

Average rate of exchange	
EUR/USD	1.1660
EUR/CZK	26.1089
EUR/SGD	1.5533
EUR/GBP	0.8606
EUR/TRY	15.2276

CASH FLOW HEDGES

2022:

In EUR million		Fair value of hedging instruments		Change in fair value	Balance sheet item for hedging transactions
Cash flow hedges	**Nominal amount**	**Assets**	**Liabilities**		
Currency hedging	207.3	8.2	–1.5	5.3	Financial assets/ financial liabilities

2021:

In EUR million		Fair value of hedging instruments		Change in fair value	Balance sheet item for hedging transactions
Cash flow hedges	**Nominal amount**	**Assets**	**Liabilities**		
Currency hedging	237.3	6.7	–4.5	2.9	Financial assets/ financial liabilities

In the MANN+HUMMEL Group, the spot-to-spot method is used for designation. The effectiveness measurement is carried out cumulatively.

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The following amounts were reclassified:

2022:

In EUR million	Reclassified/recycled amount of OCI in profit and loss statement			
Cash flow hedges	From prematurely terminated underlying transactions	Expired underlying transactions	Profit and loss statement item for reclassified amounts	Profits/losses from hedges of net positions
Currency hedging	-4.0	-5.9	Sales, net financial result	

2021:

In EUR million	Reclassified/recycled amount of OCI in profit and loss statement			
Cash flow hedges	From prematurely terminated underlying transactions	Expired underlying transactions	Profit and loss statement item for reclassified amounts	Profits/losses from hedges of net positions
Currency hedging	0.0	3.7	Sales, net financial result	

Ineffectiveness amounts to EUR 0.0 million (previous year: EUR 0.0 million) due to the spot-to-spot method applied.

2022:

In EUR million Cash flow hedges	Change in fair value (for effectiveness calculation) of underlying transaction	Cash flow hedge reserve
Currency hedging	-5.3	5.3

2021:

In EUR million Cash flow hedges	Change in fair value (for effectiveness calculation) of underlying transaction	Cash flow hedge reserve
Currency hedging	-2.9	2.9

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2022:

In EUR million	Hedging costs total	Of which costs of hedging—fair value	Of which cost of hedging—forward component	Of which costs of hedging—cross-currency basis spread	Cash flow hedge reserve—internal values	Spot component—FX derivatives	Interest rate swaps	Other result (OCI) total (cash flow hedge reserve and costs of hedging)
Other result (OCI) as of 01/01/2022	**0.4**	**0.0**	**–0.4**	**0.8**	**0.0**	**4.0**	**0.0**	**4.4**
Additions	0.7	0.0	1.0	–0.2	0.0	8.1	0.0	8.8
Basis adjustments	0.6	0.0	0.8	–0.2	0.0	–6.5	0.0	–5.9
Reclassification to profit and loss statement	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.3
Other result (OCI) as of 12/31/2022	**1.9**	**0.0**	**1.4**	**0.5**	**0.0**	**5.8**	**0.0**	**7.6**

2021:

In EUR million	Hedging costs total	Of which costs of hedging—fair value	Of which cost of hedging—forward component	Of which costs of hedging—cross-currency basis spread	Cash flow hedge reserve—internal values	Spot component—FX derivatives	Interest rate swaps	Other result (OCI) total (cash flow hedge reserve and costs of hedging)
Other result (OCI) as of 01/01/2021	**–0.4**	**0.0**	**–0.3**	**–0.1**	**0.0**	**0.4**	**0.0**	**–0.1**
Additions	–1.8	0.0	–2.6	0.8	0.0	2.3	0.0	0.5
Basis adjustments	2.6	0.0	2.5	0.1	0.0	1.1	0.0	3.7
Reclassification to profit and loss statement	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Other result (OCI) as of 12/31/2021	**0.4**	**0.0**	**–0.4**	**0.8**	**0.0**	**4.0**	**0.0**	**4.4**

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FAIR VALUE HEDGES

2022:

In EUR million		Fair value of hedging instruments		Change in fair value of hedging instruments	Balance sheet item for hedging transactions	Ineffectiveness (result) in profit and loss statement	Item profit and loss statement for hedge accounting
Fair value hedges	**Nominal amounts**	**Assets**	**Liabilities**				
Currency hedging	650.9	18.0	–12.8	5.2	Financial assets/ financial liabilities	0.0	Financial expenses/ financial income
Interest rate/ currency hedging	123.7	0.0	–9.0	–9.0	Financial assets	0.0	Financial expenses/ financial income

2021:

In EUR million		Fair value of hedging instruments		Change in fair value of hedging instruments	Balance sheet item for hedging transactions	Ineffectiveness (result) in profit and loss statement	Item profit and loss statement for hedge accounting
Fair value hedges	**Nominal amounts**	**Assets**	**Liabilities**				
Currency hedging	459.1	2.0	–13.6	–11.6	Financial assets/ financial liabilities	0.0	Financial expenses/ financial income
Interest rate/ currency hedging	159.1	0.0	–3.0	–3.0	Financial assets	0.0	Financial expenses/ financial income

MANN+HUMMEL makes use of the exception pursuant to IFRS 9.6.3.6 and designates the intercompany loan receivables as underlying transactions within the scope of hedge accounting. Gains and losses from currency translation are not fully eliminated at Group level, as the intercompany loans are settled between two Group companies with different functional currencies. The fair value changes of hedged items were essentially the same as the fair value changes of hedging instruments.

INTEREST RATE RISK

Interest rate risk is the risk that financial instruments' fair value or future cash flows will fluctuate due to changes in market interest rates.

MANN+HUMMEL monitors the interest rate risk monthly and measures it against a predefined loss limit as a basis for any hedging measures.

An increase/decrease of 100 basis points in the average interest rate on variable-interest financial liabilities would influence earnings before income taxes of EUR +/–1.1 million (previous year: EUR +/–0.3 million at an increase/decrease of 50 basis points).

An increase in the average interest rate on variable-interest financial assets by 100 basis points would change the result before income taxes by EUR +/–0.06 million (previous year: EUR +/–0.08 million at an increase/decrease of 50 basis points).

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The company is only marginally affected by the IBOR reform. For those currencies for which IBOR interest rates will no longer be published from 2022 onward, new reference interest rates have been agreed upon in the corresponding financing contracts. The IBOR reform does not affect existing hedging relationships with interest rate swaps or interest rate currency swaps.

RAW MATERIAL PRICE RISK

During the reporting period, no hedging transactions were carried out in the MANN+HUMMEL Group. In principle, MANN+HUMMEL minimizes the existing risks through long-term contracts, a selection of strategic, globally positioned suppliers, and monitoring of exchange rates.

39. Government grants

In the fiscal year, EUR 2.7 million (previous year: EUR 3.4 million) in government grants were received. These are broken down as follows:

In EUR million	2022	2021
Grants for investments	1.0	0.7
Cost subsidies	1.7	2.7
	2.7	**3.4**

The expense grants mainly comprise grants for research and development projects. The conditions attached to the granting of the investment subsidies in the previous year were fulfilled.

40. Related party disclosures

According to IAS 24, persons or companies that control or are controlled by the MANN+HUMMEL Group must be disclosed if they are not already included in the consolidated financial statements as a consolidated company. Control exists if a shareholder holds more than half of the voting rights or has the power to govern the financial and operating policies of management by virtue of a provision in the articles of association or a contractual agreement. In addition, the disclosure obligation according to IAS 24 extends to transactions with associated companies and affiliated companies in which the MANN+HUMMEL Group holds at least 20%, as well as transactions with persons who exercise a significant influence on the financial and business policy, including close family members or intermediary companies. Significant influence over the financial and operating policies may be based on a shareholding in the parent company of 20% or more, a seat on the Management or Supervisory Board of the parent company, or

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another key management position. Accordingly, only the members of the Supervisory Board and the Executive Board are considered related parties. There are no other related parties.

Mann Familien-Beteiligungsgesellschaft mbH & Co. KG and Hummel Familien-Beteiligungsgesellschaft mbH & Co. KG, which together hold 83.3% of MANN+HUMMEL International GmbH & Co. KG, exercise significant influence as related parties. There were no transactions with these shareholders. In the fiscal year, withdrawals of EUR 8.6 million (previous year: EUR 8.5 million) were made by the shareholders.

The transactions with related parties and the receivables and liabilities existing as of the balance sheet date essentially result from ordinary business activities and are as follows:

In EUR million	Joint venture	Associates	Other investees
2022			
Deliveries made and services provided			
Sale of goods	0.0	8.6	0.1
Services	0.0	0.0	0.0
Other services	0.0	0.0	0.1
Deliveries received and services procured			
Sale of goods	0.0	0.0	1.8
Services	0.0	0.0	1.7
Other services	0.0	0.0	3.4
Receivables	0.0	1.1	0.1
Liabilities	0.0	0.0	0.3

In EUR million	Joint venture	Associates	Other investees
2021			
Deliveries made and services provided			
Sale of goods	0.0	5.3	5.6
Services	0.0	0.0	–0.2
Other services	0.0	0.0	0.2
Deliveries received and services procured			
Sale of goods	0.0	9.1	1.6
Services	0.0	0.0	1.5
Other services	0.0	0.0	2.6
Receivables	0.0	0.9	0.1
Liabilities	0.0	0.0	0.5

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41. Remuneration of the Management and Supervisory Boards

MANAGEMENT BOARD

Emese Weissenbacher, Marbach am Neckar

Kurk Wilks, Portage, MI, USA

SUPERVISORY BOARD OF THE MANN+HUMMEL VERWALTUNGS GMBH UNTIL SEPTEMBER 30, 2022

With effect from September 29, 2022, MANN+HUMMEL International Verwaltungs GmbH, based in Austria, joins MANN+HUMMEL International GmbH & Co. KG and MANN+HUMMEL Verwaltungs GmbH with effect from the end of September 30, 2022. There is no obligation to establish a supervisory board for MANN+HUMMEL International Verwaltungs GmbH.

Thomas Fischer, Schalksmühle
Chairman

Helga Huber, Taufkirchen/Vils
Vice-Chairwoman
Works Council Chairwoman
MANN+HUMMEL Marklkofen

Ralph Kraut, Kirchheim am Neckar
Works Council Chairman
MANN+HUMMEL Ludwigsburg

Susanne Thomas, Ludwigsburg
Trade Union Secretary IG Metall, Ludwigsburg office

Gerhard Weis, Römerberg
Works Council Chairman, MANN+HUMMEL Speyer

Dr. Klaus Peter Fouquet, Vaihingen/Enz

Robert Grashei, Altdorf
1st authorized representative of IG Metall, Landshut

Jens Michael Hummel, Stuttgart

Johannes Winklhofer, Munich
Managing Partner, iwis Group

Dr. Karin Exner-Wöhrer, Vienna
Chairwoman of the Board of Directors
Salzburg Aluminium AG

Dr. Rolf Heintzeler, Munich
Insurance company executive

Markus Kolczyk, Mundelsheim
Head of Development Original Equipment

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The current short-term remuneration of active members of the Executive Board for the 2022 fiscal year amounts to EUR 3.4 million (previous year: EUR 2.8 million). Expenses for pension entitlements earned in the current fiscal year by active members of the Executive Board amount to EUR 1.0 million (previous year: EUR 0.0 million).
The pension provision for former members of the Executive Board and their surviving dependents amounts to EUR 8.4 million (previous year: EUR 9.0 million).

The short-term remuneration of the Supervisory Board for the 2022 fiscal year including September amounts to EUR 0.6 million (previous year: EUR 0.6 million).

Beyond this, companies of the MANN+HUMMEL Group have not carried out any reportable transactions with members of the Management or Supervisory Boards of the MANN+HUMMEL Group or other members of management in key positions or with companies in whose management or supervisory bodies these persons are represented. This also applies to close family members of these persons.

42. Staff

The average number of employees in the MANN+HUMMEL Group during the year was 22,222 (previous year: 23,211), of which 6,970 (previous year: 7,120) were salaried employees and 15,252 (previous year: 16,091) were wage earners.

43. Auditor's fees

The fees of the Group auditors Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart, recognized in the consolidated profit and loss account amount to EUR 2.2 million (previous year: EUR 1.8 million) and are divided into auditing services of EUR 0.6 million (previous year: EUR 0.6 million) and tax consulting services of EUR 1.6 million (previous year: EUR 1.2 million).

44. Indication of section 264 (3) and section 264b item 3 HGB

The companies MANN+HUMMEL East European GmbH & Co. KG, Ludwigsburg/Germany; MANN+HUMMEL East European Holding GmbH, Ludwigsburg/Germany; MANN+HUMMEL Filtration GmbH, Ludwigsburg/Germany; MANN+HUMMEL Beteiligungs- und Verwaltungsgesellschaft mbH, Ludwigsburg/Germany; MANN+HUMMEL Life Sciences & Environment Germany GmbH, Sprockhövel/Germany; MANN+HUMMEL Innenraumfilter GmbH & Co. KG, Himmelkron/Germany; MANN+HUMMEL Water & Fluid Solutions GmbH, Wiesbaden/Germany; and MANN+HUMMEL Molecular GmbH, Gefrees/Germany, make use of the exemption regulations according to section 264 (3) and section 264b HGB.

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45. Events after the balance sheet date

On February 1, 2023, the MANN+HUMMEL Group completed a majority investment in the M-Filter Group. M-Filter, one of the largest filter manufacturers in Northern and Eastern Europe, continues to expand in the region and develop its product portfolio as part of the MANN+HUMMEL Life Sciences & Environment business unit. As the purchase price is to be regarded as provisional to date, no details can be provided.

We referred to the increased risks due to the ongoing war in Ukraine in the opportunity and risk report. On February 25, 2023, the European Union adopted what is now the 10th package of sanctions against Russia. Due to the resulting restrictions on business operations, MANN+HUMMEL has decided to suspend its activities in Russia until further notice. There were no potential impairments on the recognition and measurement of assets and liabilities as a result of the discontinuation of business activities in Russia that would have led to impairment losses in the 2022 fiscal year. Risks from the Russia-Ukraine war are monitored on an ongoing basis; possible scenarios are continuously adapted to the current geopolitical situation and analyzed on an ongoing basis.

46. List of shareholdings (according to section 313 (2) HGB)

Company name and domicile	Consolidation status[1]	Equity interest %
1. Subsidiaries		
Germany		
MANN+HUMMEL Holding GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL Verwaltungs GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL Beteiligungs- und Verwaltungsgesellschaft mbH, Ludwigsburg	F	83.3
MANN+HUMMEL Filtration GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL Innenraumfilter GmbH & Co. KG, Himmelkron	F	83.3
MANN+HUMMEL Innenraumfilter Verwaltungs GmbH, Himmelkron	F	83.3
MANN+HUMMEL Komplementär GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL East European Holding GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL East European GmbH & Co. KG, Ludwigsburg	F	83.3
MANN+HUMMEL East European Verwaltungs GmbH, Ludwigsburg	F	83.3
MANN+HUMMEL Life Sciences & Environment Germany GmbH, Sprockhövel	F	83.3
MN Beteiligungsgesellschaft mbH, Wiesbaden	F	83.3
MANN+HUMMEL Water & Fluid Solutions GmbH, Wiesbaden	F	83.3

1 F: Consolidated group; E: Accounted for at equity;
N: No inclusion due to irrelevance.
The shares in capital in % at the subsidiaries are calculated on the basis of an indirect participation in MANN+HUMMEL Holding GmbH, Ludwigsburg, and therefore represent 83.3% of the participation quota in MANN+HUMMEL Holding GmbH.

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Company name and domicile	Consolidation status[1]	Equity interest %
i2M GmbH, Ludwigsburg	N	83.3
MANN+HUMMEL Molecular GmbH, Gefrees	F	83.3
comp! Elastomere GmbH, Gefrees	N	66.7
Seccua Holding AG, Steingaden Weilheim	N	83.3
Seccua Distribution GmbH, Gundelfingen a. d. Donau	N	83.3
Seccua GmbH, Steingaden	N	83.3
Seccua Medical GmbH, Gundelfingen a. d. Donau	N	83.3
Europe		
MANN+HUMMEL (UK) LTD., Wolverhampton/Großbritannien	F	83.3
MANN+HUMMEL HYDROMATION N.V., Hasselt/Belgium	F	83.3
MANN+HUMMEL (CZ) v.o.s., Nová Ves/Tschechische Republik	F	83.3
MANN+HUMMEL Service s.r.o., Nová Ves/Czech Republic	F	83.3
MANN+HUMMEL Innenraumfilter (CZ) s.r.o., Uherský Brod/Czech Republic	F	83.3
MANN+HUMMEL IBERICA S.A.U., Saragossa/Spain	F	83.3
MANN+HUMMEL Filtration France S.A.S., Paris/France	F	83.3
MANN+HUMMEL ITALIA S.r.l., Turin/Italy	F	83.3
MANN+HUMMEL OOO, Moscow/Russian Federation	F	83.3
MANN+HUMMEL Filtration Technology Ukraine Ltd., Krasyliv/Ukraine	F	83.3
MANN+HUMMEL BA J.S.C., Tešanj/Bosnia and Herzegowina	F	97.2
MANN VE HUMMEL FİLTRE SANAYİ VE TİCARET LİMİTED ŞİRKETİ, Istanbul/Turkey	F	83.3
MANN+HUMMEL Vokes Air Treatment Holdings Ltd., Burnley/UK	F	83.3
MANN+HUMMEL Vokes-Air Limited, Burnley/UK	F	83.3
MANN+HUMMEL Vokes Air Filtration Ltd, Burnley/UK	F	83.3
MANN+HUMMEL Wheway Plc, Burnley/UK	F	83.3
MANN+HUMMEL Vokes Air BV, IJsselstein/Netherlands	F	83.3
MANN+HUMMEL Vokes Air AS, Hvidovre/Denmark	F	83.3
MANN+HUMMEL Vokes Air AG, Uster/Switzerland	F	83.3
MANN+HUMMEL Vokes Air GmbH, Vösendorf/Austria	F	83.3
MANN+HUMMEL Vokes Air Holding AB, Svenljunga/Sweden	F	83.3
MANN+HUMMEL Vokes Air AB, Svenljunga/Sweden	F	83.3
MANN+HUMMEL FT Poland Spolka z Ograniczona Odpowiedzialnoscia sp.k., Gostyń/Poland	F	83.3
MANN+HUMMEL FT Poland Spolka z Ograniczona Odpowiedzialnoscia, Gostyń/Poland	F	83.3
Jack Filter Lufttechnik GmbH, Steindorf/Austria	F	83.3
Jack Filter Hungaria Kft., Polgárdi/Hungary	F	83.3
MANN+HUMMEL Water & Fluid Solutions, S.p.A., Fano/Italy	F	83.3

1 F: Consolidated group; E: Accounted for at equity;
N: No inclusion due to irrelevance.
The shares in capital in % at the subsidiaries are calculated on the basis of an indirect participation in MANN+HUMMEL Holding GmbH, Ludwigsburg, and therefore represent 83.3% of the participation quota in MANN+HUMMEL Holding GmbH.

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42. Staff
43. Auditor's fees
44. Indication of section 264 (3) and section 264b item 3 HGB
45. Events after the balance sheet date
46. List of shareholdings (according to section 313 (2) HGB)

Company name and domicile	Consolidation status[1]	Equity interest %
America		
MANN+HUMMEL INC., Wilmington, DE/USA	F	83.3
MANN+HUMMEL USA, INC., Portage, MI/USA	F	83.3
MANN+HUMMEL Purolator Filters LLC, Fayetteville, NC/USA	F	83.3
I2M LLC, Raleigh, NC/USA	N	83.3
MANN+HUMMEL Water & Fluid Solutions Inc., Goleta, CA/USA	F	83.3
MANN+HUMMEL Filtration Technology US LLC, Gastonia, NC/USA	F	83.3
MANN+HUMMEL Filtration Technology Products Corp LLC, Gastonia, NC/USA	F	83.3
MANN+HUMMEL Filtration Technology Southern Holdings LLC, Gastonia, NC/USA	F	83.3
MANN+HUMMEL Filtration Technology International Inc., Gastonia, NC/USA	F	83.3
MANN+HUMMEL Filtration Technology Canada ULC, Ayr, Ontario/Canada	F	83.3
MANN+HUMMEL MEXICO S.A. de C.V., Santiago de Querétaro/Mexico	F	83.3
MANN+HUMMEL Filtration Technology Mexico, S. de R.L. de C.V., Ramos Arizpe/Mexico	F	83.3
MANN+HUMMEL Filtration Technology Distribution Mexico S.A. de C.V., Ramos Arizpe/Mexico	F	83.3
MANN+HUMMEL BRASIL LTDA., Indaiatuba/Brasil	F	83.3
MANN+HUMMEL ARGENTINA S.A., Buenos Aires/Argentinia	F	83.3
MANN+HUMMEL Filtration Technology Venezuela C.A., Maracay/Venezuela	N	83.3
MANN+HUMMEL Filtration Technology Distribution Venezuela C.A., Maracay/Venezuela	N	83.3
MANN+HUMMEL Filtration Technology Commercial Distribution C.A., Maracay/Venezuela	N	83.3
MANN+HUMMEL COLOMBIA S.A.S., Bogotá, D.C./Colombia	F	83.3
MANN+HUMMEL LS+E HOLDING Inc, Wilmington, DE/USA	F	83.3
Tri-Dim Filter Corporation, Louisa, VA/USA	F	83.3
MANN+HUMMEL (CANADA) INC., Trois-Rivières, Quebec/Canada	F	83.3
Seccua Americas, LLC/USA	N	83.3
CleanAire, LLC/USA	F	83.3
Asia		
MANN+HUMMEL WATER SOLUTIONS HOLDING PTE. LTD., Singapore/Singapore	F	83.3
MANN+HUMMEL FILTER TECHNOLOGY (S.E.A.) PTE. LTD., Singapore/Singapore	F	83.3
MICRODYN-NADIR Singapore Pte. Ltd., Singapore/Singapore	F	83.3
MANN+HUMMEL Middle East FZE, Dubai/United Arab Emirates	F	83.3
MANN and HUMMEL Thailand Ltd., Bangkok/Thailand	F	83.3
MANN+HUMMEL KOREA Co. Ltd., Wonju/South Korea	F	83.3
MANN+HUMMEL JAPAN LTD., Shin-Yokohama/Japan	F	83.3
MANN AND HUMMEL FILTER PRIVATE LTD., Bengaluru/India	F	83.3

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Company name and domicile	Consolidation status[1]	Equity interest %
Changchun MANN+HUMMEL Faway Filter Co., Ltd., Changchun/PR China	F	50.0
MANN+HUMMEL Filter (CHONGQING) Co., Ltd., Chongqing/PR China	F	83.3
MANN+HUMMEL FILTER (SHANGHAI) Co., Ltd., Shanghai/PR China	F	83.3
MANN+HUMMEL FILTER TRADING (SHANGHAI) Co., Ltd, Shanghai/PR China	F	83.3
MANN+HUMMEL (CHINA) Co., Ltd., Shanghai/PR China	F	83.3
MANN+HUMMEL FILTER (JINAN) Co., Ltd., Jinan/PR China	F	83.3
MANN+HUMMEL Haoye Filter (Bengbu) Co., Ltd., Bengbu/PR China	F	83.3
Longkou MANN+HUMMEL Filtration Co., Ltd., Longkou/PR China	F	83.3
MANN+HUMMEL Ventures Pte. Ltd., Singapore/Singapore	F	83.3
MANN+HUMMEL (China) LIFE SCIENCE AND ENVIRONMENTAL Co., Ltd., Kunshan/PR China	F	83.3
Australia		
MANN AND HUMMEL AUSTRALIA (PTY) LTD., Arndell Park, NSW/Australia	F	83.3
Africa		
MANN AND HUMMEL Filters South Africa (Pty) Ltd., Boksburg/South Africa	F	83.3
MANN AND HUMMEL FILTERS MOROCCO SARL AU, Casablanca/Morocco	F	83.3
2. Associates		
ABC S.A., Córdoba/Argentina	E	25.8

Ludwigsburg, April 25, 2023

MANN+HUMMEL International GmbH & Co. KG

The Management Board

Kurk Wilks
Emese Weissenbacher

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Independent auditor's report

To MANN+HUMMEL International GmbH & Co. KG

Opinions

We have audited the consolidated financial statements of MANN+HUMMEL International GmbH & Co. KG, Ludwigsburg, and its subsidiaries (the Group), which comprise the consolidated profit and loss statement and consolidated statement of comprehensive income for the fiscal year from 1 January to 31 December 2022, the consolidated balance sheet as at 31 December 2022, the consolidated cash flow statement and the consolidated changes in equity for the fiscal year from 1 January to 31 December 2022, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of MANN+HUMMEL International GmbH & Co. KG, which was combined with the management report of the Company, for the fiscal year from 1 January to 31 December 2022.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB ["Handelsgesetzbuch": German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as of 31 December 2022, and of its financial performance for the fiscal year from 1 January to 31 December 2022, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Other information

The Supervisory Board is responsible for the report of the Supervisory Board. The executive directors are responsible for the other information. The other information comprises the following parts to be included in the annual report, of which we obtained a copy prior to issuing this auditor's report, in particular the sections:

- Foreword by the Management Board
- Report of the Supervisory Board
- Insights

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the executive directors for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor’s report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group’s position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive

directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Stuttgart, May 24, 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Heubach	Weber
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

Publishing information

Publisher
MANN+HUMMEL
International GmbH & Co. KG
Ludwigsburg/Germany

Layout and production
wob AG
Viernheim/Germany

Lünstroth GmbH
Bielefeld/Germany

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