

OUR Performance

We possess the ability to accomplish remarkable feats – not just in the near future but in all the days ahead. In these uncertain times, it will take a substantial effort to achieve our business objectives. While we cannot control short-term circumstances, we can shape our long-term trajectory. We are committed to solidifying our leading position within our industry. As we execute this plan, one of the advantages we have is that we do not have to think in quarters. We will continue our transformation process with conviction: **Now more than ever.**

Subcontents

Highlights 2022	028
Development of the group	030
Development of the divisions	
Greiner Packaging	034
NEVEON	040
Greiner Bio-One	046

NOW
MORE
THAN
EVER

Highlights

2021

JANUARY

Greiner becomes a founding member of the MINTality Foundation

MARCH

Greiner Bio-One start-up Tracie Solutions established

MAY

2022 Greiner Sustainability Conference "Empower People"

JULY

Greiner AG expands its Executive Board (with effect from Jan. 1, 2023)

SEPTEMBER

Greiner acquires its first recycling plant

NOVEMBER

Investment in start-up Hempstatic



FEBRUARY

BASF and NEVEON work together to recycle mattresses

APRIL

Pilot project launched for climate-friendly e-mobility

JUNE

Launch of extensive digital transformation project "ONE!"

AUGUST

Investment in circular economy start-up MATR

OCTOBER

Sustainable promissory note loan placed

DECEMBER

People & Culture Board established

Development of the group

Greiner achieved over two billion euros in sales revenue in 2022, continuing the successful trend from the previous year. Our total revenue came to 2,331 million euros. This corresponds to an increase of 2.5 percent compared to 2021.

Sales consistent despite global crises

All three divisions were affected by inflation, fluctuating raw material prices, and increasing energy costs to varying degrees. Transport costs and personnel expenses also went up significantly. Not all of these cost increases could be passed on to our customers, leading to a lower overall result than in the previous year.

Greiner Packaging performed better than expected as it was able pass on a significant amount of its increased costs to customers. Sales revenue increased by 17.7 percent year-over-year to 909 million euros (previous year: 772 million euros).

NEVEON continued to face a number of challenges, including increasingly volatile demand from the mattress and furniture sector. In the aviation sector, NEVEON enjoyed full order books but encountered challenges in meeting this demand on the production side. NEVEON saw a significant decline in the automotive sector in 2022, particularly in smaller size classes. Business was also complicated by the semiconductor shortage caused by the pandemic, scarcities in specific raw materials, vulnerabilities in supply chains and subdued consumer sentiment. As a result, sales revenue decreased slightly by 0.3 percent compared with the previous year (735 million euros) to a total of 732 million euros.

Over the last two years, Greiner Bio-One benefited from the increased demand for its VACUETTE® virus stabilization tubes (VST). Demand for VST products fell in line with expectations as the pandemic subsided. Standard products saw significant growth, with sales revenue near the previous year's level (695 million euros). The division saw a minor decline of 0.4 percent to 693 million euros, which surpassed expectations.

2023 remains challenging from a business perspective

High energy prices and increasing transport costs are making the situation increasingly challenging for the company in every area. Inflation is driving up both material and personnel costs, which is increasing the cost base and making it harder to pass on prices. Despite these challenges, our Group is still in a good position. We have enough strength to successfully navigate this challenging market phase, and will continue our long-term growth trajectory as soon as the general market environment returns to normal.

We remain fully committed to our transformation process despite the challenges we face. We are reorganizing our structures and improving our flexibility. We are pursuing decarbonization, establishing a circular economy, driving digitalization, and developing innovative products to benefit our customers.

Increased focus on investment

Despite the challenging conditions, we continued with the investments we had planned for 2022 whenever possible. Total investment increased by 3 percent year-over-year to 169 million euros, equivalent to 7.25 percent of sales revenues. Some investments in machinery and equipment had to be rescheduled due to manufacturers being affected by supply bottlenecks. Our investments focused on modernizing and expanding machinery and equipment (65.7 million euros) as well as digitalization (7.5 million euros). The majority of funds were invested in Europe (81 percent), followed by the USA (5.6 percent), South America (4 percent), and Asia (2.8 percent).

Sustainable promissory note loan of 172 million euros

In October of last year, our company issued its first promissory note loan at the Group level with the support of HSBC and LBBW. This was the first financing instrument used within the Group to be linked to the company's sustainability performance. Greiner will use the capital raised, amounting to 172 million euros, to settle existing obligations at conditions that are more favorable than would otherwise be available. The funds will be put towards the Group's continued sustainable growth.

The promissory note is tied to three objectives to be achieved by 2030: increasing the share of renewable electricity in our energy mix to 100 percent worldwide, increasing the share of management positions held by women to 40 percent, and making sure that all of the companies in the Group only use suppliers who have an EcoVadis rating of at least 50 points. Our sustainability performance is independently evaluated each year by an independent business consultancy firm. We intend to donate any reduction in interest that we secure by achieving the conditions laid out above to non-governmental organizations.

ONE: the most extensive digital transformation project in Greiner's history

In the future, a company's digital performance will have a key role to play in its success. The purpose of the project is to establish a future-proof data infrastructure to ensure that information is shared quickly between business units, handled in a standardized way, clearly filed and properly backed up in the

169

million euros in total investment, 3% more than in the previous year

event of a failure occurring. We have many challenges to overcome due to the size of the company and the structures that have become entrenched at Greiner over time. We have now tackled this with the largest transformation project in our history.

Last year, our Group launched the Road 2S/4 transformation project with the aim of becoming an industry leader in digitalization. Our aim is to standardize and optimize all processes across the Group. When the project comes to an end, all Group resources (personnel, capital, equipment and material) will be planned, controlled, documented and managed in a standardized, timely and needs-based manner. Instead of the four systems that we currently use, every business unit in the Group will use just one – SAP S/4HANA – which has been fully customized to meet Greiner's needs.

Greiner is one of "Austria's best managed companies"

Our Group underwent an external benchmarking process to assess its performance for the first time in 2022. Greiner participated in the Best Managed Companies (BMC) competition, which is held in over 50 countries and run by consulting firm Deloitte in Austria. The assessment process evaluates how companies perform in four different areas: (1) Governance & Finance, (2) Strategy, (3) Productivity & Innovation, and (4) Culture & Commitment. Topics such as ESG and cybersecurity were also considered. During the assessment process, executives participated in extensive workshops and feedback sessions, which proved to be a valuable experience. And the results show that we are on the right track.

Greiner SuccessFactors: support for our teams across the world

When it comes to looking after the company's most important resource, its staff, we are taking things to the next level with Greiner SuccessFactors, a comprehensive digital transformation project launched by the Human Resources (HR) division. The project involves the introduction of an SAP system specifically for HR processes that will harmonize all of our HR processes worldwide and guarantee a uniform level of quality. The system will help our Group to remain a highly attractive employer.

The comprehensive software suite will eventually replace all of our previous HR systems and support all of our HR processes, from onboarding, employee appraisals, training, employee dashboards/reporting, and employee history/development. We plan to roll Greiner SuccessFactors out in stages. Two core modules – "Performance" for employee appraisals and "Employee Central" for employee profiles – are already in use.

Job grading drives transparency and fairness

The tasks and roles that employees perform across our Group are diverse. The same is true for our remuneration structures. Given the diverse nature of the Group and with more and more employees working together across divisions and national borders, it makes sense for us to adopt a standardized framework for our job profiles. To this end, we have been working with a consultancy firm since the end of 2021 to develop a state-of-the-art and market-oriented title and remuneration system which we will use on a company-wide basis. The system uses a method called job grading. Job grading involves using a standardized procedure to evaluate individual positions (functions) within the company, using that data to introduce additional standardized HR processes and ensuring a greater amount of consistency between the divisions. Job grading creates transparency about the scope and responsibilities of a position, provides a basis for objective assessments, ensures that roles are clearly defined, and makes human resource development processes more likely to succeed.

Manfred Stanek joins the Group Executive Board

The Greiner AG Executive Board has had three members since the beginning of 2023. CEO Axel Kühner and CFO Hannes Moser have been joined by the newly appointed COO, Manfred Stanek, who will be responsible for the performance of the three operating divisions and supporting their strategic development. He will also oversee IT and strategic purchasing. Manfred Stanek was CEO of Greiner Packaging from 2016 to April 2023. With over 25 years of international management experience, he brings his extensive expertise in sales, marketing and strategic development to the Executive Board. He held various management positions at the US aluminum group Novelis before joining Greiner.

Executive Committee supports the Executive Team

An Executive Committee was established in January 2023 to put Greiner in a better position to address the wide variety of challenges facing the company. Consisting of the Executive Board, divisional management, and selected Greiner AG executives, the committee meets monthly. Members discuss results, identify relevant measures and initiate and monitor Group projects (e.g. SAP-S4, SuccessFactors), and Board decisions (e.g. IT Board, People & Culture Board, Sustainability Council) that have a significant impact on the Group as a whole, constitute key operational drivers (e.g., energy, cybersecurity) and make it possible to leverage synergies between Greiner AG and the divisions.

People & Culture Board for all divisions

To strengthen connections between people within the Group, we established the People & Culture (P&C) Board in December 2022. This new board is responsible for driving us forward as an employer in every area. As a central body, the P&C Board creates a

strategic framework to secure the long-term success of the Group. The Board's working groups encourage cooperation and networking at every level of the company, while the P&C Board makes HR decisions for the entire Group. The P&C Board makes decisions by consensus, with the interests of the Group taking precedence over those of individual business units.

Liquibot: Greiner spin-off for fluid balance monitoring

Fluid balance monitoring is an essential part of the process of caring for patients in a hospital ICU setting. This had been done manually until now, making the process time-consuming and susceptible to errors. Greiner Innoventures launched the Liquibot project in partnership with the Berlin-based company German-tech and the Upper Austrian health holding company OÖG in 2022 to change this situation. The partners developed an innovative system for the automated real-time monitoring of fluids. The new system sets new standards in postoperative fluid monitoring (infusions, blood, urine) and will significantly improve the quality of care for patients.

The added value that Liquibot provides has been demonstrated in a clinical trial conducted by the Kepler University Hospital in Linz. The system is expected to be ready for mass production in 2023 and will play a key role in driving digitalization in hospitals.

Hempstatic: bio-based soundproofing panels

The construction and building sector is responsible for nearly 40 percent of global CO₂ emissions. To address this issue, the start-up Hempstatic produces CO₂-absorbing, recyclable indoor soundproofing systems made from agricultural hemp industry residues. Greiner Innoventures invested in Hempstatic in 2022 to acquire a 14 percent minority stake. This investment expands Greiner Innoventures' portfolio and fosters innovation in non-fossil, sustainable materials and the circular economy. Hempstatic is currently expanding its product range and plans to introduce thermal insulation products in the future.

Investments in circular economy start-up MATR

30 million mattresses go to landfill each year because recycling a traditional mattress is such a complicated process. That's why MATR's founders developed the first all-in-one mattress solutions for the hotel industry. This innovation allows the mattress material to be recycled and reused. Various components can be maintained and replaced to extend the product's life cycle. By following the principles of the circular economy, MATR produces mattresses with a carbon footprint that is 50 percent smaller than a conventional mattress. Greiner Innoventures has supported the start-up since its inception during the Circle 17 Impacathon in November 2020. Greiner Innoventures contributed a significant sum when the company was established and will continue to back the founders as a solid partner.

Zeroplast: new approaches with alternative plastics

Greiner Zeroplast's goal is to develop alternatives to today's common thermoplastics – including packaging – for everyday use. The subsidiary of Greiner Innoventures develops unique bio-based materials for industrial injection-molding series production. In the spirit of the circular economy, secondary materials (existing resources in the form of fibers) are to be used and a new Zeroplast material produced from them. With the acquisition of Zeroplast in September 2022, we are taking a further step toward the innovative and sustainable transformation of our company.



Do the innovation

Greiner Packaging boasts more than 60 years of experience in developing and manufacturing stable plastic packaging. It uses a host of production, decoration and barrier technologies to produce packaging solutions for a wide range of food and non-food markets. The company serves its customers through its two business units – Packaging and Assistec. The business unit focuses on sustainability as part of its product development process. Greiner Packaging supplies customers around the world with innovative and sustainable packaging solutions through its highly motivated global teams.



The **Packaging business unit** produces packaging for the food market (milk and dairy products, salads, ready meals, spreads, pet food), the non-food market (detergent, medical products, cosmetics) and the multi-reuse market (baby bottles, drinking bottles, reusable lids, plastic pallets). The business unit also provides barrier solutions that help to extend the shelf life of food and prevent food waste.

The **Assistec business unit** produces technical parts and assemblies made of plastic for various sectors and applications, ranging from household appliances to the life sciences, electronics and automotive industries. The business unit acts as a long-term partner to its customers and supports them in achieving the desired product success with precisely coordinated processes based on its extensive technological expertise and innovative services.

Greiner Packaging

Headquarters	Sattledt, Austria	Core technologies <ul style="list-style-type: none">- Injection-molding- Injection stretch blow molding- Extrusion- Extrusion blow molding- Deep drawing- Assembling
Sales revenue (change compared to the previous year)	909 million euros (+17.7 percent)	
Employees	5,049	
Locations	30	
Countries	19	

Customers around the world are supplied from six locations: Kremsmünster in Austria, Březová and Slušovice in Czechia, Grodzisk Mazowiecki in Poland, Leresti Arges in Romania, and Monterrey in Mexico.

Our performance in 2022: successful despite high expenses

Greiner Packaging achieved record sales revenue of 909 million euros in the past fiscal year. This is an increase of 17.7 percent compared to 2021. Greiner Packaging was forced to negotiate prices with customers at the beginning of 2022 due to material shortages and rising energy and labor costs. The prices of packaging products based on cardboard went up by a particularly significant amount. Prices and availability stabilized as the situation eased for a number of product groups over the second half of 2022.

Order volumes went up, particularly in cardboard-plastic combinations. The properties of this packaging are particularly well suited to the increased sustainability requirements in the market. Demand for lids declined due to retailers wanting more sustainable solutions.

Greiner Packaging's Assistec business unit performed extremely well in the first half of the year, and saw strong business growth in the US. Demand weakened in the second half of the year. The business unit is well-positioned for future growth as the reshoring trend is driving a number of manufacturing companies to relocate their production facilities from Asia back to Europe and the USA in order to stabilize and secure their supply chains.

Acquisition of Serbian PET flakes producer ALWAG

Greiner Packaging acquired Serbian PET flakes producer ALWAG in September 2022. Through this purchase, the company is now able to increase the amount of recycled materials that go into its products. We can now source the recycled materials we use from our own company, instead of buying them from elsewhere. The purchase also enhances Greiner Packaging's expertise in the recycling sector, which will in turn improve the life cycle of its products. The acquisition means that recycling is now an integral part of Greiner Packaging's business model.

The capacity of the new plant is currently being expanded significantly to ensure that it can serve Greiner Packaging's production facilities and customers throughout Europe. The company plans to start by investing in the plant's infrastructure and ensuring that it is ISO certified. The output of recycled materials is expected to increase significantly over the coming years. Additional employees will be hired to accommodate the capacity expansion. In addition to producing recycled PET (r-PET), the plant will also supply customers with solutions that are tailored to their specific needs. Greiner Recycling d.o.o. is Greiner Packaging's third location in Serbia.



With the purchase of an r-PET recycling plant in Serbia, Greiner Packaging Recycling is expanding to become an integral part of its business model.

The purchase of ALWAG reflects the company's wide-ranging sustainability efforts. Greiner Packaging is committed to achieving its goal of maximizing the use of recycled materials in its products. As the first recycling company in the Group, Greiner Recycling d.o.o. will play a vital role in securing material flows for further processing by Greiner Packaging. This sustainable approach to backward integration ensures a steady supply of the raw materials that the company needs to maintain the reliability that customers have come to expect and expand the role of recycling as an integral part of its business model.

A PERFECT START TO THE YEAR: 2022 WORLDSTAR AWARD FOR CIRCULAR ECONOMY FOR PLASTICS

The World Packaging Organisation recognized a joint project between Austrian school milk producers and the three Upper Austrian companies PET-MAN, Greiner Packaging and Starlinger viscotec for sustainable cups made of 100 percent r-PET to be filled with dairy products for schools in Upper Austria. Used school milk cups were collected through the fall of 2021 and then shredded, washed, recycled and made into new r-PET cups.



Optimization and increased efficiency: customers of Greiner Assistec and Greiner Packaging benefit from the company's comprehensive know-how and far-reaching technological competence (in the picture: air up® Tritan drinking bottle; IML Lightweight Bucket; Greiner Assistec Service for Automation SAM-e).



air up®: Greiner Packaging acquires bottle manufacturing start-up

The start-up air up® is a Munich-based company that is seeing rapid growth. Their innovative idea was to develop and market a refillable drinking bottle that flavors water through scent alone. air up® has secured a strong European partner in Greiner Packaging to help with the manufacture of its Tritan bottles. The bottles have been produced in Kremsmünster (Austria) since December 2022.

Greiner Assistec: significant growth thanks to smart automation

Greiner Assistec focuses on the production of customized plastic parts and products including assembling and individually finishing them. The company acts as a long-term partner for its customers and supports them throughout product development, using precisely coordinated processes to help them achieve the desired result. The unit's sales revenue went up significantly in 2022. This impressive achievement was due to the expansion of the Smart Automation service area on a large scale at the Březová site.

Material reduction and recyclability is the aim

Greiner Packaging intends for its packaging to be 100 percent reusable, recyclable or compostable by 2025. For this reason, the company's product development cycles focus on the concept of reduce, reuse, recycle.

This approach was demonstrated last year with the low-weight 1-liter IML bucket. This plastic bucket with a lid and handle is suitable for storing food and feed in bulk. Compared to its predecessors, the weight of the bucket has been reduced from 45 grams to 34 grams, which corresponds to a plastic saving of up to 28 percent.

To promote reuse, Greiner Packaging developed two smart, sustainable and successful alternatives to disposable cups and bowls: the Reuse Drinking Cup and the Reuse Bowl. The stable and unbreakable packaging is made of high-quality polypropylene that is also dishwasher-safe. This packaging is ideal for reusable systems and can hold both hot and cold beverages or food at any temperature.



Greiner Packaging has developed capsules made of compostable polymer. End customers can recycle the new capsules in their garden compost.

r-PET cups in the circular economy with Harvest Moon

The German food manufacturer Harvest Moon shares Greiner Packaging's commitment to keeping materials in the circular economy for as long as possible. The two partners came together to create reusable packaging solutions that are both recyclable and ideally made from recycled materials. This partnership resulted in a new cardboard-plastic cup for fermented yogurt alternatives being developed, making them lightweight, shatterproof and free of plasticizers. Because they are made from 100 percent recycled, unprinted r-PET mono-material, the cups can be fully recycled back into food-grade cups, provided that appropriate collection processes are available. Recycling these cups requires less energy than using virgin material. Furthermore, switching from virgin PP to r-PET results in a 40 percent decrease roughly in CO₂ emissions.

K3® r100: cardboard wrapper separates from the cup automatically

Last year, Greiner Packaging launched the K3® r100 – an innovative packaging solution that allows the cardboard wrapper and plastic packaging to separate automatically. This solution guarantees excellent recyclability, regardless of the consumer's ability to correctly separate the materials, which was an issue for all previous K3® packaging. The cardboard and plastic separate from each other during the first sorting process so that they can be assigned to the correct material streams. Consumers can continue to use the intuitive tear-off strip to separate the packaging into its constituent parts themselves.

Greiner Packaging's cardboard-plastic combination K3® is a high-quality packaging solution that has a positive impact on the environment. Today, the trademarked solution has enjoyed 40 years of success in the market since its launch.



With the K3® r100, the cardboard sleeve and plastic cup separate by themselves.

Yeo Valley Organic: new lid saves 145 tons of plastic

R-PET packaging and our innovative K3® r100 solution proved to be extremely popular with customers last year. Since the beginning of the year, British food company Yeo Valley Organic has sold its 350-gram and 450-gram yogurt pots with reusable lids instead of disposable plastic ones, reducing the amount of plastic used by 145 tons. Customers can exchange the lids for "yeokens" in the company's online loyalty program. Yeo Valley Organic now offers most of its organic yogurts (350 grams and 450 grams) in K3® cardboard-plastic cups from Greiner Packaging, which are 100 percent recyclable.

Compostable capsules for coffee, tea and baby food

Capsules made of aluminum or plastic are used for coffee, tea and baby food and have become an essential item in many households. Greiner Packaging launched a solution made of compostable polymer in 2022 in a bid to improve its ecological footprint. End customers can recycle the used capsules in their garden compost. The sustainable packaging has been certified by TÜV AUSTRIA BELGIUM.

"My goal is to keep us on course for growth and to improve Greiner Packaging's strong position as a sustainable global player."

Beatrix Praeceptor,
CEO of Greiner Packaging International GmbH
(from May 2023)



Beatrix Praeceptor,
designated CEO of Greiner Packaging International GmbH
(from May 2023)

Outlook for 2023: driving growth to the next level

The market environment remains challenging due to a number of critical factors, making it difficult to predict trends in the consumer market. High inflation is currently having an additional dampening effect, but Greiner Packaging will continue to push ahead with its efforts to drive growth. With Beatrix Praeceptor taking over the management of the division in May 2023, the strategic course has been set for the near future. We plan to achieve significant growth in the Packaging business segment in the areas of K3® r100 and r-PET. Organic growth will continue to drive the strong growth at Greiner Assitec's locations.

Sustainability continues to be an important driver of innovation. Greiner Packaging is driving a number of projects that will increase the proportion of recycled materials used in the future and secure recycled materials. Greiner Packaging is also focusing on implementing new business models in the Reuse product area, such as coffee to go and Reuse Bowls.

Further sustainable product innovations from Greiner can be found in the chapter Use Phase & End-of-life



The Future of Foam

NEVEON is a leading integrated provider of polyurethane soft and composite foams. Its core business is the production of around 300 standard and specialty foams and using them to create semi-finished or finished products. NEVEON's foam solutions provide comfort, safety and improved energy efficiency. NEVEON operates in 17 countries and serves different markets through its Living & Care, Mobility and Specialties business units.

NEVEON

Living & Care focuses on developing and manufacturing comfort foams which enhance our sleep and domestic culture and provide critical support for medical applications. The business unit markets its products through three product lines: **.bedding** (mattresses, pillows and toppers), **.upholstery** (furniture assemblies), and **.care** (anti-decubitus and care mattresses, positioning aids and accessories).

Mobility is a reliable partner for comfort and technical foams for passenger transportation. Its products are marketed through three product lines: **.automotive** (foam solutions for engine compartments, interiors and trunks), **.aviation** (seat cushions, seat covers and special products), and **.railway** (seat cushions and seat covers).

Specialties produces foams and hybrid materials for a wide range of product and industrial applications. The business unit markets its products through seven product lines: **.insulation** (hot water, boilers and heat pumps), **.acoustics** (industrial acoustics, room acoustics and impact sound insulation), **.construction** (impact sound and vibration insulation, and structural protection mats), **.filtration & .sealing** (filter foams for liquids and gases and as carrier materials, industrial seals), Consumables (discs and rollers for surface treatment, apparel and footwear, household and natural sponges), Packaging (reusable and disposable packaging, case solutions), and Sports (sports flooring, safety solutions and wearables).



Jürgen Kleinrath,
CEO of NEVEON Holding GmbH

Business in 2022: challenges and opportunities

2022 was a mixed year for NEVEON. The division company generated 732 million euros in sales revenue, a downturn of 0.3 percent year-over-year. Conditions were already challenging in February 2022 when Russia launched its war of aggression in Ukraine, leading to interrupted supply chains and a shortage of materials. Costs for materials, energy and logistics shot up, further exacerbated by inflation. Despite these challenges, NEVEON was able to hold its own.

The Living & Care business unit had a strong start to the year before demand went down as the coronavirus pandemic abated. Consumers were ready to spend despite rising prices, but favored vacations over other spending. The Specialties business unit performed well in the boiler insulation market segment. A large number of households across the nation made use of government subsidies to switch their heating systems over to energy-efficient solutions. The Packaging Technology unit Pactec began to utilize more of its production capacity in the second half of the year. The Mobility business unit benefited from the aviation sector's surprisingly fast recovery and faced challenges meeting demand. The automotive sector continued to be affected by the ongoing semiconductor shortage.

NEVEON		
Headquarters	Vienna, Austria	Core technologies <ul style="list-style-type: none">- Block, molded and composite foam production- Assembly (including gluing, laminating, impregnating, flocking and thermoforming)- Converting (cutting, reticulation, shaping, milling, rotary and flatbed cutting)
Sales revenue (change compared to the previous year)	732 million euros (-0.3 percent)	
Employees	3,610	
Locations	57	
Countries	17	

July 2022: change in leadership at NEVEON

Despite the challenging conditions, NEVEON continued to drive forward its transformation into an integrated foam company. On July 1, 2022, Jürgen Kleinrath officially became the sole CEO of NEVEON. Prior to this, Kleinrath had served as interim Co-CEO alongside Greiner AG CEO Axel Kühner for a three-month period. As a former CEO of Eurofoam, he is well-versed in NEVEON's foam business. The company's new leadership remains committed to the aim of further solidifying NEVEON's position as one of the world's leading integrated foam companies.

"Innovation will center on chemical and mechanical recycling, two fields in which NEVEON has aspirations to become a market leader."

Jürgen Kleinrath,
CEO of NEVEON Holding GmbH

Matrix organization streamlines processes

One of NEVEON's main goals is to remove barriers between organizations and processes. To this end, the company introduced a multidimensional matrix organization in August 2022. This change puts collaboration at the heart of all of NEVEON's activities. The system facilitates rapid and direct collaboration between central Group functions and local, regional, and business unit management. The organization promotes holistic approaches and opens up opportunities to maximize performance with the support of a reliable top-down corporate governance system and a clear bottom-up approach to taking accountability for outcomes.

R&D expanded in data science

NEVEON has invested in R&D by expanding its analytical competencies and proficiencies in data science. Digital mapping of material flows in production make it possible to calculate raw material requirements with precision, resulting in significant improvements in production efficiency and sustainability footprint calculations.

New analytics laboratory in Enns

In 2022, NEVEON established an analytical laboratory in Enns (Austria) to improve the emissions of its products and ensure that it uses high quality raw materials. This competence center acts as a hub for all of NEVEON's new analytical expertise.

3D printed prototypes

NEVEON introduced its first 3D printed prototypes using additive manufacturing in 2022. This innovative manufacturing technology allows for the development of new functionality and design language for comfort products, such as highly breathable and temperature-regulated comfort foam.

New opportunities due to high recycling potential for foams

Every mattress, every sofa and every piece of packaging gets thrown out at some point. But what happens to them when they reach the end of their life cycle? NEVEON views end-of-life products as valuable raw materials rather than waste. The company is committed to the circular economy and aims to become a pioneer in this area. NEVEON's approach is holistic, encompassing "design for recycling," waste reduction, the processing of production waste into valuable composite foam products and the development of innovative chemical recycling processes. NEVEON is working with BASF to produce high-quality recycled mattress foams, using a wet-chemical recycling process to obtain recycled re-polyol. The company is also leveraging a different chemical recycling process to recover re-polyol and produce foams with up to 20 percent recycled content.

Achieving circularity means thinking creatively at every stage of the value chain and avoiding silo thinking. In partnership with Competence Center CHASE and the Transfer Center for Plastics Technology TCKT, NEVEON has been delving deeper into the question of what happens to foam products after they become obsolete since 2021. Together with the University of Trier's Environmental Campus, NEVEON is developing an innovative process called HTC pyrolysis, which transforms previously non-recyclable, mixed, and heavily contaminated foams back into valuable carbon products and oil.

Born not to burn: expandable graphite for a new level of safety

Outstanding flame retardancy, maximum comfort and future-proof – without any melamine or halogen-containing flame retardant additives. In November 2022, NEVEON presented two new products at Foam Expo Europe: flame-retardant graphite molded foam for mass transport (planes, trains) and endura graphite block foam for special mattresses (upholstery, beds). Both products provide perfect comfort and outstanding fire resistance despite being free of melamine and halogen-based flame retardant additives. In the past, these additives were needed to meet the demanding fire safety requirements of the aviation and railroad industries (FAR 25.853 and EN 45545-2, (R21) HL3).



NEVEON relies on natural graphite as a highly innovative, reliable mineral-based flame retardant.

NEVEON incorporated expandable graphite into these products for an outstanding level of flame resistance. When exposed to heat, the graphite expands and forms a large carbon/graphite layer that protects the foam from the flames, preventing the foam from melting and dripping. The expanding effect in the graphite foam stops fire sources from forming, while the carbon/graphite layer removes oxygen from the air, making the foam self-extinguishing.

Vacuum insulation panel to prevent heat loss

A large percentage of the energy consumed in households is used for hot water and heating. Thermal insulation helps households use this energy as efficiently as possible. In February 2022, NEVEON's Specialties business unit launched a new vacuum insulation panel (VIP) to lend households a helping hand. The VIP has a low thermal conductivity of $<0.004 \text{ W/mK}$, which can reduce the amount of heat lost from small and medium-sized hot water tanks by up to 50 percent. This product also improves the energy efficiency class from C to A or B to A+. NEVEON has installed a 40-meter fully automated plant at its Czech site in Nýrsko, which can produce 150,000 VIPs annually.

The company will focus on using the vacuum insulation panel in the Specialties business unit, with a particular focus on the heating sector. The VIP will also be used for mobility applications in the future. However, there are two strong arguments for this – in the growing electric mobility market, energy-efficient thermal insulation means more range and an improved environmental footprint.



The new vacuum insulation panel from NEVEON reduces the heat losses of hot water tanks by up to 50 percent.



"Foam in Service for Impact" is the motto of NEVEON's sustainability strategy, which in turn is based on the Group-wide "Blue Plan" sustainability strategy.

Impact strategy for more sustainability

NEVEON believes that it has a significant amount of responsibility as a company. To demonstrate that all of NEVEON's employees are aware of this responsibility, the company embarked on a mission soon after it was established in February 2021 to prioritize the topics that are most important to it, with sustainability topping the list. Within a year, NEVEON had established a sustainability strategy based on Greiner's Blue Plan and put structures in place to implement its plans. The strategy's motto "Foam in Service for Impact" centers on three interdependent pillars: OUR PLANET, OUR PEOPLE and OUR RESPONSIBILITY. Each pillar has a clearly defined aim and quantifiable objectives.

NEVEON's approach to sustainability encompasses the entire value chain and all of its stakeholders, representing the company's bold ambition to lead the industry in terms of sustainability. To make this happen, NEVEON has established a sustainable procurement team and expanded its sustainability team.

Outlook for 2023: cost structures optimized

NEVEON is set to continue rolling out its Strategy 2028 this year, with a strong focus on transforming into an integrated foam group with a clear sense of purpose. In line with the principle "Rethinking Foam. Making Life Better," all employees will adopt the following mindset for the future: NEVEON never settles and consistently works with passion to improve products and services, striving to make people's lives around the world more comfortable, more safe, and more sustainable – in other words, simply better. To achieve this, NEVEON's 2028 strategy focuses on five primary themes:

- The unwavering transformation into an integrated company
- The persistent pursuit of ambitious targets to remain competitive with the best in the market
- Resolute performance management
- A well-designed portfolio strategy to achieve competitive advantages
- The steadfast pursuit of all sustainability activities with the goal of becoming a circular company

Cost structures will be adapted in line with market conditions with a view to simplifying work processes, shortening routes to market, and leveraging opportunities to improve efficiency. Energy-saving measures will be pushed further, which will make a positive contribution to the planned optimization of NEVEON's carbon footprint. Innovation will center on chemical and mechanical recycling, two fields in which NEVEON has aspirations to become a market leader.

The market is set to remain challenging in 2023. The stability of supply chains and consumer behavior will be heavily influenced by the events that transpire over the course of the year. Regulatory requirements are becoming increasingly stringent in the area of sustainability, a trend which will demand a great deal of commitment from everybody in the company. Despite the ongoing challenges, NEVEON recognizes the importance of addressing the transition from a linear economic model to a circular one. As our resources dwindle and the burden on the environment grows, it will become important to keep products in the cycle for as long as possible.

Further sustainable product innovations from Greiner can be found in the chapter Use phase & End-of-life



NEVEON uses renewable raw materials for the products of the EMC Verde series.

Making a difference

Greiner Bio-One is a global leader in high-quality plastic products for in-vitro diagnostics, biotechnology and the diagnostic and pharmaceutical industries. Its extensive portfolio is sold in more than 100 countries. Greiner Bio-One uses cutting edge technologies as the basis for excellence in fundamental research, pharmaceutical drug discovery, pre-analytics and diagnostics. The company has three business units: Preanalytics, BioScience and Mediscan.



Preanalytics develops and manufactures systems for taking blood, urine and saliva samples from people and animals. It also provides digital systems for pre-analytics. Indwelling venous and arterial safety cannulas round out the portfolio. The innovative product solutions from Preanalytics significantly improve the efficiency and safety of daily routine tasks in a hospital, laboratory or clinical setting.

BioScience is a strong technology partner for universities, research institutions and players in the diagnostic, pharmaceutical and biotech fields. The business unit focuses on developing and producing laboratory equipment, such as containers for cultivating and analyzing cell cultures, as well as microplates used for high throughput screening in biochemical, genetic and pharmacological tests.

Mediscan is one of Europe's leading suppliers and service providers in the sterilization of medical products, disinfecting food packaging and the use of ionizing radiation to improve the functionality of plastics and semiconductors.

Greiner Bio-One		
Headquarters	Kremsmünster, Austria	Core technologies <ul style="list-style-type: none">- Injection-molding- Extrusion- Highly automated assembly- Sterilization: e-beam technology, gamma ray technology, X-ray technology- Development of pre-analytics software- Surface coating
Sales revenue (change compared to the previous year)	693 million euros (-0.4 percent)	
Employees	2,794	
Locations	29	
Countries	22	



Rainer Perneker, CEO Greiner Bio-One International GmbH

Our performance in 2022: successful despite obstacles

Greiner Bio-One achieved 693 million euros in sales revenue, a figure that was higher than expected. This corresponds to a small increase of 0.4 percent compared to the previous year. The previous year was heavily influenced by a high level of demand for VACUETTE® virus stabilization tubes (VST). As expected, the COVID-19 pandemic subsided after the first quarter of 2022 as demand for virus stabilization tubes went down significantly. Demand for our standard products remained high.

Orders for some product groups – such as blood collection tubes, safety products and HTS plates – went up significantly. The company also expanded its production capacities for a wide range of core products, such as blood collection tubes, at its international sites. The BioScience business unit enhanced its production technologies and expanded its capacity in a targeted manner to meet the dynamic requirements of the market and achieve its strategic goals.

Conditions remained turbulent. The year's geopolitical events stirred up uncertainty and unrest in the global markets and had an additional negative impact on supply chains which had already been disrupted due to the COVID-19 pandemic. As a result, the availability of certain materials was delayed in some product areas, resulting in significant increases in the cost of raw materials, components, energy, transportation and purchased services compared to the previous year.

China joint venture: shares acquired

China holds significant importance as a strategic market for Greiner Bio-One. With a population of 1.4 billion – the largest on the planet – the country offers immense growth potential for medical products. In order to tap into the market more effectively, Greiner Bio-One founded the joint venture Greiner Bio-One Suns Co., Ltd. based in Beijing in 2011, in which Greiner Bio-One held 51 percent of the company's shares until recently. Greiner Bio-One took over the remaining shares in December 2022 when the long-standing joint venture partner left the company. In the future, Greiner Bio-One will drive the company's development as the sole owner. The company's performance over the past few years has made the management confident in their ability to continue driving growth in China.

Two new sales offices in Dubai and Singapore

The healthcare sector is constantly modernizing and expanding, not just in China, but also in Asia as a whole and the MEA region (Middle East & Africa). Greiner Bio-One expanded its presence in both regions in 2022 so that the company can better tap into the market. In the first quarter of 2022, Greiner Bio-One in Singapore established Greiner Bio-One Singapore Pte. Ltd. as a new sales company. Greiner Bio-One Singapore will serve as a hub for market development in the Far East Asian and Pacific regions. This site will enable GBO to provide better support for its existing customers in these regions. Greiner Bio-One MEA FZ-LLC, founded in the second quarter of 2022, is based in Dubai and will become a new hub for sales activities in the Middle East and Africa.

Further sustainable product innovations from Greiner can be found in the chapter Use Phase & End-of-life

"The new opportunities offered by digitalization are a significant driver of new developments in the healthcare sector and elsewhere."

Rainer Perneker,
CEO Greiner Bio-One International GmbH

Evoprotect: plans to expand capacities

The VACUETTE® EVOPROTECT safety blood collection set used for preanalytics has performed superbly in the market since it was launched in 2021. The VACUETTE® EVOPROTECT safety blood collection set is easy to operate and features a semi-automatic safety mechanism that is easy to activate and reliably protects medical personnel from needlestick injuries. Triggering the safety mechanism within the vein provides immediate protection for personnel collecting the sample. The specialized cut of the cannula ensures a gentler puncture of the vein. Customers were quickly won over by the premium safety product. As demand is showing a strong upward trend, Greiner Bio-One is planning to expand its manufacturing capacity in this area.



Tracie digitizes the entire sample collection process.

Tracie: a start-up for new standards in the sampling process

The megatrend of digitalization is driving developments in healthcare. With its previous software solution, Greiner eHealth Technologies, Greiner Bio-One has played a key role in driving developments in the field of preanalytics in recent years. In March 2022, Greiner Bio-One gave this development fresh momentum when it founded a joint venture with a start-up character, Tracie Healthcare Solutions GmbH, based in Munich, alongside an external partner. The new joint venture can rely on Greiner Bio-One as a strong partner. It also has the independence it requires to focus on customer needs.

Tracie is a new software solution which digitizes the entire sample collection process. Tracie uses a scanning process to create a secure link between patients and their samples and forward valuable data to the laboratory for analysis. Digital instructions help nurses and physicians to perform their daily tasks, allowing them to make better and more reliable medical decisions and provide more effective treatment for their patients.

The best approach for cell culture assays

For advanced cell and tissue culture applications, Greiner Bio-One offers an innovative family of ThinCert® cell culture inserts in an automation-friendly 96-well format. The new ThinCert® 96-well HTS insert is the optimal tool for scientists who want to analyze a large number of tissue models (e.g., endothelia and epithelia tissue models) for transport or co-culture studies at speed. The cultivation of cells at the air-liquid interface (ALI) allows for the creation of in vivo-like models for the study of respiratory diseases and other scientific research areas. The membrane has been meticulously designed to offer excellent permeability (high pore density) and transparency to surpass the current limitations of competing products. ALI cultures have demonstrated their immense value in studying the pathogenesis of coronavirus infections, particularly during the COVID-19 pandemic, when there was an urgent need for research to develop new drugs and understand the biological makeup of the virus.



The new urine cup ensures greater safety and saves around one-third of transported pallets due to optimized packaging.

New urine cup: safer, more stable, more sustainable

In October 2022, Greiner Bio-One launched an innovative urine cup with an integrated transfer unit: The VACUETTE® urine collection system simplifies the process of transferring samples from the cup into an evacuated tube in a fast, simple and hygienic way. The urine cup's thread has been optimized to make it easy to open and close, while a stabilizing lip prevents overtightening and provides additional stability. The lid of the urine cup includes a recessed transfer unit that significantly reduces the risk of needlestick injuries.

In an effort to promote sustainability, the new cups are no longer individually packaged. Instead, the product's sterility is indicated using an affixed seal. This saves approximately 15 tons of packaging film for every 10 million cups. Each pack contains 100 more cups but is no bigger than the pack used for the previous version. This move eliminates the need for around 26,000 boxes and roughly 1,000 transport pallets.



In the case of the Sapphire pipette tips, material usage has been reduced by 20 percent compared to the previous version.

Sapphire pipette tips: less is more

Launched in the second half of 2021, this new generation of Sapphire pipette tips maintains the same high level of user-friendliness while utilizing 20 percent less material compared to the previous version. The tips are available as a rack or in eco-friendly bags. Refill units are also available. The refill units feature rack inserts packaged in cardboard, saving a considerable amount of space and material compared to full racks while also reducing emissions related to transport. The inserts themselves are made of around 70 percent recycled material.

Understanding of sustainability underlined

Greiner Bio-One is continuing to work towards the sustainability goals outlined in the Greiner Group's "Blue Plan." The company aims to become climate neutral (Scope 1 and 2), implement a circular economy, and develop a team that is prepared to meet future challenges – all by 2030. Greiner Bio-One implemented a range of initiatives and measures in 2022. The main focus of attention last year included raising awareness of sustainability and increasing the visibility of the issue. Sustainability is an overarching goal for Greiner Bio-One, and one that the

company approaches from three different angles: the environment, people and ethics. Greiner Bio-One has incorporated sustainability into its eight value propositions for customers. These values define what Greiner Bio-One stands for and highlight what customers can rely on when they deal with the company.

Greiner Bio-One published a new sustainability brochure in November 2022 and added a dedicated sustainability section to its website. Stakeholders can use both of these channels to inform themselves about the steps Greiner Bio-One is taking to achieve its sustainability goals.

How can we help stakeholders be more involved? Greiner Bio-One is relying on people's curiosity. Visitors to the website www.gbo.com/en-at/sustainability/quiz looking for information about sustainability will find a quiz combined with a donation campaign. Participants who take the quiz can choose one of three sustainability initiatives that Greiner Bio-One supports with donations.

Photovoltaics: harnessing the power of the sun

Greiner Bio-One has switched to 100 percent renewable electricity at all of its Austrian and German sites. Renewable electricity now makes up well over 50 percent of the energy mix across all sites. Our first photovoltaic systems were installed at our Dutch sales location in Alphen aan den Rijn in 2020 and at Mediscan's Austrian site in Kremsmünster in 2021. A second system was installed at the German site in Frickenhausen in July 2022. These systems together provide enough electricity for around 150 four-person households. The company is also planning to install more photovoltaic systems at its other sites in Europe and South America.

EcoVadis silver rating awarded in recognition of efforts

In 2022, Greiner Bio-One turned to the world's largest rating agency EcoVadis to have the sustainability efforts of the entire group of companies externally evaluated for the first time. Their assessment resulted in the company being awarded a silver medal for its sustainability performance. The Greiner Bio-One Group received a total of 60 out of 100 points, placing it in the top 20 percent of all companies evaluated. Within its own industry of manufacturing medical and dental equipment and materials, Greiner Bio-One ranked among the top 8 percent.

Outlook for 2023: significant investment in the future

Greiner Bio-One will concentrate on continued growth and expanding its market share in 2023, particularly in its strategically important regions of North America and Asia. To achieve this aim, the company will continue to capitalize on the trends that are driving growth, including high throughput screening, cell therapy, 3D cell culture and digital preanalytics.

Greiner Bio-One plans to implement a number of infrastructure projects and expand its capacity in 2023 and 2024 to support further growth. Two of the infrastructure projects are based in Austria. Production facilities at the Rainbach site will be doubled in size, and a new sterilization plant will be built in Kremsmünster.

New warehouses and office buildings will be built at our sites in the UK and Brazil, with further investments planned at other sites. Greiner Bio-One's plans include making a significant investment in increasing its manufacturing capacity for its core products in the Preanalytics and BioScience business units.

Greiner Bio-One does not believe that there will be any significant changes in the market due to the ongoing uncertainty surrounding geopolitical issues. High levels of inflation are driving material prices up. This will continue to make the economic situation more challenging. Energy and transport costs will remain elevated for the foreseeable future. The division is taking a proactive approach by implementing initiatives to enhance its operational efficiency and performance. Despite these obstacles, Greiner Bio-One's management is optimistic about the upcoming fiscal year. By continuously improving its processes, planning proactively and maintaining strong international partnerships, Greiner Bio-One will continue to provide the best possible products for its customers.



In addition to being ISO 50001 certified (Energy Management), the Frickenhausen site is also ISO 140001 certified (Environment and Sustainability).