

*the*  
**WORLD**  
**OR**

IS NO MORE  
ON THE MOVE

THANKS TO OUR EMPLOYEES,  
WE REMAIN ON A SUCCESS COURSE.

**When reflecting upon 2020, we look back upon a turbulent year, the effects of which were also clearly felt at Greiner AG.** At moments of such massive upheaval, what makes us stand out is an ability to take courage, remain united and have the confidence to adopt the correct measures. Moreover, if the crisis has demonstrated one thing, it is that we can build on our shared strengths!

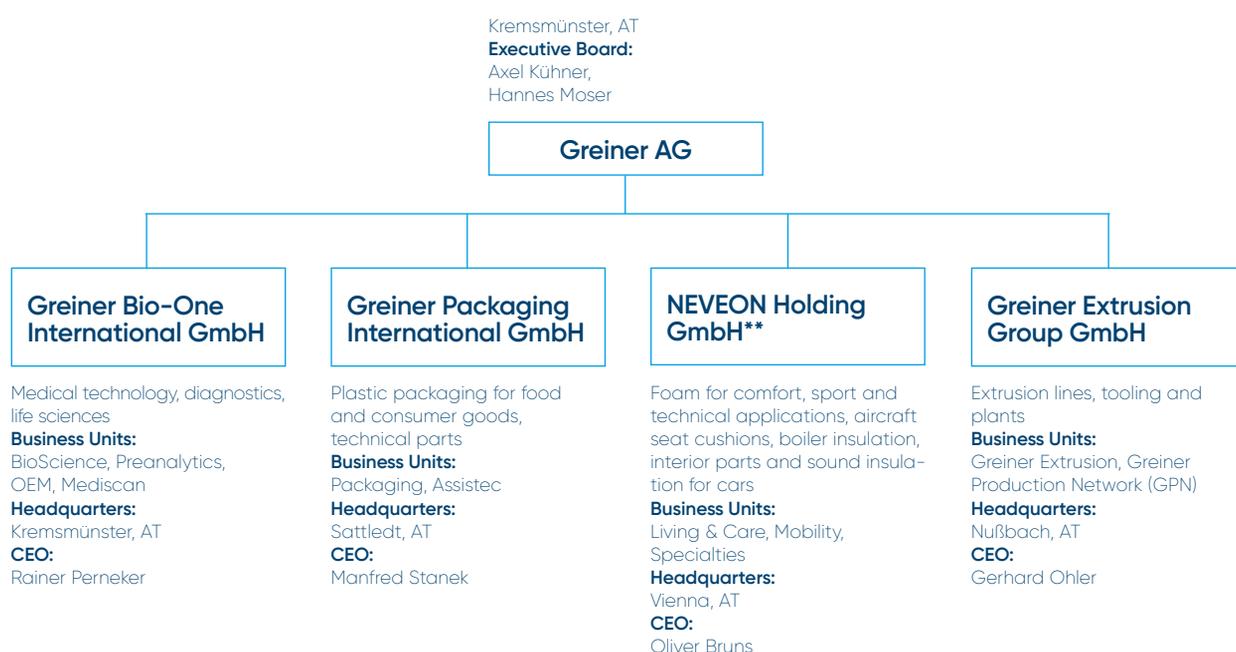


# Key figures

	2020	2019
Consolidated sales revenues	1,930	1,675
Cash flow	314	144
Investments	111*	102
Employees	11,494	10,745
Sales per employee	0.17	0.16

ACTUAL in EUR million, joint ventures prorated  
 \* investments in tangible assets

# Group structure



\*\* formerly Greiner Foam International GmbH



## 11,500 x thanks

We wish to dedicate this Annual Report  
to our 11,500 employees.  
Because it is due to their efforts  
that we are mastering  
these challenging times.

**Many thanks!**

Axel Kühner  
CEO

Hannes Moser  
CFO

Rainer Perneker  
Greiner Bio-One

Manfred Stanek  
Greiner Packaging

Oliver Bruns  
NEVEON

Gerhard Ohler  
Greiner Extrusion



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# Four divisions ensure stable growth in the crisis

Greiner numbers among the world's leading companies in the plastics and foam industry. The products from the group, which is headquartered in Kremsmünster, Austria, are a standard feature of everyday life and include yogurt cups on the breakfast table, comfortable foam mattresses, car and aircraft seats, blood sample collection tubes at the doctor's surgery and components used in the production of plastic window frames.

Along with globalization and innovation, diversification is one of the three cornerstones upon which the group rests. Under the Greiner AG umbrella, four operative divisions consisting of Greiner Bio-One, Greiner Packaging, NEVEON (formerly Greiner Foam) and Greiner Extrusion operate 139 locations around the globe.

With the group-wide "Blue Plan" sustainability strategy an active contribution is being made to sustainable development and the solution of current global challenges.

On the basis of a unique corporate culture, which is founded on trust, responsibility and mutual respect, Greiner offers approximately 11,500 people in 34 countries secure employment. Greiner enjoys international success, but also has firm regional roots and to this day remains a family-owned enterprise, which sees contented employees, customers and partners as central elements in positive corporate development.



**Greiner Bio-One.  
Making a Difference.**

Greiner Bio-One is a global player in the areas of medical technology and life sciences. With over 2,300 employees and 28 locations, Greiner Bio-One is a leading manufacturer of quality products for laboratory requirements and sample collection systems.



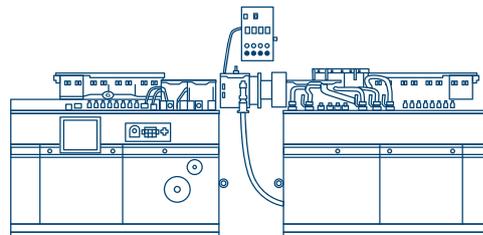
**Greiner Packaging.  
Do the Innovation.**

Greiner Packaging numbers among the leading manufacturers of plastic packaging in the food and non-food area. The division is a global player and possesses an efficient network of 32 locations and a workforce of almost 4,900 worldwide.



**NEVEON.  
The Future of Foam.**

NEVEON is one of the world's leading integrated foam groups and offers outstanding polyurethane flexible and composite foams for a diversity of applications. With a network of 61 locations in 18 countries and more than 3,400 employees, the company guarantees customer proximity, minimum delivery times and top quality.



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

Greiner Extrusion is the world's leading supplier of production lines, tools and complete plants for plastic extrusion. With 13 production and service locations and over 600 employees, Greiner Extrusion possesses an excellent international positioning.

# Courage in times of change

One cannot turn back the tide, but one can learn to ride the waves. For us, this is the main lesson of 2020. The waves were unpredictable, arrived more or less overnight and left a trail of unsurpassed havoc in their wake. Therefore, our personnel are owed a great debt of gratitude for their exemplary conduct during this phase.

In 2020, we were all forced to change our ways. We have learned to cope with fresh challenges such as home office and home schooling, and have demonstrated the particular importance in times of turbulence of upholding values such as flexibility and openness to the new.

From a professional standpoint, above all the extent of the disruption caused has proven to be more dramatic and far-reaching than could possibly have been estimated at the beginning of 2020. In view of these massive upheavals, we at Greiner were also forced to spontaneously adopt new approaches. We reacted quickly and either modified or changed entirely the focal points and priorities within the group. Owing to our diversification strategy, the losses that had to be accepted due to the sudden standstill in the aviation industry were compensated for by outstanding successes in the packaging and medical technology segments. Consequently, the overall stability of the group was constantly maintained even in this turbulent period.

In the course of this exceptional year, our workforce made a decisive contribution to the fact that in the final analysis, as a group we can actually look back on 2020 as an exceptionally successful financial year. We therefore attach special importance to dedicating this annual report to our employees as a gesture of our esteem.

Greiner has always been characterized by a willingness to also take courageous steps at a time of crisis and it is hardly a matter of course that in the middle of the most serious pandemic for a century, the measures required for the largest acquisition in company history were implemented. In 2020, the foundations for continued successful growth in the foam business were laid with the complete takeover of the Eurofoam Group. Therefore, at this juncture we would like to thank the owning family and the Supervisory Board for their trust and support in this demanding phase.

Moreover, another bold step towards market and technological leadership in the foam sector was recently taken with the merger of the six business areas in the Greiner Foam Division under the NEVEON umbrella brand.

Nobody knows precisely when this crisis will end and if the external circumstances do not alter, it is our personal attitudes that will carry us through these difficult times. Therefore, looking to the future with courage and having the preparedness to face new challenges constitute our current watchwords and will remain so in 2021.



Axel Kühner  
CEO

Hannes Moser  
CFO

# Broad shoulders are carrying us through the crisis

Over the years, the correct balance between consistency and drive has made Greiner a successful, globally active company and now points the way out of the current crisis.

For over 150 years, the company has manufactured a diversity of everyday products. Founded in 1868 as a cork stopper factory in Nürtingen, Germany, Greiner has evolved into one of the world's leading providers of plastic and foam solutions. The company has always been intensely aware of its roots and their cultivation, as well their employment for further growth and the transcendence of limits. It is this perfect blend of tradition and innovation that has characterized Greiner since time immemorial and has guided it to success.

This success has continued up to the present day, owing to the sensitivity required with regard to zeitgeist and a systematic openness to innovation. For only thus is it possible to survive in the long-term. Merely making plans for the present is insufficient and instead one must seek to move forward, wish to expand and aspire to being one step ahead of the rest.

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2020 was a successful year for Greiner during which the company demonstrated its resilience to crisis on more than one occasion. Whether in the packaging or medical technology fields, the diversification strategy with the splitting of production into four operative divisions, has proven to be both wise and sustainable. It lends Greiner broad shoulders and carries it through troubled times. As a consequence, the targets in certain areas were not only reached, but also partially surpassed.

We are convinced that this fruitful course will be maintained in future. However, we are aware that the achievements of over 150 years of company history are not only due to the strong foundations and far-sightedness of the owning family, but also the entire workforce, customers and partners, and the Greiner Executive Board. Our gratitude goes to them all!



*Erich Gebhardt*  
Supervisory Board Chairman



*The Supervisory Board  
Erich Gebhardt, Chairman / Dominik Greiner, Deputy Chairman / Regine Hagen-Eck, Member  
Christoph Greiner, Member / Andreas Ludwig, Member / Gerald Schinagl, Member / Jakob A. Mosser, Member  
Nico Hansen, Member / Georg Kofler, Employee Representative / Maximilian Gressenbauer, Employee Representative  
Ernst Zimmermann, Employee Representative / Markus Rohrauer, Employee Representative*

# Stable and agile even in turbulent times

Over the years, the Greiner owning family has been confronted by a plethora of changes and its history has also been characterized by numerous upheavals and global transformations of an economic, social and political nature.

In times when companies must repeatedly adjust quickly to short-term shifts in fundamental conditions, it is only intuitive to turn to behavioral patterns that have become established over years and decades. Accordingly, during the past year, we mastered the corona pandemic in masterly fashion and such an achievement is no coincidence. For once again, we owe our success to our highly committed workforce and our diversified corporate structure and culture, which enabled the downturns in some segments to be compensated for through innovative performance in other areas. In the final analysis, it was the skillful use of such opportunities that made 2020 so successful.

A great many additional openings also await us. The development of innovative markets, products and solutions will continue to concern us in every business area, irrespective of whether these relate to food packaging, medical products or foam. The



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**“THE PANDEMIC HAS SHOWN CLEARLY WHO CAN BE THE BIG WINNERS IN A CHANGED FUTURE.”**

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*Christoph Greiner*

Christoph Greiner

*Dominik Greiner*

Dominik Greiner

*P. Greiner*

Peter Greiner

*Barbara Mechtler*

Barbara Mechtler-Habig

pandemic has shown clearly who can be the big winners in a changed future. Moreover, the trend to digitalization has only just begun in the industrial sector and is set to become one of its most important drivers.

Today we are working in a different manner to that prior to the pandemic. The motto is now, "new work, new chances". Therefore, the early recognition and exploitation of future trends will be of decisive importance, but will not involve the casting aside of Greiner's traditional intrinsic values, or its well-proven strategies and structures.

The foundation stone for a successful future is always laid in the past and with our ownership and business organization we are extremely well

positioned to both retain the tried and tested, while extending our capabilities with regard to new issues such as sustainability and innovation.

We see Greiner as being ideally equipped for the future. The owners and the company not only share a harmonious, stable and effective system of values, but are also pursuing the same objectives. Moreover, a professional and highly motivated management and almost 11,500 loyal employees form an efficient team that will enable us to jointly seize the opportunities of tomorrow. We look forward with anticipation to this future!

*The Family Council*

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THAT MOVE

IN ORDER TO MOVE WITH THE TIMES, THE TASK IS  
NOT TO FOLLOW TRENDS, BUT TO SET THEM. WE  
GENERATE IMPETUS AND ASSUME RESPONSIBILITY  
FOR OUR EXISTENCE, OUR COLLEAGUES,  
STAKEHOLDERS AND FELLOW HUMAN BEINGS.

# Everything flows, everything is in motion

A virus still has the world literally holding its breath and digitalization has fundamentally changed not only our way of life, but also our ways of working. Many spent 2020 in their home offices, while the young were out on the streets demanding a fairer world. And to cap it all, fake news has been perpetrating its dark deeds in the background. So what on earth is going on?

Corona has shaken the very foundations upon which the existence of the entire global population is built. Very rarely has there been such a longing for continuity and a return to the "good old days" as is momentarily the case. It is therefore only logical that "do it yourself" movements are again motivating personal initiative and the wish to return the analogue to a secure place in the digital age.

The world is on the move and therefore precisely for us as a global group, it is vital that we monitor, accept and actively shape these developments. 2020 was undoubtedly an exceptional year because so much changed simultaneously and quite literally for all of us a virus turned everything completely upside down in even the most private of corners.

The world in which we lived previously is slowly falling apart. Conventional thought patterns have been lost, opinions are intensified in their own echo chamber, individual success has seized the spotlight and a general understanding of what is right and wrong and what divides and unites a society has been gradually lost.

Politicians have entered office, who with a completely new and heightened sense of power, seek to steer attention in the one-dimensional direction of the national state and increasingly fail to look beyond their own limited horizons. Climate agreements are questioned and judicially confirmed election results go unrecognized. People have doubts about medicine, progress, enlightenment and occasionally, even democracy



itself. Fake news serves as an allegedly solid basis for personal decision-making and as far as significant social questions are concerned, majorities are almost impossible to find. Society is crumbling into a granular structure in which differing lifestyles and categories of opinion exist on parallel planes and only come into contact at a few interfaces. Polarization holds sway and open discussion is now a seldom occurrence.

#### **Digitalization as a major driving force**

The world appears to be out of control and although more information is available than ever before, life has nonetheless become more arcane and unpredictable. One of the main driving forces behind this development is digitalization. Today, algorithms rather than editors-in-chief tend to decide which news hits the headlines. Automation, which is targeted solely on one's habits and preferences, determines which snippet of reality is received. In fact, it is increasingly difficult to develop a differentiated picture, as black-and-white positions dictate public debate.

None of this represents a new phenomenon, as for many years we have been living in a digitalized society and information and communications technologies have already greatly altered daily, professional, family and public life. Concepts affecting the personality and the private sphere are in transition and digitalization has penetrated every area of our existence. It has revolutionized our communications, the world of work, education, economics and industry. However, the speed with which corona has accelerated this trend is unprecedented.

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SOCIAL PARTICIPATION.”**

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#### **“New Work” - new chances?**

Technology operates with increasing autonomy and has become an important part of everyday life. Above all, the possibilities offered for process digitalization are most evident in the working environment. “New Work” focuses on the raison d’être of work and in the meantime has emerged as the generic term for the general transformation in the working world. When machines begin to accomplish tasks better than humans, we start to consider the purpose of working as a whole. Therefore, the task in future will be to achieve a successful symbiosis between life and work.

A new way of thinking, the wish for change and meaning, personality development and also digitalization will confront a growing number of people in the “old” world of work with the question as to what they wish to do in future. The key elements of “New Work” are value-oriented action, personal fulfillment and social participation. These are merits that precisely amongst the younger generation play a major role in the choice of employer and therefore they must be the object of increasing consideration amongst companies.

#### **The more diverse, the better**

The future is unpredictable. Therefore, it is all the more important to adjust to these diverse lifestyles. As far as companies are concerned, in concrete terms this means that it is better to rely upon variety rather than singularity of focus and this maxim applies equally to people. Diversification is the name of this and it represents a strategy that Greiner has employed for many years and which, precisely in times of crisis has proven of great worth. In particular, the slump in the aviation industry was largely compensated for by new products in the medical technology and packaging areas. Such diversity makes a company fit for the future and enables it to respond skillfully to new omens. Agile structures help companies to adjust more quickly to events that are beyond planning, which is certainly a categorization that applies to a pandemic.

#### **The correct mindset is decisive**

Allegedly Albert Einstein once remarked “Insanity is repeating the same mistakes and expecting different results.” The digital transformation is exerting enormous pressure on companies to change. It is clear that with the right mindset it will be easier to overcome the problems posed by the new world of work. However, foreseeing the future has always been virtually impossible and now this task is also subject to the accelerated speed at which radical change is occurring. This tempo cannot be modified, but what can alter is our personal approach and hence our attitude towards fresh challenges. Precisely the COVID-19 crisis has shown that new answers are needed in order to adjust a chosen course and seek a fresh approach. Testing new solutions and concepts is the watchword for the future along with the acceptance of responsibility, the summoning up of courage and a willingness to tolerate errors and learn from them. These are the strategies for progress, for both people and every organization.



### Why look so far afield?

A flight to the USA for a two-hour meeting? Today, hardly conceivable! Indeed, corona has fundamentally changed our attitude to many aspects of life. Traveling, living and acting on a sustainable basis has become mainstream thinking and always faster, higher and stronger have been replaced by the resolve to question the tried and tested, further innovation and reshape the existent. In particular, this applies to the new circular business models, sustainable product design and the overall consumption of resources within companies. For although a video meeting is a poor substitute for personal contacts, it can contribute to the handling of issues more efficiently, cheaply and in less time.

### Ecology, sociology and economics

The protection of our natural resources is an issue that has become a focus of worldwide debate due primarily to the efforts of the climate activist Greta Thunberg. Above all, Thunberg has proven to be a projection figure for young people, who in the course of the "Fridays for Future" demonstrations have demanded a value transition. Within this context, one possible key to a sustainable future is the circular economy, which foresees a transition to entirely recyclable products.

A more sustainable tomorrow will certainly be accompanied by change and there can be no doubt that as yet we have not found answers to all the related questions. However, we primarily see change and transformation as a major opportunity, not only for us as a company, but above all for society and the environment. We are convinced that the future lies solely in sustainable economic management and therefore our Blue Plan has been created as a springboard for continued business success and our ambitions up to 2030.

**Greiner is implementing these measures in the field of sustainability**  
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# Corona – the black swan has landed!

The impossible has become feasible and the unthinkable credible. In 2020, Greiner's world was also turned upside down, but although corona led to shifts within the group's four divisions, Greiner still closed this singular year of crisis more successfully than ever.



*As unlikely as it is to see a black swan in the wild, the term black swan moment crops up frequently in the economic sciences as a term for unplannable events, which contrary to every prediction occur over night, as exemplified by the appearance of the corona virus in 2020.*

Wuhan is a Chinese provincial capital with a population of eight million and the reputed source of the global COVID pandemic. It also provided the backdrop to the initial images from a distant clime of overfilled intensive medicine wards and people in futuristic, protective clothing, which flickered onto monitors as exotic news, while in reality the virus had already arrived in Europe. But who at that time could have anticipated the year that awaited us, or the new reality with which in the course of the common battle against the pandemic we have now become only too well acquainted?

#### **Toilet paper and videoconferences**

Today, one lockdown merges with the next and in Austria the health system has also been subjected to strong pressure, while tourism has suffered a de facto standstill. Toilet paper briefly enjoyed the status of a luxury article and videoconferences have become the only possibility to remain in contact with our fellow humans. However, if we have learned one lesson from the past year, it is certainly the fact that anything can happen at any moment. Therefore, the question arises as to how in such an unstable situation can a company make any plans at all?

As opposed to all the positive forecasts, in 2020 the global economy went into a nosedive that can best be compared to a combat situation. At some point or another during the year, we all had our "black swan moment", which is the economic sciences term used to describe an event that is so extremely improbable and occurs so abruptly, that it cannot be predicted. This can be anything from a natural catastrophe to a war, a financial crash or even the outbreak of a pandemic.

Corona's arrival in the economy prompted an immediate reaction in the stock markets. If at the end of February, the Dow Jones still stood at 29,000 points, a month later it was already down to below 20,000 and although this trend has now been reversed, it demonstrates how rapidly bulls can turn into bears. Moreover, prior to the begin of the pandemic, an increase in co-working spaces of twenty per cent was forecast, but now owing to stricter home office regulations, premises are frequently deserted.

#### **Case C occurs, while you are planning for Case B**

COVID-19 caught us off guard. For even as a global player with a wealth of experience in risk assessment, we could never have estimated the magnitude of this danger. Moreover, Greiner was also confronted by massive upheavals in the market. For example, due to a production shutdown in India, rubber, which is used as a raw material in the medical technology field, was briefly totally unavailable.

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**“EVERYBODY HAS A  
PLAN, UNTIL THEY  
GET PUNCHED IN  
THE FACE.”**

Mike Tyson

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The aviation industry was laid idle from one day to the next and short time working had to be introduced in some areas. Remote working in the form of home offices quickly took root and is certain to continue to play a major role in future. In fact no sentence could better sum up 2020 than the remark that, “Everybody has a plan, until they get punched in the face”, which was made during an interview by the world-champion boxer, Mike Tyson, who for a long period was seen as unbeatable.

#### **Diversification proves its worth – 2020 is a record year**

Therefore, when it applies that risks can never be entirely accounted for and certain things constitute force majeure, it is only logical that the correct handling of crises is more important than their foreseeability.

What benefited Greiner in 2020 was its multiplicity of products and diversification in four divisions, which constitute a strategy, that has long been a source of group stability. Accordingly, partially dramatic downturns in some areas could be counterbalanced by gains in other divisions. In fact, however unbelievable it may seem, overcompensation was even possible with the result that 2020 was the most successful year in Greiner’s company history.

Product and market diversification proved to be especially beneficial during the corona crisis. Greiner Packaging and Greiner Bio-One still enjoy an excellent order situation because the products of both divisions are of key importance for the security of supply and hygiene with regard to foodstuffs and medicines.

In the medical technology field, Greiner Bio-One products made a major contribution to the fight against the crisis, as they were needed for corona testing and the development of medication and vaccines. Consequently, although expansion of roughly 5 percent was already predicted for Greiner Bio-One in 2020, the division has actually closed the year with growth of around 36 percent.

In addition, people are currently paying special attention to product hygiene and shelf life. As a result, the significance of packaging characteristics such as barriers against bacteria and viruses, the prolongation of freshness and the transport and stock functions has become clearly evident. Precisely at this time, consumers have come to realize the importance of packaging and its value.

#### **Taking courageous decisions**

Especially in times of crisis, it is important to have a clear objective in view. However, the adoption of clear positions in exceptional circumstances demands courage. Courage that was shown by Greiner in 2020 with the increase of its participation in the joint venture Eurofoam from 50 percent to date to 100 percent and hence the wrapping up of the largest acquisition in the group’s business history.

With the complete takeover of the Eurofoam Group, Greiner has consolidated its basis for continued, successful expansion in the foam business

**Find out more about  
our developments in  
times of crisis  
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*Thanks to the increased demand for medical products, Greiner Bio-One achieved highly positive development.*

field and in 2021 took another important step with the amalgamation of the six business areas of the Foam Division under the "NEVEON" umbrella brand. The aim of this strategic merger is to achieve the status of an all-round foam producer and fabricator, which can supply a complete range as a full-liner and thus rise to become a top market and technology leader. The taking of such bold and calculated steps either in, or precisely because of, a period of crisis is exactly what has characterized Greiner since time immemorial.

**More about NEVEON**  
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#### **Longer-term change instead of survival tactics**

Certain things have come to stay and megatrends will also accompany our journey through 2021 and beyond. Work patterns and methods will be subject to long-term change and digitalization and sustainability will continue to be key corporate issues.

Therefore, are we preparing for the unknown? Or in other words, if anything can happen at any time what is the use of forecasts and plans? The theoretical objective is not to predict future black swan occurrences, but instead to realize that they will happen, assume this to be the case and ensure that a swift and flexible response can be made. Speed and agility are in demand and in future creativity will be more important than perfection. Trial and error and a fresh attempt will be the order of the day.

Our mindset will therefore decide how in a mental regard we intend to head into these uncharted waters. Resilience, which implies the ability to know and activate one's resources in challenging situations, will gain in significance and the task will be to achieve a solid footing, in order that although a storm may occasionally rustle the leaves, the tree will remain firmly rooted in the ground.



*According to the German trend researcher and futurologist, Matthias Horx, "We have to let go of the world before corona."*

# The world before corona? Let it go!

In the course of the COVID-19 pandemic the global economy has come to a partial standstill, existences have been threatened and entire industries disrupted. However, the crisis and the cataclysms that it has caused have also opened up room for fresh opportunities. It is a time of massive insecurity, but also a moment in which the previously unthinkable has suddenly become credible.

The US president Abraham Lincoln once remarked that the best way of predicting the future is to shape it and this statement is perfectly apposite to the situation in which we have now been embroiled for many months.

However, how can we influence, design and plan a future that alters from day to day? In reality this is wishful thinking in view of the fact that around the globe barely a single stone has been left standing. Moreover, vaccines are developed and then discarded, and new virus mutations have spread in a repetitious process. Therefore, when confronted by this zigzag pattern it is possible to define a clear course

and reconnect to the past? "No way!" say Matthias Horx and Harry Gatterer because, "We have to let go of the world before corona." Horx is regarded as one of the most influential trend researchers and futurologists in the German-speaking region and together with his fellow colleague, Harry Gatterer, he heads the "Zukunftsinstitut" (Future Institute) in Vienna, which deals primarily with social and economic questions. In the following text, they reveal why a return to life prior to corona is neither possible, nor desirable.

#### Matthias Horx draws a conclusion about the crisis

“ 2020 was the year of the pandemic and 2021 will be the year of decisions. The actual sense of a crisis lies in our recognition of the fact that even without it, things would not have remained as previously. In its essence, the corona crisis constitutes a continuous questioning of our social consistency and our readiness to undertake human cooperation and constructive (future) thinking.

The virus has turned previous trend lines on their head and with 2021 the twenties have begun. A decade during which we will discover whether or not we are capable of moderating global warming. Furthermore, 2021 sees an extraordinary number of approaching finales. The end of the American age is drawing to a close and time has begun to run out for the fossil fuel era. 2021 will also be a year in which a tendency that has already recently become apparent will strengthen massively, namely the development of new revolts and rebellions. Therefore, it may be the case that the corona crisis has just one purpose, which is to make it crystal clear to humanity that even without it nothing would have continued as before.

#### Let's allow the pre-corona world to slip away!

Even before the crisis substantial forces for change were gaining in strength and now these are proliferating with even greater dynamism. Prior to corona a growing "we culture" was already tangible everywhere and in recent years had led to the emergence of a growing number of social businesses. As a result, solidarity, diversity and sustainability were moved from their former status as nice-to-have topics to the must-have agenda. But then corona arrived.

Owing to the pandemic our world is not only experiencing collective deceleration, but also a gigantic deconstruction of everyday life that extends to its economic interrelationships. What holds the world together and what does not is now more clearly apparent and the shutdown has unleashed developments that are irreversible. Therefore the motto "Let it go!" must prevail and we should allow the pre-corona world to ride off into the sunset. An update of the past does not constitute our future.

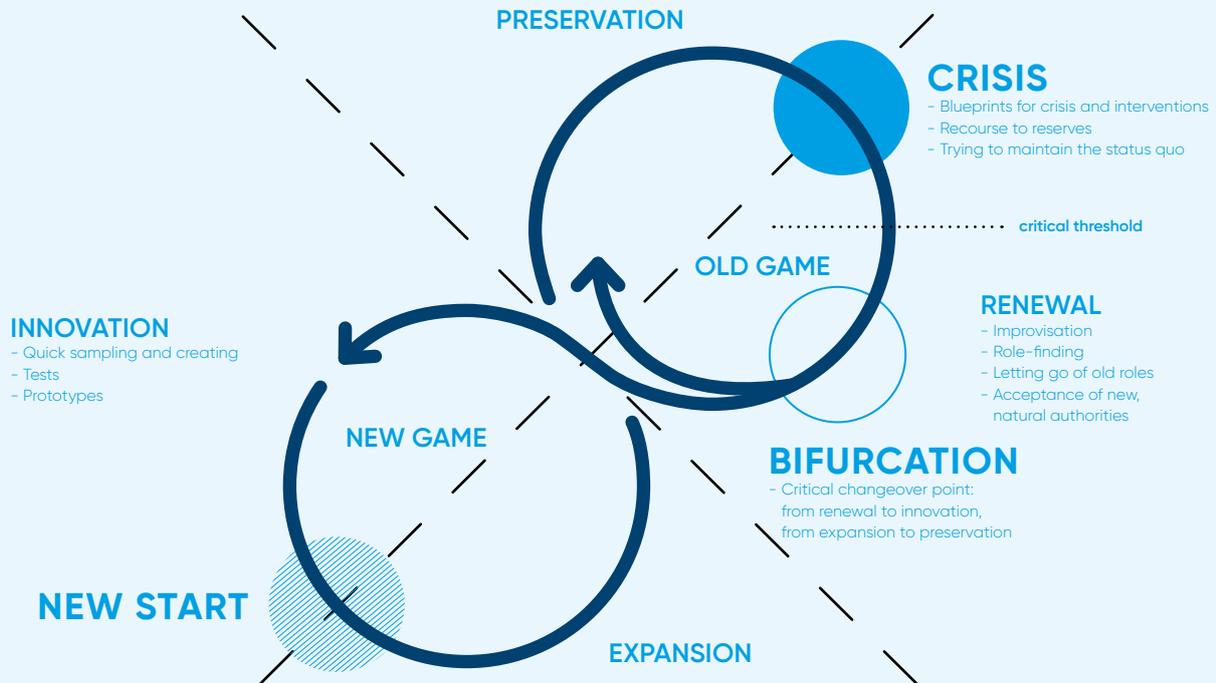
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**"2020 WAS THE  
YEAR OF THE  
PANDEMIC AND  
2021 WILL BE THE  
YEAR OF DECISIONS."**

Matthias Horx

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# Lazy Eight: The adaptive cycle as the instrument of the hour



In the Adaptive Cycle, also known as the Lazy Eight because of its shape, the path of the coming months can already be outlined.  
Source: Zukunftsinstitut, 2020

## We are switching to "Lazy 8"

Consequently, the question is no longer, "When is this fuss over, but instead what do we do next?" Actually, we must now lay the foundations for the social and economic future and therefore 2021 is a year of decisions.

What we need above all at present are decision-making capabilities and self-organization in every single company. The crisis caused by corona has triggered the disintegration of old cause and effect relationships, which were always complex and therefore will be difficult to rekindle. Every company can anticipate diverse knock-on effects, but these cannot be forecast. In addition, we will be faced by a world with an increased awareness of global interrelationships and dependencies.

Humanity and its health will now enter the economic equation, which is something that before corona was barely conceivable. Moreover, once the shock has been overcome, multiple economic audits will follow. We will not find answers to their results through linear thinking and for this reason the motto now must be a switch to complexity and adaptation. Indeed, this is a prerequisite for the retention of a decision-making capacity in an extremely volatile environment.

### The adaptive cycle as the instrument of the hour

On the basis of the Lazy Eight model (see Gunderson/Holling 2002; Katzmair/Gulas 2018), the world and its economy is on the reverse renewal loop. At the critical bifurcation point, we will stand at a fork in the road, with one part of the economy quickly returning to normality and business as usual, while the other either cannot or will not seek the reverse gear and instead will attempt to push forward. The choice of the way ahead and the direction in which we wish to move actually constitutes the momentum generated by the crisis. It will demand great many things, which will include investments in future technologies and skills.

The decision to opt for a new game represents a rejection of short-term goals in favor of long-term survival and in a world of global complexity the ability to think in a networked and systematic manner is a fundamental prerequisite.

In times of radical change, openings and potential space appear that are unlikely to reoccur in the short-term. Consequently, the crisis phase will be the most entrepreneurial in decades and any period at the end or following a crisis is the moment of opportunity for visionaries.

### Identity, creativity and speed

The decisive factor in the "now or never!" phase is complex self-awareness. The predominant dynamic forces are challenging and require a very clear understanding of one's own strengths and potential. Companies will bind their strategies more firmly to their identity and also more clearly to general wellbeing.

Gaining a lead in the new game is less a question of company size and financial strength than ingenuity and resourcefulness. Consequently, new networks and natural roles will result.

The tried and tested will be questioned and speed will also play a significant role. In the frenzied stand-still of the crisis, possibilities that otherwise would have needed years to emerge will occur in an instant. Therefore, however painful it may be, the disassembly of the present will create a new future.

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**"IT MAY BE THE CASE THAT THE CORONA CRISIS HAS JUST ONE PURPOSE, WHICH IS TO MAKE IT CRYSTAL CLEAR TO HUMANITY THAT EVEN WITHOUT IT NOTHING WOULD HAVE CONTINUED AS BEFORE."**

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*The trend researcher and futurologist, Harry Gatterer, regards decisiveness and self-organization as important prerequisites for future success.*



# How should we approach the new age?

The corona crisis has exposed various frailties, but has also revealed potential. Sustainability, climate protection and research are topics that will also accompany us into the future, and with its Blue Plan Greiner has created a bold sustainability strategy, which points in this direction.

From a current perspective, when and in what form the real economy will recover from COVID-19 remains unclear. Moreover, although the ongoing inoculation campaigns provide reason for a degree of optimism regarding the outlook for the second half of 2021, the road to a marked relaxation of the situation will be long and hard. However, what is already apparent is that corona has proven to be a catalyst for changes.

#### **Corona as a magnifying glass for existing problems**

The debate regarding the question as to the form in which mobile working could, or would, either supplement or even replace conventional office work had dragged on for years. But then corona broke out and within a few days, entire IT departments had to perform the genuinely herculean task of enabling employees to work at home where this was deemed to be sensible. Consequently, what for many years had merely been discussed as a theoretical hypothesis suddenly became physical reality and innumerable similar examples from the field of digitalization could also be listed at this juncture.

Thanks to an enormous joint effort and exchanges of information between scientists around the globe, within a very short space of time a minor miracle has been achieved. Namely a vaccine which from now on will be employed as a game changer in the battle against the virus and should restore a degree of freedom to us all.

Therefore, if there is one thing that the pandemic has taught us, it is that through concerted effort we can move mountains. Even before corona, our aim was to achieve climate neutrality by 2030 and the virus has not caused this ambition to be lost, but instead has heightened it still further. We have to fight climate change with all the means at our disposal. Accordingly, we must rethink our approach to energy consumption, place a focus upon more efficient methods of production, find an alternative to fossil fuels and employ renewable energy sources to maximum effect.

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**“CONSEQUENTLY, WHAT  
FOR MANY YEARS HAD  
MERELY BEEN DISCUSSED  
AS A THEORETICAL  
HYPOTHESIS SUDDENLY  
BECAME PHYSICAL  
REALITY.”**

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### **Social issues have moved into the spotlight**

Climate protection is not only a scientific, but also a social issue and precisely in a crisis, turmoil in this regard always comes to the fore. Therefore, with its binding "Plastics for Life" sustainability strategy, which was introduced during 2016, Greiner already anchored social and environmentally-compatible conduct within its group. This initiative was then followed in 2017 by the implementation of inter-group sustainability management. It is worthy of note that Greiner's adaptation of its product portfolio with respect to recyclability, increased innovation in line with sustainability and activities aimed at establishing circulatory economic structures is not only inline with the European strategy for plastics, but also extends beyond statutory requirements and constitutes the key area in which the group leads by example.

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**"CLIMATE PROTECTION  
IS NOT ONLY A  
SCIENTIFIC, BUT  
ALSO A SOCIAL ISSUE  
AND PRECISELY IN A  
CRISIS, TURMOIL IN  
THIS REGARD ALWAYS  
COMES TO THE FORE."**

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### **The "Blue Plan": our sustainability strategy for a better future**

The targets established in the sustainability strategy partially extend to the year 2030 and represent a blueprint for the future development of the group. They also go far further than the demands contained in the EU's plastics policy and range from the introduction of an internal carbon pricing system to a commitment to make all plastic packaging entirely reusable, recyclable or compostable by 2025. In addition, they include an assurance to eliminate all problematic and superfluous plastic packaging and an obligation to cover a considerable percentage of material requirements with recyclate. As far as product development is concerned, the objectives encompass attractive design, optimum product protection and outstanding environmental compatibility. Factors which under the motto "Designed for Recyclability", are accounted for from the very start of development projects.

In a circular business model, nothing is discarded. Products are integrated into loops and waste becomes the source of the new. This requires fresh ideas and improved engineering, as well as product design, which is the key to a circulatory approach. Our aim is to become a circular company based on resource efficiency.

### Intelligent design as the order of the day

Creative ideas are in demand in order to gradually move closer to the aforementioned objective. Greiner Innoventures cooperates with start-ups on the development of products outside the group's core business areas and with this corporate incubator we offer the framework and resources needed for inter-company teamwork. We therewith combine our extensive know-how and strengths with the visions and creativity of the start-ups.

The superordinated objective of Innoventures is to push ahead with innovations that go beyond the current research and development activities of the respective business areas and thus create a significant adjunct to Greiner's future.

### Personnel who think out of the box

The corona crisis constitutes a social and economic stress test, the like of which most of us have never previously experienced. In order to pass this examination both people and companies require a high degree of resilience and in particular this applies to employees. Therefore, Greiner places a special emphasis upon personal empowerment.

At Greiner, people are very much in the limelight because it is they that shoulder much of the responsibility for the implementation of group strategy. Investments in the workforce are essential, especially with regard to basic and further training, which constitute an important prerequisite for the overcoming of everyday challenges in the workplace with drive and job satisfaction.

### We must do things differently!

Sustainability is the only entrepreneurial approach with a future. Therefore, our Blue Plan provides a platform for our prolonged business success and our ambitions in the years up to 2030.

Undoubtedly, a more sustainable future will be accompanied by changes and in this regard, as yet we do not have answers for all the questions involved. However, we primarily see change and transformation as representing an opportunity, not merely for us as a company, but first and foremost for society and the environment.



The Blue Plan covers all of the group's business areas worldwide and focuses on the three main areas which have been identified as being the keystones in Greiner's future. In addition, the Blue Plan contains three superordinated goals that we wish to achieve by 2030:

- The realization of a circular economic system
- The empowerment of people
- The strengthening of social commitment

[greiner.com/blueplanvideo](https://greiner.com/blueplanvideo)

# Global strength in turbulent times

11494

**Employees**

111

EUR MILLION INVESTMENTS\*

%  
TOTAL WOMEN QUOTA

4

divisions in the plastics and foam sector

7

3

♀

\* investments in tangible assets

139 LOCATIONS



34

COUNTRIES

EUR MILLION

TURN  
OVER

1930

# Corona applies an economic stranglehold

During 2020, COVID-19 precipitated a global crisis that sent the economies of every country around the globe plummeting into a virtually unparalleled downward spiral. Moreover, the virus triggered an unprecedented supply and demand shock.

Corona, corona, corona! The party guilty of causing the dramatic slump in the world economy is quickly identified, for if in recent years this grew by an average of 1.2 to 1.5 percent, in 2020 the pandemic caused it to contract by 3.5 percent.

The most serious recession since the Second World War has affected the industrial and threshold nations to an equal extent and the world's poorest nations have also suffered badly. A unique situation has resulted in which no country is immune to either the dramatic economic situation, or the corona virus, which has clearly left its mark everywhere. The caesura in countries dependent upon tourism has been even more dramatic. In Europe, the Spanish economy was hardest hit with a minus of eleven percent, followed by France and Italy with a respective minus of around nine percent.

Germany's economy has also been afflicted and after a decade-long period of growth, in the corona crisis year 2020, it slipped into a serious recession with gross domestic product shrinkage of 5 percent as compared to 2019. The Austrian economy fared even worse and was down by 6.6 percent on the preceding year. All in all, economic performance in the eurozone fell by 6.9 percent and thus returned to roughly the level of 2015.

Not only were local economies jeopardized by the respective, large-scale shutdowns and lockdowns, but also the closely-knit nature of the global economy resulted in the fact that owing to the disruption to supply chains, barely a single region could escape the crisis. The worst affected industries in this scenario are services, tourism and gastronomy.

The global consequences of the corona pandemic are serious and the majority of countries have incurred massive debts in attempt to shore up

their companies. Furthermore, although the hope is that 2021 will see a return to healthy growth and prosperity, it can be anticipated that this recovery will only commence late in the year, if not first in 2022.

### United Kingdom

During 2020, the United Kingdom was subject to the paralyzing effects caused jointly by the Brexit debate and the corona crisis. The wrangling surrounding the departure from the European Union continued at the start of the year until the UK officially left the community on 31 January. Then in spring, the already problematic trade negotiations were further complicated by the outbreak of the corona pandemic. After ten months of tough bargaining, the EU and the UK finally agreed at the last minute to a trade and cooperation agreement, which thus prevented a "hard" Brexit and since 1 January 2021 has regulated these relations. The UK is therefore no longer part of the EU single market or the Customs Union and in addition, has withdrawn from all of the EU's political bodies and international agreements. In the meantime, growth in the British economy has fallen by ten percent.

### USA

In 2020, the US economy suffered a 3.5 percent fall in GDP, which was the most severe since 1945. Moreover, recovery was slowed owing to the continuation of the pandemic and a further massive wave of COVID-19 infections between mid-November 2020 and mid-January 2021. Nonetheless, since the summer of 2020, the US economy has regained some ground, but up to the end of December the resultant impetus was still insufficient to compensate for the massive slump in the first half-year. It is expected that in 2021 the US will return to calmer economic waters.

### China

To date, China has made the most headway in combating the virus. Consequently, as opposed to all of the Western industrial nations, even in the worst recession since the Second World War, it was able to still register economic growth. Of decisive importance in this regard was the speed with which countermeasures were implemented. In the first quarter of 2020, China completely cordoned off the city of Wuhan and its eleven million inhabitants from the outside world. Tactics such as this resulted in relatively quick success and the avoidance of a serious second wave of infections. Accordingly, after a very sharp downturn in the first quarter, the Chinese economy recovered rapidly and as one of the few nations worldwide, the People's Republic saw growth of 2.3 percent.

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**"NO COUNTRY IS  
IMMUNE TO EITHER  
THE DRAMATIC  
ECONOMIC  
SITUATION, OR THE  
CORONA VIRUS."**

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# Sales revenues by division



GREINER  
EXTRUSION

**3 %**

2020 | 68  
PY | -13 %



NEVEON

**25 %**

2020 | 479  
PY | +20 %



GREINER  
PACKAGING

**36 %**

2020 | 692  
PY | +0.4 %



GREINER  
BIO-ONE

**36 %**

2020 | 693  
PY | +36 %

GREINER  
**100 %**

2020 | 1,930  
PY | +15 %

# The best ever group result, and that in a crisis year!

Consolidated sales revenues of EUR 1.93 billion and therefore growth of fifteen percent in a crisis year par excellence. In spite of strong headwinds, Greiner has thus stayed on its success course and particularly in these challenging times, the strategy of product and market diversification has more than proven its worth.

Group diversification is one of the three strategic cornerstones upon which the Greiner business model is based. On the one hand, these solid foundations are intended to secure corporate stability and on the other, act as a cushion against fluctuations in the global economy. The volatile currency markets, as well as a certain dependency upon raw material market prices, also constitute recurring challenges.

Above all, the COVID-19 virus has affected the foam area in the automotive and aviation sectors. By contrast, the comfort sector demonstrated a rapid recovery. Conversely, at no point was the demand for packaging and above all medical products impacted by the virus and instead these areas saw strong sales. Greiner Packaging and Greiner Bio-One were thus also able to continue on their growth path in 2020. During the year, NEVEON (formerly Greiner Foam) and Greiner Extrusion registered a slight fall in sales revenues, but nevertheless as opposed to the previous year, the Foam Division saw growth owing to the acquisi-



tion of Eurofoam. In 2020, consolidated sales revenues increased from EUR 1.675 billion to EUR 1.93 billion and cash flow also increased over the preceding year, rising by 118 percent to EUR 314 million (FY 2019: EUR 144 million). All of the investments made in the 2020 financial year were again financed from cash flow.

#### **Sales revenues by region**

Greiner largely marketed its products in Europe and the continent was the source of around 71 percent of its sales in 2020. 7 percent were obtained in Asia, 17 percent in North America and 3 percent in South America. The remaining 2 percent emanated from the rest of the world.

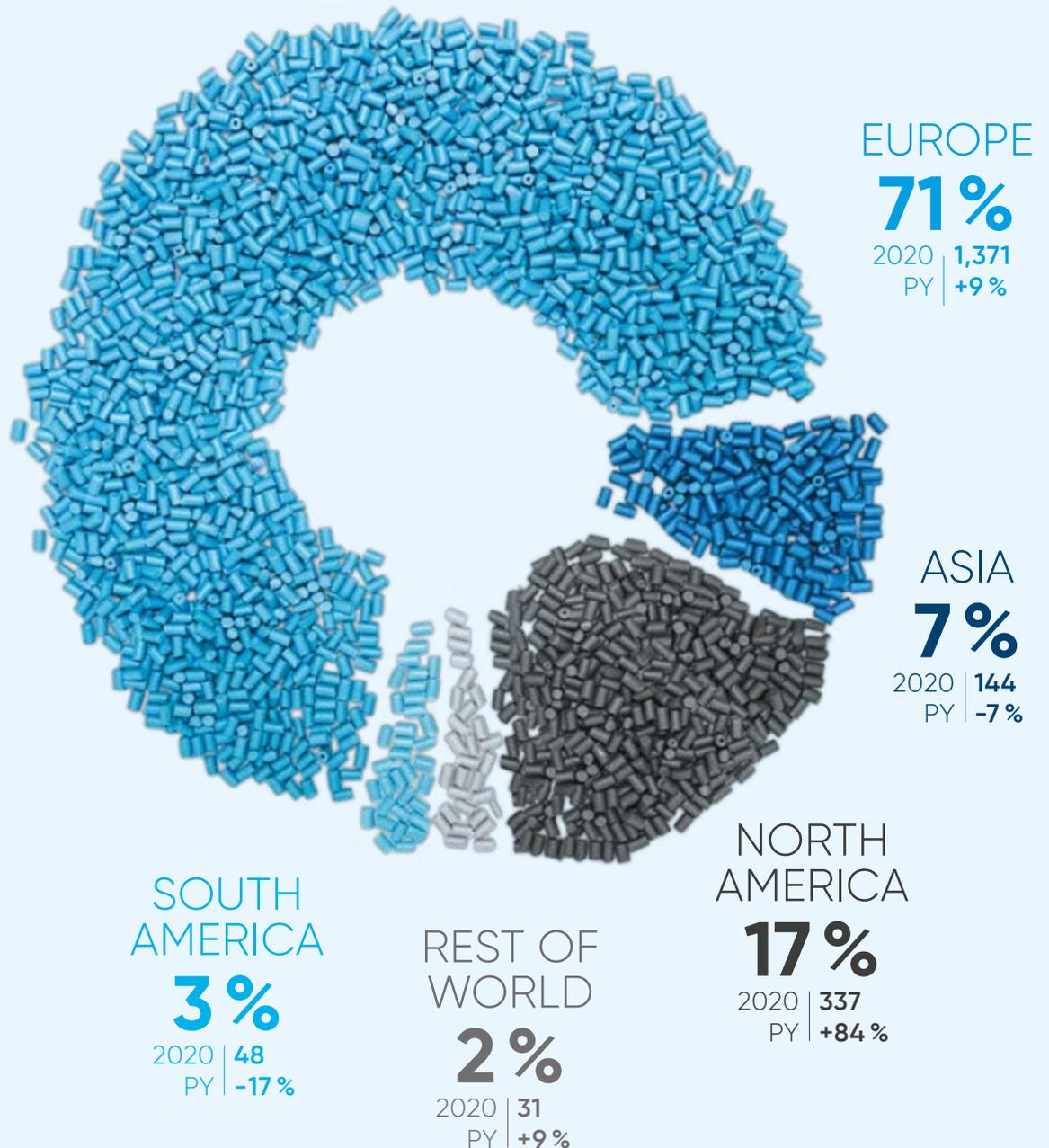
#### **Employee numbers have increased**

During 2020, group employee numbers rose from 10,745 to 11,494. This sharp increase was due primarily to the takeover of the Eurofoam joint venture. As at the 31 December 2020 closing date, a workforce of 2,680 was employed in Austria along with another 6,979 personnel in other European countries. Greiner had 693 employees in Asia, 790 in North America, 225 in South America and 127 in Africa.

#### **Basic and advanced training are vital**

For many companies, finding suitable specialist personnel has become a problem and Greiner has also witnessed the outbreak of the "war for talents". Therefore, basic and advanced training within the group is now a special priority. Accordingly, the Greiner Campus and the modern apprentice workshops that it houses constitute a clear commitment to the Kremsmünster location in Austria and serve to create the ideal conditions for the training of the next generation of skilled employees.

# Sales revenues by region



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**“GLOBAL PLAYERS  
MUST BE AWARE OF  
THEIR OBLIGATIONS  
TO THE EARTH  
AND COMING  
GENERATIONS.”**

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In addition, the Greiner Academy offers the workforce internal tuition and further educational possibilities on an inter-divisional basis and the GEMs Program (Greiner Expert & Management Succession) has been designed specifically to help selected management trainees climb the next rung in the career ladder. Greiner’s educational program is rounded off by a training course supplemented with coaching within the group, which is targeted on graduate students. Within eighteen months, the participants obtain a comprehensive knowledge of the group and become acquainted with a variety of divisions and departments. Furthermore, they also gain initial project experience at Greiner.

**A focus on environmental issues**

Global players must be aware of their obligations to the Earth and coming generations. In Greiner’s case the group can point to long-term experience in the field of recycling technology and a sustainable approach to both the environment and resources.

In 2019, Greiner published its first Sustainability Report, which established clear objective and values. In addition to a more efficient energy policy and the increased use of recyclates within the group, among other issues the report focused on raising the percentage of women in managerial posts. The next Sustainability Report, which will be issued this year, will document the progress made towards achieving these goals. The creation of a sustainability platform in which companies along the value added chain consider the possibilities for the resource-protective use of packaging, as well as entry to the Alliance to End Plastic Waste, constitute just two of the numerous efforts that Greiner is undertaking with regard to a responsible approach to our blue planet.

**CO<sub>2</sub> emissions pursuant to the GHG Protocol**

For a number of years, Greiner has reported its group-related, atmospheric emissions in line with the Greenhouse Gas Protocol (GHG Protocol). Over time, data quality has improved considerably and for this reason the emissions for 2018 and 2019 were newly calculated. The CO<sub>2</sub> footprint (Scope-1 and Scope-2 market-based emissions) in 2020 amounted to 162,016 t of CO<sub>2</sub> equivalents (reporting period: 1.1.2020–31.12.2020). 2020 also witnessed the extension of Greiner’s carbon inventory, which means that in addition to the greenhouse gas emissions from group locations, relevant emissions in its value added chain (Scope-3 categories) are also calculated and reported. In 2020, the CO<sub>2</sub> footprint (Scope-3 emissions) consisted of some 1,314,589 t of CO<sub>2</sub> equivalents (reporting period: 1.1.2020–31.12.2020).

# CO<sub>2</sub> emissions in the course of the year\*

## SPECIFIC CO<sub>2</sub> EMISSIONS (per TEUR sales revenues)

2020: **84 kg**  
2019: **113 kg**  
2018: **111 kg**

## SCOPE 1

2020: **31,488 t**  
2019: **23,539 t**  
2018: **21,134 t**

## SCOPE 2 (market-based)

2020: **130,528 t**  
2019: **143,440 t**  
2018: **136,595 t**

## SCOPE 2 (location-based)

2020: **234,621 t**  
2019: **221,938 t**  
2018: **217,605 t**

## SCOPE 3

2020: **1,314,589 t**

\* Scope 1: (direct emissions) emissions from heat generation, vehicle fleet and coolant leakages; Scope 2: (indirect emissions from energy purchases) emissions from electricity, district heating and district cooling; Scope 3: (other indirect emissions) emissions from the sourcing of raw materials, upstream chain energy, logistics and waste

The calculations are carried out in accordance with the guidelines of the GHG Protocol and incorporate the largest administrative and production locations in which Greiner has a more than 50 percent participation. Joint ventures and sales offices are excluded. The financial data for the calculation of the specific CO<sub>2</sub> emissions per TEUR includes all consolidated Greiner enterprises.

The corporate carbon footprint shows all emissions as CO<sub>2</sub> equivalents, which means that apart from carbon dioxide, they also take into account the six other greenhouse gases regulated in the Kyoto Protocol (methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), fluorocarbons (FKW and H-FKW) and nitrogen trifluoride (NF<sub>3</sub>)). The sole exception is formed by the emission values from electricity consumption for which only CO<sub>2</sub> emissions are reported. However, as these constitute the bulk of the emissions emanating from the power supply, they can be omitted from the calculation. The emission factors employed for the measurement of climate impact originate from recognized eco-balance databases.

## Pressing ahead with research and development

Innovation is a decisive factor for success in both the European and international business arenas. Therefore, in order to open up fresh opportunities, Greiner has further internationalized its group research and development and stepped up the cooperation with external research bodies and companies. With the Greiner Innoventures corporate incubator, the group offers a framework and resources for teamwork with other companies.

## Outlook 2021

In spite of the long-term failure of the European economy to achieve anything better than moderate growth, not to mention the volatile currency markets and the effects of the COVID-19 pandemic, Greiner still expects a further increase in sales revenues in 2021. The group's geographical spread and product diversity are advantageous in this regard, as owing to the fact that its companies generally manufacture items for the local markets in the countries where they are located, Greiner is largely free from import duties and trade restrictions. However, against the backdrop of the continuing corona crisis, the outlook is subject to considerable planning uncertainties. Nonetheless, owing to its market position, Greiner awaits a positive medium- and long-term demand trend.

What we have set in motion:

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**"OUR CONTRIBUTION  
TO OVERCOMING  
THE PANDEMIC LIES  
IN THE DAILY SUPPLY  
OF RELIABLE PRODUCTS  
OF COVID-19  
RELEVANCE."**

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*Rainer Perneker  
CEO Greiner Bio-One International GmbH*





# Greiner Bio-One products play an important role in the pandemic

With the rapid development of the VACUETTE® virus stabilization tube and an intense focus upon research and laboratory products of relevance to COVID-19, Greiner Bio-One is making a key contribution to the conquest of the pandemic. The careful management of production capacity and close cooperation with our customers constitute the basis for an extremely successful business picture.

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.

28 LOCATIONS

EUR MILLION

TURN  
OVER

693

Employ-ees  
5732

—  
**“GREINER BIO-ONE  
 ACTED QUICKLY WITH  
 NEW PRODUCTS FOR  
 THE NEEDS OF THE  
 PANDEMIC.”**  
 —

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 articles 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 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.

#### **Above-average business development in 2020**

During the 2020 financial year, Greiner Bio-One employed a global workforce of more than 2,300 at 28 locations in 20 countries. The company achieved annual sales revenues of EUR 693 million, which represented growth of 36 percent over the preceding year (FY 2019: EUR 509 million). This development pattern was largely influenced by the COVID-19 pandemic and there was also an intense focus upon the maintenance of international delivery capabilities and the best possible management of production capacity and the supply bottlenecks in the sourcing market. The beginning of the pandemic was marked in many countries by a reduction in hospital services to the treatment of emergency cases, the postponement of routine examinations and the closure of laboratories, universities and research bodies, which resulted in a business downturn. In response, Greiner Bio-One acted quickly with new products for the needs of the pandemic and created additional production capacity for items of relevance to COVID-19 with the aim of securing the supply of research and diagnostic facilities. During the second half-year in particular, large increases in sales revenues were achieved with COVID-19 related products, above all in the USA and Europe. However, although falling raw material costs bolstered the business result, international transport logistics resulted in high additional costs.



*The VACUETTE® virus stabilization tubes ensure safe sample transportation.*

#### **Investments in the future with expansion at international locations**

Within the framework of an infrastructure project extending over several years and involving considerable investments, the expansion of production at the Frickenhausen location in Germany was concluded, whereby the previous production area was increased by more than a third. The subsequent enlargement and modernization of the administration building will be completed spring 2021. The production location in Thailand plays an important role in the supply of the Asian region and in view of anticipated market growth and the resultant perspectives, this is set to further gain in significance. Therefore, an extensive location expansion project has been completed involving the installation of a new high-shelf warehouse, which has trebled storage capacity, and the more than doubling of the production area.

#### **Products for the diagnosis of acute SARS-CoV-2 and vaccine development**

During a year characterized by the COVID-19 pandemic, Greiner Bio-One products not only played an increasingly important part in vaccine development and production, but also in acute SARS-CoV-2 diagnosis. Within a very short time, the VACUETTE® Virus Stabilization Tube (VST) was launched onto the market. The sample taken from the nose or mouth/throat region of the person being tested is transferred with a swab into the VACUETTE® VST. This unbreakable tube, which is made of PET plastic, contains a phosphate-buffered saline solution and ensures the safe transport and storage of the viral sample material. In combination with VACUETTE® transport line products, the material for the PCR analysis of SARS-CoV-2 is thus delivered safely to the laboratory at its respective destination. In addition, standard VACUETTE® blood collection tubes from Greiner Bio-One are employed for laboratory examinations in connection with antibody tests.



*ELISA microplates are also employed for corona antibody tests.*

ELISA microplates are also used during testing for corona antibodies and during vaccine development specially treated cell culture products play an important role, as they facilitate cell attachment and growth. Greiner Bio-One supplies suitable roller flasks and mass cell culture systems for ongoing vaccine production.

In the mass cell culture field, Greiner Bio-One has added developments to its CELLdisc portfolio, which apart from the 12- and 24-layer versions and a closed lid system for the prevention of contamination, include a variation that allows safe gas exchange with all sizes of CELLdisc by means of the use of external filters. Furthermore, the CELLstage aid, which guarantees the perfect positioning of the CELLdisc during filling, has been brought to market.

In the cell and tissue culture field, Greiner Bio-One has supplemented its range of cell strainers with a variation for tubes with limited volumes that enables the processing of small sample volumes. Cell strainers are employed to separate the cells obtained from an organ from other tissue components. In addition, they facilitate the isolation of cells, for example from the immune system, for further examination. This is important for the characterization of cellular surface structures, as for example in COVID-19 research.

#### **A contribution to medical digitalization**

The division can also look back on a successful year in the digitalization field. In the course of a joint project with Greiner eHealth Technologies, the GZO



*CELLstage for the optimum positioning of CELLdisc mass cell culture vessels during filling.*



*Small EASYstrainer for cells from tubes with volumes of up to 15 ml.*



*Greiner eHealth Technologies provides digitalized pre-analysis.*

Spital Wetzikon became the first Swiss hospital to introduce a blood sampling process with fully digitalized support. This means that for the hospital's personnel problems with regard to the manual labeling of tubes, the limited legibility of important information and difficulties with machine readability are things of the past. Thanks to Greiner eHealth Technologies the entire blood sampling process could be optimized and made more efficient, which has not only resulted in an improvement in pre-analysis quality, but also a positive effect upon laboratory results.

#### **Making a Difference, a new slogan with a powerful message**

With a reworked corporate design and both a new purpose statement and slogan, Greiner Bio-One now presents itself with a modern image, which expresses what the division represents. Namely, that with passion and dedication its workforce seeks to provide life sciences and healthcare professionals with advanced and sustainable products and solutions, with the result that Greiner Bio-One contributes to the preservation of health.

#### **Outlook 2021**

It can be assumed that the COVID-19 pandemic and hence the increased demand for related products will continue for some months to come. One major priority will remain the securing of the necessary capacity and in addition Greiner Bio-One will focus on the systematic, targeted realization of its corporate strategy. As a competent and reliable partner for its customers, the division will endeavor to continually raise its market shares and consolidate leading positions in key segments.



*The production location in Thailand has undergone significant enlargement.*

What we have set in motion:

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**"SEEING AN OPPORTUNITY  
IN A CRISIS IS EASIER SAID  
THAN DONE, BUT IN THE  
FINAL ANALYSIS 2020 WAS  
A GOOD BUSINESS YEAR  
FOR GREINER PACKAGING  
WITH MANY POSITIVE AND  
SUSTAINABLE FURTHER  
DEVELOPMENTS."**

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*Manfred Stanek  
CEO Greiner Packaging International GmbH*





# Success course also retained in the crisis year thanks to new ideas and a sustainable strategy

COVID-19 dominated 2020, but Greiner Packaging used the pandemic-related crisis as an opportunity to develop new innovations in what was a relatively stable market environment. In addition, sustainability was driven forward as part of the division's own circular economy strategy and in crisis-ridden 2020, the foundations for a successful future were nonetheless laid with the repetition of the business result of the previous year.

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**"GREINER PACKAGING  
DEMONSTRATED THAT  
A GREAT DEAL COULD  
BE ACHIEVED THROUGH  
INTERNATIONAL  
TEAMWORK."**

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Greiner Packaging is one of Europe's leading manufacturers of plastic packaging for the food and non-food area. It produces innovative solutions, which owing to the efforts of local teams around the globe are constantly becoming more sustainable. With the Greiner Packaging and Greiner Assistec Business Units, the division is perfectly equipped for future market requirements. The former develops and manufactures packaging solutions such as cups, bottles and lids with a strong focus on the food and non-food industry. Conversely, Greiner Assistec acts as a solution provider of technical components and the production of customized plastics solutions, including assembly and upgrading.

EUR MILLION

**TU  
RN  
OV  
ER**

**692**

**32**  
**LOCATIONS**

**7984**  
**Employees**



*Greiner Assistec's Visor was one of the first developments in the COVID-19 crisis.*

—  
**"PERFORMANCE IN  
 THE FOOD SEGMENT  
 WAS AS HIGH AS  
 USUAL."**  
 —

#### **The COVID-19 crisis is mastered through teamwork**

When the pandemic began in spring 2020, Greiner Packaging demonstrated that a great deal could be achieved through international teamwork. During the crisis, the organizational model with an excellent balance between centralization and decentralization, and strong, local business units proved its worth, as it facilitated quick and flexible reactions with regard to employee safety, production at the locations and new innovations. The market situation in 2020 presented a mixed picture with high performance in the food segment as usual, but a generally downward trend in the fields of office supply, hotels, gastronomy and catering. All in all, sales revenues were at the level of the previous year but on closer scrutiny gains, losses and marked fluctuations within the individual segments become recognizable.

Progress towards a sustainable circular economy was driven forward and lent shape in the form of a divisional strategy. Furthermore, during 2020 Greiner Packaging achieved numerous advances in the innovation field that included detergent packaging containing 50 percent r-PP, the first r-PS yogurt cup and special products for protection and hygiene such as even easier to handle disinfectant bottles and the new Greiner Visor protective shield against COVID-19.

### A sustainable, circular economy is used to create shared opportunities

Greiner Packaging has based its circular economy strategy on three cornerstones consisting of product and service development and material partnerships. Accordingly, efforts aimed at increased recyclability were intensified in the product field, initial activities took place in the service area and new partnerships were forged with the aim of securing material flows from the recycling loop. It is therefore hardly surprising that in 2020, Greiner Packaging entered into more new cooperations than ever before. Apart from the support of the Plastic Bank, these included memberships in Styrenics Circular Solutions (SCS), the Circular Plastics Alliance and the Alliance to End Plastic Waste, as well as the HolyGrail 2.0 initiative for digital watermarks on packaging. In addition, Greiner Packaging joined the international #ForumRezyklat coalition and with these strong partnerships intends to jointly realize additional sustainable ideas.

### Sustainability as a benchmark for future success products

New packaging solutions are also contributing to a sustainable circular economy. For example, owing to its 50 percent r-PP content, in the fall of 2020 the Henkel K3®-F packaging for the 4in1 detergent discs from Persil convinced the jury of the Austrian Green Packaging Awards. In the dairy segment, following initial testing the new K3® r-PS yogurt cup met with a highly enthusiastic response in Switzerland and now final approval for the foods segment is awaited. The resealable, returnable yogurt cup lid is also a model example of sustainable thinking.

Other focal points in 2020 included the “Design for Recycling” concept that already integrates subsequent circulatory thinking during the packaging development phase, as well as the future use of digital watermarks, which facilitate plant sorting and hence recycling. Equally important milestones were passed with regard to increased product and market diversification, which foresees a move away from purely dairy packaging suppliers. Therefore, a stronger foothold is being established in new segments such as ready meals, salads, ketchup, sauces & dressings and other food and non-food markets.



Prize-winning! The detergent packaging produced by Greiner Packaging for Henkel now contains 50 percent r-PP.



Pride! Gatherers at the opening of the first Greiner Packaging Plastics Collection Center in Manila, Philippines.



*Practical and sustainable! Greiner Packaging's new returnable lid for dairy products.*

#### **The 2019 level is retained in the crisis year**

In view of the pandemic, with sales revenues of EUR 692 million (FY 2019: EUR 690 million), more than 4,900 employees at 32 locations in 19 countries, a good result was achieved for the financial year, which replicated that of 2019. Therefore, having successfully mastered what was a difficult year, Greiner Packaging can look back on 2020 with a degree of satisfaction. The corporate strategy prepared in 2017/18 is the object of continual updates and will continue to plot the business course for the future with priorities such as operative excellence, diversification and circular economy activities as its guardrails.

—  
**“NEW BUSINESS  
 MODELS SHOULD  
 BE CREATED AND  
 FRESH MARKET  
 OPPORTUNITIES  
 SEIZED.”**  
 —

#### **A volatile raw material price environment**

During 2020, the raw materials markets were also overshadowed by the COVID-19 crisis. The global economic slump at the beginning of the year and the negative oil price trend sent market prices on a downward spiral. However, after a summer characterized by an extremely low price level, there were initial, perceptible signs of demand recovery in Asia and in the final months of 2020 poor material availability resulted in prices on a par with those at the beginning of the year. The impending Brexit and the hoarding of safety stocks reinforced this trend, but in spite of these market fluctuations, the development and commercialization of alternative materials continued in all of the product groupings.

#### **Greiner Assistec is also banking on reliability**

In 2020, the new sustainability strategy played a key role at Greiner Assistec, which aims to position itself in future as a 360° solution provider. On the one hand, this is to be achieved by adaptation to customer sustainability strategies with regard to CO<sub>2</sub> reduction and on the other, through the use of more sustainable or recyclable materials. New business models are to be broadened and fresh market opportunities exploited. One example in this respect is the new Greiner Visor, which was developed as an ad hoc response to COVID-19 and makes a valuable contribution to health protection.

One item of bad news was certainly the announcement of the closure of the Greiner Assistec location in St. Gallen, Austria in 2021. This was unfortunately unavoidable, but the degree of Greiner Assistec's fitness for the future is proven by its focus on process optimization, smart automation, digitalization and larger production units. The high problem-solving competence that the development of intelligent plastic components with integrated electronics requires also indicates this future orientation. As a technology integrator, Assistec constantly strives to reach the next level.

**Trends**

As opposed to the previous year, when sustainability and digitalization represented the predicted trends, the task now is to strengthen local supply chains. The spotlight is on the return of sourcing from the Far East to Europe and the creation of local supply chains in order to become more independent. Another important topic in 2021 will be work safety at the locations, not merely with regard to protection against COVID-19, but also in general terms and in connection with employee health and well being. In addition, we will continue to make progress with the sustainability topic.

**Outlook 2021**

Within Greiner Packaging, we are convinced that 2021 will be a good year for the division although developments in respect of the pandemic remain unpredictable. Nonetheless, the division will continue to systematically pursue its course in the direction of a sustainable circular economy with CO<sub>2</sub> savings, enhanced packaging recyclability and new business models. In addition, the Packaging Business Unit will aim for greater diversification through the opening up of new markets, while the Assistec Business Unit will concentrate on the sharpening of its profile as a safe and reliable supplier and local partner, and hence as a sustainability solutions provider.



*Practical, attractively shaped and ideal for promotions! Greiner Assistec has developed the Stabilo White Box as a returnable container for pencils.*



*Innovative sustainability! Greiner Packaging's K3® cup, made from 100 percent r-PS, as a typical, Swiss twin yogurt package.*

What we have set in motion:

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**"NEVEON IS A GROUP  
THAT OFFERS INTEGRATED  
FOAM SOLUTIONS  
FOR EVERY AREA OF  
APPLICATION AND  
INDUSTRY ON A ONE-  
STOP BASIS. THIS IS AN  
IMPORTANT USP AND A  
SIGNIFICANT COMPETITIVE  
ADVANTAGE."**

---

*Oliver Bruns*  
CEO NEVEON Holding GmbH

**NEVEON**

Proud Member of Greiner



# NEVEON surpasses its sales revenues and result targets

The acquisition of Eurofoam and the related, heralded transformation of Greiner Foam into NEVEON, one of the world's leading integrated foam groups, constituted the topics that dominated matters in Greiner's Foam Division during 2020. In spite of challenging general conditions, the past year was highly successful for NEVEON, which succeeded in surpassing its sales revenues and result targets.

—  
**APRIL 6, 2020**  
**REPRESENTED THE**  
**UNOFFICIAL BIRTHDATE**  
**OF NEVEON.**  
 —

NEVEON (formerly Greiner Foam) is one of the world's leading integrated foam groups and since February 2021 has concentrated the foam know-how of Eurofoam, aerospace, MULTIfoam, Perfoam, PURTEC and Unifoam under a single umbrella. With the three business areas Living & Care (mattresses, upholstered furniture and health applications), Mobility (automotive, aviation, railway and maritime) and Specialties (boiler insulation, acoustic solutions, filter foam, special packaging, sports surfaces and diverse other special applications), NEVEON offers polyurethane flexible and composite foams for a vast range of sectors, which extend from the comfort and mobility segments to diverse special applications.

During the 2020 financial year, NEVEON attained sales revenues of EUR 479 million<sup>1</sup> (FY 2019: EUR 410 million<sup>2</sup>), which corresponded with an increase of 20 percent over the preceding year. In 2020, the foam specialist also employed a workforce of more than 3,400 at 61 locations in 18 countries.

<sup>1</sup> Since July 2020, 100 percent of Eurofoam's sales revenues have been taken into account.

<sup>2</sup> 50 percent joint venture Eurofoam not prorated.

EUR MILLION

**TU  
RN  
OV  
ER**

**479**

**6**

**1**  
**LOCA  
TIONS**

*Employ-  
ees*

**50**

**4**

**3**



*The Living & Care Business Area offers foam products for both improved sleep and living culture and the support of medical and care applications.*

### **Eurofoam integration and a new management**

April 6, 2020 marked a high point in the history of Greiner's foam activities and represented the unofficial birthdate of NEVEON. This was the day on which the complete takeover of Eurofoam, which until then had been a 50/50 joint venture between the Austrian Greiner AG and the Belgian Recticel S.A., was signed and sealed. This strategically important step enabled the foam specialist to further consolidate its already leading position and initiate the transition to NEVEON, which constitutes a fully integrated enterprise. Moreover, another milestone was passed with Oliver Bruns' assumption of the divisional management from Michael Schleiss.

### **Diversification proves its value in times of corona**

Since 2020, corona has literally had the world holding its breath. However, the strengths of NEVEON's product and market diversification were clearly apparent in this turbulent period and contributed to the division's positive development. While the aviation sector was hard hit by corona and the situation in the automotive area was tense, following a good first quarter and a three-month-long, corona-induced paralysis, the comfort foam segment enjoyed full order books and excellent sales revenues. The Specialties Business Area also showed positive development owing to the solid demand for heating system and footfall insulation and construction industry products.

### **Living & Care –individual products for individual quality of life**

NEVEON's Living & Care Business Area produces mattresses, upholstered furniture and care area items and thus offers foam products for enhanced sleep and living culture, as well as the support of medical and care applications.

For Eurofoam, which was active in the comfort and technical foam areas, 2020 was a successful but also turbulent year, not least owing to its full integration into Greiner. Nevertheless, in spite of a weak second quarter due to corona and extreme price increases for isocyanates and polyols in the fourth quarter, the company was able to exceed its targets for 2020 and not only retain, but also increase its shares in relevant markets. In the comfort foam area, Eurofoam achieved a clear increase in sales revenues and quantities over the preceding year. This was the

result of the above-average demand for furniture and mattress applications in the second half-year. In Hungary, the company was able to successfully complete a project for increased productivity and enlarged foam production and storage. In addition, across the board investments were made in the automation and digitalization of various production processes. Unifoam was also able to enjoy exceptionally strong sales in 2020, although the year ended weaker than expected. The tense situation in South Africa with regard to corona and the related volatility cast a shadow over consumer spending and led to a fall in demand in all areas that is likely to continue into the second quarter of 2021. The pandemic also impacted raw material supplies and prices, and this prompted Unifoam to adopt new and innovative approaches involving online and cross-border market development.

#### **Mobility – sustainable product solutions that move**

The Mobility Business Area offers a comprehensive portfolio of foam applications for the automotive, aviation, railway and maritime sectors that covers every aspect of passenger transportation.

Corona and the related travel restrictions had a severe impact upon the aviation industry, which in 2020 was confronted by the worst downturn in its history. Following aerospace's start to the year with a record order backlog, owing to delays and cancellations in the wake of the pandemic, the sales revenues from OEMs and subsequently the airlines slumped to an unprecedented degree. These losses could be compensated for by strategic projects from 2019, which consisted primarily of production closures in Austria and Germany. However, where there is



*The Mobility Business Area offers a comprehensive range of foam applications that cover every aspect of passenger transportation.*

darkness, there is also light and in 2020 aerospace landed the largest cushion order in its history. In addition, aerospace and a supplier of seat covers and foam components initiated a joint project for the opening of a new plant in Mexico.

—  
**“2020 PROVED  
 TO BE EQUALLY  
 CHALLENGING FOR  
 THE AUTOMOTIVE  
 SECTOR, BUT IT ALSO  
 OFFERED ONE OR TWO  
 BRIGHT SPOTS.”**  
 —

2020 proved to be equally challenging for the automotive sector, but it also offered one or two bright spots. While owing to corona and supply chain disruption, Eurofoam suffered a sizeable reverse over the preceding year in the technical foam area, Perfoam sought growth in the automotive field with acoustic components and in line with this strategic orientation during 2020 the company was able to capture important contracts. For example, Mercedes Benz AG nominated Perfoam for the supply of efficient encapsulation for its hybrid drives and converter housings. In addition, with the delivery of the first large series of encapsulation parts for the new customer VOLVO and a follow-up order from BMW for the encapsulation of its six-cylinder diesel engines, the company was able to achieve further important sales targets in 2020. In China, which is the world's largest car producing nation, a new manufacturing line for acoustic components was installed and made ready for serial production. Moreover, in spite of major fluctuations in global use of capacity levels, the Chinese plant, which Perfoam operates in conjunction with its joint venture partner CAIP (Changshu Automotive Trim Co., Ltd.), demonstrated above-average development.

Following careful strategic consideration, in 2020 Perfoam decided to withdraw from the production of PU parts for vehicle interiors. A further strategic decision saw the closure of the polypropylene glass fiber mat plant in Neukirchen, Germany. In future, both products will be obtained from partners.

**Specialties – specialized know-how for  
 a wealth of applications**

With acoustic solutions, filter foams, special packaging and goods for sports applications, the product portfolio of the Specialties Business Area is as diverse as the world of foam is colorful.

Thanks to a construction industry that despite corona remained stable, 2020 was a successful business year for PURTEC, which achieved growth in the double-digit percentage range. Requirements in the regenerative energy sector stimulated the market and in particular resulted in sizable growth in the biomass heating system segment, which was mirrored by the demand for insulation. The installation of heat pumps in new buildings also remained on an upward curve, whereby PURTEC placed its



*The product portfolio of the Specialties Business Area is as diverse as the world of foam is colorful.*

strategic focus on the acoustic insulation of the equipment. With an innovative computer simulation for the determination of energy losses, PURTEC was also able to add an additional service to its portfolio and in addition, accelerate the development of new products.

Unlike PURTEC, MULTIfoam was unable to entirely avoid the effects of the corona pandemic. Above all, sales losses had to be accepted in the shoe industry and sports surfaces areas. By contrast, large sales revenue growth was achieved in the agricultural market segment with foam inserts for cowshed mats and a new product for roof gardens. With special rubber materials, the German subsidiary GuKoTech was able to double its sales in the cargo securing area and at the end of 2020, MULTIfoam took an important step forward with the amalgamation of all of its production activities at its location in Ozorków, Poland, where a competence center for the production and processing of composite foam was also created. Customers are now benefiting from the fact that the entire product range can be supplied from this location.

### **Outlook 2021**

NEVEON started 2021 with positive quantity and sales revenues development in virtually all areas. Under the motto, "One Business – One Team", the year will be dominated by the integration of the portfolio companies, the merger of differing corporate cultures and the vision of becoming Europe's leading integrated foam group and one of the top three foam companies worldwide by 2025. The creation of a development center in Enns, Austria, sustainable product development and a reduction in the CO<sub>2</sub>-Footprints also represent major items on NEVEON's agenda for 2021.

What we have set in motion:

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**"THANKS TO THE EFFORTS  
OF OUR EMPLOYEES  
AROUND THE WORLD  
AND THE INCREASED USE  
OF DIGITAL SOLUTIONS,  
WE HAVE BEEN ABLE TO  
MASTER THE CHALLENGES  
PRESENTED BY 2020."**

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*Gerhard Ohler  
CEO Greiner Extrusion Group GmbH*





# Digital tools carry us through the crisis

Production locations on three continents and a multifaceted product portfolio, but first and foremost the flexibility of our personnel, represented the cornerstones of the "corona year" 2020. A robust US market, growth in the field of digitalized machines and special solutions for niche markets compensated for the low-key demand in some segments.

Greiner Extrusion is the world's leading supplier of extrusion lines, tooling and turnkey plants for profile extrusion. In the 2020 financial year, the company had a workforce of more than 600 employees at 13 locations in 8 countries and attained sales revenues for the year of EUR 68 million (FY 2019: EUR 78 million).

—  
**"THE SEVERE LIMITATIONS  
 ON INTERNATIONAL  
 TRAVEL DURING 2020  
 HAD A NEGATIVE IMPACT  
 UPON ASSEMBLY WORK  
 ON THE SPOT."**  
 —

## **Security of supply thanks to a global production network**

2020 confronted the division with special challenges. In spring, the corona pandemic caused a sharp decline in customer investment and subsequently, essential protective measures such as temporary plant closures and travel restrictions had a detrimental effect upon business activities. Therefore, Greiner Extrusion used its global production and planning system for the targeted distribution of previously acquired customer orders to its tooling and mechanical engineering locations in Europe, Asia and the USA. As a result of this advantage, security of supply could be guaranteed for the customers and owing to its global production capacity, Greiner Extrusion was even able to capture contracts in the midst of the corona pandemic and complete them as scheduled.

**13**  
LOCATIONS

EUR MILLION

**TU  
RN  
OV  
ER**

**68**

**664**  
Employees



*Virtual troubleshooting using a mixed reality headset.*

#### **The virtual services success factor**

The severe limitations on international travel during 2020 had a negative impact upon assembly work, start-ups, handovers and on the spot servicing by Greiner engineers. However, owing to the rapid implementation of modern communications technologies at Greiner Extrusion and teamwork with the customers, the majority of projects could be finished on time and production started punctually. A portfolio of partially and fully digitalized services thus proved its worth along with virtual troubleshooting, commissioning, acceptance and training.

#### **A virtually reduced CO<sub>2</sub> footprint**

As early as in the initial phase of the corona lockdown, a major order from Eastern Europe for six fully automated DIGI.LINEs was successfully put into operation by means of virtual commissioning. The otherwise standard flights of several customer representatives for machine inspection and pre-acceptance were thus saved, as were the journeys of Greiner start-up engineers to the customer plant. The advance acceptance of numerous toolings at Greiner Extrusion's technical center in Austria, as well as the final tuning abroad also took place entirely using virtual services. Apart from the mutual savings related to travel expenses and time, Greiner Extrusion's virtual services protect the environment and reduce the CO<sub>2</sub> footprint.

#### **The USA fuels sales growth**

Customer investment in North America also remained strong during the corona year and actually increased in certain market segments. Following the record result of the Meadville (PA) location during the previous year, in 2020 the Ramsey (MN) plant demonstrated sales growth of 50 percent, which corresponded with a doubling of revenues since 2018. The success in the USA was driven largely by customer solutions for extruded fencing and decking profiles made from foamed plastics and wood plastics composites (WPCs).

#### **The Greiner Production Network (GPN) achieves record sales revenues**

In spite of the more difficult conditions in 2020, GPN in Austria and the Czech Republic achieved a 9 percent increase in its sales revenues from production for external customers in the plastics machinery and tooling manufacture area. Precise production in line with individual customer stipulations and a high degree of delivery reliability contributed to the



*GPN: a milled-off housing for a melt pump.*



*The use of foamed WPC planking is booming in the USA.*

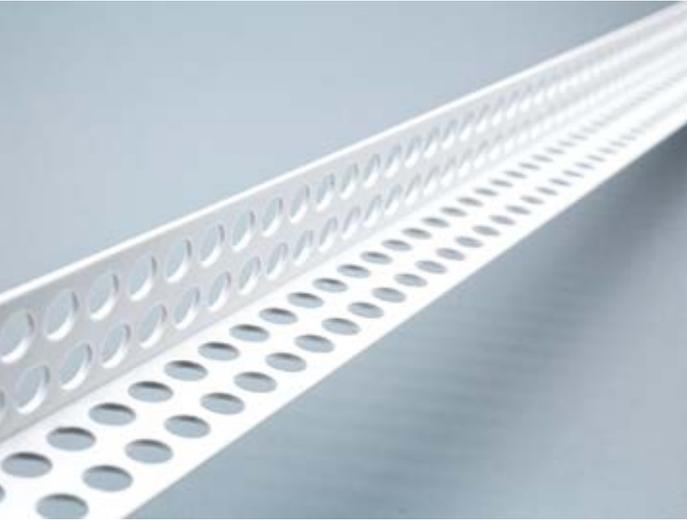
enlargement of the customer base, which related primarily to the melt pump, extruder, feedblock and flat sheet die segments.

#### **Short glassfiber compound material for white goods**

The development of a new profile extrusion line for the processing of the highly resistant material Ultradur® (55 percent glass fiber content) for a leading manufacturer of windows and doors in the white goods sector has resulted in the simultaneous fulfillment of a number of sustainability targets. To date, the profiles had to be produced largely from aluminum and heated to prevent condensation. However, using innovative co-extrusion technology from Greiner Extrusion, Ultradur®-based reinforcements can be inserted onto plastic profiles in an inline process. On the one hand, this replaces the aluminum profiles and the insertion procedure previously required and on the other, because of improved insulation characteristics, heating and the energy that it required are saved completely.



*A co-extruded profile with inline, integrated Ultradur® reinforcement.*



*High-speed extruded and inline die cut plaster profile.*

#### **High-speed extrusion of angle staff profiles**

With regard to profile extrusion, a leading European manufacturer in the construction materials industry demanded a 60 percent increase in productivity, production safety and increased user friendliness. In response, on the basis of its long-term experience and development know-how, Greiner Extrusion designed a new type of complete plant for the highest double strand extrusion production speeds using two synchronized, rotary die cutters operating in sequence. In addition, all the cutting waste was sucked up and returned to the process, thereby maximizing material yield.

#### **Carbon fiber plastic extrusion for lift ropes**

For the first time, a production plant for the manufacture of new types of lift ropes was developed and set up for a new customer in the field of composite materials. The challenge was to integrate a wide variety of machine components into an overall system. In contrast to conventional steel ropes, these lift ropes are made of carbon fiber composite material and coated with a thermoplastic inline in a co-extrusion process. The use of these special ropes makes it possible for lifts to travel much higher. In addition, these lift ropes weigh only one seventh of conventional steel ropes, are more durable and less susceptible to wear. And they contribute significantly to energy savings in passenger transportation.

#### **A high-performance line for Poland**

With a follow-up order for an individualized and fully equipped high-performance extrusion line from Greiner Extrusion, a leading innovator in the window system field has established a new technological standard at its Polish production plant. The extensive use of sensors, intelligent process controls, the most economic energy systems possible and special back-up systems ensures a degree of plant availability of over 98 percent.

#### **In India, a global group gets started with Greiner Extrusion**

After a two-year acquisition phase, in 2020 the capture of a major order from a leading international producer of flat glass and building materials could finally be celebrated. In the end, the customer was convinced by the clear consensus with Greiner Extrusion regarding sustainability, environmental protection, compliance and innovation values. The engineering and profile system development were carried

out for the location in India and were followed by the delivery of three extrusion lines and a large tooling system. The Greiner Extrusion Liaison Office in India ensured permanent local support.

#### **A majority participation is taken in Simplas S.p.A.**

The takeover of a majority participation in the Italian specialist for flat sheet dies at the beginning of July 2020 tightened the linkage between the two companies even further. As a consequence, the global sales network and the production and servicing of flat sheet dies and feedblocks were all considerably expanded. At the same time, a service point was opened at the Nußbach location in Austria for the rapid and professional servicing of Simplas customers in Germany, Austria and Switzerland. Numerous new customers and OEMs in the multilayer sheet extrusion area were acquired and long-term partnerships in the BOPP film segment were intensified. Furthermore, a separate team for the servicing and refurbishment of film and sheet dies across the entire European region was installed at the Arcisate location in Italy.



*Multi-channel sheet extrusion die for film production.*

#### **Outlook 2021**

The robustness of the US construction industry in combination with the strong demand in the home improvement sector, the increasing investment activity of numerous window profile manufacturers in Europe and the fact that solutions for the effective combating of the corona virus came into view during the fourth quarter of 2020, constitute positive signals for the 2021 business year. The demand for special solutions for technical profile applications and Greiner Extrusion's digital extrusion lines remains strong. Moreover, at the same time, the Italian subsidiary, Simplas, will continue to participate in the solid growth shown by the film and sheet industry and generate additional business with the support of Greiner Extrusion's worldwide production capacity. Last, but not least, the ongoing adjustment of corporate processes and structures to the oncoming demands of the market will further enhance the teamwork with our customers and the performance of the Greiner Extrusion Division.

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**"2020 WAS THE YEAR OF  
THE PANDEMIC AND 2021  
WILL BE THE YEAR OF  
DECISIONS. THE ACTUAL  
SENSE OF A CRISIS LIES  
IN THE FACT THAT WE  
RECOGNIZE THAT EVEN  
WITHOUT IT THINGS WOULD  
NOT HAVE REMAINED AS  
PREVIOUSLY."**

*Matthias Horx  
Trend researcher and futurologist*

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Telephone +43 50541 60301  
Fax +43 50541 60304  
[group.communication@greiner.com](mailto:group.communication@greiner.com)  
[www.greiner.com](http://www.greiner.com)

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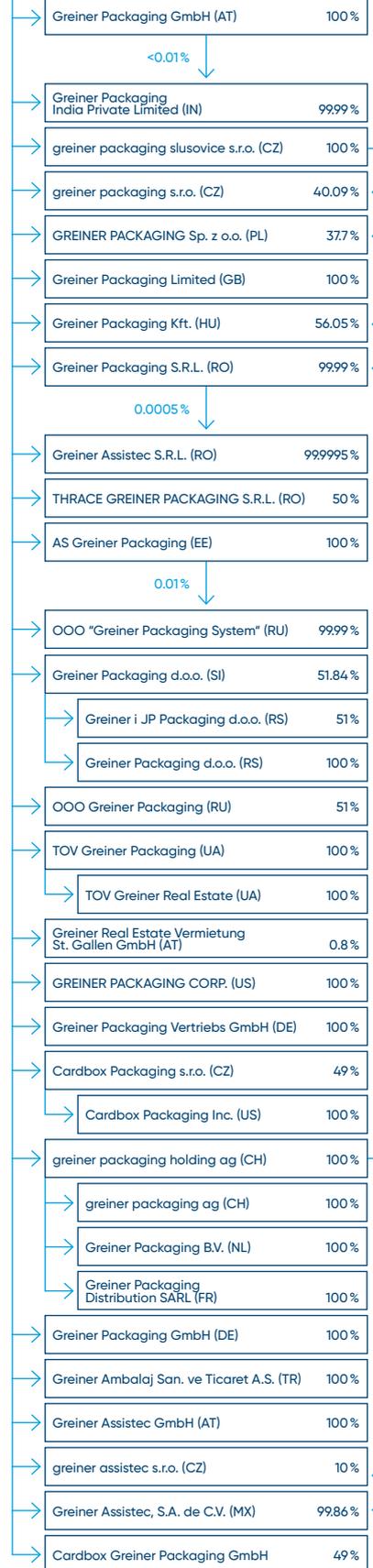


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