

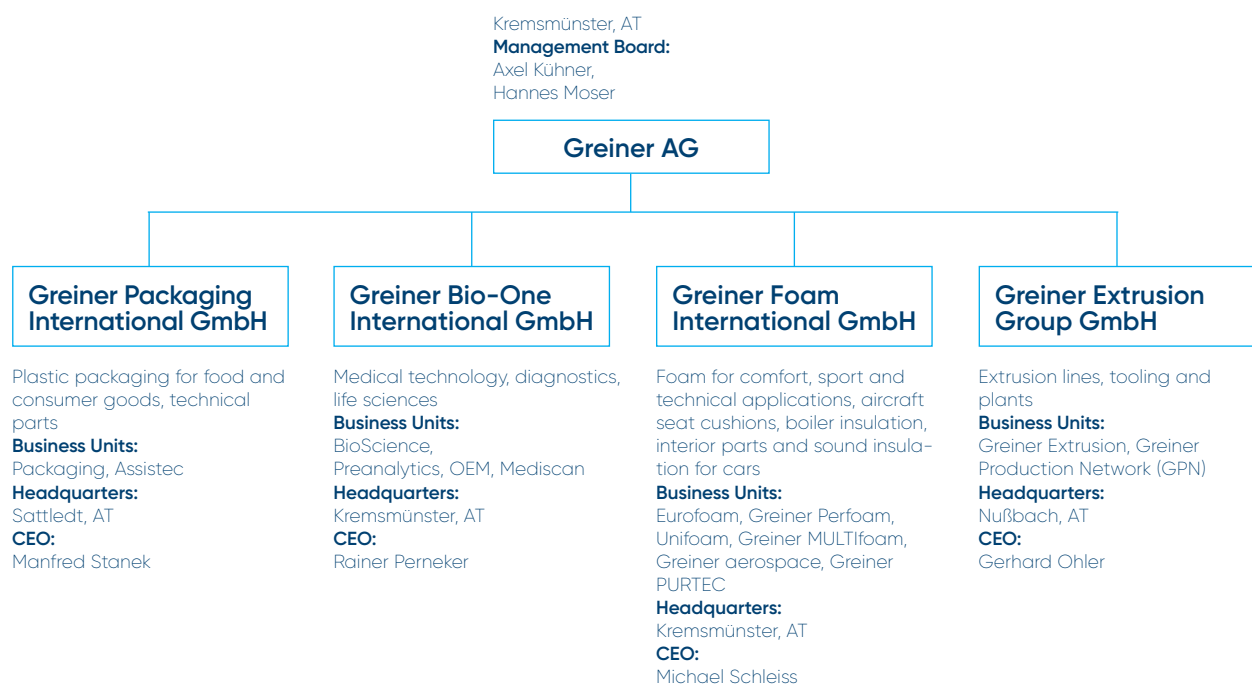
we  
simply  
make life  
better.

# key figures

	2019	2018
Consolidated sales revenues	1,675	1,631
Cash flow	144	128
Investments	102	116
Employees	10,745	10,785
Sales per employee	0.16	0.15

ACTUAL in EUR million, joint ventures prorated

# group structure





simply  
accepting  
responsibility.









# contents

greiner worldwide	6
management board foreword	8
supervisory board foreword	10
family shareholders foreword	12
simply to the point	16
management report	30
greiner packaging	36
greiner bio-one	44
greiner foam	52
greiner extrusion	60



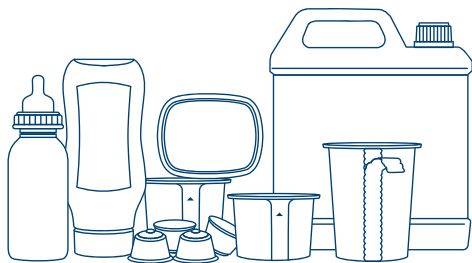
Plastics accompany  
our daily lives and  
in general greatly  
enhance their quality.  
They make life easier  
and it is precisely  
this simplicity  
that is valuable.

# four divisions that simply make life better. worldwide.

Greiner, which has its headquarters in Kremsmünster (Austria), is a global leader in the field of plastic and foam solutions. Founded in 1868 in Nürtingen, Germany, Greiner develops and manufactures products for everyday use. With its four operative divisions comprised by Greiner Packaging, Greiner Bio-One, Greiner Foam and Greiner Extrusion, the group is at home in widely differing industrial sectors. However, irrespective of the diversity of the sales markets involved, Greiner products always offer value added and not only make life simpler, but also enhance its quality. This fact is exemplified by food packaging that prolongs shelf life, safe blood sample collection tubes, intelligent mattresses, lightweight aircraft and car seating, and plants for the production of high-quality plastic window frames.

Greiner has been in family ownership for five generations and is a non-listed corporation. Today, it offers a workforce of almost 11,000 employees in 34 countries secure employment together with a unique corporate culture that is founded upon trust, responsibility and mutual respect. Greiner is both internationally successful and regionally anchored, and aspires to being a reliable partner to its customers and suppliers worldwide. Moreover, as a responsible employer it regards the job satisfaction of its personnel, optimum working conditions, diversity, health and occupational safety, basic and further training, and the compatibility of careers and family life, as fundamental corporate values. In tandem with a sustainable business approach, a combination of product and market diversification, innovation and globalization provides the basis for continuous, earnings-oriented growth.





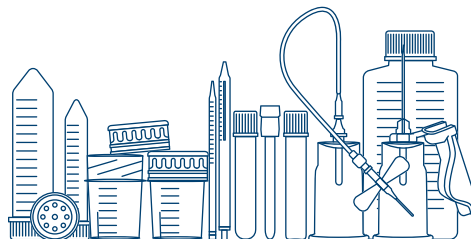
**Greiner Packaging.  
Do the Innovation.**

Greiner Packaging is one of the predominant manufacturers of plastic packaging in both the food and non-food sectors. The company is active worldwide via an efficient network of 32 locations, which employ a workforce of over 5,000.



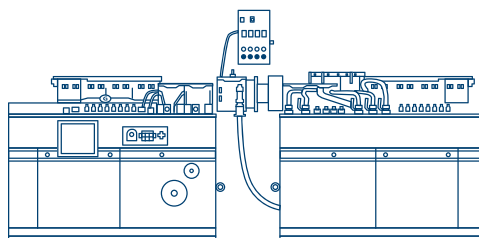
**Greiner Foam.  
Foam for Life.**

Greiner Foam is regarded as one of the world's most successful manufacturers of special foams. With a network of 62 locations and more than 2,550 employees (50 % share in joint venture), the company guarantees customer proximity, minimum delivery times and top quality.



**Greiner Bio-One.  
Your Power for Health.**

Greiner Bio-One is a global player in the field of medical technology and life science. With over 2,300 employees and 28 locations, Greiner Bio-One is a leading producer of quality products for laboratory requirements.



**Greiner Extrusion.  
Keeping you ahead in Extrusion.**

Greiner Extrusion is the world's leading supplier of extrusion lines, tooling and complete systems for profile extrusion. With 13 production and service locations, and over 700 employees, Greiner Extrusion is ideally equipped for the international market.

# simply consistent. simply greiner.

Greiner once again achieved growth in the 2019 financial year and hence a success that was not only monetary in nature, but equally the result of contributions in an ecological and social regard. Accordingly, we continue to pursue our goal of improving the lives of as many people as possible, by making them more comfortable and above all, simpler.

During the 2019 financial year Greiner was able to maintain its growth course in what was a challenging business environment. Thus at a time of economic slowdown, our product and market diversification, global orientation and innovation-driven, sustainable initiatives demonstrated their value. Greiner increased its consolidated sales revenues by 3 percent to EUR 1.675 billion over the preceding year.

We at Greiner see economic success and a responsibility to society, the environment and our employees as constituting two sides of the same

coin. Therefore, we have further intensified our involvement in sustainability and in 2019 published our first report on this subject. The targets established therein extend to 2030 and will not be easy to achieve. However, they are quite simply necessary, important and correct. We are also aware of the fact that ambitious targets demand fresh and innovative thinking. Consequently, in 2019 we created the best possible preconditions for such a mindset with the foundation of our INNOVENTURES corporate incubator.

In the course of 2019, we also established new standards with respect to teamwork through the opening in May of the Greiner Campus and the introduction of inter-group, leadership and collaboration principles, which serve to simplify day-to-day cooperation. Established during a two-year process by those who best know what is required, namely our personnel, these principles guide our actions. Conversely, their global communication in tandem with our 2025 strategy is a matter for executive management.

Successes are not created on a desert island and consequently our heartfelt gratitude and recognition go out to our employees, our partners, customers and the owning family for their outstanding achievements in the past financial year and their untiring commitment in turbulent times such as the first months of the new year due to the outbreak of the coronavirus. Our thanks are also due to the members of the Supervisory Board for the trustful cooperation.





A stylized, handwritten signature in black ink, consisting of a large 'H' followed by 'Mos' and a long horizontal stroke.

Hannes Moser  
CFO

A stylized, handwritten signature in black ink, featuring a large 'A' followed by 'Kühner' and a long horizontal stroke.

Axel Kühner  
CEO

# simply vital. roots and wings.

"There are two things that children should receive from their parents; roots and wings." This well-known quotation applies equally to both families and companies.

With the opening of a small general store in Nürtingen, Germany more than 150 years ago, the seeds were sown of what today is a globally successful, family-owned concern with almost 11,000 employees at 140 locations in 34 countries. From the outset, it was the pioneering spirit, courage and solidarity of the owning family that furnished the enterprise with both roots and wings; attributes that also enabled Greiner to maintain its growth course in 2019. This is because strong roots provide a solid anchorage even in times of storm, while wings assist endeavors to reach for the stars and achieve both continuous further progress and reinvention.

However, the success attained in the course of more than one and a half centuries is not only due to the strong foundation and far-sightedness of the owning family, but also Greiner's employees, customers, partners and the Management Board. They have all made a contribution and with their untiring commitment have ensured that the daily lives of innumerable people are today more comfortable, safer and simpler.

Our thanks and recognition for their outstanding efforts and support are due to the group's almost 11,000 employees around the world without whom Greiner's story of achievement would be impossible. Our appreciation also goes to the Greiner Management Board for the constructive teamwork and the systematic implementation of corporate strategy. Last, but by no means least, we like to express our gratitude to the owning family for their entrepreneurial vision and the fact that they have created an enterprise with strong roots and broad wings.



*Erich Gebhardt  
Chairman of the Supervisory Board*





*The Supervisory Board*

*Erich Gebhardt, Chairman / Claus Bernhardt, Deputy Chairman / Regine Hagen-Eck, Member  
Christoph Greiner, Member / Andreas Ludwig, Member / Gerald Schinagl, Member / Tilman Schad, Member  
René Wollert, Member / Georg Kofler, Employee Representative / Maximilian Gressenbauer, Employee Representative  
Ernst Zimmermann, Employee Representative / Markus Rohrauer, Employee Representative*

# simply promising. a new decade.

During the past decade, Greiner AG developed further at enormous speed. Sales revenues rose, profitability improved and progress was made with regard to the central strategic cornerstones of globalization and diversification.

On the ownership side, the handover from the fourth to the fifth generation was completed and for the first time in the company's history, its management consisted of persons from outside the owning family. Our gratitude goes to all the Greiner employees, who played a role in this success story, not merely in 2019, but also frequently throughout the entire decade.

The outbreak of the coronavirus has meant a challenging start to 2020. Nevertheless, a new decade offering a wealth of opportunities now awaits and the development of sustainable products and solutions will occupy us in every business area, irrespective of whether these involve food packaging, medical items or foam. The products manufactured must offer greater resource conservation, recyclability and inte-





Claus Bernhardt

Christoph Greiner

Dominik Greiner

Peter Greiner

Barbara Mechtler-Habig

gration into disposal loops. As a consequence they all require the shared attribute of simplicity. Because the smaller the amount of material that products need and the less complex their handling is for consumers, the more straightforward their collection and recycling will become.

Apart from sustainability, the decade ahead will be characterized by the tempo of digitalization. New business models will establish themselves, automation and artificial intelligence will gain in relevance in every business area.

However, during the coming years we also wish to develop completely new business areas. Accordingly, with the launch of Greiner INNOVENTURES in 2019 a platform has been created for all those innovations, which are not embedded directly

within the operative activities of Greiner AG, but nonetheless can offer value added to our existing customers.

We regard Greiner AG as being well equipped for the coming decade. A stable ownership structure, professional and highly motivated management and almost 11,000 loyal employees make us certain that together we can use these opportunities to the full.

*The Board of Family Shareholders*



The New Plastics Economy  
Global Commitment unites  
more than 450 businesses,  
governments and others  
behind a clear vision of a  
circular economy for plastic.  
We are pleased Greiner joined  
us from the start in 2018, by  
setting concrete 2025 targets.  
Our vision is for a world where  
plastic never becomes waste  
or pollution. It will be a chal-  
lenging journey, but by coming  
together we can eliminate the  
plastics we don't need and  
innovate, so the plastics we  
do need can be safely and  
easily circulated – keeping  
them in the economy and out  
of the environment.

SANDER DEFUYT  
LEAD OF THE NEW PLASTICS ECONOMY INITIATIVE AT THE  
ELLEN MACARTHUR FOUNDATION



# simply on principle. our values.

The name Greiner stands for almost 11,000 employees spread around the globe. It also represents a family-owned enterprise, which like any other family unit has its own system of values. Values that consist of openness, appreciation, reliability and striving for excellence and constitute the foundation stone of our success.

Wherever people interact, it is important that they understand the driving force and values underlying their assignments. Values furnish foreseeability, provide orientation and help to secure the integrity of our conduct in the long-term.

#### **Value-based leadership and teamwork**

Leadership involves personnel motivation and the creation of an environment in which every individual can achieve his or her potential to the full. An important factor in this regard is teamwork across every hierarchical level that is responsible, transparent and designed to provide long-term value generation. Therefore in a process lasting almost two years, with the support of an international, interdivisional managerial team, our workforce has drawn up our leadership and collaboration principles. These are founded on our corporate values and since October 2019 have been implemented throughout the company.

## Leadership- & Collaboration Principles



**"Our corporate values are the roots of our success. They define our culture and the nature of our daily teamwork. They render us unique and provide us with stability."**

AXEL KÜHNER  
CEO GREINER AG

# simply important. the human success factor.

Our success is indelibly linked to the achievements, enthusiasm and talents of our personnel for whom we wish to create the very best preconditions. Accordingly, as a family-owned enterprise with a more than 150-year history, we offer stability without constraints.

With strong roots in Upper Austria's Kremstal, we facilitate global careers and extend the greatest possible opportunities for personal development at 140 locations in 34 countries. We value the individuality of our employees and see diversity as enrichment. We also attach major significance to empathy with differing cultures and opinions, and respectful conduct. Moreover, we encounter fresh challenges with courage and inquisitiveness.

Apart from fair remuneration in line with performance, we view the compatibility of professional and private life as a priority. Therefore, parallel to the securing of optimum working conditions, diversity, health and occupational safety, flexible working time models, childcare at group headquarters and voluntary social benefits are just some of the features that distinguish us as an attractive employer. In addition, for many years we have made targeted investments in the further

training of our shop floor and managerial personnel through the Greiner Academy.

## **Modern employment**

For us, it is important that our employees enjoy working at our companies, as only thus can innovation succeed. Consequently, we do everything possible worldwide to provide optimized and motivating working conditions. Our thoughts in this connection are directed towards the future and therefore we have also broken away from traditional work patterns. For example, at the Greiner Campus, our modern office and training center in Kremsmünster, which was launched in 2019, we employ open planned rooms and creative zones, which make team and departmental limits more permeable and are equipped with state of the art infrastructure.

## **A good start**

The future of young people is very close to our hearts. Therefore, at our 3,400 m<sup>2</sup> apprentice training center on the Greiner Campus, we instruct the technical specialists of tomorrow. Apart from skills training, teaching includes a special program that focuses on topics such as social competence or health and safety awareness.

A solid education facilitates a positive start to professional life, while lifelong learning secures careers. Therefore, apart from the Greiner Academy, we also proffer first class further training opportunities in cooperation with universities, colleges of applied sciences and other educational institutions.

**"At Greiner, we regard diversity as enrichment and the driving force behind our success. For this reason, a professional and respectful approach to differing needs and perspectives is most important."**

CLAUDIA MAJOR  
HEAD OF STRATEGIC  
HR MANAGEMENT  
GREINER AG





# innovations that simplify our lives.

Plastics accompany our daily lives, whether as a yoghurt cup on the breakfast table, during medical treatments, in smart mattresses, comfortable car and train seats, or in window frames that offer excellent insulation. Plastics make our lives easier and enhance their quality.

However, they themselves are far from straightforward. On the contrary, the material and its processing are highly complex and demand ongoing innovation, which in addition to globalization and diversification, is one of our strategic cornerstones and is pursued in both the four divisions and Greiner Technology & Innovation (GTI), our innovation think tank.

## **Products with value added**

At Greiner, we process raw materials into intelligent products with value added. For example, in the foods area Greiner Packaging utilizes innovative barrier technologies. These prolong the shelf life of foodstuffs without the addition of preservatives and evidence that what at first glance appears to be merely simple packaging is in fact far more sophisticated. Our K3® packaging is another inventive product and consists of an environment-friendly combination of a limited quantity of plastic with a recycled cardboard wrap.

In the medical field, products from Greiner Bio-One simply make applications safer. Under the VACUETTE® brand name, ingenious items for the taking of human and veterinary samples are currently manufactured and marketed worldwide. Special products for the analysis and breeding of cell cultures, as well as microplates for high throughput screening, also evidence the division's innovative capacity. Moreover, with a view to tomorrow, Greiner Bio-One has created a basis for outstanding achievements in basic research, the discovery of active pharmaceutical agents, pre-analysis and diagnostics.



The products from the Greiner Foam division also have far greater capabilities than are immediately evident. For example, smart mattresses monitor our bodily functions during sleep and intelligent aircraft cushions with printed electronics forecast their remaining service life and the date when a replacement will be required. Greiner Foam is also active in other innovative fields such as bio-based foams and 3D-printing-technology for small batch production and the rapid prototyping of foam components.

Greiner Extrusion, our technology division, manufactures capital goods for the extrusion of profiles. Its innovative and technological leadership now extends to extrusion dimensioning, which delivers measurable value added. The DIGI.LINE extrusion line minimizes material consumption and raises output, while also improving extrusion stability and production reliability.

#### **The INNOVENTURES corporate incubator**

Positive performance today offers no guarantee of success tomorrow. Therefore, in order to secure growth, equal attention must be paid to both future and existing business possibilities. Consequently, our Greiner Technology & Innovation think tank has created the INNOVENTURES incubator, which offers holistic scope for the development of new, future-proof business models. As a result, innovations can emerge that are entirely detached from day-to-day business.

**"Innovation is an ongoing process. Together with diversification and globalization, it constitutes one of our three strategic cornerstones and the basis for earnings-oriented growth."**

HANNES MOSER  
CFO GREINER AG



plastic.  
simply  
valuable.

In every conceivable color and shape, soft or hard, transparent or opaque, plastic represents a remarkably versatile material. It is also indispensable to modern life.

Even the most ardent plastics opponents are unlikely to object to its employment in certain areas such as medicine. However, matters become more critical when plastic is used out of pure convenience and in excessive amounts. Drinking straws, disposable cups, cotton buds and plastic bags are just some of the products, which one can forego with a clear conscience. This certainly means dispensing with a degree of comfort and hygiene, as well as a partially poorer CO<sub>2</sub>-footprint, but is nonetheless a worthwhile sacrifice. Indeed we at Greiner are of the opinion that plastics should only be utilized where they offer value added. This should be adjudged on a personal level and in this connection improved information is important, for without it decisions may be taken that help neither the user nor the environment.

Today, plastics face sharp criticism and the debate surrounding the material is frequently one-sided and highly emotional. Consequently, the numerous advantages that it offers such as lightness, ideal food protection, efficient insulation against heat and cold, inexpensiveness and resource-protective production, not to mention its virtual indestructibility that is both a curse and a blessing, are often ignored. Therefore it is not the material per se that is currently causing us problems, but rather its careless use, incorrect disposal and a lack of recycling. These are factors, which constitute an environmental policy challenge that demands urgent solutions.

### **Circular utilization**

At a time when resources are in ever-shorter supply, it is clear that plastic is too valuable to be thrown away after being used just once. Instead, environmental protection and the minimization of plastic waste necessitate the retention of the material in the economic cycle for as long as possible. This requires creative thinking along the entire value added chain, as well as additional economic and, above all, regulative incentives. In fact, various plastics can be recycled several times over although the reuse of others is difficult for technical, legal and economic reasons. For example, owing to stringent regulations, at present the possibilities for employing products containing recycle in the foods sector are subject to de facto strict limitations.

Only when all the statutory requirements have been met and the fundamental demands on the packaging have been clarified can the actual reuse-oriented design process commence. Naturally enough, consumers must also subsequently cooperate, as depending upon the percentage of recycle content, materials can demonstrate varying degrees of discoloration and are therefore not entirely transparent, but instead light gray, brown or greenish. These chromatic deviations frequently prove unacceptable to consumers and therefore the current situation with regard to recycled plastic is similar to that experienced many years ago in the case of recycled paper. Quite simply, consumers must get used to the new look.



# simply circular.

Stefan Grafenhorst heads the Sustainability & Corporate Responsibility Department at Greiner and is one of our experts in the circular economy field. In an interview, he talks about the significance of a functional circular economy.

**Greiner has put its faith in circular economy. Why?**

**Grafenhorst:** If we wish to leave our children a world worth living in, a transition from a linear to a circular economic system is unavoidable. Moreover, this not only applies to plastics. The steady depletion of resources and increasing environmental impact demand that we retain products for as long as possible in the economic loop, or in other words, recycle them. The fact that the consumer goods of today represent the raw materials of tomorrow must finally be understood.

**Circular economy and recycling go hand in hand and the latter is a well-known concept. Why therefore is the circular economy not yet reality?**

**Grafenhorst:** Even though recycling is a familiar concept, the pitfalls lie in the details. Therefore, we need new and innovative approaches and intensive cooperation along the value added chain because no one can overcome the current challenges in isolation. Raw material manufacturers, producers, consumers and recyclers must all contribute.



*Stefan Grafenhorst  
Head of Sustainability & Corporate Responsibility  
Greiner AG*

### **What is Greiner doing with respect to recyclability?**

**Grafenhorst:** In order that products such as yoghurt cups can be integrated into the circular economy, they have to be recyclable. Among many other aspects, this means that they must be so designed as to enable recycling systems to identify, separate and reuse the material as plastic. In order to guarantee this capability we are currently testing the use of watermarks on our products as a sorting aid. Greiner allots absolute priority to the comprehensive consideration of every eco-design factor and this forms the starting point of every product development process. Furthermore, apart from design for recycling we are also working intensively on the use of recyclates with the aim of reducing the ecological impact of our products still further. We understand fully that a great deal remains to be achieved with regard to an environment friendlier plastics cycle and have not closed our eyes to the evident problems. Therefore, we are doing everything in our power to ensure a sustainable future.

### **Where is Greiner leading by example?**

**Grafenhorst:** We have set ourselves ambitious targets. The adaptation of our product portfolio with respect to total recyclability, additional innovations in line with sustainability and activities aimed at establishing circular economics are all central issues in this connection. We pool our expertise and cooperate with a variety of interest groups in numerous local, national and global initiatives. For example, in Great Britain we are seeking future-proof solutions with supermarkets and consumer goods producers within the framework of the UK Plastics Pact. In addition, during 2018 we signed the New Plastics Economy Global Commitment of the Ellen MacArthur Foundation, which is to be implemented in teamwork with the environment program of the United Nations and is intended to tackle the scourge of worldwide plastics pollution.



simply united.  
the packaging  
with a future  
platform.

We believe plastic products and packaging often constitute the superior solution and others share this opinion. Therefore, we recently formed the “Packaging with a Future” platform together with a number of partners with whom we are cooperating along the value added chain.

We are combining our capabilities, adopting fresh approaches and pulling together with the shared aim of ensuring that plastic will again be seen for what it is, namely a valuable material without which our current standard of living would be impossible. At the same time, we also have a focus on the negative effects of care-less plastic consumption and are working hard on their mastery. We are jointly committed to shaping a sustainable future in which resources will be protected and product cycles employed. In a nutshell, we wish to push back boundaries.

#### **Less polarization, more cooperation**

The members of the platform clearly state that a problem exists and we have to bear part of the related responsibility. We wish to do this in conjunction with all those who have made a meaningful contribution to packaging with a future. Mutual opposition of the players would render any genuine solutions impossible and consequently these can only be achieved through genuine and sincere cooperation.

#### **Seeing the bigger picture**

We all agree that we want the same thing, namely a clean and safe future. In order to achieve this goal, every possibility must be considered and a decision made on a case-by-case basis, as to which items must be packaged and with what. The task is to consider as many potential solutions as is practicable, in order to achieve a result offering maximum sustainability.

#### **Now or never**

We believe that the resource-protective use of packaging is feasible, rational and not least, essential. By now at the very latest, it is clear to everyone that the task ahead involves the handling of our resources with greater care and a reduction in the footprint that we leave behind. We have long been working towards this goal as an individual company, but in unison we can achieve far more. We must promote our solutions further and thus also become a role model for the conquest of the international waste problem.

#### **Closing the circle**

We wish to realize the vision of effective waste collection, sorting and recycling in a functional cyclical economy. Europe is already leading the way by example and has set itself ambitious targets. For example, by 2030 all plastic packaging must be reusable or recyclable. However, in order to achieve this goal technologies and an approach similar to those already existent in Austria must be employed and subjected to intensive further development. Only then can we serve as a global blueprint for success. For waste knows no frontiers!



# bad for the climate? simply untrue.

At a time of “plastic bashing” it may appear paradoxical, but those wishing to rescue the climate cannot avoid the use of plastics.

For example, in buildings they provide effective insulation against cold and heat, and as a result of their lightness plastics reduce the CO<sub>2</sub> emissions from vehicles and aircraft.

Accordingly, in a global economy in which goods are transported over long distances, were we to replace plastics with other materials, product weight would multiply and increase CO<sub>2</sub> output thus engendering a catastrophic climatic impact. Furthermore plastic packaging, which today is the object of frequent criticism, represents effective product protection. Indeed, if one considers the fact that 90 percent of the CO<sub>2</sub> footprint of a product derives from the content and only 10 percent emanates from the packaging, it then becomes apparent that optimum protection, which is

a major packaging task, is of eminent importance for a positive eco-balance.

## **The environmental impact of packaging in figures**

Consumption results in greenhouse gases, but only 1.5 to 2 percent of the CO<sub>2</sub> footprint of an average European consumer derives from packaging. To put this figure into perspective, it is worth considering that the CO<sub>2</sub> footprint of a flight from Berlin to Singapore and back corresponds with per capita packaging consumption during a period of thirty years. And to remain on the topic of mobility, car tire abrasion is the source of roughly a third of the widely cited microplastic emissions, which constitute two-thirds of the plastics entering the environment.

However, to return to plastic packaging and its environmental impact, it can be stated that as a rule, owing to factors that include its protective function, this is many times smaller than that of the product. As an illustrative example, in the case of a portion of roast beef or other meat

**"Plastics help to save CO<sub>2</sub> and as compared to other materials demonstrate a superior environmental balance. However, this is always subject to the premise that the plastics are collected and disposed of appropriately."**

AXEL KÜHNER  
CEO GREINER AG

product the CO<sub>2</sub> balance of the product is 200 times greater than that of the packaging. Moreover, optimized packaging prolongs the shelf life of the product from 6 to 16 days and cuts meat waste in retailing from 12 to 3 percent. If one bears in mind the fact that the production of 1kg of beef requires some 14,000l of water, it becomes evident what such a saving means for the climate balance of the product.

Packaging can represent a powerful lever against food waste amounting to approximately 90 kg per head and year. However, this does not imply a dogma, which insists that plastic must always be used for its production.



# 2019. simply a mixed year.

In the course of 2019, the global economy lost a good deal of its momentum. This ongoing weakness derived mainly from the trade conflict between the USA and China, uncertainties regarding the shape of Brexit and the increasing insecurity created by geopolitical risks.

During the past year, globalization became shackled owing to the introduction of 1,300 new trade restrictions, either in the form of customs duties, or non-tariff trading barriers. Worldwide trading dynamism was thus sacrificed in the name of national interests. The USA - China trade dispute, the confusion surrounding the UK's departure from the EU and geopolitical tensions all made their presence felt and caused major uncertainty worldwide. In global terms, economic growth fell from 2.9 percent in 2018 to 2.4 percent in 2019. As in the preceding years, growth in the euro zone stagnated and in 2019 amounted to a mere 1.2 percent. Italy demonstrated the poorest performance within the euro zone and with 0.2 percent was only marginally positive. The trade

conflicts also had a severe impact upon the German economy, which suffered due to its dependency upon exports. Consequently, in 2019 it grew by a meager 0.5 percent. By contrast, positive signals emanated from Spain, as with growth of 2.0 percent the former crisis state demonstrated the strongest expansion in the euro zone. In the course of the year, the French economy recovered slowly from domestic political strife and the related demonstrations of the "gilets jaunes" and thus grew by 1.3 percent. In the wake of the slowdown in international trade, economic growth in Austria also declined markedly and stood at 1.6 percent.

#### **Brexit costs growth**

On 23 June 2016, the citizens of the United Kingdom voted by a small majority to take their nation out of the European Union. Following long and unsuccessful Brexit negotiations, Theresa May lost a party leadership vote to the hardliner Boris Johnson and resigned as prime minister. Johnson then called a general election on 12 December 2019 and the Brexit leaving date was postponed for a third time before being finally fixed for 31 January 2020. In 2016, the UK still occupied third place amongst the G10 nations in the growth ratings, but in 2019 the country's economy only grew by 1.3 percent. Moreover, although possible burdens on the British economy emanating from the Brexit vote have already been suggested for some years, the full economic effects of EU departure will first become evident after 2020.

#### **USA**

With a 12-month delay, the downturn also reached the USA in 2019. The positive effects of the tax reform implemented at the beginning of 2018 weakened during the past year and at the same time the costs of protectionist trade policies became increasingly apparent. In addition, towards the end of the year both the impeachment proceedings surrounding the incumbent president, Donald Trump, and the constant hostilities with Iran resulted in further uncertainty. Nonetheless, with growth of 2.3 percent as opposed to 2.9 percent in 2018, the US economy held up well.

#### **China**

Structural problems and the trade conflict with the USA had a dampening effect upon Chinese development. In 2019, the world's second-largest economy expanded by 6.2 per cent, which was the slowest growth rate in almost three decades. However, at the end of the year there were already indications of a slight stabilization. Observers see as deriving from the temporary defusing of the trade dispute following the signing of a partial agreement for although this accord does not remove the rivalry between the two nations, at least in the short-term it should prevent a rapid deterioration in their relations.

# simply successful. despite a challenging economic climate.

In the 2019 financial year, Greiner maintained its successful course with consolidated revenues of EUR 1.675 billion and growth of 3 percent. Product and market diversification ensures corporate stability in a period of economic slowdown and in future will also serve to open up new business areas.

Alongside globalization and innovation, product and market diversification constitutes one of Greiner's three strategic cornerstones and in times of difficulty, it secures both corporate stability and the development of additional business lines.

Volatile currency markets and the dependency upon raw material prices are recurring challenges. However, due primarily to continuing low interest rates in Europe, at least in 2019 currency effects barely impacted the course of business. Despite the loss of general economic impetus, Greiner Packaging and Greiner Bio-One were able to maintain their growth course. In 2019 Greiner Foam and Greiner Extrusion registered a slight fall in sales revenues. In total, during the 2019 financial year Greiner achieved consolidated sales revenues of EUR 1.675 billion (2018: EUR 1.631 billion). This figure corresponds with an increase of 3 percent as compared to the preceding year. Cash flow was 13 percent higher than in the previous year, rising to EUR 144 million (2018: EUR 128 million). As was the case in previous years, all of the investments initiated in 2019 were financed from cash flow.



## Sales revenues by region



	Europe	North America	Asia	South America	Rest of world
2019	1,253	183	154	57	28
PY	+1 %	+8 %	+5 %	+43 %	-23 %
Share	76 %	10 %	9 %	3 %	2 %

ACTUAL 2019 in million euros, change over the previous year and share of 2019 sales revenue in %, joint ventures prorated

## Sales revenues by division



	Greiner	Greiner Packaging	Greiner Bio-One	Greiner Foam	Greiner Extrusion
2019	1,675	690	509	401	78
PY	+3 %	+2 %	+8 %	-2 %	-2 %
Share	100 %	41 %	30 %	24 %	5 %

ACTUAL 2019 in million euros, change over the previous year and share of 2019 sales revenue in %, joint ventures prorated

In 2019, Greiner invested EUR 99 million in tangible assets (2018: EUR 108 million) and with 10,745 employees at 140 locations in 34 countries worldwide, the Greiner family again increased in size. As at the 31 December 2019 closing date, Greiner had 2,543 employees in Austria, 6,251 in the rest of Europe, 775 in Asia, 821 in North America, 219 in South America and 136 in the rest of the world.

#### **Market position consolidated**

In 2019, Greiner once again expanded considerably. The focus was on investments in plant and machinery in order to also guarantee the availability of sufficient capacity in the face of rising demand and be able to secure first class quality standards across the board. During the year, acquisitions and their integration into the group played a subordinate role.

A central theme of the past financial year was the upgrading of foam competence. This has long been a major Greiner cornerstone and especially in the technical foam segment is foreseen for further expansion. Therefore, related efforts remain at the top of the group's agenda for 2020.

#### **Greiner Campus – thinking in terms of tomorrow**

In the past financial year, Greiner also created the spatial basis for continued growth with the completion of the EUR 16 million, 11,000 m<sup>2</sup> enlargement of its headquarters in Kremsmünster (Austria). The Greiner Campus, which opened in May 2019, is a modern office and training center with some 2,400 m<sup>2</sup> of excellently equipped workstations and open work spaces, as well as almost 3,400 m<sup>2</sup> of apprentice workshops. A bistro serving freshly cooked, regional cuisine daily and a garage with 188 parking spaces round off the amenities at the new group headquarters and serve to ensure that Greiner personnel enjoy an optimum working environment.

#### **A focus on sustainability**

In 2050, Europe intends to become the first climate-neutral continent. In order to achieve

this ambitious target at the end of 2019 the European Commission presented its new strategy for growth in the shape of the Green Deal, which defines an apposite package of measures. The Green Deal is intended to secure the efficient use of resources and ensure that among other results emissions will be cut while employment is simultaneously created. Greiner already anchored binding socially acceptable and environmentally compatible action within its group during 2016 through the introduction of a comprehensive sustainability strategy. This was followed in 2017 by the implementation of sustainability management throughout the group and the first Greiner Sustainability Report in 2019. The latter established measurable objectives such as the elimination of all problematic and superfluous plastic packaging and a promise to make the group's entire output in this area recyclable, reusable or suitable for composting by 2025. A further obligation for 2025 envisages a considerable percentage of the material requirement as being recyclable. Furthermore, the introduction of an internal carbon pricing system by the end of 2020 and a 53 percent reduction in specific CO<sub>2</sub> emissions have also been determined.

#### **CO<sub>2</sub> emissions reported via the GHG Protocol**

For a number of years, Greiner has reported its corporate greenhouse gas emissions via the Greenhouse Gas Protocol (GHG Protocol). In 2019 (reporting period 1.1.2019 until 31.12.2019), the CO<sub>2</sub> footprint (Scope 1 and Scope 2 emissions) consisted of 290,474 tonnes of CO<sub>2</sub> equivalents. In view of the continual improvement in the quality and depth of detail of the collated corporate data, 2021 will see an evaluation of the emission sequence with the aim of a decision regarding a recalculation of the basis year in line with the GHG Protocol.

#### **Success though digitalization**

Forward-looking initiatives and farsightedness represent the keys to success. Greiner has long been part of the digital world and with the help of maturity models systematically examines the digitalization of its products, processes, business plans and infrastructure. Such analyses show where and how digitalization generates value added and subsequently contribute to income-oriented growth. For Greiner, digitalization not only means networked production in the shape of the fourth industrial revolution, but also new business models and smart products

Yearly CO<sub>2</sub> emissions\*

\*Scope 1: emissions from internal company activities; Scope 2: emissions from energy supply.

The calculations were drawn up in accordance with the guidelines of the GHG Protocol and incorporate the largest administrative and production locations in which Greiner has a participation of over 50 percent. Joint ventures and sales offices were excluded. The financial data for the calculation of the specific CO<sub>2</sub> emissions per EUR 1,000 sales revenues includes all consolidated Greiner companies. The CO<sub>2</sub> values shown contain all the process- and vehicle fleet-related emissions. The latter and those emanating from cooling agents were extrapolated on the basis of representative Greiner locations. The gases included are CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and SF<sub>6</sub>, as well as the HFC and PFC groups. The sources for the emission factors were the International Energy Agency (IEA), the Austrian Federal Ministry of the Environment (GEMIS) and ecoinvent. The GWP factors are pursuant to the 2013 IPCC standard.

networked in the Internet of Things (IoT). In highly automated plants such as those belonging to Greiner Packaging and Greiner Bio-One, Industry 4.0 takes center stage, while IoT is more predominant at Greiner Foam. Within the framework of their respective digitization strategies, the divisional organizations also work in unison on a variety of digitalization topics. Moreover, with Greiner Technology and Innovation the group disposes over a think tank, which supports the operative divisions with their activities in this area.

### Outlook 2020

Since the beginning of 2020, the world has watched the rapid spread of the new coronavirus with bated breath. Upon the editorial closing date, a detailed assessment of the effects of the pandemic upon the global economy in general and Greiner in particular was not yet possible. However, in spite of this problem, moderate economic growth, political disputes and volatile currency markets, Greiner still anticipates a further increase in sales revenues during the current finan-

cial year. In this challenging environment, Greiner benefits primarily from its geographic diversification and product multiplicity. Equally, both the names and reputations of the individual business divisions have long been well established and ensure durable customer relationships. Furthermore, as Greiner generally produces for the local markets in the countries where it is based, it is largely free from import tariffs and trading restrictions. Innovation is a decisive factor for success in the European and international marketplaces. Therefore, in order to establish new business lines, during 2020 research and development are to be further internationalized and the cooperation with external research institutes and companies intensified. The newly founded INNOVENTURES corporate incubator will ensure that in future potentially disruptive innovations and new, scalable business models can be created entirely separately from day-to-day business.

simply  
**fresh.**







# simply greiner packaging.

During 2019, the circular economy was the predominant topic of discussion within the plastics industry and in particular the object of intensive debate in the packaging field. Against this background, through its problem-solving approaches Greiner Packaging was able to position itself in the industry as a forward thinker, which is an important role that can be built upon in future. Indeed, the proactive consideration of trends and market demands already resulted in an extremely successful 2019 financial year.



As a leading European producer of plastic packaging in the food and non-food areas, for the past sixty years Greiner Packaging has been simplifying the daily lives of both its customers and consumers with solutions that are equally practical and attractive. The company deals with the challenges of the market via two business units consisting of Packaging and Assistec. The former manufactures packaging such as cups, bottles and lids, while the latter acts as a solution provider through the provision of customized plastics solutions, their assembly and individual upgrading.





**"For Greiner  
Packaging social  
changes mean  
fresh opportunities  
for both our company  
and the environment."**

*Manfred Stanek  
CEO Greiner Packaging International GmbH*

### Record results confirm the probity of the chosen strategy

Greiner Packaging is active worldwide and in the 2019 financial year employed some 5,000 employees at 32 locations in 19 countries. Greiner Packaging achieved sales revenues for the year amounting to EUR 690 million, which represented an increase of 2 percent over the preceding year (2018: EUR 673 million). In terms of sales revenues and profitability, 2019 was the most lucrative year in company history. In addition to the successful conclusion of projects for new customers, this extremely positive result derived from the implementation of the 2022 Strategy. In line with the principle of operative excellence, capacity was concentrated within the production networks, thereby optimizing machine park utilization.

### A challenging environment

The positive result was achieved in spite of a number of challenging external factors. For example, the volatile political situation in Turkey caused inflation to rise with negative consequences for the prosperity of the population and sales of consumer goods.

The approach of Brexit also led to uncertainties amongst companies doing business in the UK. However, the fact that the Greiner Packaging location in Dungannon produces primarily for local customers meant that it was spared any negative effects.



*The opening of this cardboard-plastic combination has been reworked. As a result, in future it will be even easier to intuitively separate both components, which can then be recycled.*



2019 witnessed a radical change in the raw materials market as the increase in demand for sustainable items triggered a decline in that for conventional packaging industry plastics. As a result, in comparison with 2018, the market prices for both polystyrene and polypropylene fell. Moreover, 2019 also saw a surprisingly large drop in the price for PET, which was due largely to a late start to the season and surplus capacity worldwide. By contrast, the prices for r-PET rose, as at present this is the only material to possess a positive EFSA Opinion and can therefore be employed for food packaging.

### The trend towards sustainable solutions continues and the circular economy is gaining momentum

Greiner Packaging pushed ahead with a transition from a linear to a circular economic system. The legal framework for this initiative is provided by the EU's Single-Use Plastics Directive, which was published in June 2019. The main objectives of this regulation are the promotion of reusable,





*The opening ceremony of the first Greiner Packaging plastic collection center in Manila, Philippines.*

recyclable products that are also suitable for composting, a rise in the rate of recycling to over 50 percent, the increased employment of recycle, and a ban on disposable plastic items. Greiner Packaging subscribes fully to these guidelines, not least owing to its intensive focus upon the topic of design for recycling, reductions of the plastic content of products and employment of alternatives to virgin material (whereby especially in the foods segment, the use of recycles is subject to legislative restrictions). Greiner Packaging wishes to assume a pioneering role and therefore numerous internal innovation teams are working on sustainable packaging for the future. Moreover, participation in and the support of various projects serve to underline company involvement in this connection. For example, in 2019 Greiner Packaging extended its cooperation with the Ellen MacArthur Foundation from Great Britain for another three years and has assumed various ambitious obligations under the terms of the Global Commitment. Furthermore, 2019

saw the commencement of teamwork with the Plastic Bank, a Canadian social enterprise that has undertaken to protect the environment and assist people in need. Plastic waste is collected in towns, cities and on beaches, sorted, recycled and sold. In view of the fact that the gatherers receive financial remuneration for every kilogram of plastic waste handed in, they have an opportunity to escape the poverty that frequently dominates their home countries. Greiner Packaging is the first packaging company in the world to become a Plastic Bank partner and in Manila on the Philippines the company is already supporting the creation of an ecosystem for Social Plastic® with a total of five collecting stations.



Greiner Packaging aims to achieve sustainable action right down the line and the probity of this approach is evidenced by two honors received during 2019. Firstly, EcoVadis, a globally operative platform that prepares CSR supplier ratings for worldwide delivery chains, presented the company with a Gold Medal for its efforts. The platform evaluates the areas of environment, labor & human rights, ethics and sustainable procurement on the basis of their sustainability. Consequently, with its gold medal Greiner Packaging numbers among the best three percent of plastics processing companies worldwide. Secondly, the Austrian Federal Ministry for Sustainability and Tourism honored Greiner Packaging for its exceptional commitment in the field of energy efficiency. By 2030, Greiner Packaging Austria intends to raise its energy efficiency by 20 percent and increase the share of renewable energy in its electricity purchases to 90 percent. The journey into a sustainable future can only be completed by means of cooperation between business and consumers. Therefore, Greiner Packaging relies heavily upon a dialog with its customers, as was the case during the 2019 Innovation Day, which bore the title "Transitioning to a Circular Economy". In March, some 200 invited guests from 15 nations gathered in the Packworld in Oberwaltersdorf (Austria), where six experts from the complete value added chain provided insights into the challenges and opportunities offered by a circular economic system in the plastics field.



*In 2019, Greiner Assistec extended its twin-sheet process range and can now deep draw plastic sheets in sizes up to 2,700 x 1,700 mm.*

### Greiner Assistec

The Greiner Assistec business unit creates customized solutions and is able to provide innovative combinations of differing technologies. For Greiner Assistec, top quality and sustainable production go hand in hand and therefore during the 2019 financial year, the latter played a major role. The spotlight was on resource-protective manufacture, the avoidance of production waste, efficient process controls, reject prevention, the use of modern machinery and the employment of recyclates.

In 2019, Greiner Assistec was able to enlarge its value added portfolio with an important bonding technique. As a result, hot plate welding technology, which involves the fusing together of individual parts with the aid of a hot plate, is now also available. This addition to Greiner Assistec's range represented a response to customer requests and means that the unit can further enhance its reputation as a supplier of complete solutions. Its specialists have also extended their expertise in the



twin-sheet process field. Using a new and highly modern system, plastic sheets with dimensions of up to 2,700x1,700 mm can now be thermoformed, which enables coverage of the demand for industrial pallets and special formats for large load carriers.

Furthermore, in 2019 Greiner Assistec was also able to celebrate the receipt of an honor, as the global player and multi-technology concern 3M presented its long-term partner with the 3M EMEA GmbH 2018 Supplier of the Year Award for its customized solutions and outstanding degree of service.

### Trends

Apart from sustainability, digitalization also plays a major role, as reflected not just by the production area, but also new business models and smart products. The latter area is particularly well suited to a combination of sustainability and digitalization, and for example invisible, digital watermarks on packaging contribute to improved sortability in waste handling plants.



*Greiner Packaging is employing a new soot-free, black colorant for WC cleaning agent bottles. As opposed to standard solutions this is easily recognizable in sorting plants and the packaging can be entirely recycled.*

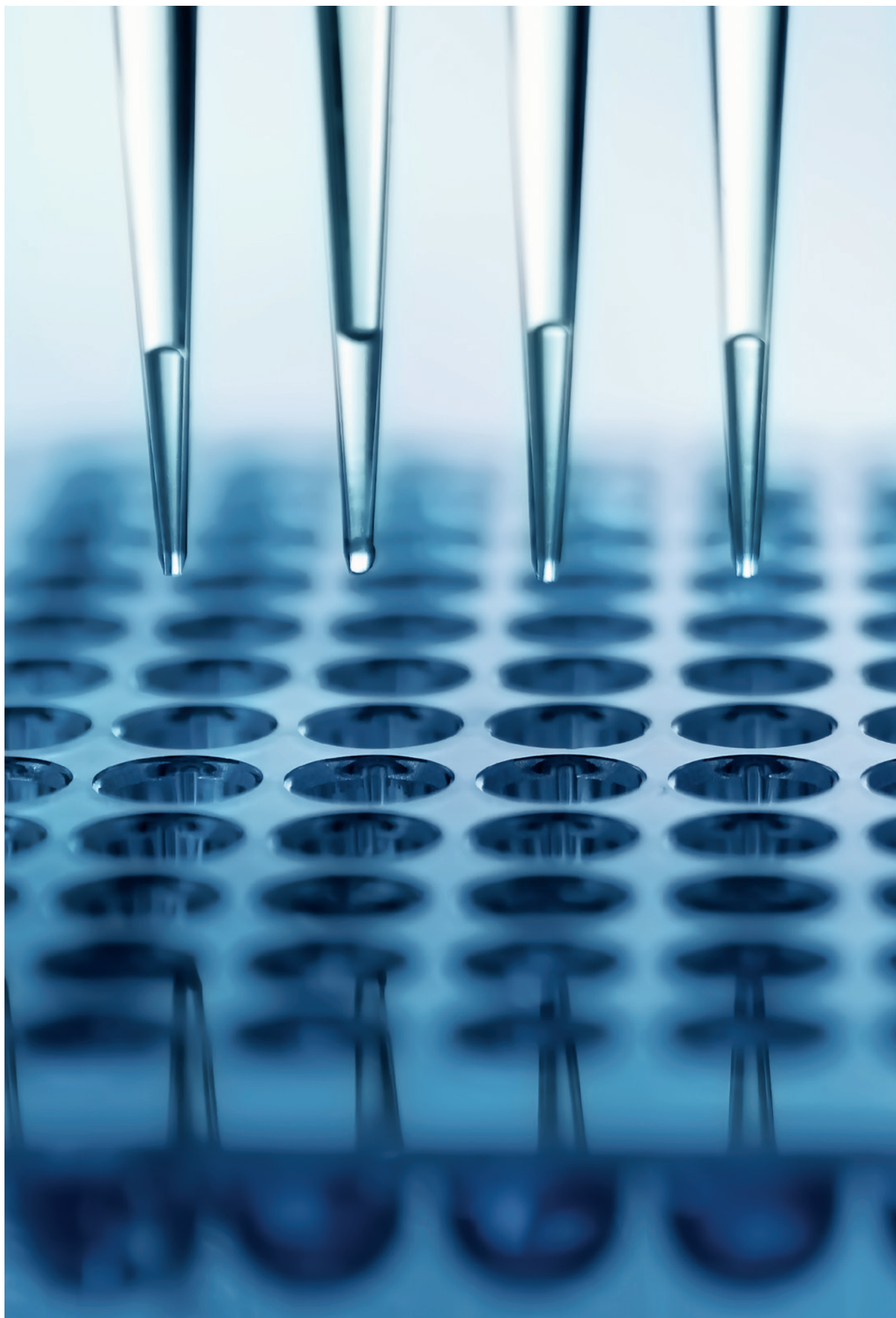
### Outlook 2020

Greiner Packaging is convinced that it will enjoy a good year in 2020. First and foremost, the circular economy offers additional potential for improvement and fresh opportunities. The emphasis on products with a positive CO<sub>2</sub> balance and excellent recycling capacity means that customer and consumer demands can be met to an equal degree. Moreover, especially as far as the recycling of packaging is concerned, the coming months will see numerous new ideas enter the market. Greiner Packaging is therefore already demonstrating a high level of commitment in this regard and is in the process of implementing concrete measures for the enhanced recycling capacity of its products. Therefore, in view of new projects and developments, both the Packaging and Assistec business units are able to look to the future with confidence.

simply  
**safe.**







# simply greiner bio-one.

Greiner Bio-One has again expanded its global presence with a new location in Indonesia. In addition, enlarged capacity has opened up new opportunities and product launches in key market segments have created additional growth potential. It is these factors, among others, that constitute the reasons for the successful 2019 financial year.

With its Preanalytics, BioScience and Mediscan business units, Greiner Bio-One is one of the world's leading companies in the field of medical technology. Preanalytics, which is based in Kremsmünster, Austria, specializes in the development and production of collection systems for human and veterinary samples of blood, urine and saliva and provides customized, digital systems solutions (Greiner eHealth Technologies) for the pre-analytical process. Safety IV catheters for venous and arterial use round off the portfolio. These innovative product solutions make a major contribution to greater efficiency and safety during daily, routine tasks in hospitals, laboratories and medical practices.







**"Our focus is on a strong customer orientation and innovative, top quality product solutions."**

*Rainer Perneker  
CEO Greiner Bio-One International GmbH*



*Samplix® multiple use drawing needles and tube holders serve as matching accessories in the new product line.*



*Samplix® Blood Collection Tubes represent a closed vacuum system for threshold and developing countries.*

The BioScience business unit, which has its headquarters in Frickenhausen (Germany) acts as a strong technology partner to universities, research institutes and the diagnostic, pharmaceutical and bio-technological industries. The business unit develops and manufactures laboratory consumables and vessels for the cultivation and analysis of cell cultures, as well as microplates for the high-throughput screening of biochemical, genetic and pharmacological test samples. In addition, molecular analysis methods such as DNA arrays and quick tests are offered for the evidencing of foreign viruses together with platforms for automated HPV genotyping.

In Europe, Mediscan numbers among the leading suppliers of products and services in the field of medical product and food packaging sterilization, and the functional improvement of plastics and semiconductors by means of ionizing radiation.

Furthermore, as an original equipment manufacturer (OEM) and competent technology partner, Greiner Bio-One offers industrial customers from the fields of biotechnology, diagnostics, medical

technology and pharmaceuticals, customized product solutions and manufacturing processes that extend from the development phase to production.

#### **Very positive business development in 2019**

In 2019, Greiner Bio-One employed a global workforce of 2,320 at 28 locations in 20 countries. The company achieved sales revenues of EUR 509 million, which represented growth of 8 percent over the preceding year (2018: EUR 473 million), and passed the EUR 500 million mark for the first time. Therefore, in spite of a challenging market environment, the successful business trend of recent years was maintained. Moreover, extensive increases in capacity enabled the use of a range of fresh potential and new customers were also obtained. In particular, market shares were gained in the USA and Latin America and positive currency effects emanating from the exchange rates for the US dollar and Japanese yen generated additional momentum. The business result also benefited from the fall in raw material prices, which was particularly notable in the second half-year.

### Asia is an important growth market

In 2019, measures aimed at further strengthening the market presence in Asia were again implemented. With a population of around 260 million and a rapidly growing economy, Indonesia is one of Southeast Asia's most important growth markets. Therefore, in February Greiner Bio-One opened a representative office in Jakarta, the nation's capital, and has thus moved closer to its customers with the aim of responding to their requirements to an even better degree in future.

The production plant in Thailand plays a major role in the successful supply of the Asian market. However, owing to the continual growth of recent years, its spatial capacity is exhausted. Consequently, in June 2019 work commenced on the enlargement of the Thai location's production and storage facilities, which will be completed in 2020.

The Frickenhausen location (Germany) is also of great importance to international supplies and as part of a large-scale infrastructure project, in 2019 construction work began on extensions to both the production and administrative buildings, which will be finished in 2020.



*The closed CELLdisc system offers full protection against contamination.*

### Samplix® is a response to customer demands in the Asian region

March 2019 saw the launch of the Samplix® product line, which was developed specially to meet the requirements of selected markets in Asia and Africa, and facilitates increased activities in these large growth regions. The product line consists of the Samplix® Blood Collection Tube and matching accessories such as the Samplix® multiple use drawing needles and tube holders. In many regions of the world, blood collection continues to take place using a syringe from which the sample material is subsequently transferred to a tube manually. This method of collection engenders the considerable risk of direct contact with the sample and hence infection with blood-borne diseases. As a solution, with Samplix® Greiner Bio-One offers users a closed vacuum system with a good price-performance ratio. Samplix® therefore represents the ideal system for a switch to safe and hygienic blood collection.

### A new and innovative safety product

The VACUETTE® EVOPROTECT Blood Collection Set adds a new generation of inventive safety solutions to the existing product portfolio. This premium product possesses a semi-automatic safety mechanism, which allows single-handed actuation and thus provides the user with reliable protection and against needle-stick injuries. As a result, this safety blood collection set offers simple employment, even greater safeguards and in addition, patient protective cannulation. EVOPROTECT was first presented during the summer in 2019 and will become available on the market in 2020.

### Cell culture products have become rock stars

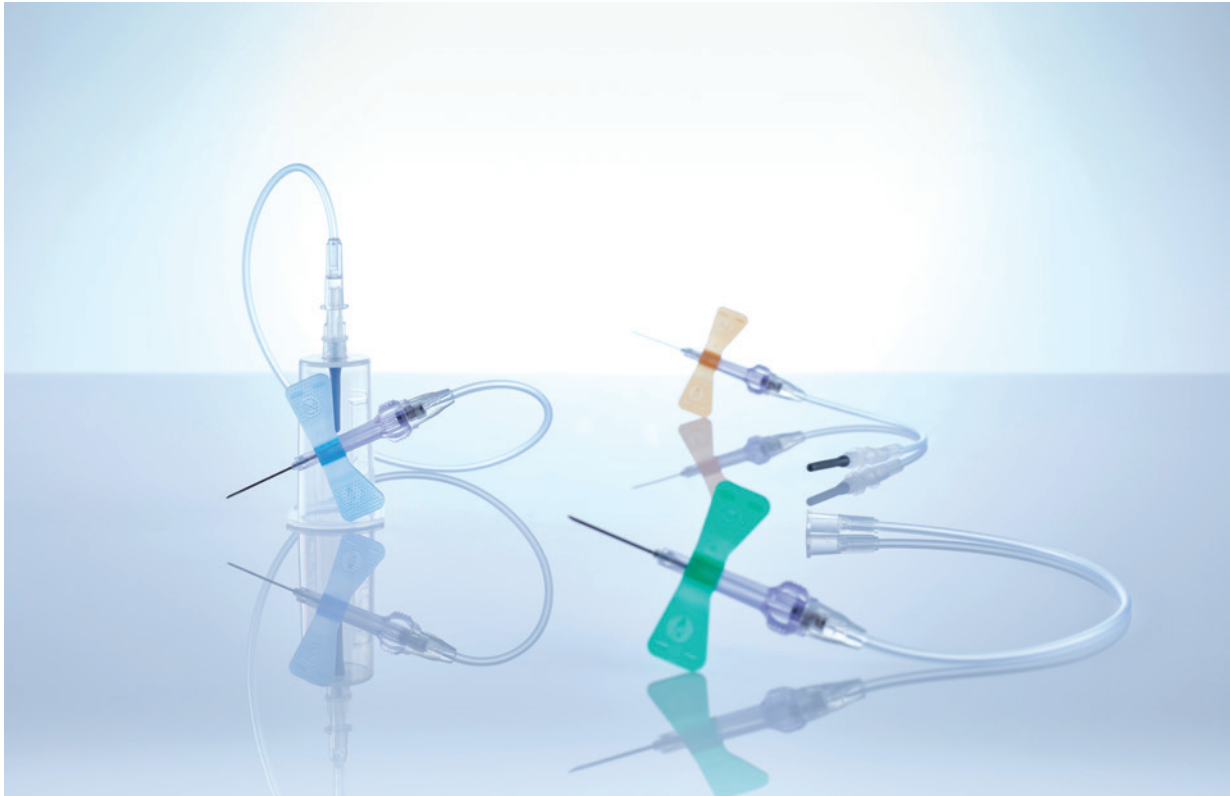
The BioScience business unit has focused its marketing activities in the cell and tissue culture product field under the motto #cellculturerocks. In the magnetic 3D cell culture segment, individual kit components have been optimized and the portfolio rounded off with the related CELLSTAR® cell culture flasks, which have cell-repellent surfaces. The products facilitate the development of new treatment and therapy methods for tumor dis-



*An extended range of applications is available in the magnetic 3D cell culture field.*

eases and personalized medicine. The results of research derived from teamwork with industrial and scientific partners have been published in internationally respected scientific journals. In the field of mass cell cultures, Greiner Bio-One has extended its CELLdisc-product range. New 12- and 24-layer versions assist users during the switch from competitor products to CELLdisc by eradicating the need for complicated adjustments to existing processes. Furthermore, the CELLdisc portfolio has been supplemented with a closed system, which securely excludes contamination and thus paves the way for new application possibilities. On this basis, CELLdisc can now be employed in the production of cell-therapeutic products that make the highest demands with regard to safety and are subject to stringent contamination protection regulations.





*VACUETTE® EVOPROTECT is a safety blood collection set with a semi-automatic protection mechanism.*

CELLview cell culture products offer customized solutions for microscopes, immunocytochemistry and subsequent, high-enlargement, microscopic analyses. They combine the comfort of a single-use product with the outstanding optical characteristics of a thin, embedded glass base and thus permit the top quality, microscopic imaging of cultivated cells.

#### **Sustainable and innovative product solutions in plastic**

As a plastics processing specialist, Greiner Bio-One makes a significant contribution to greater sustainability in the health sector. Blood collection tubes made from unbreakable plastic and safety products for protection against needle-stick in-

juries during the removal process safeguard both patients and medical personnel against direct contact with the sample material and hence infection from blood-borne diseases. In addition, the company ensures that product development focuses on minimum raw material use and operates energy-efficient production facilities.

#### **Outlook 2020**

Greiner Bio-One looks to the coming year with confidence. New large-scale orders that come into effect in 2020, as well as continuous market growth, permit the next twelve months to be viewed with great optimism. The strong network of international production and sales locations, as well as the conclusion of current location and capacity enlargement will once again secure the supply of international customers with products of the highest quality.



simply  
**comfortable.**





# simply greiner foam.

Greiner Foam is one of the world's most important manufacturers of special foams and foam products. In 2019, it witnessed a return to a normal level of the unusually high prices for polyurethane raw materials that had characterized the preceding two years. As a consequence of this fall and stagnating sales volumes, the high revenues of 2018 could not be repeated.

With its companies Greiner Perfoam, Greiner aerospace, Greiner MULTIfoam, Greiner PURTEC and the joint ventures Eurofoam (50 %) and Uni-foam (80 %), Greiner Foam unites all of the foam competences within Greiner. Greiner Foam represents a strategic division with 62 locations in 17 countries and more than 2,550 employees, which is active in the business areas of polyurethane (PU) foam, automotive, aviation and building technology.

62  
Locations

2,553  
Employees  
50 % share in joint venture

401  
Revenue (EUR million)  
50 % share in joint venture





**„Owing to our  
stable and durable  
products, we are  
also able to achieve  
lasting success  
even in times  
of instability.“**

*Michael Schleiss  
CEO Greiner Foam International GmbH*



*E-motor encapsulation.*

Eurofoam, which has a tightly-knit network of locations in Central and Eastern Europe, and Unifoam, which is located in Durban, South Africa, are leading producers and processors of flexible polyurethane foam for the mattress, upholstered furniture and aviation industries, as well as the environmental and building technology sectors. Greiner Perfoam is a leading international Tier-1-Developer and manufacturer of functional, interior trim parts, as well as specially designed acoustic components for the engine and passenger compartments in premium class cars. With plants in Europe, the USA and China, Greiner aerospace is a globally active specialist for seat cushions and covers for passenger aircraft, while Greiner MULTifoam manufactures recycling composite foam for the sport, shoe and construction industries. Its subsidiary, GuKoTech, produces top quality rubber and cork products for the construction industry, cargo safety, acoustic attenuation and insulation. Greiner PURTEC specializes in highly efficient heat insulation for hot water boilers.



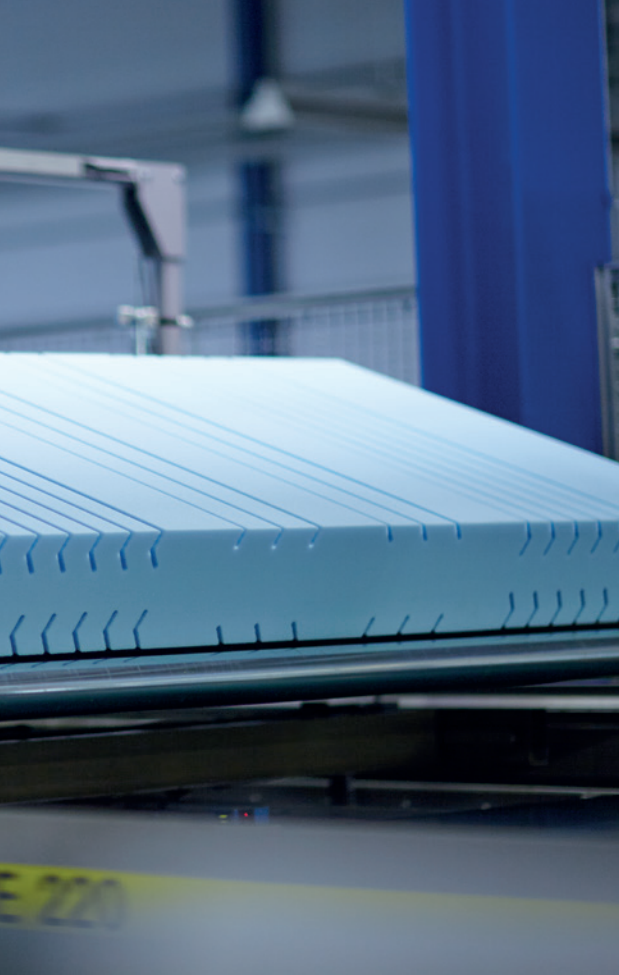
*Eurofoam's highly automated mattress production plant in Burkhardtsdorf, Germany.*

During the 2019 financial year, Greiner Foam attained sales revenues of EUR 401 million (2018: EUR 407 million). Nonetheless, in spite of this lower figure, the prompt initiation of appropriate measures enabled a satisfactory result to be achieved. 2019 was characterized by a variety of political and economic uncertainties and another considerable decline in the volume of foam industry sales in Europe and South Africa. On the one hand, this represented a reaction to the exorbitant raw material costs in 2017 and 2018 and the correspondingly high product prices. On the other, it was also a consequence of the general sense of insecurity and to some extent, recognizable market saturation. The tangible result is a marked increase in competitive intensity in every region. Moreover, in the automotive sector, which for PU foams is most important, in 2019 global sales of cars fell for the first time in a decade, especially in the Chinese market.

#### **Unstable markets, but Eurofoam stays on course**

With 2,068 employees at 36 locations in 11 countries of Central and Eastern Europe, the Eurofoam group numbers among Europe's largest producers of PU foam. In 2019, the company faced difficult general conditions, as well as a declining and





*The Unifoam team celebrates the most successful year since its foundation.*



highly competitive mattress and upholstered furniture market in Austria, Germany and Poland. Nevertheless, it was able to achieve its targets for the year and retain or increase its market shares. Overall the technical foam segment demonstrated solid growth, which was attained in spite of a sharp downturn in automotive sector demand during the second half of the year. Moreover, owing to high productivity and innovativeness, Eurofoam was also able to further consolidate its top ranking in the acoustic solutions area. In Hungary, investments were initiated with the aim of raising productivity and improving the flexibility of foam production and storage. Romania gradually enlarged its product portfolio and focused on accessing new markets, while Eurofoam Bulgaria strengthened its market position and opened a new cutting plant.

#### **Unifoam outstrips the market**

South Africa's political and economic instability had a negative impact upon the polyurethane market in 2019. However, Unifoam continued to outstrip the market with a strong performance and enjoyed the most successful year since its foundation. This was due primarily to a strategically focused and committed management team

in tandem with an intelligent, proactive pricing policy and the efficient control of overheads and raw material supplies.

In particular, the resources invested in the development of new products have paid dividends in the higher density foam product, "Mattress in the Box" and other compressed item categories. Moreover, this has led to growth in new regions such as Cape Town and generated cross-border revenues.

#### **Success for Perfoam with acoustic components for e-vehicles**

In line with its strategic orientation, Greiner Perfoam maintained its success in obtaining new contracts for acoustic components. During 2019, production capacity was expanded and the Linz location in Austria manufactured almost a million parts per month, which were delivered to BMW, Daimler, Jaguar Land Rover and Volvo. In China, the world's largest car manufacturing nation, the joint venture with Changshu Automotive Trim Co., Ltd. (CAIP) received an initial order for acoustic encapsulations from Daimler. Following



*The Greiner Intelligent Seat is a trendsetting aviation sector innovation.*

the completion of the new production line, customers are now able to inspect process reliability and part quality at first hand. Perfoam received orders from several premium manufacturers for the "e-Rim" product, a molded foam encapsulation for a reduction in the noise emissions from e-drives. Consequently, its entry into the e-mobility field has proved most successful.

#### **Greiner aerospace focuses on innovation and service**

For Greiner aerospace, the 2019 financial year was characterized by ongoing adjustments to market demands and initiatives aimed at achieving location stabilization and cost-efficiency. In order to secure future growth, the company focused on innovation and new services for airline customers and seat manufacturers. With the "Greiner Intelligent Seat" (GIS), for the first time Greiner aerospace offered its clientele a product, which enables proactive maintenance and the ongoing operational optimization of aircraft seating. This is achieved by means of sensor electronics installed in the seat cushions, which facilitate the visualization, logging and evaluation of data via an IoT platform. Airlines thus receive a constant

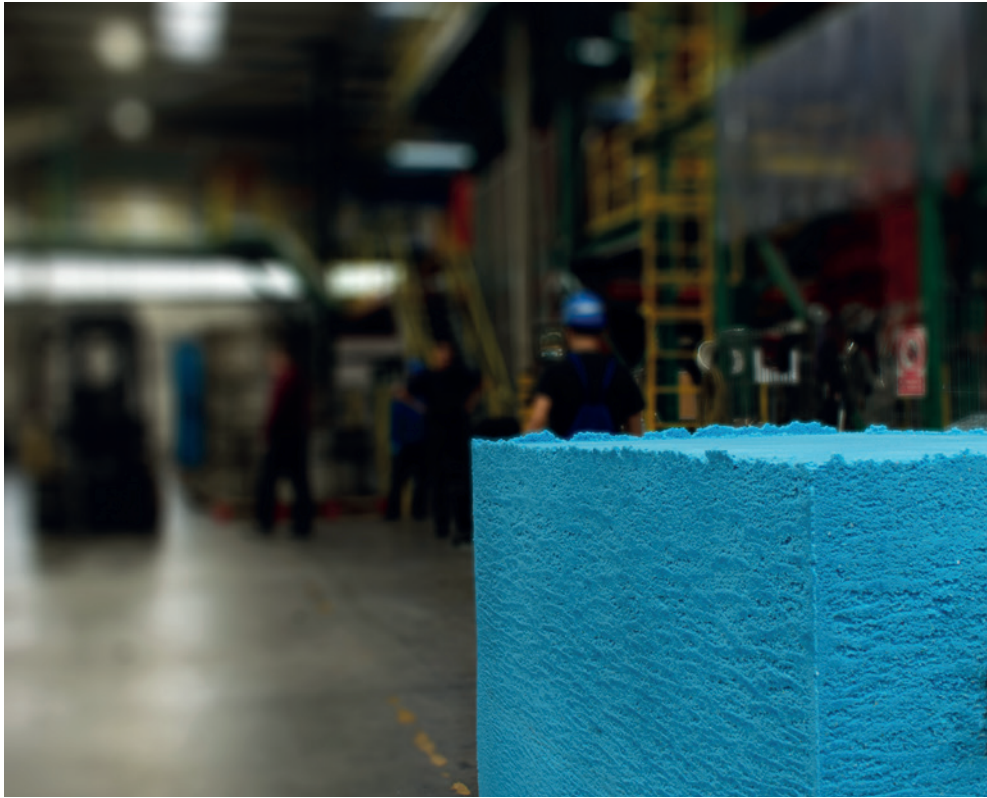


*In an age of heightened environmental consciousness PURTEC scores with intelligent heat insulation.*

and comprehensive flow of information regarding the status of the cushions and covers, etc. which greatly simplifies handling and logistics. The new product has already been registered for a patent and practical testing is currently in progress with notable development partners, customers and users.

#### **Energy-efficiency and digitalization at PURTEC**

Growing environmental consciousness and stricter legislation have led to a rise in demand for effective heat insulation, which for PURTEC as the market leader for such solutions again proved beneficial in 2019. With efficient products such as Neodul® and Modul® VIP (Energy Efficiency Class A), PURTEC was able to maintain its market ranking and reap the rewards of its innovative capabilities. PURTEC also responded to the trend towards digitalization in the heating branch with the development of smart insulation, which establishes new benchmarks with intelligent concepts and integrated sensors. At the same time, internal processes were newly evaluated and restructured in the course of a lean management and digitalization strategy. Among other measures, a so-called "digital twin" is intended to



*The new Greiner MULTIfoam composite foam plant in Ozorków.*

accelerate development work, in order to reduce the time-to-market needed for new innovations.

#### **MULTIfoam enlarges its capacity**

During the 2019 financial year, MULTIfoam's main focus was on an increase in capacity at its location in Ozorków, Poland. The newly installed composite foam plant virtually doubles production capacity and enables the company to meet growing demand. MULTIfoam also achieved a breakthrough in the artificial turf underlay market with its matchbase.pro® product and in 2019 raised its market share considerably. The GuKoTech subsidiary was awarded a European Technical Assessment (ETA) for its footfall product acousticbase®, which can now be marketed in the construction sector throughout Europe and in Turkey. At its Nürtingen location (Germany), GuKoTech also processes used bottle corks into agglomerated cork, which is employed in high-quality soundproof doors.

#### **Outlook 2020**

It may be assumed that 2020 will see a continuation of a market characterized by uncertainty and volatility. The automotive industry also has to battle with the massive insecurity related to

the drive systems of the future and although in the past the foam sector was less affected by economic fluctuations, in the current situation one must be prepared for a weakening in demand. Greiner Foam will counteract this trend in all of its business areas with quality and service and thus capture market share. In addition, the centrally coordinated initiatives for lean management and the use of the opportunities offered by digitalization will enable the Greiner Foam companies to raise their productivity. The current activities aimed at consolidating and enlarging the foam segment will be intensified further in 2020. Moreover, the development of technologies for the sustainable use of PU foams in the course of a sustainability initiative will continue. The results of the strategy revision in all business areas, which began in 2019, will be released in the first half of 2020 and subsequently, realization will commence. In mid-2020, the long-serving CEO of the Greiner Foam division, Michael Schleiss, will be standing down from all his organizational functions and following a transitional period as a Greiner AG consultant, will enter retirement. On 1 July 2020, Oliver Bruns will assume the divisional management of Greiner's foam activities.

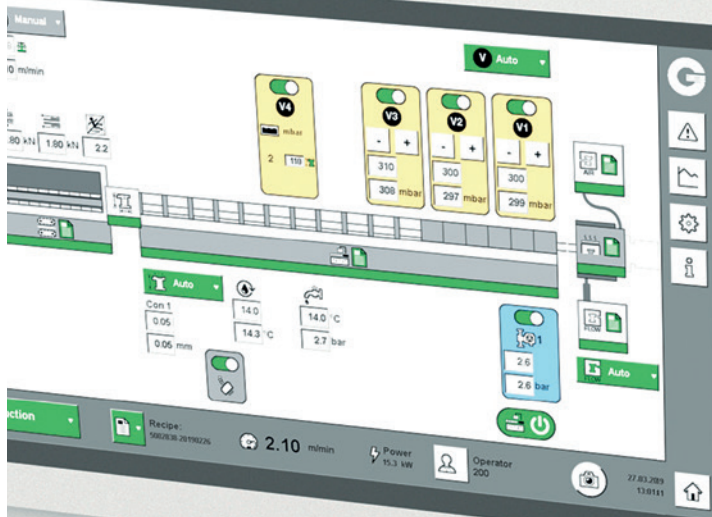
simply  
**stable.**







greiner  
EXTRUSION

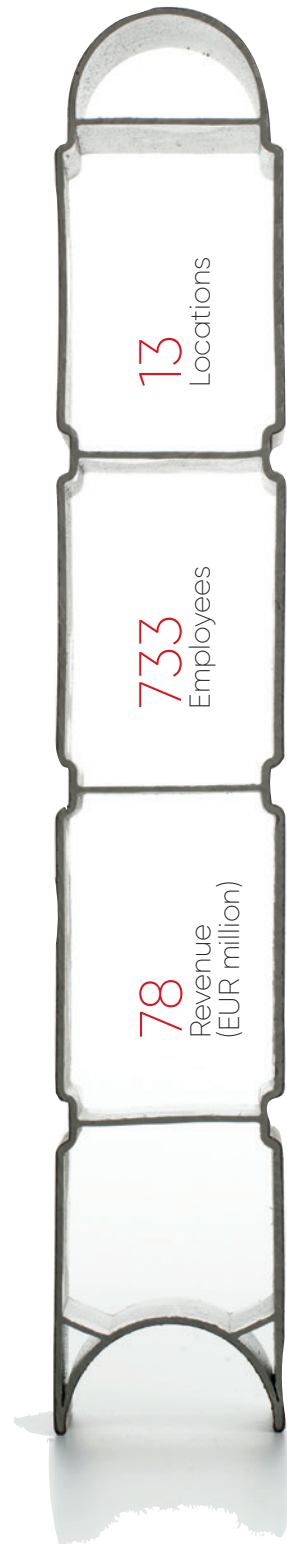


# simply greiner extrusion.

Digitalization and extrusion 4.0 were the dominant topics of 2019 and with the world premiere of the DIGI.LINE, the first fully automated, digital profile extrusion line, Greiner Extrusion ranked as the branch trendsetter.

Greiner Extrusion is the world's leading supplier of extrusion lines, tooling and turnkey lines for profile extrusion. In the 2019 financial year, the company had a workforce of over 700 employees at 13 locations in 8 countries and attained sales revenues for the year of EUR 78 million (2018: EUR 80 million).

The 2019 financial year was characterized by differing trends and a high degree of volatility. In Europe and Asia, customer investment in profile extrusion tooling slowed significantly, but equipment replacement and machine modernization business was stable. First and foremost, the willingness of customers to invest was dampened by the geopolitical climate, unpredictable election





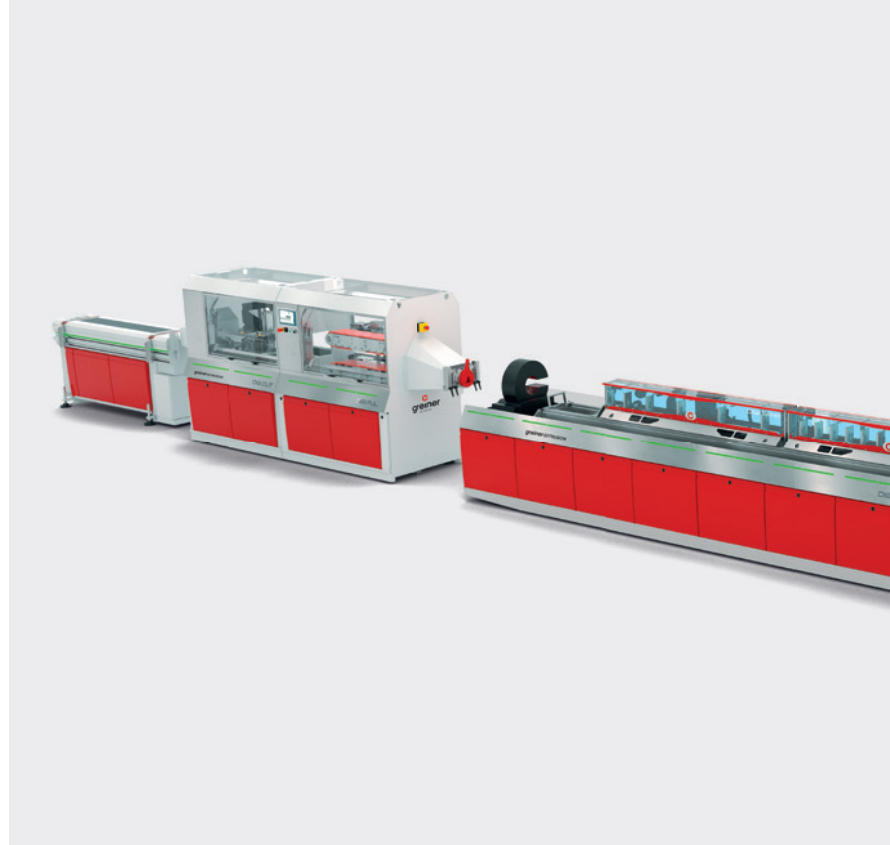
**"The rapid decision of leading profile manufacturers to opt for Greiner Extrusion's new digital solutions confirms the probity of our digitalization strategy."**

*Gerhard Ohler  
CEO Greiner Extrusion Group GmbH*





*"seeing is believing!" The world premiere of the DIGI.LINE at the K 2019 trade fair in Düsseldorf.*



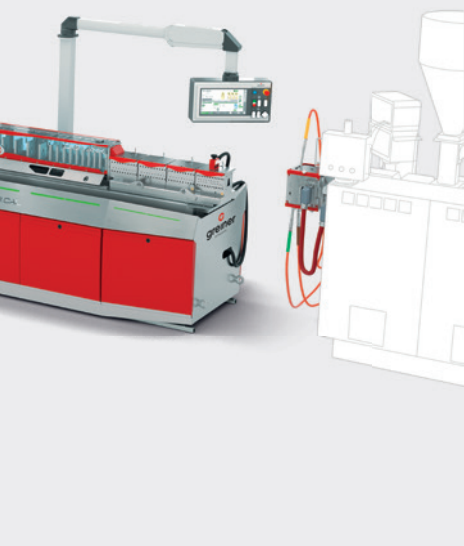
*Extrusion 4.0. The Greiner DIGI.LINE guarantees an automatic extrusion process and maximum savings.*

results and the devaluation of national currencies in several emerging markets. By contrast, there was sizeable demand for Greiner Extrusion's automated and digital extrusion lines, and numerous project contracts were concluded. Indeed, customers placed extensive orders even prior to the world premiere of the new DIGI.LINE at the flagship K 2019 trade fair in Düsseldorf (Germany).

Customer investment in North America and Australia remained at a high level. Indeed, despite a weakening of housing construction growth and consolidation among profile manufacturers, the USA continued to act as the strongest branch locomotive. Greiner Extrusion was able to participate fully in this market and in the process broke several records. In terms of a yearly comparison, sales growth in the USA amounted to 33 percent and for the first time North America accounted for over a quarter of divisional revenue. In addition, more machines were sold to the region than to Europe, which constituted another first, and at the same time both new customers were obtained and market shares captured from competitors.

The highlight of 2019 was the presentation at the K 2019 trade fair in Düsseldorf of the Greiner DIGI.LINE, the world's first fully automated, digital profile extrusion line. Some 1,000 visitors from 60 countries attended the global launch on the Greiner booth, which took place under the motto





"seeing is believing". The specialist audience was treated to live demonstrations of the DIGI.LINE in production operation, which showed both its functions and performance. As a result, Greiner Extrusion was able to establish itself as a first mover in the field of digitalization and (profile) extrusion 4.0.

#### **Extrusion 4.0 with the Greiner DIGI.LINE**

During 2019, new Greiner technologies helped numerous customers to become trendsetters in the digital profile extrusion field. Indeed, following extensive live presentations, workshops, intensive customer personnel training and thorough testing under tough production conditions, a number of leading window and technical profile manufacturers chose to enter into "digital partnerships" with Greiner Extrusion. Within just a few months, such decisions resulted in double-digit sales figures for DIGI.LINES, the digitally upgraded RED.LINES and large toolings with integrated FLOW.MATIC.

#### **New customers for sheet extrusion dies**

Following the acquisition of a participation in the Italian Simplas S.p.A. during the year before last, 2019 saw the launch of a joint market drive. The systematic acquisition activities on the part of the technological experts from Simplas and Greiner Extrusion Business Development that followed led to the capture of numerous new customers within only a few months. The project successes

achieved ranged from small PET dies and melt distributors to 7.5 m-wide dies for agricultural films. Moreover, the Greiner location in Shanghai (China) carried out the first overhauls of sheet extrusion dies for Chinese customers. Simplas, which is a leading supplier of dies for film and sheet extrusion, as well as coating applications, thus ensured high capacity utilization at the plants of the Greiner Production Network (GPN) during 2019.

#### **Precision production for plastics machinery**

In 2019, GPN attained a six percent increase in its production sales revenues for external customers from the plastics machinery field and following a stringent audit, a well-known compounding systems manufacturer was obtained as a new customer. Growth in the production of new applications resulted in intensive use of advanced CNC multi-axial machining center capacity. Moreover, GPN's real net output ratio was further optimized through the addition of module assembly for various machines from European OEMs. Productivity and profitability were also raised by means of the GPN Production Efficiency Program.

#### **The new DIGI.SCALE provides precise, digital, inline profile weighing**

The DIGI.SCALE profile transfer station with integrated digital profile weighing is networked with the complete DIGI.LINE. Fast and precise weighing in combination with the permanent display of the actual profile weight facilitates rapid, targeted and automatic intervention in the case of profile weight deviations during production. In addition, comprehensive data logging allows the call-up on the monitor of profile weight development trends at any time. A LED strip immediately

shows profile over- or underweight and the automatic transfer station separates the approved and rejected products.

### Premium toolings for India and Latin America

During 2019, there were increasing demands in both India and Latin America for improved profile extrusion line quality and performance. This opened up both markets for Greiner Extrusion's premium tooling systems and led to initial investments in RED.TOOLING by long-term, regular customers, who number among the regions' leading manufacturers of plastic window frames. Of decisive importance in this respect was overall equipment efficiency (OEE), shorter start-up times, reduced material consumption, minimized reject rates and improved process stability. Overall, RED.TOOLING furnishes customers with increased cost advantages in tandem with enhanced profile quality for windows of a better standard and higher sales prices.

### A Big Boy for North America

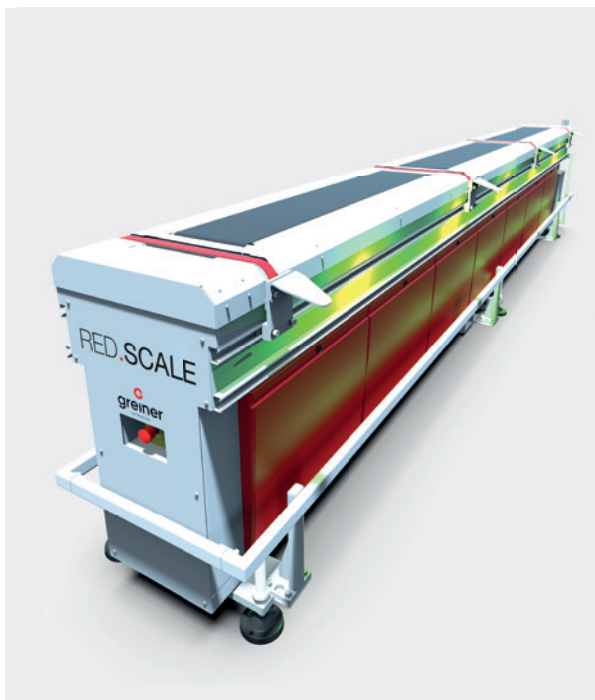
In 2019, this tool broke two records at once. Firstly, it represented the largest tooling ever built for the USA and secondly, it successfully entered production after only a single test run. The reasons behind this achievement related to both

long-term, systematic know-how management and the intensified collaboration between Greiner Extrusion's teams of experts in North America and Austria. All the design, production and tuning know-how obtained from a similar tooling in 2013 flowed into the construction of the new version and in addition technical improvements were installed. The plastic panels produced, which are used in the housing sector, measure 650 x 203 mm and weigh in at a hefty 13 kg/m.

### Sustainable extrusion in Eastern Europe

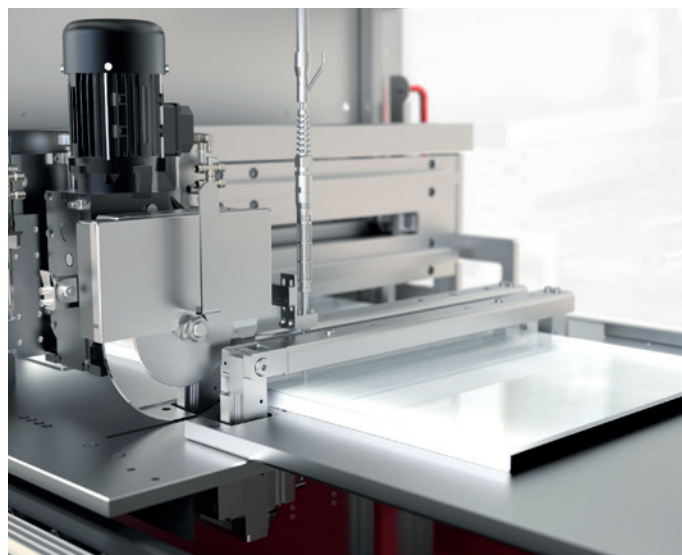
In 2019, one of Eastern Europe's largest producers of construction materials decided to employ LAYER.COEX plus, Greiner's latest co-extrusion technology. This permits the utilization of up to 65 percent plastic recyclate during profile manufacture, which thus saves an equal amount of virgin material. The biggest advantage in this connection is the fact that in combination with a limited amount of new material, colored recyclate (regrind) can be employed directly in profile production. This means that the standard, energy-intensive and expensive process of plastic grist granulation, which was used to date, has

*The new DIGI.SCALE stands out owing to fast, precise, digital inline profile weighing with an integrated LED strip for reduced profile costs.*



*A record tooling from Greiner US for a housing profile weighing a massive 13 kg/m.*





*The new RED.CUT Disk facilitates the clean, low-noise cutting to length of especially wide and flat profiles.*

become obsolete. LAYER.COEX plus thus protects resources, boosts the circular economy and improves the CO<sub>2</sub> footprint.

#### **An extrusion solution for halogen-free profiles**

In the construction industry in general and the electrical installation area in particular, halogen-free plastics constitute an important part of comprehensively designed fire protection concepts. Furthermore, the use of halogen-free cable and wiring is increasingly becoming obligatory. Consequently, for these specific applications Greiner Extrusion has developed a special tooling technology, which uses top quality technical plastics such as self-extinguishing polycarbonate/acrylonitrile-butadiene-styrene (PC/ABS). In this combination, the features of both materials come into play simultaneously through the uniting of the good processability of ABS with the excellent mechanical characteristics of PC. However, the extrusion process is sensitive and poses challenges, but with the new Greiner tooling technology it is possible to extrude extremely precise, halogen- and tension-free plastic profiles.

#### **The new RED.CUT Disk for high-precision profile cutting to size**

The latest cutter technology from Greiner Extrusion enables the extremely clean, low-noise cutting to size of wide and flat profiles. An electrically driven cutting disk is used for this purpose, which cuts the profiles like a pizza knife with no chips and the greatest precision. With its outstanding repetitive accuracy and high cutting quality, which eradicates the need for cleaning during downstream processes, the RED.CUT Disk offers a decisive reduction in production costs. The Disk is suitable for the separation of PVC foam profiles and hollow-chamber profiles with heights of up to 25 mm.

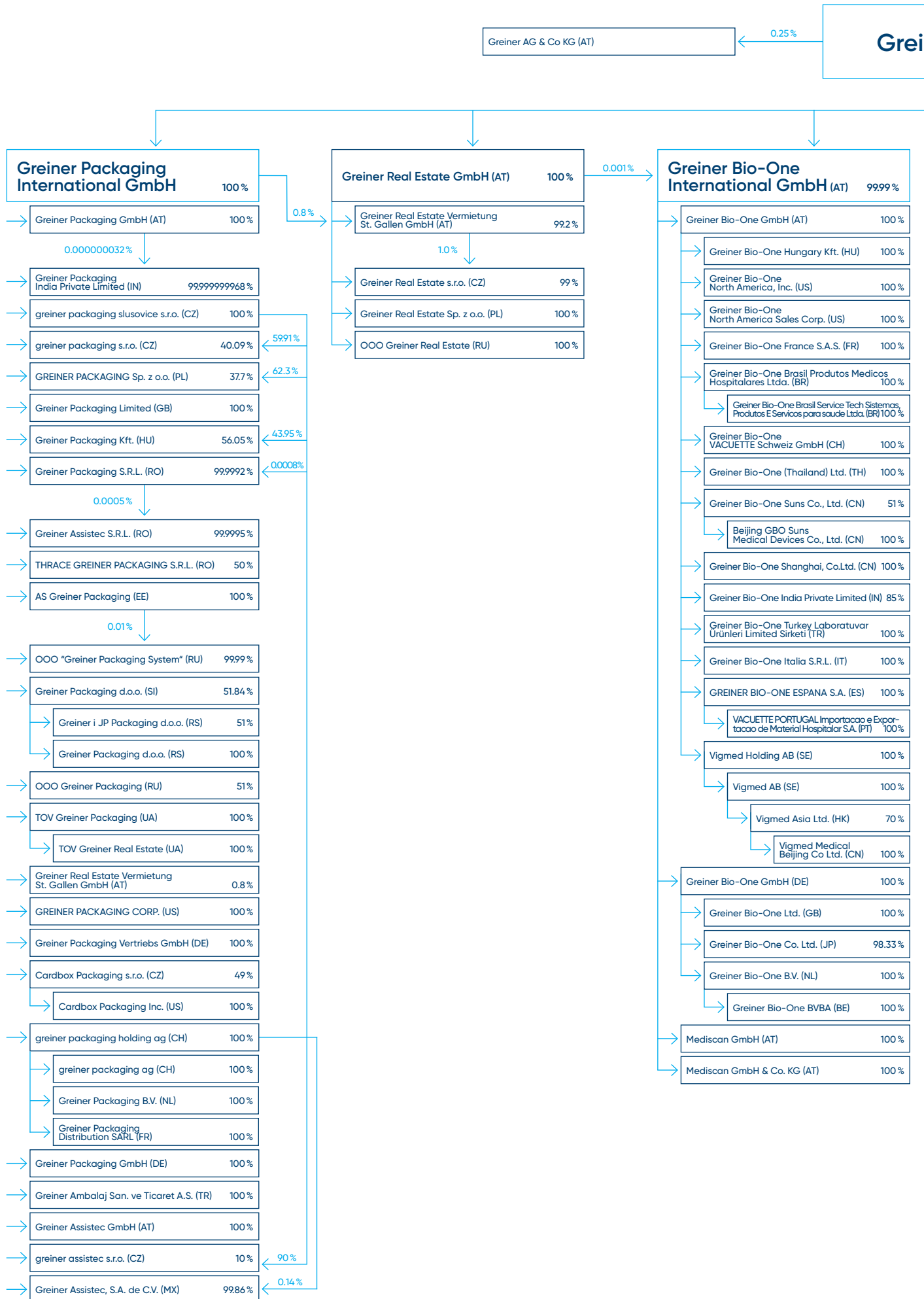
#### **Outlook 2020**

In spite of the current consolidation among profile manufacturers in some countries, the prolongation of the problematic geopolitical situation, trade disputes, sanctions and economic weakness in a number of regions, in certain markets there is still a need for the renewal of extrusion lines due to age and wear and tear. Equally the demand for automated and digital profile extrusion solutions will increase further and open up opportunities for growth. Moreover, for innovative and agile companies, the technological and industrial structure transformation offers a wealth of possibilities, which in 2020 Greiner Extrusion will continue to pursue in targeted fashion.

Everything should  
be made as simple  
as possible, but not  
simpler.

ALBERT EINSTEIN





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