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## Dear readers,

The only constant is change. This also applies to the Müller-Guttenbrunn Group. Much has changed in our company over the past few months - and I am pleased to say - for the better.

Some of the changes are obvious and immediately visible. For example, we have developed a new corporate design including a new logo, new colours and new fonts for our entire group of companies. There has not been a major revolution. We have continued along the same path, developing and supplementing well-known elements of what we already had. For example, the new marketing brand name "MGG Met-rec" with its logo was created from "Metall Recycling Mü-Gu" and the Hungarian company "Mü-Gu Kft" became "MGG Mü-Gu" or "Remat MG" became "MGG Remat"

Other changes in turn weigh tons, such as the filter systems in the new exhaust air system of our large shredder at our headquarters in Amstetten. The renewal of the exhaust air system was real teamwork bringing many advantages: We use the most modern air treatment systems to protect the environment and at the same time make our plant safer.

Certain changes are quantifiable. For example, we were able to significantly increase our capacities with the construction of a new warehouse and a newly designed processing plant at MGG Metran. Around 2,500 tons of E-waste material are now processed there every month.

Again other changes are noticeable. This includes the complete takeover of MBA Polymers Austria by the Müller-Guttenbrunn Group. Not only do the employees of the joint venture, which we co-founded, now belong completely to the Müller-Guttenbrunn Group, the name has also changed. This leading recycling plant in Kematen now operates under the name MGG Polymers GmbH.

Changes can also be measured. The Müller-Guttenbrunn Group will crack the 100,000 MT mark for the annual processing of Waste Electrical and Electronic Equipment (WEEE) and materials from WEEE. The recycling of flat screens, which has recently become part of our Group's recycling services, is also making a significant contribution to this. However, this milestone also shows that it was only thanks to a strong team that we were able to become an innovation leader in the WEEE recycling industry.

All this implies that change can of course also be a great incentive. Amongst others this also applies to other objectives, such as the newly integrated quality and environmental management system that we have implemented with the integration of MGG Polymers. Indeed we are already looking forward to the next changes, which will be implemented in a positive mood, knowing that they help us grow.

Christian Müller-Guttenbrunn  
CEO



## "The woman with the X-Ray vision"

Cornelia Wieser very carefully examines the recycled material at the MGG plant in Kematen. She sorts, crushes and analyses large and small parts - and she knows exactly what it is about with these recycled materials. Cornelia gives an insight into her work environment.

**Cornelia Wieser, you are responsible for the laboratory analysis at Metran. What exactly do you do?**

CORNELIA WIESER: Broadly speaking, I analyse different material samples - from e-scrap fractions to fractions of our plastic sorting system. These samples can originate, for example, from one particular sorting process in our recycling plant. In these cases I check whether the settings of the separation equipment are set correctly and that the separation is working correctly. But the samples can also come from a big bag of a final product that we produce. With these analysis, I can check whether the quality of the material really fits with that we have guaranteed to our customer.

**What methods are you applying?**

WIESER: Qualitative and quantitative methods are being used. Especially the quantitative evaluations can be complex, for example if larger fractions have to be sorted by hand.

**Yes, we can imagine that this may include many parts?**

WIESER: Yes, the most extensive analysis that we did so far included 20,000 particles, but that was of course part of a larger project experiment. From each big bag with ready-for-sale material, of course, I get a much smaller but still representative sample.

**However, it looks as if you do not have to do everything by hand, since you also have numerous machines available in your laboratory, as I see...**

WIESER: Fortunately that is right - I use an infrared spectrometer. With that spectrometer I can for instance determine the type of plastic of a particle. However, before I can do this though, the parts of a sample need to be sorted out by means of a sink-float analysis.

**How does this sink-float analysis work?**

WIESER: That is really not a high-tech system and I normally use simple buckets for this purpose. These contain a water-salt mixture, with different densities. Parts with a low density float and can be easily fished out; the parts with a higher density sinks to the bottom of the bucket. Different groups of plastics can thus be separated easily.

**And you also analyse very fine parts, isn't it?**

WIESER: Indeed, I also analyse particles within the size range of 0-1 millimeter. I use a Sieve Stack, which allows me to create several size ranges. The small pieces can be grinded to powder by using one of the two cutting mills that I can use. But I can also cut larger parts into becoming small and eventually even as small as powdery dust. The powder, which finally emerges at the end of the process, is then pressed into tablets and these tablets are examined in an X-ray spectrometer to define their composition. For the small particles, it is particularly important to be very careful and accurate. But it is exactly this that makes my work so exciting, as I can determine precisely - even for these smallest particles - the composition of these materials. With a



*"The work with the small parts is exciting. I can ultimately determine exactly which materials we are dealing with, even with the finest particles."*

detailed look at a pile of material or even with a handful of parts, it is impossible to determine the value of the material. With this high-tech device, which can be used to analyse a wide variety of samples, we can now have a detailed view of the composition. This is very helpful for example to determine the value of a shredded and powdered sample of printed circuit boards, you see?

**How did you get into this job?**

WIESER: I always wanted to work in a laboratory. After I graduated at the HLW in Weyer, the opportunity arose for me to start working at Metran and I immediately took the opportunity. Since there was no laboratory before at Metran, I had to acquire the necessary know-how. And this is how I acquired the knowledge of how to deal with each machine and how to set up the entire laboratory so that it works smoothly. And this is how it should be!

**What a wonderful end of our interview. Thank you for the exciting insight in the laboratory work at Metran and I wish you a lot of success in your interesting job.**







*"The recycling of plastics from WEEE and End-of-Life Vehicles (ELV's) is a basic prerequisite for meeting the recycling and recovery targets set by the EU for these wastes."*

## Important course setting at COP 2017

**In Geneva, the issue of brominated flame retardants was intensively discussed at the "Conference of the Parties" of the United Nations Stockholm Convention. The new regulations may have a significant impact on plastic recycling.**

The main objective of the United Nations Stockholm Convention is to protect people and the environment from Persistent Organic Pollutants (POPs). In a complex process, the Conference of Parties (COP) defines substances that must be controlled by restrictions on production or use.

### In focus: Deca-BDE

At the COP meeting in April 2017, a brominated flame retardant substance called Deca-BDE was discussed in depth. At the end of the intensive meetings this substance was added to the list of Persistent Organic Pollutants POPs. These restrictions may have a major impact on the recycling industry. Deca-BDE has been intensively used in the past in durable products such as vehicles and electrical appliances. These products from these days are now End-of-Life Vehicles (ELVs) and Waste Electrical and Electronic Equipment (WEEE). For this reason, numerous European WEEE and ELV plastics recyclers, amongst whom MGG Polymers, were represented at COP 2017 in Geneva.

Flame retardants are usually used for safety reasons to limit, slow down or prevent possible fires. The term "flame retardant" therefore refers to a function and not to a family of chemicals. Deca-BDE is therefore one of many substances used as flame retardants and belongs to the group of Brominated Flame Retardants (BFR) and comes from the substance family of Poly-Brominated Diphenyl Ethers (PBDE). As long as the BFRs are contained in the matrix of the plastic, they do not cause any damage. However, these POPs must be incinerated at

sufficiently high temperatures to destroy the stable molecule without producing hazardous exhaust fumes. In the case of plastics from WEEE, this means that the plastics have to be separated that contain these Brominated Flame Retardants and these separated plastics need to be incinerated in suitable incineration plants at sufficiently high temperatures. These incineration processes can recover the generated heat and if this is the case with a defined efficiency this is called thermal recovery.

### Restrictions and their effects

As some other substances have already been restricted as POPs, the recycling industry is confronted with such challenges from time to time. It is also not the first time that a Brominated Flame Retardant has been restricted. The Müller-Guttenbrunn Group's innovative recycling technologies have so far been able to separate plastics with Brominated Flame Retardants (BFRs) from WEEE plastics into an identifiable part of the waste stream, which is monitored to ensure environmentally sound treatment – in this case thermal recovery by incineration.

However, detailed chemical analysis of input material do not make any practical and economic sense for recycling companies, as they are very expensive. WEEE and ELV shredder residues are treated to obtain a plastic mixture from these residues. This plastic mixture is recycled by specialized plastic recycling plants. The "target plastics", i. e. plastics without Brominated Blame Retardants, are recycled into post-consumer recycled (PCR) plastics. All "non-target plastics" are incinerated in suitable incineration facilities plants. These "non-target plastics" include plastics with Brominated Flame Retardants, which are destroyed by the high temperature incineration process.

### Recycling or standstill?

In Geneva there was a debate on whether it might be better to continue to use these BFR-containing plastics in controlled applications. This proposal was clearly rejected by the decision to define Deca-BDE as POPs. No thresholds for deca-BDE have yet been set at COP 2017. For the recycling industry, it is very important that realistic limit values are set in order to enable the recycling of such plastics to continue.

An important requirement of the plastics recyclers was not to classify these plastic wastes as hazardous waste. They fear that plastics recycling could come to a standstill if these plastic mixtures of end-of-life vehicles and WEEE are defined as hazardous waste. Plastic recycling plants do not have the necessary permits to treat hazardous waste.

The recycling of plastics from WEEE and ELVs is a basic requirement for meeting the recycling and recovery targets set by the EU. This makes a significant contribution to the development of a closed-loop economy and to an enormous reduction in energy consumption as well as significantly lower CO<sub>2</sub> emissions.

The technology exists to separate plastics with BFR's from those without. But if too low threshold values, which are called Low POP Content (LPC) values, for deca-BDE are set, this will undoubtedly lead to important EU objectives to be missed. These objectives are set as recycling and recovery targets for WEEE and ELV's as well as objectives for the establishment of a Circular Economy by the EU.

We call for a realistic balance between the objectives for the reduction of CO<sub>2</sub> emissions which largely influence global warming and the justified wish for a non-toxic world. Recycling of plastics should not be stopped.





## Major investment in clean air

**Müller-Guttenbrunn modernized the exhaust system of the shredder plant in Amstetten. For this purpose, roughly 15 tonnes weighing highly modern dry-air filters were installed.**

In order to be able to recycle metallic wastes, they have to be shredded. This is especially true for old cars or complex pieces of metal containing wastes such as washing machines. For this purpose, MGG Metrec has been using a large shredder for over 30 years and this major piece of equipment is constantly being renewed and improved.

This year, the focus of the modernization process was on improving the exhaust air technology. After all, end-of-life vehicles contain dust and the shredding process itself also produces smaller particles. Sophisticated exhaust air systems ensure that these small particles cannot escape into the environment. Although the shredder always adhered to all legal threshold limits, some of the systems of the shredder have to be renewed from time to time. Therefore the exhaust system has now been brought up to the latest state-of-the-art and thus sets new standards in air cleanliness for dust emissions.

### Two installation steps

In two installation steps the existing filters were replaced by the most modern systems. For the engineering team of Müller-Guttenbrunn, this meant two meticulously planned large-scale renewal operations. The plant was shut down twice and the existing de-dusting plant was replaced by a high-performance system according to the latest filter technologies. As raw material continued to come in, the planning process and the timing of the installation was very critical.

### A very large vacuum cleaner

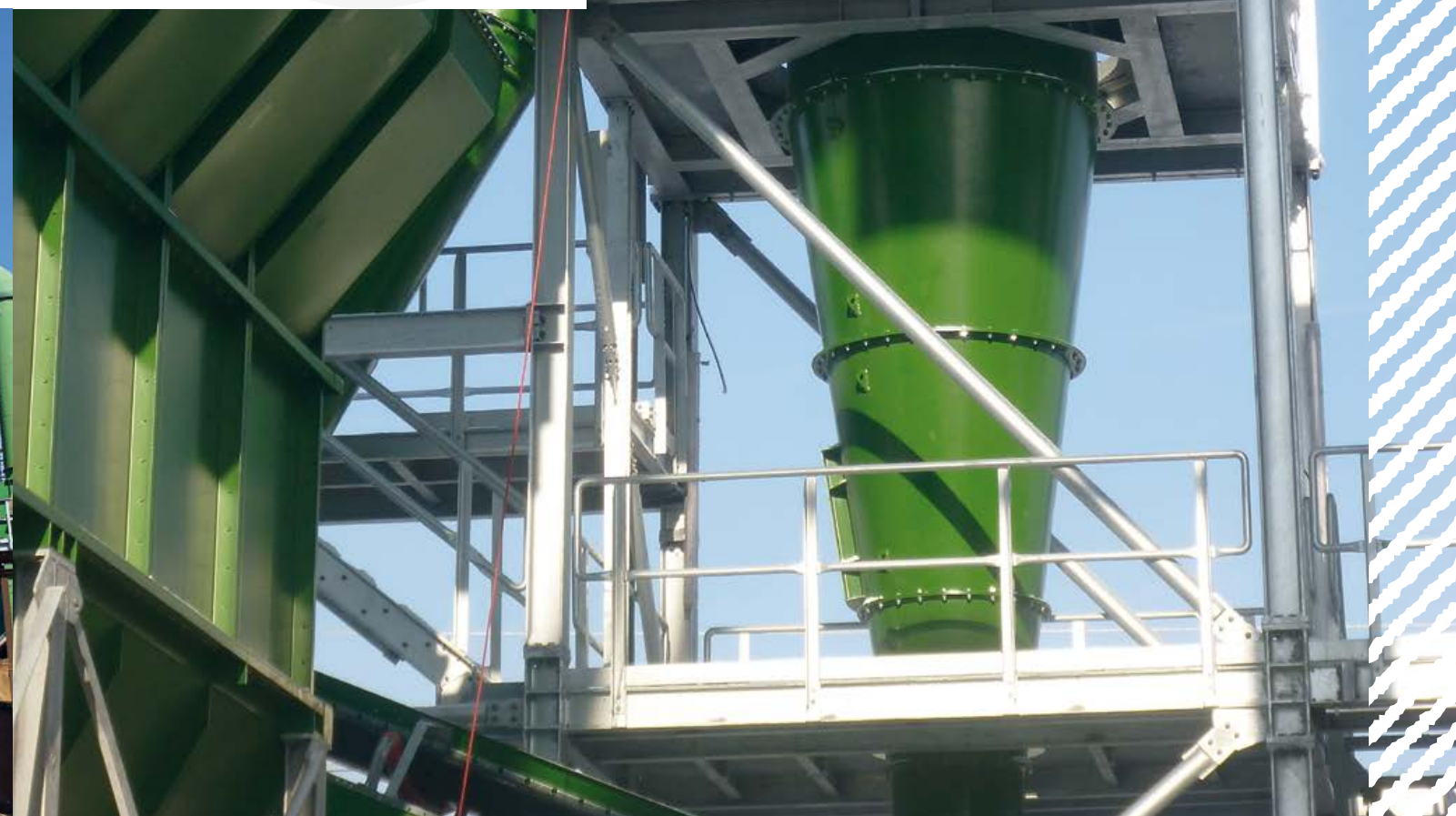
As before, the cleaning of the dust-laden air from the shredder takes place in two stages. First, the air is pre-cleaned in two cyclones (centrifugal separator). The coarser particles are separated from the air coming from the shredder process just in the same way as it is done in modern vacuum cleaners at home. Subsequently, a so-called fabric filter separates the finest particles from the exhaust air the shredder plant. A large amount of dust is thus filtered out of the air passing through the shredder and this dust material is subsequently delivered to a specialized waste incineration plant for thermal recovery (incineration whereby the generated energy is used for instance to produce electricity). In order to guarantee the functionality of the system, the existing measuring instruments are extended by a further detection system.

### Improved interface

In addition, the interface between the two filter stages is extended by a large particle separator and a so-called pre-coating system. While the large particle separator is mainly used to eliminate larger particles such as pieces of residual film and tape, the pre-coating process also filters and binds the smallest parts from the air. The combination of these two air cleaning systems also increases the overall safety of the shredder system as a whole – hence the shredder system security is generally increased by the newly installed components as well.

This huge improvement in exhaust technology is a gain for all, says CEO Christian Müller-Guttenbrunn: "We are showing once again that we care about the ongoing development of our systems. The consideration of the environment and of course our neighbours is as important as increasing the efficiency of our recycling systems."

*"As a recycling company, it is important to always work as environmentally friendly as possible. That's why it is so important for us to have a state-of-the-art in air purification in place."*







## "The production site is my habitat."

No one knows the company MGG Metrec (formally Metall Recycling Mü-Gu) as good as managing director Michael Grimm. In an interview, he gave us exciting insights into his daily business and his tonnage heavy challenges.

**Mr. Grimm, you have been working for Müller-Guttenbrunn for many years. What makes your work in this company still so exciting after all these years?**

MICHAEL GRIMM: I collected my first experiences in the company from 1980 to 1984 as trainee. Even in these days I remember to have realized that no day is like the other. And that has not changed during these 30 years, really nothing. We have continued to evolve, but we are still a classic family owned business, where one can always bring in his ideas as communication lines are short.

**In this long period of time something must certainly have changed in the company?**

GRIMM: Of course! I can well remember the times when I worked as trainee. In these days, we drove to landfill sites in the Waldviertel region from Monday to Friday to recover metals from these landfills in heavy work. Today this is completely unimaginable. When I started back in 1985, the companies were still happy to dispose of their metal bearing materials and even paid for it. Today, recycling has become a really tough business.

**A lot has changed for you personally as well. How did you develop from being trainee to become Managing Director of MGG Metrec?**

GRIMM: I started working on this site here in Amstetten after my studies at the HTL Waidhofen and my military service in April 1985, almost thirty two years ago. After many exciting projects as well as an intermezzo as operations manager of the newly founded Metran, it was in the '90's that I moved into the planning of the logistics into the commercial area of the management team of the company. That is

where I stayed until 2009, when I unfortunately fell out for a longer period of time for health reasons. As a consequence Dietmar Berger took over this commercial role as Managing Director. Since then, I have been looking after the technical area, in other words as Managing Director for Operations for MGG Metrec.

**You have talked about exciting projects. I guess that the installation of the car-shredder in Amstetten more than 30 years ago must have been one of them in Amstetten – or am I wrong?**

GRIMM: Indeed, that was really my first major project. For me, it was first all about understanding what a shredder is and how it works. Installing such a system is not a futility and especially in these days shredding plants were not available in abundance. Furthermore, we have taken the choice to try out a new and for these days innovative type of construction.

**That must have been an instructive experience to get started. In the meantime you can look back on a lot of experiences ...**

GRIMM: There were and still are such challenges. This includes, for example, the development of own railway waggons or own special trucks. We also learned a lot from absolute emergency situations - for example, after the fire of the Neusiedler paper factory in 2000. Within one month some 14,000 tons of fire residues and 1,400 tons of scrap had to be treated. What made it particularly difficult is that there was quite some material still glowing and we did not have any experience with that. A similar situation developed after the flood of 2002: We had to scrap 3,500 brand new cars, all of which did not run a meter.

**But doesn't it require exactly that, anyway, with the huge quantities that are processed in Amstetten?**

GRIMM: Sure, you have to realize that we are processing about 1.800 cubic meters of material every single day and this represents in other words 800 to 900 Metric Tons. As I already mentioned: no day is the

same as the other and you are only as good as the whole team is. This is why we need a top-motivated team every single day.

**You have spent a lot of time outside on the production site, but surely you will also be spending many hours in the office. Where do you like it best?**

GRIMM: Definitely out in the yard. My office work is of course part of my role, but frankly my real habitat is indeed outside. Paper is patient, but scrap has to be processed! Out in the yard side, you quickly realize that scrap is not the same as scrap. Just look at the de-pollution station for end-of-life vehicles – I must say that I admire our employees, who always find all the problematic stuff and properly dispose of them. This is exactly what our team is working on at the production site every day.

**You are getting excited now. But you also have quite a lot of decisions to be made in your office. What are you currently worried about?**

GRIMM: The most important thing is to get continuity and stability in our production processes. However, we are largely dependent on our suppliers. Since the scrap prices vary enormously on a monthly basis, there are months with a lot of material and then again months with less material. This means that there are some months with a lot of work and then others with less. Additionally this waste material is always different – waste is not produced to specification.

*"I can still remember my time as a holiday intern. At that time, we were driving through the landfill sites in the Waldviertel and had to work very hard to extract all the metal. Unimaginable today!"*



## MBA Polymers Austria has changed into MGG Polymers

**A new chapter was opened in the success story of MBA Polymers Austria: The Müller-Guttenbrunn Group took over all shares in this high-tech plastics recycling company in Kematen on July 1, 2017. Previously the Müller-Guttenbrunn Group was majority co-owner of the joint venture, which was founded in 2004 with the American partner MBA Polymers Inc. In order to avoid confusion, the company was renamed MGG Polymers in the course of the complete takeover.**

For Müller-Guttenbrunn, the surprising opportunity to take over the entire plant in Kematen arose from a change of ownership by the American partner. "With the team of MBA Polymers Inc., we have had an excellent partner at our side over the past 12.5 years, who has supported us above all with important know-how in the critical start-up phase. Meanwhile, high-tech recycling from Silicon Valley has been perfected in the Mostviertel and the site in Kematen has developed solidly. We are therefore convinced that we can continue the success story with our own team," said Christian Müller-Guttenbrunn, Managing Director of the Müller-Guttenbrunn Group, explaining the complete takeover.

### A real flagship company

The MGG Polymers plant in Kematen is one of the world's most advanced plastics recycling facilities processing plants. Some 100 employees produce high-quality post-consumer plastics (ABS, HIPS, PP and PC/ABS) at this site, of waste plastic originating from electronic and electrical waste.

Recently, major investments were made in a fourth extrusion line and a new warehouse. This increased the processing capacity of MGG Polymers to more than 50,000 tons per year.

Per Metric Tonne of recycled engineering plastics, emissions of around 4.5 tonnes of CO<sub>2</sub> can be saved. This achieves well over 100,000 tons of CO<sub>2</sub> savings, which is equivalent to the CO<sub>2</sub> emissions of about 12,500 Austrians! The plastics recycled by MGG Polymers are used for "green" electronic products such as vacuum cleaners and coffee machines as well as for automotive parts.

As you know, it's hard to get started at the beginning - it was no different with MBA Polymers Austria: Many partners - both customers and suppliers - had their doubts as to whether the vision of the two founders would be crowned with success. The question was asked: Can the recycled plastic be used in new devices? However, the entire team convinced all critics with new ideas and innovations.

It is no coincidence that there were many international awards for these pioneering achievements, the first one as Tech Pioneer at the World Economic Forum back in 2006 and the last one in 2017 at the largest conference on E-Waste Recycling IERC, the ICM Cowbell Award. The plant in Austria had developed into being the flagship company of MBA Polymers Inc. The former American partner company is now turning to other challenges with the investor Elephant Equities as its new owner. The Müller-Guttenbrunn Group, on the other hand, will continue to pursue its ongoing success course in domestic plastics recycling with MGG Polymers in the coming years.

*"Meanwhile, high-tech recycling from Silicon Valley has been perfected in Austria. We are convinced that we can continue the success story with our own team."*



### From MBA Polymers to MGG Polymers

A meeting at a conference in Switzerland at the beginning of 2004 set the ball rolling: Mike Biddle, founder of the American recycling pioneer MBA Polymers Inc. and Christian Müller-Guttenbrunn had the joint idea of building a plastics recycling plant next to the MGG Metran plant. At the end of that year, the joint venture MBA Polymers Austria Kunststoffverarbeitung GmbH was founded. The recycling facility was built in 2005 and in the following year, the Mostviertel-based MBA Polymers branch was able to start operations in March 2006.





"With our new logos, we express that we are constantly evolving in all areas."



## Small changes with great impact

**The Müller-Guttenbrunn Group (MGG) will appear uniformly with a new logo. This means that all companies in the group present themselves visually and graphically as one large recycling family.**

The motto for the redesign of the MGG logo was: "Evolution instead of Revolution". The good and well-known Müller-Guttenbrunn logo has consistently been developed one step further, just in the same way as our recycling processes are developing - step by step. The striking recycling circle in blue and green was therefore the starting point for the redesign of the new MGG logo.

### A logo for everyone

"The aim was to create a logo that could be used by both the group and all individual companies. With the communications agency Sengtschmid from Amstetten, we have therefore developed a strong umbrella brand logo, under which all MGG companies can easily find a place optically," explains Chris Slijkhuis, responsible for Public Affairs in the Müller-Guttenbrunn Group. The abbreviation of the Müller-Guttenbrunn Group - MGG - is therefore the connecting element in all logos together with the recycling circle. With this graphic design of the new logo, it was also clearly underlined that the Müller-Guttenbrunn Groups' business is related to the Circular Economy.

The typeface used, Gotham, comes from the American typeface design house Tobias Frere-Jones, who designed the typeface for public spaces in 2000. The Gotham typeface was developed to "look masculine, new and fresh, giving it a credible voice," says Jonathan Hoefler, the New York-based designer of the typeface.

### New logos, new names

With the redesigned Müller-Guttenbrunn Group brand, the subsidiaries are now also presenting themselves externally as members of the MGG family. Some of the companies even received new company names. This is particularly evident in MGG Polymers (formerly MBA Polymers Austria) in Kematen or MGG Trade (formerly Müller-Guttenbrunn Switzerland).

Christian Müller-Guttenbrunn, CEO of the Müller-Guttenbrunn Group, is enthusiastic about the new brand image of the entire group: "With our modern logos we express the fact that we are constantly evolving ourselves further in all areas of our business. It sends the signal that we are all pulling together within our group."



## "Just two phone calls and I can start all over again!"

Since 2001, Dagmar Schartmüller has been managing the logistics and the truck fleet at MGG Metrec (formerly Metall Recycling Mü-Gu) in Amstetten. In the interview she talks about everyday working life and its surprises.

**Hello Mrs. Schartmüller! At MGG Metrec you are responsible for ensuring that the trucks are in the right place at the right time. Surely you must be in a constant hectic activity?**

DAGMAR SCHARTMÜLLER: Absolutely! After all, it is not only our drivers and their 27 trucks that need to be managed. Loads are also assigned to third-party carriers. Everything has to be planned and clarified as well. Our purchasing team will provide me with the necessary information on where and when to pick up material. Or our customers, who are actually our suppliers, call us themselves. That's why I make countless telephone calls every day.

**This means that scheduling is an ongoing process?**

SCHARTMÜLLER: Yeah, actually it is. There are certain companies that we visit every day. So that is a routine and can be planned on a weekly basis. However, most of the work happens as and when needed. This implies that it can happen that the planning for the next day is finished in the evening and then there are two phone calls and I can start all over again.

**Is there a typical working day at all?**

SCHARTMÜLLER: No, there is not a day like the other and every single one is a challenge. When I arrive at 7 a.m. I'll see if all the trucks are on the road. Every now and then there is the first nasty surprise,

because a truck is standing in the workshop or one of the drivers is on sick leave. In such cases it is important to react quickly ...

**... and if all goes well?**

SCHARTMÜLLER: Then the umpteen unread e-mails that have accumulated from the previous evening to the morning must be processed. In this case, the telephone usually rings anyway and it is important to respond quickly to inquiries. In between, the drivers' hourly reports must be checked or the papers for the trucks of the foreign freight companies must be prepared.

**Talking about paperwork: More than 2 years ago, MGG switched from an analogue to a digital system. What are your experiences so far?**

SCHARTMÜLLER: It was a big change for everyone - both to the drivers and for myself. We all had to get used to the new system first. I have to say, however, that many things have become much easier as a result. In the past, drivers had to write off all loading orders from a large display calendar. Now we can simply print out the loading orders. In addition, it is now much easier to track who has been where and when. It used to be much more difficult to investigate. In the meantime everything has worked out, but especially the starting phase was really intensive. The program had to be fed with all the necessary data - that was a real challenge.

**A challenge is certainly also the occasional coordination of transports from abroad...**

SCHARTMÜLLER: In our industry, normally scheduled loads take place within an agreed time window - it is thus essential to get a



*"Of course, the work has to be done, but it's not all done strictly by the book, I have some room to manoeuvre."*



freight forwarder to be in time. However, frequently the freight company is booked for any available loading slots. On top of this, you have to be careful with international transports regarding holidays abroad. It has already happened that our driver was standing in front of closed gates as a result of a public holiday. That's why we have our Müller-Guttenbrunn calendar, which lists all holidays throughout Europe!

**This brings us straight to the question: What does your work at Müller-Guttenbrunn mean to you?**

SCHARTMÜLLER: It is important to me that I can develop and operate freely in my field of work. The work has to be done, of course, but it is not strictly regulated and there is room for maneuvering in the way it is done. What speaks for the company is that it is still a family business in which many employees have been working for many years. I myself have been working for the Müller-Guttenbrunn Group for more than 20 years.

**During this time you have certainly experienced a lot of memorable things here in the logistics department - haven't you?**

SCHARTMÜLLER: I remember one incident immediately: A trailer was tilted exactly onto a power distribution box in front of our entrance. For this reason, all of the company had no electricity the next day. You

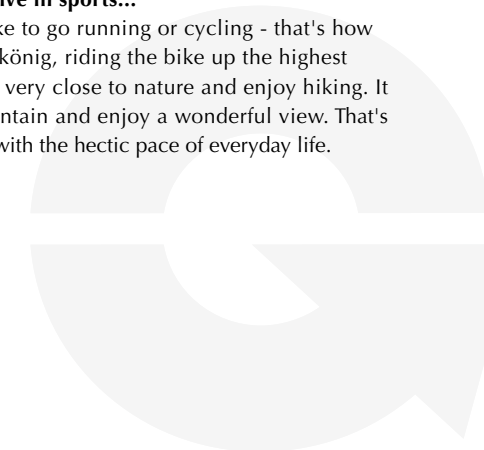
would think of a quiet day, but it was just the opposite. Another such memorable experience was the discovery of a bomb on an adjacent construction site. Our gates were closed and no truck could get in or out.

**Do you sometimes drive a truck yourself?**

SCHARTMÜLLER: After I took over as head of logistics back in 2001, I made sure to have a truck license and in the past, I used to drive the trucks a little bit - for example, to quickly get a truck into the workshop. But I have to admit that I am now a little short of practice.

**It is said that you are very active in sports...**

SCHARTMÜLLER: Indeed. I like to go running or cycling - that's how I recently joined the Glocknerkönig, riding the bike up the highest mountain of Austria. I am also very close to nature and enjoy hiking. It love to reach the top of a mountain and enjoy a wonderful view. That's the change that I need to cope with the hectic pace of everyday life.





*"Many people are not aware of the fact that one gets into conflict with the law if a deregistered old vehicle that cannot be inspected successfully anymore is sold to a buyer who then takes the ELV out of the country."*



## Where are all the old cars?

The latest figures on end-of-life vehicle recycling in Austria are encouraging, but at the same time worrying.

First of all, the hard facts: In 2016 a total of 48,700 end-of-life vehicles were recycled by the recycling companies in Austria. The Müller-Guttenbrunn Group (MGG) once again achieved excellent recycling rates. The targets set by the EU were clearly exceeded. For example, 87.2 percent of the material was kept in the material cycle. A further 10.2 percent of the input material was thermally recovered. This means that MGG achieved a total recovery rate of almost 97 percent - an absolute record!

For the Müller-Guttenbrunn Group these figures are proof that good work is being done. We invest a lot of money and energy in order to continuously improve our recycling processes. When you see these figures, you realize that it really is worth it," says Christian Müller-Guttenbrunn, Managing Director. MGG is particularly strong in post-shredder technologies and is able to recover a large number of non-ferrous metals.

### The other truth

That's the good news. But it is only half the truth because 255,400 end-of-life vehicles were deregistered in Austria last year. If the

48,700 recycled vehicles are deducted, this means that the whereabouts of more than 206,000 old and used vehicles have not been clarified. Only 19 percent of end-of-life vehicles end up in the shredder plants of recycling companies such as MGG. Experience has shown that many of the end-of-life vehicles (ELVs) are illegally exported to foreign countries, where they risk to end up in landfills or to simply be left behind. This poses a threat to the environment and the Austria loses a lot of valuable secondary raw materials as a consequence.

These worrying data put the own high recycling rates into a completely different perspective. "Looking at the few recycled end-of-life vehicles that are recycled in Austria, our overall recycling rate would shrink to a meagre 18.4 percent," says Christian Müller-Guttenbrunn, emphasizing once again that targeted measures must be taken to combat this dwindling number of end-of-life vehicles.

### Conflict with the law

The consumers at large need to be made conscious of these facts. Many people are for instance not aware of the fact that one gets into conflict with the law if a deregistered old vehicle, that cannot be inspected anymore successfully, is sold with the purpose of being exported. Such an End-of-Life Vehicle is regarded as a hazardous waste. The export is illegal and can result in high fines, also for the seller.



### Exciting Facts on the Recycling of End-of-Life Vehicles:

- In Europe, the fate of 4 Million End-of-Life Vehicles (ELV's) annually is unknown.
- Upon delivery, 32.35 kilograms of components are missing from an End-of-Life Vehicle. Many of these components are re-used in the form of spare parts in other vehicles.
- 181 kilograms of material are taken from an end-of-life vehicle prior to the shredding operation. The range extends from the tires to the catalytic converter and from oil to the batteries. 169 kilograms is recycled and 11.5 kilograms is thermally recovered for the energy.
- 521 kilograms of iron or shredder scrap are recovered on average from an ELV.
- 40 kilograms of non-ferrous metals can be recycled from an End-of-Life Vehicle and increasing.





*"The first few minutes are crucial. Fires with recycled plastics as produced in this facility must be extinguished within 15 minutes."*



## A cool team for tough situations

Since eleven years, the plastics recycling plant of MGG Polymers in Kematen/Ybbs has had an own company fire brigade. Up to now, the fire brigade team only had to be active for technical efforts and fortunately not because of fires. The most important undertaking of Fire-Brigade Commander Sonja Dattinger and her troops: to prevent the worst case.

The firefighters are flocking on the factory grounds of MGG Polymers during this summery afternoon. "Water march!" it sounds in a loud command tone. Seconds later a white foam mixture already spills over the wall of the new warehouse. Fortunately, it is just a simulation. No fire far and wide, only the sun burns from the sky.

### 500,000 liters of water for the emergency

In the middle of the process is Fire-Inspector Sonja Dattinger. For five years she has been the commander of the company fire brigade at MGG Polymers.

She knows that when it comes to an emergency, it all has to go very quickly. "The first few minutes are particularly important. Fires with recycled plastics must be extinguished within 15 minutes," she says. For such an emergency 500,000 liters of water are stored on the entire

surface of the plastics recycling company, all distributed over seven cisterns. So far, fortunately there was not such a fire, but this kind of exercises is done and has to be done regularly.

Most of the 43 firemen and women work in production area of the facility. To ensure that the exercises do not interfere with the production flow in the factory, the exercises are planned in great detail. On this hot day, MGG Polymers employees from two shifts are participating in this exercise which revolves around various foam extinguishing agents.

### The special vehicle on wheels

There is no fire-brigade truck – you would look for a Fire Truck in vain. Instead, the MGG Polymers Fire-Brigade is equipped with a "special vehicle": a custom made fire-fighting roll container with portable specialty pumps. This custom made vehicle was produced in southern Styria and it became a necessity after the MGG Polymers plant was supplemented with a new warehouse and a further extruder during the last round of expansions. With its two quick-action devices, the prescribed protection target can be achieved in the initial phase of any fire emergency. In order for this to work properly, these exercises serve to train the usage of this specialty device and its commands.

Equally important for Commander Sonja Dattinger is the issue of preventive fire protection actions. Here the members of the company fire-brigade bring their entire knowledge into the game to reduce any fire-risks before an emergency can happen. The team has completely re-worked the original fire protection concept. In addition, any improvements proposed are discussed with the MGG fire protection officer every single month and resulting actions subsequently agreed with the plant management. "In the last few years, much has developed in the right direction," says Sonja Dattinger, concentrating again on the exercise.

### Rule is rule

An important fact: The company fire brigade of MGG Polymers is one of five fire brigades in Lower Austria that are required by the authorities. Without them, the production facilities at the MGG Polymers plant in Kematen would be at a standstill. Fortunately, however, the machines run smoothly at full speed a few metres away, while the foam carpet at the practice area is getting higher and higher.

The members of the company fire brigade have learned some important lessons again this afternoon. Nevertheless, everyone hopes that the acquired knowledge will continue to be used only for simulations.







*"This kind of price battle is not our style of business. We rely on long-term relations with personal contacts. And this way we have developed real friendships over the many years."*

## "Our business model has nothing to do with speculation!"

**Dietmar Berger is responsible for the commercial side of MGG Metrec and MGG Metran. In this interview, he talks about the fast-changing world, his personal trust and his current and future plans.**

**Mr. Berger, the commercial activities of purchasing and sales are important in every company. How are you dealing with these commercial activities?**

DIETMAR BERGER: For our company, the sourcing activities are of crucial importance in order to finally be able to sell the corresponding quantities of secondary raw materials at the end of the recycling processes. For this reason our team of 5 purchasers is constantly on the road both in Austria and abroad. With our suppliers we negotiate the sourcing prices and quantities directly and on the spot.

**Does this mean that the personal contacts play an important role?**

BERGER: Exactly. The direct contact with our suppliers and customers is what we cultivate and live every day. This means not only a lot of travelling, but also by making many phone calls and writing many personal e-mails. Nowadays everybody expects an immediate answer. If we cannot be reached right away, our competition is contacted immediately instead. Everything has really become very fast. This is probably due to the fact that metals are traded at stock exchange prices. And these prices can sometimes change within a few minutes.

**But you cannot do everything personally, can you?**

BERGER: In our daily business, much is agreed by the phone. Much is based upon trust. But you have to realize that such a relationship of trust can only be built up over a long time, sometimes even years. That is why I did a lot of field work, when I joined the management team back in December 2009. As a result of all these personal contacts and meetings with the majority of our partners, we now know exactly with whom we can do business just by picking up the telephone.

**You have previously worked in the sales of Mastercard credit cards of Europay. How difficult was the changeover when you came to Amstetten in 2007?**

BERGER: This is, of course, a completely different kind of business. But I was fortunate enough to learn a lot from my colleague Michael Grimm, who at that time was responsible for the commercial activities. Still today I can ask him about peculiarities about certain businesses. At the beginning I also answered calls from our weighing bridge and took over material from suppliers directly at the scrap yard. Often we immediately haggled for the price at the same time. This was definitely a good learning school.

**You have emphasized the word "team" several times. How does the team coordinate internally?**

BERGER: There is a sourcing meeting every week. The entire field service team reports about their market impressions. This meeting has an important impact as interface between purchasing and sales activities. Since there are often clear differences in individual markets, these reports are always interesting to follow. To our extended commercial team we also count our subsidiaries abroad. Therefore, we also work closely with them by exchanging ourselves on a regular basis.

**You have mentioned the often rapidly changing prices before. Is it possible to conclude long-term contracts at all?**

BERGER: The approaches can be quite different. Most of our contracts are rather short-term contracts. We often work based upon experience when it comes to pricing. Nevertheless, there are also quarterly contracts and rarely - but nevertheless - there are also annual contracts. Speculation has nothing to do in our daily business! Unfortunately, we recognize that there also is a trend by others to simply send out e-mails with pricing proposals. This kind of price battle is not our style of business. We rely on long-term relations with personal contacts. And this way we have developed real friendships over the many years.

**How is this strategy working out?**

BERGER: The first quarter of 2017 went well. With our technicians in the Müller-Guttenbrunn Group, we are currently trying to expand our portfolio in the field of rigid plastics. Our goal is to establish a recycling of rigid mixed plastic from a separate collection in Lower Austria. These rigid plastics today are being incinerated, but now we have the technology to separate and recycle these rigid plastics. We have to dig into opportunities like these. As a large WEEE recycler we have an excellent positioning in the markets that we service. We are not any longer to be seen as a classic scrap dealer, operating at the end of a linear chain. On the contrary we see the Müller-Guttenbrunn Group completely different and we have taken the opposite route. We see ourselves at the beginning of the Circular Economy of raw materials. This is a crucial difference in a European market that is low in the availability of natural resources.

**Behind this, there is a lot of personal commitment from all employees in the Müller-Guttenbrunn Group. What makes the difference?**

BERGER: The great thing is that the Müller-Guttenbrunn Group has remained to be a family business. This means that we have very short distances. This makes decisions easy and uncomplicated and this gives us a clear competitive advantage. It also motivates our employees to think out of the box and to take responsibility to propose innovations. Each of us can move something here and that is the beauty of working in the Müller-Guttenbrunn Group.





*"Fast-track notifications are designed to speed up notification requests and to free up time and resources to combat genuine illegal shipments of waste."*



## Fast-Track Notification project was kicked-off in Brussels

'Fast-Track Notifications' is the fifth case for the International Green Deal North Sea Resources Roundabout (NSRR). This case, which was initiated by the Müller-Guttenbrunn Group and HKS Metals in the Netherlands, deals with the concept of 'Fast-Tracks' for WEEE with the objective to make shipments to compliant EU WEEE recyclers easier and faster. Article 14 of the European Waste Shipment Regulation provides ample basis for the concept of 'Fast-Track Notifications', but implementation within quite some European countries leaves quite some room for improvement.

For this particular case Austrian, Belgian, Dutch, English and French public and private sector experts explore possibilities for commonly accepted criteria for pre-consented facilities and for the development of mutually accepted simplified notification procedures under the Waste Shipment Regulation. The working group had its first meeting in the Dutch Permanent Representation in Brussels on 13 September 2017.

### International Green Deal North Sea Resources Roundabout

The North Sea Resources Roundabout (NSRR) was initiated by The Netherlands, UK, France and Flanders with the aim to stimulate Green Growth in the North Sea region by facilitating the trade and transportation of secondary resources. The 5 year International Green Deal is envisioned to accommodate a maximum of ten secondary resource streams or cases. For each case a working group is establis-

hed to come up with practical and scalable solutions to the barriers encountered. Most solutions are likely to involve the harmonisation of national interpretation and enforcement of EU legislation and will not require new rules or regulations. For this particular case it was agreed that Austria is connected with the Northsea by Danube and Rhine.

### Pre-consented facilities

Making shipments to compliant EU WEEE recyclers easier and faster will allow these WEEE secondary raw materials to flow much in the same way as primary raw materials can do today and will result in boosting the production of secondary raw materials for the European Circular Economy.

The project will focus on the business processes behind the pre-consented facilities and the notification requests. By agreeing standardized and harmonized simplified procedures, there will be more confidence amongst all parties involved, resulting in much quicker treatment of notification requests, possibly within a week.

Furthermore, Fast-Tracks Notifications are thus expected to free up time and resources from the authorities, which can then be used to fight true illegal exports of WEEE and fractions of WEEE.

A number of initial actions and planned deliverables were defined in this productive kick-off meeting and other meetings are planned.



## A comprehensible set of rules at the push of a button

**Rules must be complied with – and since the Müller-Guttenbrunn Group always strives to work in conformity with the law in all the areas of its' activities, a new software has been installed to support the MGG employees to this extend.**

In a company like MGG, texts with legal guidelines, permitting rules and standards stack up. Keeping track of the content of all of these rules and requirements, particularly in following up the deadlines for recurring checks and measurements is not always easy. This is especially the case when laws and regulations change. The companies of the Müller-Guttenbrunn Group are no exception. "We have a huge variety of laws, regulations and standards that we have to adhere to and all these documents fill up countless folders and numerous cupboards. With our new traffic light system, however, we now have everything in view," explains Lisa Rainer, specialist in the new compliance software system within the QM department of the Müller-Guttenbrunn Group in Amstetten.

### The traffic light system

The compliance management software "gutwin" is supplied by the Vienna based provider Gutwinski Management. The program breaks the complex legal and permitting requirements down into simple and easy-to-understand work instructions and links these instructions together with the deadlines for each of these tasks to the responsible persons. The system sends out e-mails to the responsible persons requesting them to fulfil the corresponding activity within the set-timeframe (for example, to measure whether certain limit values are adhered to). Through their feedback, reports or the like, the system is updated. The already mentioned traffic light system will show the fulfilment rate: green stands for done, yellow for work-in-progress and

**"We have a variety of laws, regulations and standards that we have to comply with - filling countless folders. With our traffic light system, however, we now have a clear view of everything."**

red for overdue activities. This traffic light system allows the system to create up-to-the-minute reports and relevant documentation for certifications or verifications at the push of a button – which is proving to be very helpful for efficient audits.

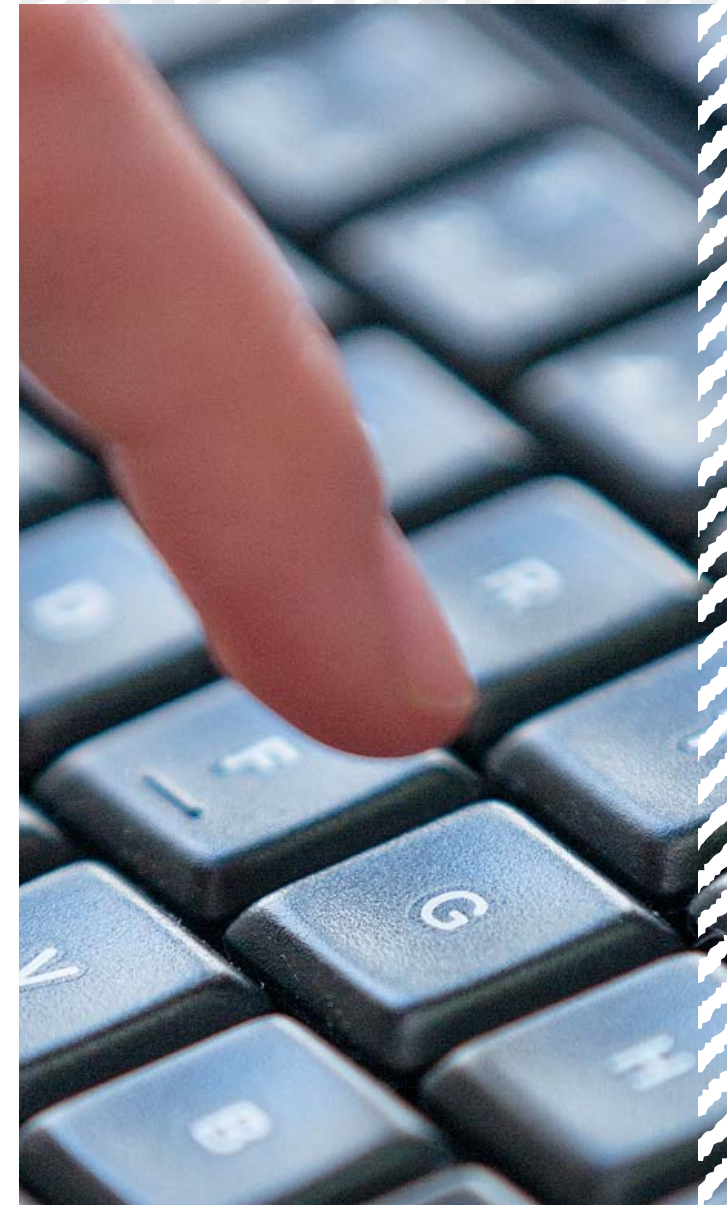
### A lot of preparation is necessary

Before this software system was able to work properly and create reports within seconds however, a lot of preliminary work was necessary. For example some 1,500 legal and permit requirements had to be interpreted properly for the MGG companies MGG Metrec and MGG Metran. In addition, all relevant documents such as permits and authorizations needed to be digitized and this turned out to be not always an easy task, as Lisa Rainer outlined: "The oldest permits documents are from the year 1976, so over 40 years ago. No wonder that countless pages were bleached or that the paper threatened to crumble. Of course, these old texts had to be typed into the system manually."

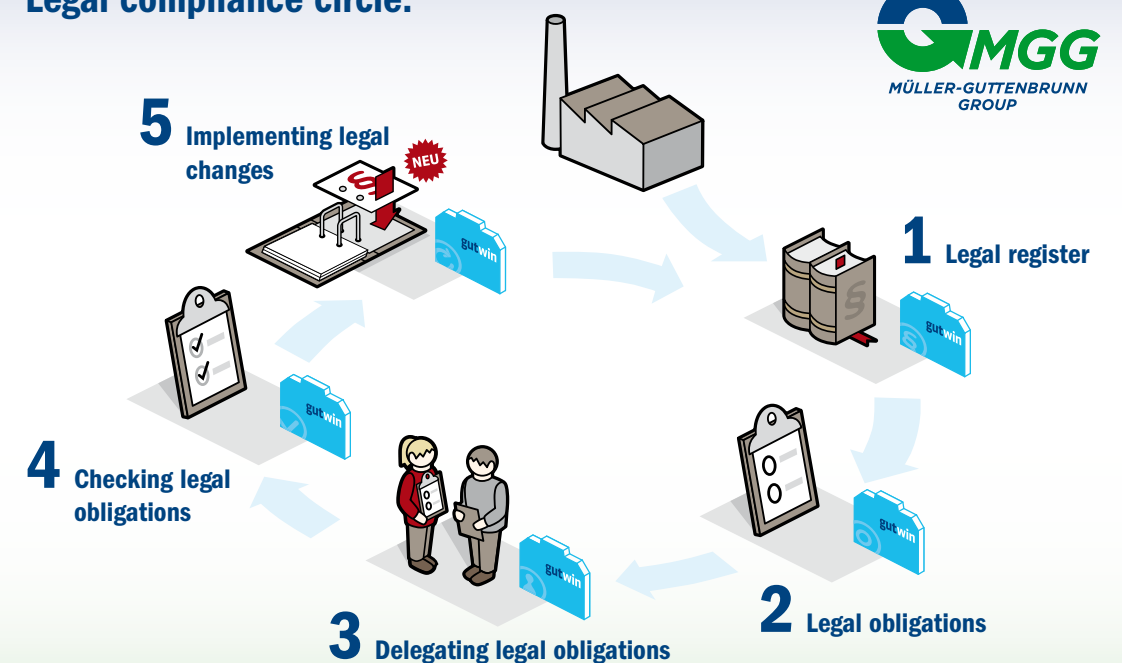
### Always up to date

On the long run, nothing will remain as it is - not even the norms, permits or legal requirements. With "gutwin" system, however, the database with the legal documentation leading to work instructions can be constantly updated without much effort. Legislation (for instance in the areas of environmental protection, occupational health and safety, plant safety or energy) are entered and automatically adopted by the software manufacturer.

After this huge amount of work, we are now absolutely sure: we at Müller-Guttenbrunn comply with the rules!



### Legal compliance circle.





## "We all speak the same language"

2017 the MGG subsidiary Mü-Gu Kft. in the outskirts of Budapest celebrated its 25-year anniversary. The ideal occasion to discuss the current developments and future objectives with Managing Director Nándor Hoffmann.

### Mr. Hoffmann, you celebrated an anniversary with your company last year ...

NÁNDOR HOFFMANN: Yes, indeed, we have been active in Budapest for 25 years this year. Many do not know this, but the foundation of Mü-Gu Kft. officially took place three years before. The original property, however, had no infrastructure, so everything had to be built up from scratch. It was in 1992 that the regular operation started under the first managing director József Máthé. We are very grateful that he is still available as consultant and guide, even today.

### When did you join the company?

HOFFMANN: I joined Mü-Gu Kft. back in 2011. Before that I worked in a foundry. I worked as project manager in this foundry, after I finished my economic studies. At Mü-Gu Kft. it was my task to start building up a new department for activities in the non-ferrous metals business. It was great fun to buy and sell, activities for which I unfortunately have little time today. I was asked to take over the management of the company at the end of 2012. The initial phase was a big challenge, because the entire plant had to be restructured. Therefore,

I am still grateful to all the people who were at my side back then. Most of them now form the core of our current team.

### Talking about the team. How is the Mü-Gu Kft team set up today?

HOFFMANN: At Mü-Gu Kft. in Budapest we have over 70 employees and are set-up pretty similarly to the way how our parent company in Austria is organized. We are processing around 100,000 Metric Tons of scrap a year with a large shredder, a hydraulic shear and various other types of treatment equipment. Our strengths are the treatment of ferrous and non-ferrous metals as well as e-waste. If customers wish, we can also offer complex solutions for other waste streams.

### Where does the raw material come from?

HOFFMANN: Mainly from the region around Budapest and from the central areas of Hungary. In order to source the material, we operate an own fleet of 20 trucks continuously.

### How does the cooperation with the other companies within the Müller-Guttenbrunn Group work?

HOFFMANN: The collaboration with the other companies in the Group, especially in Austria, is part of our daily work. The beauty of this is: no matter where the companies are located, all speak the same language. We have a daily exchange of information and continuously look for areas in which we can work together. A very clear example of

this is in the area of sales. Together as a group, we have of course much more material available compared to the volumes we generate ourselves and of course this largely expands the number of outlet channels available to us in this market of secondary raw materials.

### What are the current challenges that Mü-Gu Kft. is facing on the market?

HOFFMANN: A constant challenge is the Hungarian bureaucracy. We are also struggling to expand our great team. This is not so easy, because it is really difficult to find the right workforce at the moment. Of course, it is generally important to keep up with the market, to adapt constantly to new circumstances and to improve the efficiency.

### What are the improvements planned for the next few years?

HOFFMANN: We have now reached our capacity limits at the current company premises. Efficiency is therefore an extremely important keyword in our company. This means we will have to further optimize and modernize our processes. An important aspect for the future will be the expansion of our 32,000 square meter site. With our property neighbours everything is already clarified and it is now necessary to work out the formalities.



*"Cooperation with other companies of the Müller-Guttenbrunn Group is part of the daily work. We exchange information on a daily basis and look for areas where we can work together."*







*"The entire WEEE recovery process leads to a recycling rate of 75 percent in the form of secondary raw materials and a thermal recovery of about 20 percent of the input material."*

## The UNIDO Stockholm Convention Division **on-tour to MGG**

The United Nations Industrial Development Organization, UNIDO, is one of the most important UN agencies. The UNIDO Stockholm Convention Division supports countries in implementing measures defined in the Stockholm Convention. UNIDO focuses in particular on dealing with persistent organic pollutants (POPs) in developing countries. It also identifies best practices for industry using POPs in accordance with conventions.

### **From Vienna to Amstetten**

Earlier in 2017, the Müller-Guttenbrunn Group (MGG) participated in a UNIDO workshop on POP-brominated flame retardant substances. This topic is important for MGG because such flame retardants can be found in many plastics to be recycled. The workshop, which took place in Vienna, discussed how these substances can be most effectively eliminated. During the workshop, there was also a discussion of the way in which the Müller-Guttenbrunn Group treats plastics contaminated with POPs.

The participants of the UNIDO workshop were invited to visit Müller-Guttenbrunn's recycling plants in Austria, which recycle waste from waste electrical and electronic equipment (WEEE). This visit took place on a sunny day in August. After a presentation of the recycling processes, the group gained a detailed and practical insight into the recycling processes of old electrical and electronic equipment in the Müller-Guttenbrunn Group.

### **The recycling chain at MGG**

The process begins with the treatment in a smasher, in which components containing harmful substances such as batteries, capacitors and toner cartridges, but also valuable components such as coils and printed circuit boards as well as contaminants (e. g. wood) are separated. The second step in the processing of waste electrical and electronic equipment is the shredding of the remaining material, after which almost 40 percent is separated in the form of ferrous scrap.

The remaining shredder residues are transported to MGG Metran, where the non-ferrous metals are recovered in numerous separation steps. Particular attention is paid to separating the plastic fraction which may contain POP flame retardants.

These plastics will subsequently be supplied to MGG Polymers, where the perfect implementation of the Stockholm Convention requirements was demonstrated, namely the production of post-consumer recycled (PCR) plastics processing of plastics into REACH and RoHS compliant post-consumer plastics with levels of brominated flame retardants that are below the POP thresholds.

### **75 percent recycling rate**

Residual plastics, which may contain POP flame retardants, are supplied to appropriate incinerators in which the plastics are destroyed with embedded POP flame retardants.

The entire WEEE recovery process results in a recycling rate of 75 percent in the form of secondary raw materials and a thermal recovery (at the end of the entire recycling process) of about 20 percent of the input material.

The technical tour ended with a Q&A session to discuss some of the challenges facing the recycling industry in Europe. Apart from the many problems associated with transboundary shipments of waste in Europe, the ever-increasing flow of new substances that need to be restricted was also discussed.

The visit of the UNIDO delegation was important in order to show how recycling processes can function efficiently in connection with the separation and destruction of plastics containing POP flame retardants. It was also agreed that this type of exchange would be maintained in the future.





## High-ranking visit to the Müller-Guttenbrunn Group

On 6 November 2017, Stephan Pernkopf, Deputy Governor of Niederösterreich, visited the Müller-Guttenbrunn Group's headquarters in Amstetten. Important and sensitive issues were discussed.

Recycling is important, but it is also a true Herculean task. This was confirmed by Stephan Pernkopf, Deputy Governor of the Provincial Government, during a visit to the Müller-Guttenbrunn Group (MGG) in Amstetten. The company operates three recycling plants in the region closing the raw material loop for the Circular Economy.

In a short presentation, the company reviewed the successes of recent years. In addition to international awards, the data about the recycling processes in particular stand out: by recovering the raw materials, for instance, each of the 240 MGG employees in the 3 companies in Lower Austria saves more than 1,000 tons of CO<sub>2</sub> emissions per year.

### Mostviertel innovation power

Deputy Governor Pernkopf was particularly impressed by the innovative strength of the Amstettner family-owned business. "It is wonderful to see the commitment with which all employees devote themselves to the topic of recycling. When you see that 95 percent of the waste can be recycled, it's quite remarkable," said Pernkopf during a tour at the MGG site in Amstetten.

He was impressed by the large shredder installations and the enormous amount of development work that is involved in them. Managing Director Christian Müller-Guttenbrunn reported about

the numerous modernisations in recent years – such as the completely new exhaust air system, weighing several tons, that was installed last summer, providing clean exhaust air since its installation.

### Reasonable solutions necessary

Through constant innovation, the Müller-Guttenbrunn Group has developed into a recycling company with an international reputation.

One of the innovation projects that is currently on its way is the Bobby-car project, whereby solid plastics in the bulky waste fraction is collected separately to be recycled. The project is currently in the test phase. Another project that will be finalised before the year end is the recycling of Flat Panel Displays. It is clear that MGG focuses on Lower Austria as source for these materials.

The MGG leadership therefore spoke to the Deputy Governor, responsible for environmental issues in Lower Austria, about better solutions for the future. The unbelievable abundance of norms, limit values and regulations as well as the loss of recyclable waste due to illegal exports of end-of-life vehicles or waste electrical and electronic equipment were discussed.

Dr. Stephan Pernkopf assured his support: "Every small step on the way to a Circular Economy is important. Therefore, it is important to me to strengthen companies like Müller-Guttenbrunn when it comes to working out sensible solutions for all of us."

*"As a recycling pioneer, the Müller-Guttenbrunn Group is constantly striving to identify potential for improvement in Austria and on the European stage in order to make recycling more efficient and cost-effective."*







*"It's great to know that everything is recycled and not dumped or incinerated."*

## "You have to be in control of your wheel loader"

**Margit Aigner is one of the wheel loader operators and worked for over 10 years at MGG Metran in Kematen. Together with her colleagues with their heavily horse powered colossi, she ensured that the recycling and recycled materials reach the right spot at the right time within the boundaries of MGG Metran site.**

**Hello Margit, your workplace is a heavy weight wheel loader, which you have just turned off. Are there many men who envy you a job?**

MARGIT AIGNER: Yes, indeed quite a few. Many cannot or do not want to believe that I am doing something like this - and many simply find it cool. Fortunately, there are more and more women who are operating heavy equipment like these.

**How did you get such a cool workplace?**

AIGNER: I used to be working as a sorter at a conveyor belt with another recycling company. At that time - we are talking some 20 years ago - I have always looked at the wheel loader drivers from above and I must say, that I was fascinated by these devices. During the breaks I was allowed to try and go around a bit with these machines and somehow I was officially entrusted with a small loading machine. And after that the devices have simply become bigger and bigger.

**That means you have been driving these machines for 20 years now.**

**How long have you been at Metran?**

AIGNER: I've been with Metran for about 10 years. I started here at

the sorting station. Fortunately however, there was a shortage of loader operators. Since I mentioned that I had already experience driving such loaders in the past, after a few weeks I was given the chance to take the position of wheel loader operator... and it stayed that way, fortunately.

**Could you please describe your workplace?**

AIGNER: It is an articulated steering loader with a weight of almost 20 tons and nearly 200 HP. With the shovel I can transport up to five cubic meters of material at one time.

**What is your typical working day in your 200 HP office?**

AIGNER: Before I can sit down on my seat, there is a shift hand-over. With the shift handover we get the shift plan, so that we know which material is processed on which machines. There is always a clear plan of what exactly is planned for the day. This way I know what I have to do, which material is loaded onto which machine and whether the finished material has to be loaded onto trucks, railway wagons or shipping containers.

**How long does a shift take?**

AIGNER: We operate in two shifts. The morning shift starts at 05:00 and runs to 13:00 hr. The afternoon shift begins at 13:00 and ends at 23:00 hr. There are always three wheel loader operators per shift and an additional fourth wheel loader during day-time.

**Are there any particular challenges in your work?**

AIGNER: Not really, no. If you are operating such a heavy wheel loader, you simply have to pay attention to the situation on the site, for example, when sloppy holes form. In the winter we clear the snow with our wheel loaders. You simply have to know where there are any manholes and take care, whilst clearing the snow, not to damage them. But the most important issue is to have your vehicle under control so that you can quickly and properly feed one separation system after the other with the correct material and then return the separated material to the appropriate storage box.

**Are you as wheel loader operator also thinking about the fact that you are making an important contribution to keeping raw materials in circulation and to the environment at large?**

AIGNER: Yes, of course! It is great to know that everything is recycled instead of being disposed of or landfilled. Fortunately, I have been entrusted with a huge wheel loader here and this since ten years.

**What do you do to compensate for the long sitting in the wheel loader all day?**

AIGNER: In my spare time I love to do sport and I enjoy nature. I like cycling or walking. And in the winter I enjoy alpine and cross-country skiing.





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