

Müller-Guttenbrunn claims leadership role in plotting Europe's recycling future

Innovative multi-tasker

Müller-Guttenbrunn's electronics shredder operation at Amstetten.



At the Metran plant, valuable plastics fractions are created and then shipped to nearby MBA Polymers Austria.

Recycling of end-of-life vehicles made the Müller-Guttenbrunn Group big. But over the years, the number of these ELVs handled by the company's car shredder at Amstetten in Austria has dropped dramatically, partly due to an increased outflow of used cars to Eastern Europe. At the same time, the group's e-scrap and plastics activities have been recording spectacular growth.

The company's larger facilities have direct access to the rail system.

'**M**ay I introduce you to Eva: on a yearly basis, she can handle some 80 000 tonnes of electronics,' says Günther Höggerl, research & development manager at Müller-Guttenbrunn Group (MGG), while guiding me around the company's facility at Amstetten, a town west of Austria's capital Vienna.

Just to clarify, Eva is MGG's e-scrap shredder installation and is an abbreviation of Elektronik Verwertungs Anlage (German for 'electronics recycling facility'). However, it also happens to be the name of one of the daughters of company owner and ceo Christian Müller-Guttenbrunn.

During the short tour, it appears there are other production lines at the Amstetten facility carrying exotic names that need clarification - and 'Smasher' is one of them. 'We call it Smasher because one of our engineers hit on the idea of developing this machine when one day his smart phone fell on the ground and opened up just like that,' explains Höggerl. 'This experience inspired him to design a machine that depollutes the phone or other devices by



Research & development manager Günther Höggerl.



smashing these and so separating, among other elements, batteries, capacitors and toner cartridges. This makes following steps in the recycling process easier and more efficient.'

Big in Central Europe

Founded and headquartered in Austria, the family-owned Müller-Guttenbrunn Group is an international recycling company focusing on the central and south-eastern regions of Europe. It has operations in Austria, Hungary,

Romania and the Czech Republic, as well as a trading company in Switzerland. In all, the workforce numbers 940.

In 2015, MGG handled roughly 850 000 tonnes of scrap, of which close to 700 000 tonnes was ferrous derived primarily from end-of-life vehicles (ELVs) and a further 100 000 tonnes was non-ferrous. In addition, more than 50 000 tonnes of plastics and some 25 000 tonnes of paper and cardboard were recycled under the group umbrella.

In terms of feedstock, the various operations are fuelled by municipalities, take-back systems, reuse companies and major electronics pro-

130 of its own trucks on the road

In 2015, MGG recycled some 850 000 tonnes of scrap. To achieve such volumes, the company depends greatly on its logistics and on efficient management of its network of sources, among which are take-back organisations, municipalities and a whole range of other scrap suppliers.

To ensure an effective collection system, the company owns and operates a fleet of 130 trucks and 'a much larger' fleet of containers. The larger operations of the group - at both Amstetten and Metran - have direct access to the rail system, with ownership of railway loading and unloading stations. For efficient transportation of scrap by water, meanwhile, the company has a direct access point along the River Danube near Linz in Austria, not far from the Müller-Guttenbrunn Amstetten, Metran and MBA Polymers triangle of operations.



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Decline in ELV volumes

While it is the recycling of ELVs that has made the Müller-Guttenbrunn Group big, the number handled by the company has dropped dramatically over the past decade as a result of the increasing outflow of used cars to Eastern Europe, confirms the company's marketing director Chris Slijkhuis.

Of the 250 000 cars deregistered in Austria every year, says Slijkhuis, only 50 000 end up in one of Austria's six car shredders - one of which is the shredder unit at MGG's facility in Amstetten. 'This means that some 200 000 vehicles are somehow disappearing,' he points out.

'The right decision'

The trend towards a decline in ELV inputs was recognised at an early stage by MGG's owners. They decided not to sit and wait, but to innovate and explore the new opportunities offered by the rapidly-growing electronics and plastics recycling markets. 'We were forced to seek new frontiers,' says Slijkhuis. 'Looking back, this was



One of Müller-Guttenbrunn's operations in Romania.

the right decision. We have managed to more than compensate for the ELV volumes we have lost over the years by developing expertise and infrastructure for processing electronics and plastics. In fact, we have re-invented ourselves.' MGG's figures speak for themselves: in 2005, the company handled 20 000 tonnes of electronics; by 2015, this volume had more than quadrupled and is likely to grow beyond 100 000 tonnes in the next couple of years. Unsurprisingly, MGG claims to be the largest e-scrap recycler in Central and South East Europe.

Without MGG's modern recycling technologies, the company would never have been where it is

today. At Amstetten, for example, Smasher and Eva ensure proper depollution and recovery of 'a high-quality ferrous metal scrap with very little loss of copper and other non-ferrous elements,' it is claimed.

Shredder residues are transported from Amstetten to the nearby Metran facility to be further processed into a range of non-ferrous concentrates. Metran also creates a valuable plastics fraction, which is delivered to the neighbouring MBA Polymers facility, again for further processing.

MBA Polymers Austria was established through a joint venture between plastics recycling major



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MBA Polymers and MGG. Given that electronic devices contain increasing amounts of plastics (already more than 30% on average and rising rapidly year on year), MGG saw this as a big opportunity to grow and diversify its business. The highly-automated plant for the recovery of three different types of plastic (PP, HIPS and ABS) started production in 2005.

Growth expected in 2016

According to Manfred Geyer, sourcing manager of MBA Polymers Austria, 10% of the total of 50 000 tonnes of plastics fractions processed in 2015 came from Metran, with the remainder supplied by external sources. Production growth is expected for 2016. The MBA Polymers facility, which covers 20 000 m² and has a 100-strong workforce, will handle some 60 000 tonnes of plastics with an output of roughly 26 000 tonnes as compared to 21 000 tonnes in 2015, confirms Geyer. Furthermore, in 2016, PC + PC ABS will be added to the company portfolio. MBA Polymers Austria delivers primarily to the automotive industry and to producers of household electronics. www.mgg-recycling.com

Let's speed up shipment procedures, says Slijkhuis

It is certainly one of the most frustrating issues for Europe's electronics recyclers, and Müller-Guttenbrunn is no exception: the jungle of paperwork and complicated procedural requirements when organising cross-border shipments of e-scrap within the EU. But Chris Slijkhuis, marketing director at MGG, has a plan that, if implemented, could well put an end to all this bureaucracy. His so-called 'Fast-Track Notification' could speed up scrap shipment procedures considerably and thereby help 'make the Circular Economy work', he contends. Getting permission to transport, let's say, a truckload of shredder residues from a recycler in Germany to Müller-Guttenbrunn's electronics recycling facility at Amstetten in Austria is truly a nightmare in Slijkhuis' experience. 'It takes a paper file of over 100 pages of documents,' he explains. 'A huge amount of documentation requiring, in total, 50 pieces of detailed information on transport mode, packaging, dispatch location, receiving location, hazardous characteristics, etc, etc.'



Chris Slijkhuis.

And then, when all the form-filling has been completed, the waiting begins. 'At MGG, we have had four cases each taking more than a year to get a notification,' he laments. 'We got so fed up with all this, so we thought of this new concept that is more up to date and, more importantly, much faster.'

Basically, Slijkhuis' Fast-Track Notification gives recyclers the opportunity to become a 'pre-consented' recovery facility, followed by a 'simplified' procedure for non-hazardous input for recycling. 'For instance, we would have a much shorter response time,' he points out. Over the past few months when speaking at seminars and conferences, Slijkhuis has frequently mentioned shipment procedures. Also, he has brought his plan to the attention of the directors-general of environment ministries in several EU member states. 'I have the feeling we have put the issue on the agenda,' he says. 'They seem to be taking it seriously.'



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