

# opportunity<sup>2</sup>

Focus:  
Biogenic waste





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Professor Marion Huber-Humer heads the Institute for Waste Management and Circular Economy at the University of Natural Resources and Life Sciences Vienna. Together with her colleague Erwin Binner, we asked her about the future global challenges of the department.



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When it comes to compost, the quality standards are high. Foreign substances, especially plastics, are therefore a major problem. To solve this, Lengel GmbH, together with Komptech, recently realized a new stationary Compost fine processing.



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Since our foundation, we have been intensively involved with the composting of biogenic waste. Many Komptech machine types are part of the „standard equipment“ of composting plants and guarantee maximum ecological and economic efficiency.



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The field of activity of the Rhein-Main Deponie GmbH (RMD) lies between Wiesbaden and Frankfurt. The municipal company has specialized in the use of organic waste and is the largest producer of renewable electricity in the region.

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# Everything is connected with everything!

Thus said Alexander von Humboldt over 160 years ago. Our globally connected world seems not to have quite grasped what that ultimately means. Climate change, secure energy supplies and preserving the environment demand the commitment of everyone, and that we think in terms of interconnectedness.

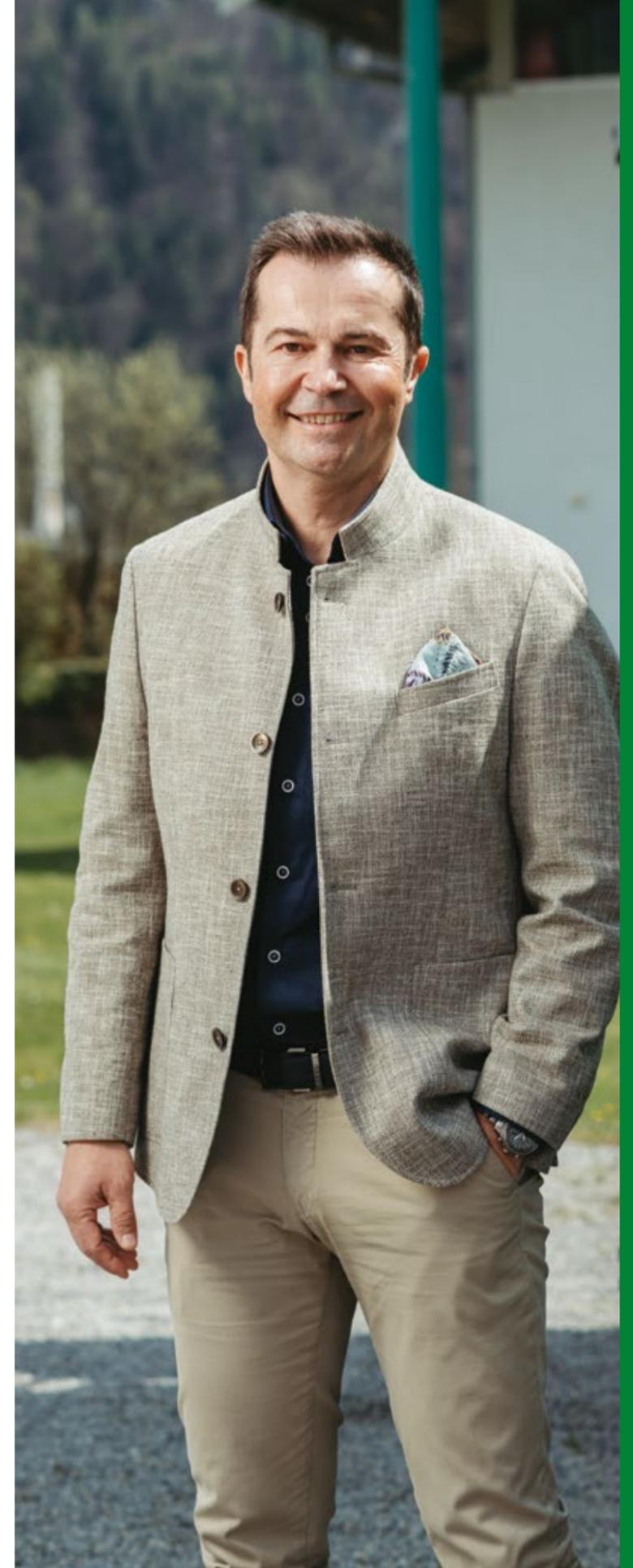
The difficulty in reaching a final declaration at the 27th World Climate Conference shows that politics are still standing on the brakes. The dominance of national interests and lobbyists is strong. Still, there was no retreat from the goal of reaching climate neutrality by 2050.

Climate neutrality will not be possible without a circular economy. According to calculations by the World Resource Council, about half of all global greenhouse gas emissions are caused by the extraction and processing of abiotic and biotic raw materials. In addition, if we do not recycle more materials, next generations will not be able to meet their resource needs. Worldwide, currently only 8.6 percent of raw materials are returned to the material cycle (Circularity Gap Report 2021). So there is much to do. For Europe, which leads in waste management, this means there is an opportunity to assist other countries with technology and knowledge.

Without a legal framework, landfilling, the simplest form of disposal, would probably be used all over the world, even in countries that have enough money for alternatives. So regulations (which are continually updated) are welcome. Recently Komptech held a guest presentation at a conference in Australia. One of the topics was a new regulation that mandates not just separate collection but also biological treatment. A similar law in Styria in Austria set the stage for the birth of Komptech almost 30 years ago, as it gave rise to the idea of developing professional technology for composting.

This issue of 'Opportunity' is all about the preparation, processing and post-processing of biogenic waste. It looks at material and energy recycling, issues with contaminants, the positive effect of compost, and the milestones in Komptech's history. Here as well, everything is connected with everything, and the energy crisis has (once again) brought biogas into focus. Enjoy the read!

Warm regards,  
Heinz Leitner  
CEO





# From Startup to Global Player

Komptech celebrated its 30th anniversary in 2022. A retrospective of the anniversary and the history of the company.

In 1992 two Austrians, Josef Heissenberger and Rudolf Pretzler, set themselves a goal: To enable the large-scale production of high-quality compost out of organic waste. The timing was good, since in many places in Europe the first laws on the separate collection of biogenic waste had gone into effect. With pioneer spirit and pragmatism, the young mechanical engineers developed their first compost

turner and called it the "Topturn." This was the beginning of the Komptech success story, which continues to this day.

“ It’s not about what I want to sell - it’s about how we can help our customers.

Josef Heissenberger, 2011

Many successful companies started in a garage. In Komptech’s case the garage was a small rented workshop in which Heissenberger and Pretzler gave their first ideas form. Both were already experienced in one of the world’s oldest technology fields, designing and building ploughs. But they wanted to create something completely new – a compost turner for triangular windrows that would make windrow composting more economical. And so, through many long nights, naturally working by hand,

they created the Topturn 300, a triangular windrow turner driven by the power take-off shaft of a tractor. It was the birth of a company for KOMPosting TECHNOlogy. Practicality was always the top priority. From the very first, the two engineers sought the insights of disposal companies and local customers. This has not changed. „We see our customers as long-term partners, and we want to be successful together with them,” says CEO Heinz Leitner.

“ There is no antidote to constant innovation.

Josef Heissenberger, 2011



1992

Komptech is founded. Working together with the disposal company Saubermacher, the company develops its first Topturn. The Styria region in Austria becomes one of the first in Europe to introduce the separate collection of organic waste.

1997

Entry into the shredding market with the development of the Terminator and Crambo. Construction of a new production facility in Frohnleiten. First sales partners in Spain and Japan.

1999

Drum screens are added to the portfolio, followed by star screen machines in 2003 and ballistic separators in 2006. Komptech thus becomes a full-liner for waste treatment.

2003

Sales subsidiary in Great Britain.

2007

US sales subsidiary in Denver, Colorado, to handle the North American market. Founding of the Komptech Research Center and the Komptech Academy. Komptech now has 400 employees at nine locations in six countries around the world.

2008

Entry into biomass processing with the Chippo chipper, and in 2011 with the Axtor high-speed shredder.

2011

The Komptech Group serves some 2500 customers in 53 countries, and this number continues to rise.

2014

Tireless innovator Josef Heissenberger dies at age 59 as a result of a traffic accident. Komptech Management promotes former CTO Heinz Leitner to replace him.



**FROM MACHINE MANUFACTURER TO SOLUTION PROVIDER**

With over four thousand customers in more than 80 countries and an export rate of almost 95 percent, today KompTech is the technology leader in waste processing. The portfolio comprises more than 50 machine types for shredding/chipping, screening, separation, and biological treatment, covering all the major steps in waste treatment. There are also compact mobile systems for waste wood processing, as well as special solutions in splitting and recycling technology. KompTech has its own digital tools, a worldwide service network, and extensive expertise in implementing location-specific processing concepts. Leitner: „We’re in constant communication with our customers. It starts with the first sales visit and continues over the entire lifetime of the machine or welcome. Due to this we have a very good knowledge of the challenges faced by the industry in each country.”



**FROM AUSTRIA TO THE WORLD**

Ask questions, test limits and be dependable – that’s how company founder Josef Heissenberger described KompTech’s recipe for success. Today we would add: User benefit is always our first priority. But at the same time we work to develop new, intelligent solutions for a global circular economy. The foundation was laid in 1992, and by 1997 KompTech had already grown so much in the German-speaking countries that it had to build a new production facility in Frohnleiten, Austria, home to today’s headquarters. More

machines were added, like the low-speed Terminator and Crambo shredders, and in 2011 the Axtor, a multipurpose shredder and chipper that has become indispensable. This made KompTech a full-line machine supplier for mixed waste, waste wood, biogenic waste and biomass processing. Parallel to portfolio expansion the sales network grew steadily, throughout Europe, to the US and since 2018 on the African market.



Timeline of key events:

- 2015** KompTech becomes part of the Hirtenberger Group.
- 2018** KompTech starts activities in Ghana. Additionally, the condition monitoring system Connect! enters the market.
- 2019** KompTech launches rental offerings.
- 2020** The first e-mobile product line of Terminator and Crambo models
- 2020** A KompTech machine is in operation in Antarctica. The company now has machines on every continent.
- 2022** Commissioning of the first stationary plant in Indonesia.
- 2022** KompTech celebrates its 30th anniversary. New brand outfit.



### SUSTAINABILITY AS A WAY OF LIFE

With the launch of the “green efficiency®” programme in 2013 Komptech started a new approach to machine development. The goal is higher efficiency in drives, shredding systems and material discharging, in order to get higher

“Sustainability and CSR are high on our agenda. One of our next goals is to become a CO<sub>2</sub>-free company.

**Heinz Leitner**

energy efficiency overall. The concept includes innovative exhaust scrubbing technologies, longer-lasting wear parts and noise reduction. This was followed in 2019 by the company’s own overarching sustainability programme, whose goals are aligned with the UN Sustainable Development Goals. As a result, from then on Komptech has followed exclusively sustainable business models. “Our goal is to solve societal issues with technological approaches,” says CEO Leitner. “We are convinced that green technology can make a major contribution to protecting the environment.”



### RESEARCH FOR CUSTOMERS

Investigating the potential of new technologies, such as those of Industry 4.0, is the job of the in-house research department. Together with well-known partners in science and the private sector, Komptech works on research projects for reducing greenhouse gases and resource use, and for improving separation precision in the processing of mixed waste streams. New legal mandates like the Circular Economy Action Plan immediately flow into the development work.

The Komptech Research Center was founded in 2007. Last

year a large-scale project was launched under the “Komptech Campus” name, and is intended to support partners and employees even better with the latest information on product and process technologies.

“We see our customers as long-term partners, and want to be successful together with them.

**Heinz Leitner**



### FIT FOR THE FUTURE

With its over 30 years of experience in waste processing, Komptech has much more to offer than just machines, and can

“We question everything. Holding on to the past only slows down innovation.

**Christian Oberwinkler**

help customers get the maximum value out of waste. For this purpose Komptech has developed digital tools which monitor processes, improve machines and systems, and share data across continents in real time. Komptech experts and sales partners try to support customers as well as possible in the big picture, including providing expertise going beyond the machines. This repositioning is underlined by the brand relaunch that Komptech undertook in its anniversary year.

But Komptech wouldn’t be Komptech if it just rested on its laurels. CEO Heinz Leitner: “We will continue to focus on developing new technologies that can make a positive contribution to a greener, more sustainable world.”

The focus for the next few years will also be on the processing of mixed waste. In addition to a planned expansion and optimization of the product portfolio, sensor technology, digitization and machine learning are playing an increasingly important role in improving recycling rates. Together with partners from science and industry, we are working on research projects to drive this development forward. With a strong international focus, Komptech’s solutions are expected to drive progress in mixed waste processing worldwide.

“Those who link growth to environmental destruction have a linear understanding of business. I see the future of the manufacturing business as a cycle with a recycling component as high as possible.

**Heinz Leitner**



# We are ready for new challenges

Climate change, resource scarcity, food security: The questions of the future call for answers. With over ten thousand students, the University of Natural Resources and Life Sciences in Vienna (Universität für Bodenkultur Wien, or BOKU) is an important educational institution that provides the tools to address the varied future global challenges and tasks.

At the Institute of Waste Management and Circularity (ABF-BOKU) a motivated team under the leadership of Professor Marion Huber-Humer teaches and researches on innovative concepts and processes for sustainable waste management and a circular economy.

**Opportunity:** Professor Huber-Humer, what are the areas of expertise of your Institute?

**Professor Marion Huber-Humer:** According to the EU Waste Directive, waste avoidance and re-use have the highest priority. They are important focal points of our research at the institute. We concentrate particularly on the question of how to reduce food wastage. That is one of our main research topics. Circle-oriented waste management is another important area. We work on the analysis and optimization

for the low-emissions, environment-friendly, monitored storage of residues. We use innovative measurement methods and continue to further develop them. To name one example, using open-path laser measurement devices and dispersion modelling we do research on the quantification of greenhouse methane emissions from waste treatment facilities and landfills.

” In Austria, each year about a million tonnes of edible foodstuffs end up in the bin. I don't think very many people are aware of this.

**Professor Marion Huber-Humer**

of collection systems and usage options. In addition, landfilling remains an indispensable element in waste management. So we take part in technology research and development

**Professor Marion Huber-Humer:** Absolutely. The effects of this waste on the climate and the environment are enormous and unnecessary. You know, for nearly twenty years food waste

**Opportunity:** Let's briefly look at the topic of food. The current crises are causing interruptions in supply chains, and along with sharply higher prices this is bringing food into the focus of public attention. Is wastage really an important issue?



**Marion Huber-Humer** is the head of the Institute for Waste and Recycling Management at the University of Natural Resources and Applied Life Sciences, Vienna. As the 2015 Austrian of the Year in Research, Huber-Humer was very much dedicated to global waste management. In addition, Huber-Humer is currently leading several research projects around the topics of landfilling, methane oxidation or biomass. Huber-Humer regularly publishes in a wide variety of journals.

**Erwin Binner** has been a research associate at the Institute of Waste and Recycling Management at the University of Natural Resources and Applied Life Sciences, Vienna, since 1993 and is head of the laboratory testing department. Binner's research interests in biological waste treatment include composting of separately collected biogenic waste, compost quality and mechanical-biological residual waste treatment. In addition, Binner teaches as a visiting professor in Lima, the Peruvian capital.



has been an important research field at our institute, and our results show that solutions are needed for private households in particular. Much more food is wasted at the household level than at any other point in the value-creation chain. So we see it as our task to identify solutions, in addition to developing methods and doing comprehensive data capture. We make very specific action recommendations for producers, retailers and consumers. Sensitizing is particularly important for the latter group. We also work closely with schools and training facilities in the tourism industry, and take part in various projects with practical focus.

**Erwin Binner:** Like in many other countries, Austria started composting household waste a few decades ago. It very quickly became clear that household waste compost sometimes contained high amounts of contaminants. So, in the late eighties Austrian Standard S2022 laid down the first quality criteria for household waste compost. Parallel with that, standards for testing methods and application guidelines came into being. In order to further improve compost quality, trials were done on the separate collection of biogenic waste from households, for example in Klosterneuburg, Graz and Vienna.

The first major progress came in 1992 with the regulation on the separate collection of biogenic waste, which made waste separation mandatory from 1995. At almost the same time, in 1993, Austrian Standard S2200 laid down the quality criteria for composts from biogenic waste. Along with its ancillary standards, it defined much stricter limit values than its predecessor, Austrian Standard S2022.

The Austrian Compost Regulation in 2001 was the next milestone. With it, Austria became the first country in Europe to legislate “the end of waste.” Compost made compliant with this regulation is

no longer considered waste, but instead takes on the status of a product! The regulation largely incorporated the testing parameters of S2200 and the test methods of S2023, with the limit values adjusted where necessary. Since then, in Austria we make compost products in quality class A+ for use in organic agriculture, and quality class A for use in conventional agriculture. At ABF-BOKU we provided scientific support for these processes, primarily

by developing methods to determine the quality and positive properties of composts. These include the maturity and stability of the organic compost substance. We also developed a model for determining the humic content of composts. The humic content is an important quality criterion for composts, and this measurement model is based on infrared spectroscopy. Another research area we’re focusing on right now is microplastic contamination in composts.

” Biogenic waste is an important fraction in meeting the recycling targets of the Circular Economy Law.

**Erwin Binner**

**Opportunity:** That is definitely an urgent issue. What problems need to be solved here?

**Erwin Binner:** Residual waste analyses show that, despite the organic waste regulation that has mandated the separate collection of bio waste since 1995, considerable quantities of usable biogenic waste end up in residual waste bins. We need to use this for reclamation in the future. This also involves ancillary measures to improve the quality of the biogenic waste that is collected.

Many composting plant operators complain about the high amount of contaminants in the biogenic waste they get. They have to remove the contaminants, which increases their costs. In order to improve the situation we need to take steps at the collection system level. That might mean publicity in order to motivate consumers to separate



**Opportunity:** Thank you, Professor Huber-Humer. Now a question for your colleague, Erwin Binner. Mr. Binner, even with the most careful use of food, leftovers remain. As organic waste they can be made useful, for example by composting. You’ve made an important contribution to the very good reputation the Austrian compost industry enjoys today. What would you say were the milestones in recent years?



Soil testing is an important area of work. Before the analysis, the shovel is used.

their trash rigorously, or using a contaminant scanner or perhaps distributing a kind of “red card” to people who don’t follow the rules. This is taken into account by the new

” Often countries start small with projects of modest scope, in order to gain experience. These pilot projects can then be scaled up step by step.

**Professor Marion Huber-Humer**

compost regulation, the first draft of which is expected soon. The regulation will define limit values for foreign matter in waste delivered for processing. The figure of two percent by mass of the wet mass is being bandied about. Plant operators can accept collected waste with a contaminant content up to five percent by mass, if technical measures are in place that reduce that amount to two percent in the input material for rotting.

**Opportunity:** You just returned from a congress in Lima. What are the challenges in waste management for developing nations like Peru? Is our experience applicable?

**Erwin Binner:** BOKU entered into a partnership agreement with the Universidad Nacional Agraria La Molina way back in 1990. This agricultural university does research in similar areas as BOKU. Together we developed training programmes, seminars and congresses. For example, in the spring an international compost course was held, and a few weeks ago there was the seminar “Waste Avoidance, Recycling, Treatment and Landfilling” where 190 participants from South and Central America including Mexico discussed their research findings.

I consider events like this and the open exchange of ideas to be very important. Only in this way can the responsible parties

evaluate the advantages and disadvantages of procedures in Europe, modify techniques for use in their own countries, and most of all learn from our mistakes. The good news is that we’re seeing initial successes. For example, in recent years the number of “sanitary landfills” in Peru has risen. These are landfills that meet a certain technical standard and have the corresponding barrier function. Emissions thus don’t escape completely uncontrolled like they did previously. Composting has been understood to be essential for both agriculture and waste disposal. Many municipalities and farming operations run composting plants, at a similarly small scale as in Austria. Here and there, the separate collection of recyclable and biogenic fractions has started.

**Opportunity:** Ms. Huber-Humer, at the start you mentioned circular waste management. Europe is doing its homework, even if there remains much to do. But how can appropriate solutions be found in less prosperous countries?

**Professor Marion Huber-Humer:** In my opinion, interdisciplinary research and the international collaboration of varied stakeholders are the keys to moving international waste management towards a circular economy. At our institute we work on these questions by systematically observing material flows and processes. In the process we always try to consider and evaluate the entire life cycle.

Here again we follow the waste management premises from avoidance, collection and reclamation to environmentally neutral disposal with minimum emissions. From this, procedures and technologies can be adapted and systems can be optimized for countries that have less money to spend on waste management. It’s important to understand the existing local structures in each country, and get them onboard early. These might be

active and involved local people – the so-called informal sector that takes care of collecting and using certain waste streams. Or it might be formal organizations and education institutions up to the university level, that offer waste management education and training programmes.

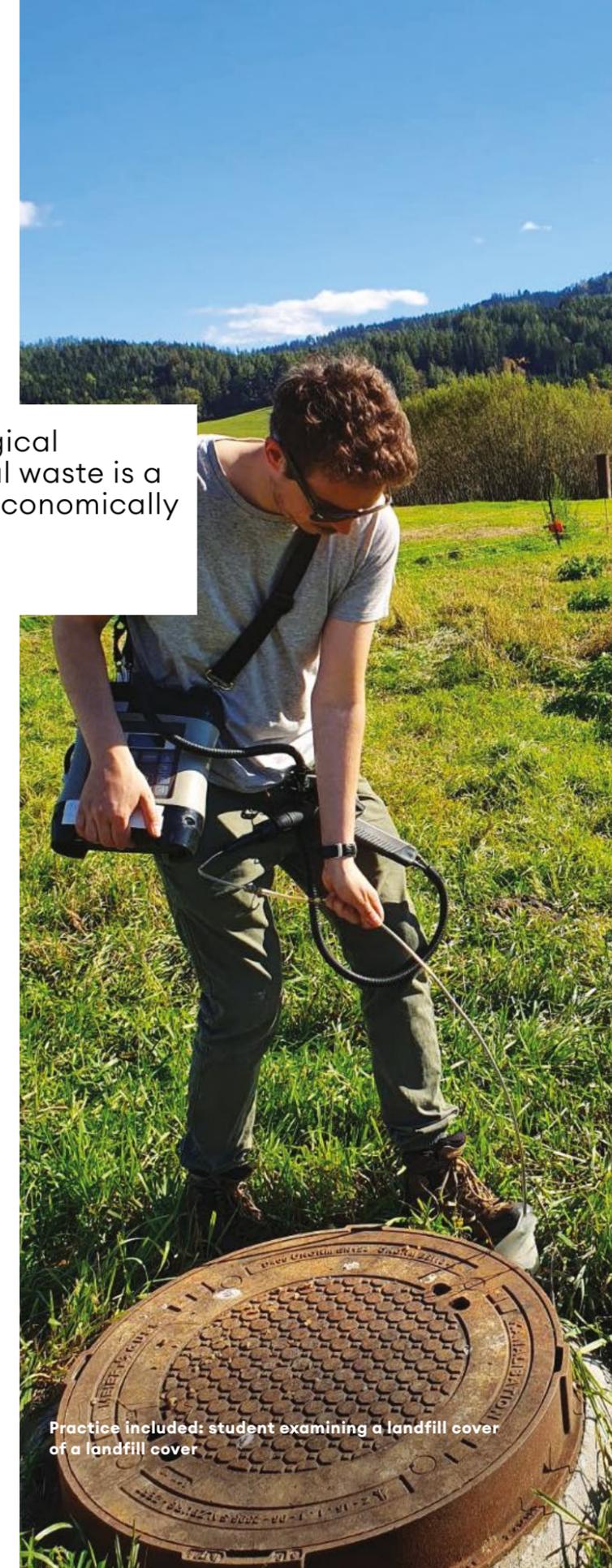
” The mechanical-biological treatment of residential waste is a low-tech measure for economically weak countries.

**Professor Marion Huber-Humer**

**Opportunity:** Can you give us an example?

**Professor Marion Huber-Humer:** I can gladly give several. In the past years we have done many very different projects. We see over and over again that knowledge transfer and training are essential. One good example is a Tempus project supported by the OeAD, the Austrian Agency for Education and Internationalization. Together with students and colleagues from Dresden Technical University and Universities in Ukraine and Belarus, we developed waste management study programmes. In the process, in cooperation with study groups and local stakeholders, regional waste management plans were formulated.

In another project we worked with partners in Ethiopia to establish the separate collection of organic waste in a district of the capital city Addis Ababa. This waste was subsequently composted decentrally to produce a locally available fertilizer. Currently we’re participating in several projects for handling electronics waste



Practice included: student examining a landfill cover of a landfill cover

in the Caribbean and in Laos. Among other things, the island nature of small Caribbean is a specifically regional challenge. Other projects in recent years have revolved around ship recycling and dealing with hazardous waste in China, and handling plastic waste in Vietnam. We've worked in Kazakhstan and Russia on modernizing management systems for residential waste, in particular towards monitoring landfills, and means and technologies for minimizing emissions.



**Opportunity:** In many countries, mixed household waste is the largest fraction. Can its mechanical-biological processing contribute to sustainable waste management?

**Professor Marion Huber-Humer:** Absolutely. In many of the foreign projects I named, we found that the timely implementation of simple, robust technologies makes a noticeable improvement in the environmental situation. It acts as a bridge technology, like it did in Austria twenty or thirty years ago. Back then we didn't have enough thermal treatment capacity.

In the mechanical stage, recyclables like metal or thermally usable fractions can be reclaimed. These can be usable as primary energy sources for regional industries. But the really big benefit for the environment is in the substantial reduction of greenhouse

“ If mixed household waste is processed mechanically-biologically before landfilling, the organics in it stabilize and do not decompose as easily.

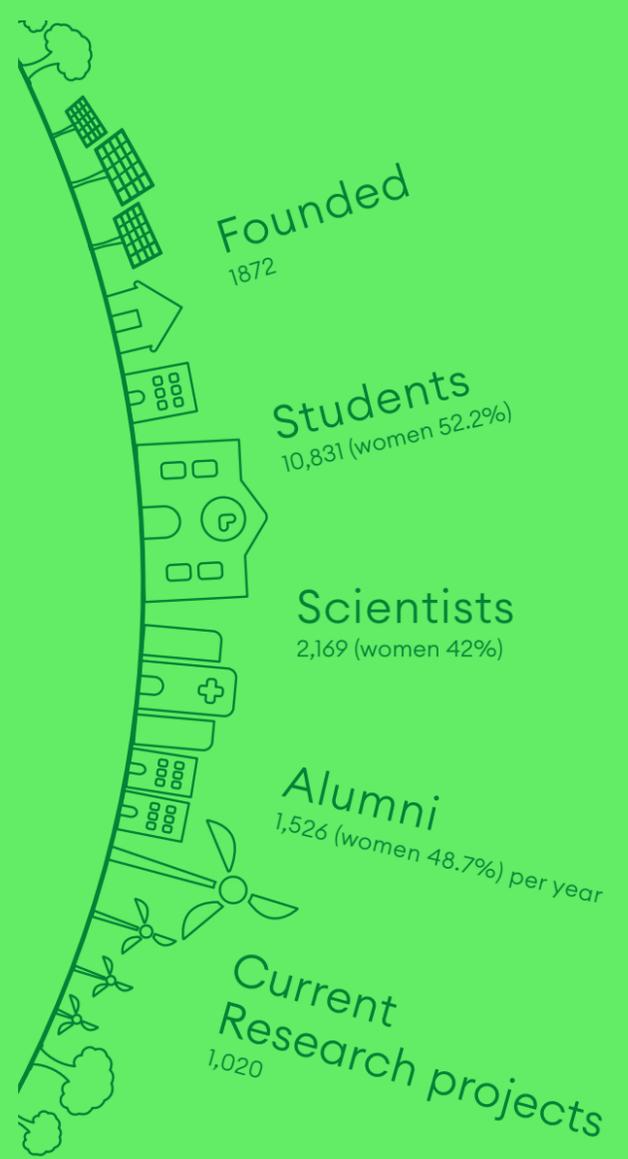
**Professor Marion Huber-Humer**

methane emissions. If mixed household waste is processed mechanically-biologically before landfilling, the organics in it stabilize and do not decompose as easily. If this stabilized material is tipped into a landfill uncompressed, it favours the biological methane oxidation process. That means that methane formed and emitted by untreated waste in deeper landfill layers is broken down by methane-oxidizing microorganisms. The microorganisms colonize pre-treated material preferentially, and transform methane into water and carbon dioxide. Carbon dioxide is much less greenhouse-active than methane. The result is a multiple win for the environment in countries where due to the lack of legal, institutional and economic disincentives, uncontrolled dumping is still the predominant form of waste disposal.



**A jump into the Technical Center: Huber-Humer and Binner investigating the gas formation potential of waste**

## UNIVERSITY OF LIFE AND SUSTAINABILITY



**i** Research and teaching at BOKU are characterized by their holistic approach to problems.

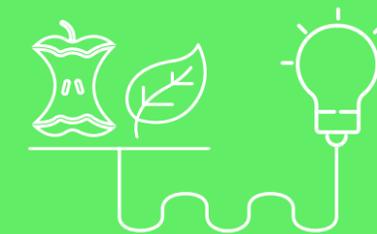
# The right processing for higher biogas yield

THE ENERGY CRISIS IS DRIVING DEMAND FOR BIOGAS FROM BIOMASS, AND BRINGING BIOGAS PLANTS INTO THE FOCUS OF PUBLIC INTEREST.



The key to their efficient operation is the proper preparation of the feedstock.

Biogas plants turn organic waste and residue into renewable energy in the form of methane. This is used primarily for green electricity generation. Without government subsidies it can be sold only at market rates, and this has made things difficult for many plant operators in the past. But now there is light on the horizon, in the form of sharply higher gas prices that make biomethane generation competitive. What's more, many European countries want to replace a portion of their natural gas imports with locally produced biomethane. So we at Komptech decided to present the solutions we offer for economical gas production by anaerobic digestion. Our focus is on high gas yield through removal of contaminants and maximizing usable fractions. For example, our technology gives good results even with feedstocks that have high contaminant content, be it plastics or food packaging. Komptech machines can be used to prepare a wide range of material streams for dry or wet anaerobic digestion (AD).



## ELECTRICITY FROM BIOGAS

On average, a tonne of organic waste gives 110 cubic metres of biogas. This corresponds to about 660 kWh of energy. In a cogeneration plant this generates about 200 kWh of electricity. About 18 tonnes of organic waste can cover the annual electricity needs of a four-person family (around 3,500 kWh).

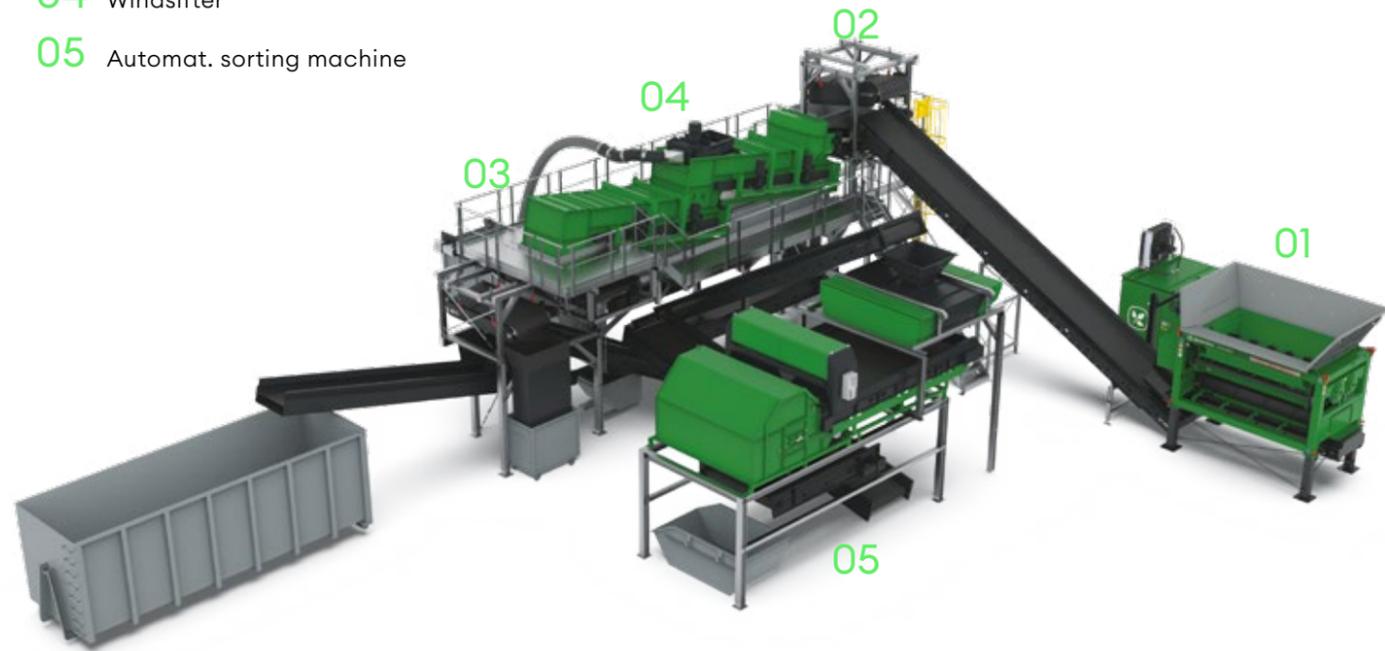


## BIOMETHANE

Before biogas can be fed into the natural gas network, it needs to be treated by drying, desulfurizing and carbon dioxide removal. The treated biogas is then conditioned into biomethane, which has similar characteristics to natural gas. A cubic metre of biogas gives about 2.5 kWh of electricity, enough vehicle fuel to travel 9 kilometres, or about as much heat as 0.6 litres of heating oil.



- 01 Shredder
- 02 Magnetic separator
- 03 Star screen (2-/3-fractions)
- 04 Windsifter
- 05 Automat. sorting machine

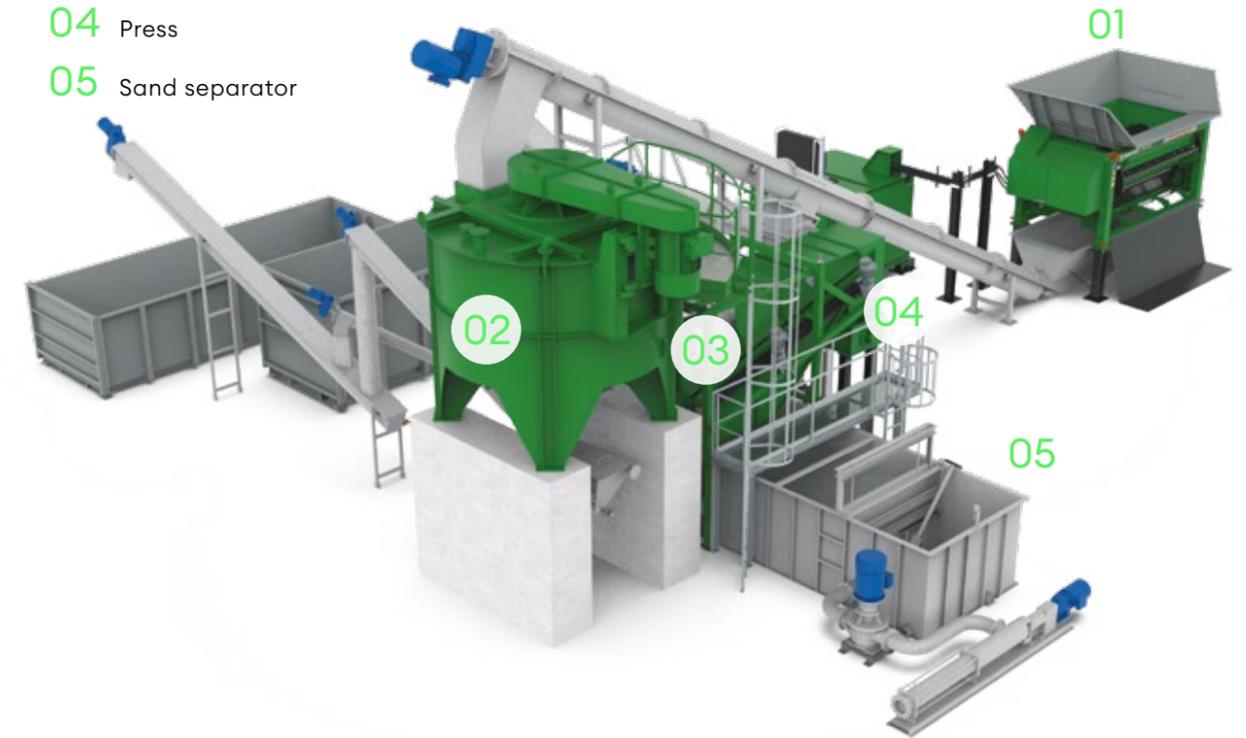


## PREPARATION FOR DRY AD

Organic waste can be turned into energy and compost, often through a combination of anaerobic digestion (AD) and subsequent composting. Processing starts with low-speed shredding, often followed by magnetic separation and screening by star screen. In screening to two fractions the undersize fraction (mostly < 60 to 90 mm) becomes the input material for AD. A large percentage of the

contaminants in the organic waste end up in the oversize fraction. Before use this needs to be cleaned or disposed of, depending on local considerations. If the input material is heavily contaminated with plastic, the basic machine set can be supplemented with a wind sifter. Three-fraction screening including optical sorting can also give good results in such cases.

- 01 Shredder
- 02 Pulper
- 03 Wet screen
- 04 Press
- 05 Sand separator



## TECHNOLOGY FOR WET AD

Wet AD is an effective way to treat wet, heavily contaminated organic waste, food scraps, expired foodstuffs and food industry waste. In three steps, waste is turned into a pumpable substrate for AD. About 90 percent of the starting material goes into the substrate. Low-speed shredding opens up the organic material and prepares it for subsequent liquefaction. The shredded material then passes through a pulper where it turns into a liquid that can be separated

in the subsequent wet screening step. At the same time, heavy items are separated out. Wet screening removes light contaminants, mostly plastic, from the AD-substrate, while sand screening protects the pumps and paddles of the fermenter from abrasion. The oversize fraction is mechanically dewatered by pressing, and then further processed or disposed of depending on its composition.



# A circular economy is the goal

Stefan Lengel is an industry pioneer. Inheriting an agricultural operation in 1988, he became one of the first in Austria to set up a plant for composting biowaste and green cuttings. Today his family-owned company near Vienna has two state-of-the-art compost and soil plants plus an own biogas plant. Quality requirements for compost are high, so contaminants, especially plastics, are a big problem. In order to solve it, Lengel recently set up a new stationary fine compost prep line with the help of Komptech.

When Maria Lengel started producing grass sod in the late 1960s, nobody could anticipate that sustainability and climate protection would ever be such hot topics. But the company aligned itself early on with the cycles of nature, and designed its production processes accordingly. “We’re proud that with our business we contribute to conserving natural resources,” says her son Stefan Lengel. For him as the current owner the sustainability principle is a key part of the family company’s philosophy. It extends over three generations and includes his children, who bear responsibilities in company management. Daughter Stefanie runs Lengel GmbH, and son Alexander is director of Marchfelder BioEnergie GmbH and thus in charge of biogas production. “Green blood runs in our veins” says Lengel senior with a grin.



Turning only with the Topturn - the new X6000 is now the eighth windrow turner from Komptech

## ORGANIC SOIL IN HIGH QUALITY

Both Lengel composting plants recycle regional biogenic waste and green cuttings. Every year they make around 15,000 tonnes of finished compost, various organic soils, plant substrates and bark mulches. Finished turf remains part of the portfolio. More than half of the annual compost production reaches quality class A+. “Our company stands for high product quality,” emphasizes Alexander Lengel. That makes the increasing contamination of organic waste with foreign matter a problem. Recently he contacted the Komptech Systems technology Office in Vienna. The goal: Better fine compost processing.

## COMPOST VIRTUALLY FREE OF FOREIGN MATTER

Instead of a drum screen, Lengel will now screen compost in a flip-flow screen (the BIVITEC® by Binder+Co) with eight or six-millimetre holes. The resulting fine fraction is



“We need the highest compost quality for our soils and substrates.” Alexander (left) and Stefan Lengel are very satisfied with the the performance of the new fine screening plant (pictured above).





almost contaminant-free. The final product is also nice and flaky, since waste cannot clump into little balls in a flip-flow screen. The screen overflow goes to a combination wind sifter and stone separator for further cleaning, and then on to composting. Thus, no valuable organic material is lost.

So that Lengel management would be able to estimate the achievable output quality before investing in the new system configuration, Komptech called in the Vienna University of Natural Resources and Life Sciences, and the Binder+Co Technical Centre. Together they evaluated a series of material samples from the processing sequence. The customer was very happy with this way of doing things.



The screening plant consists of a convenient feeding bunker and a large dimensioned BIVITEC® flip-flow screen.

### ENERGY FOR THE VEHICLE FLEET

Organic waste that doesn't go to composting is used by Lengel to make green energy. Back in 2004 the current senior director took the company's own biogas plant into operation, and since then it has been supplying the vehicle fleet

“ We greatly appreciate the partnering and solution-oriented cooperation with Komptech,

Alexander Lengel

with CO<sub>2</sub>-neutral energy. The plant feedstock is expired foodstuffs, food scraps and organic waste collected by regional disposal companies. Each year about 15,000 tonnes of biomass come together.

“ The combination of composting and biogas generation gives us more control options.

Alexander Lengel

Materials with higher energy content tend to go to the biogas plant. Also, we're better able to even out seasonal fluctuations in compost production “

The biogas plant makes about 220 cubic metres of raw gas, all of which is used for electricity generation. That gives 12 megawatts per day. For the future, Alexander Lengel plans to increase the capacity of the plant to 30,000 tonnes of processed biomass per year, and to output biogas in natural gas quality. A biogas filling station is also planned. That would let the company start selling green gas

### BUSINESS ASSOCIATES AND FRIENDS

The Lengel and Komptech companies didn't start working together just yesterday. After Stefan Lengel founded his first composting plant, in the early 90s he met with Josef Heissenberger and bought a first-generation Komptech compost turner. It was a Topturn 300, serial number #3. Both founders shared the vision of returning organic waste to the natural



Formerly turf bricks, today turf rolls - the production of ready-made turf is still an important mainstay. The picture shows Stefan Lengel with daughter Stefanie and son Alexander.

cycle at large scale. The business relationship became a friendship.

Over the years, this compost and soil maker acquired not less than 24 Komptech machines, including shredders, screeners and eight Topturn compost turners. The relationship continues with the third Lengel

generation and the current Komptech team. Alexander Lengel: “What sold us on Komptech was the overall package. This includes the secure availability of spare parts, and their fast and dependable service.” He adds that it is also important to him to work together for a greener world.

# Plastic-Free Compost

COMPOST PRODUCERS ARE  
CONFRONTED WITH A  
GROWING PROBLEM.



More and more contaminants, especially plastics, are finding their way into organic waste. The Plastic-Free Compost research project was launched to counter this.

Komptech is a partner of the Plastic-Free Compost project, which was set up by the Chair of Waste Processing Technology and Waste Management at the University of Leoben (AVAW). Other partners are the Leoben Waste Management Association (AWV), Binder+Co AG and Holding Graz Community Services.

Starting in 2024, in the EU all residential biogenic waste must be collected separately, and by 2035 the recycling rates for residential waste must be massively increased. The plastic problem will be a central issue in this, especially in urban areas. Plastic is the dominant contaminant in biogenic waste and compost, much more so than glass or metal. The plastics in biogenic waste come from packaging and especially the plastic bags used to collect the waste. They end up in the finished compost as fragments of soft and hard plastic.

Compost is important as a renewable resource that can be used in the place of artificial fertilizers, which in turn can reduce greenhouse emissions. The compost law in Austria and the biowaste law in Germany set limit values for foreign matter and plastic in compost. This demands technologies for separating plastics out of compost.

The idea for the Plastic-Free Compost research project came up at the end of 2020 at the AVAW in the course of the last DeSort research year, during discussion of the data that had then become available on contaminant amounts from post-processing trials. The overarching goal of the project is science-based research into innovative and applications-specific fundamentals for making more compost in higher quality. By examining individual processes in the context of material cycles, methods of removing plastic contamination can be better understood and thus improved.





## OBJECTIVE 1: PLASTIC TRANSFORMATION AND FAULT ANALYSIS



Here, the research focuses on developing a method for identifying the transformation behaviour of different plastics groups in biogenic waste with regard to contaminant content in compost, as well as the microplastic component.

## OBJECTIVE 2: NEW PRE-TREATMENT METHODS

The central objective here is the design of the pre-treatment: Which process steps, starting with drying, size reduction, screening, air sifting and sensor-supported sorting, are suitable for significantly improve the separation of plastics?

## OBJECTIVE 3: NEW COMPOST TREATMENT METHOD

With a new post-treatment process involving three-fraction screening, wind sifting and automatic sorting of the oversizes, it is hoped to expand the possibilities for plastics removal after composting.



Within the project, Komptech provides mobile wind sifters and screening machines, as well as contributing the composting expertise it has gained over the years.

The project results can flow into the plans and concepts of the project partners, to develop new awareness-raising measures, services and products around plastic-free compost. This takes a wide scope of activities, like machine and process development, market research, business plans and investments in R&D. The project is planned to run for three years. The intention is to boost the effectiveness of organic waste recycling, and by reducing the amount of waste that gets incinerated, also to reduce the energy required for incinerating moist organic waste while at the same time reducing climate-damaging emissions from waste treatment.



# Experience makes the difference - especially in composting



We've focused intensively on the composting of biogenic waste since our founding. Many Komptech machines, like the Topturn compost turner or the Multistar star screen, are standard equipment at compost plants, and guarantee their operators maximum ecological and economic efficiency.

#### EVERYTHING FROM A SINGLE SOURCE

Our product line covers the needs of open composting plants, from mobile machines to large systems with stationary machines for preparing and packaging the final product. From organic waste and green waste, to agricultural residue to sewage sludge and household waste, Komptech offers the necessary knowledge and machines or systems for every application, in order to get the best, most usable output.

## 30 Years

Experience in composting

## 6-120 Millimeter

bandwidth of the screen cut  
of screening and separating machines

## 50 Machines

in different sizes using different  
technologies for composting

## > 1,000 times Topturn

compost turners  
sold so far



# Processing of Biogenic waste

## MECHANICAL PREPARATION

### 01 Shredding

Shredding and mixing create a starting mixture that is ideal for the rotting process. Low-speed shredders like the Crambo or high-speed machines like the Axtor (for green waste) can be used for shredding. These can be stationary or mobile machines depending on local conditions.

### 02 Contaminant separation

To meet quality criteria for the final product even with highly contaminated feedstock, the material can be screened before composting. Multistar star screens can be used for this coarse screening, which is typically done in a stationary setting.

## BIOLOGICAL TREATMENT

### 03 Rotting process

The decomposition and recombination processes performed by microorganisms are controlled from the outside through ventilation, mixing and irrigation. We use open solutions like windrow composting, as well as closed processes in rotting tunnels, or combinations of both. Turning windrows with the Topturn X improves ventilation, enables wetting and ensures that the different rotting zones are mixed.

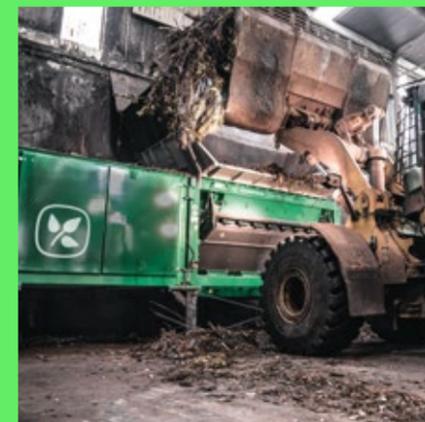
## POST-PROCESSING

### 04 Screening

The compost is screened to remove any foreign material and get a product with a uniform particle size. We offer various mobile and stationary machines for this, in the form of drum screens, Multistar star screens and Flowfex flip-flow screens (Cooperation with Binder+Co AG, Bivitec expansion shaft screen). The grain sizes they generate range from coarse fractions for agriculture to finely screened material for making soil.

### 05 Separation

Further separation steps may be necessary during or after screening, depending on the degree of contamination. Following removal of contaminants by sifting, the screen overflow can be reused as structural material in compost or as biomass fuel. Our technology offerings range from removing light materials from the screen overflow (Hurrikan windsifter) to stone separation (Stonefex) to combined stone, glass and plastic separation (Densofex density separator).



# Biowaste is valuable

The Rhein-Main Deponie GmbH (RMD) is located in the middle of Germany, between Wiesbaden and Frankfurt. This municipal utility specializes in using biowaste, and is the largest producer of renewably generated energy in the region.

In addition to an anaerobic digestion system, landfill and biogas utilization plant, the Rhein-Main-Deponiepark in Flörsheim operates a biomass power plant and photovoltaic system. Currently the anaerobic digestion plant processes about 50,000 tonnes of biogenic waste each year. A Komptech shredder and screen kick off the anaerobic digestion process.

The RMD was moving towards renewable energy sources even before the renewable energy law was passed. They first used the landfill gas from municipal landfills to generate environment-friendly power, later adding the anaerobic digestion plants in Flörsheim and Neu-Anspach. “The basis for the construction of the anaerobic digestion plants was the long-term acceptance and disposal of the organic waste in the MTK and HTK districts,” explains Thomas Richter, RMD’s Biogas and Green Waste Department Manager. The goal was to utilize organic waste effectively, i.e. both for material reclamation and energy production while keeping transport distances short, and offering it all at a fair price to local communities, said the Richter, a degreed

“ Our focus is on the generation of renewable energy, and organic waste processing is a key part of that.

**Thomas Richter**



The new processing plant consisting of Crambo shredder and Multistar star screen as the result of good cooperation: RMD plant manager Heiko Scriba with Christian Hüwel (Komptech) and Matthias Sternstein (Anlagenbau Günther)





chemical engineer.

**PROCESSING WITH KOMPTECH MACHINES**

The first anaerobic digestion plant was built in 2008. For organic waste processing RMD chose a stationary solution from Komptech, consisting of a Crambo and star screen. About six months ago they replaced the machines with new ones. A big part of the reason was the new biowaste legislation with its tighter quality requirements, which made new equipment necessary. Richter: "The first system was fully depreciated after only ten years. Its 14-year service life was naturally a stroke of luck for us, and proof of the outstanding quality of its component parts." RMD wrote a modification into the bid tender for the new system. It needed to have higher throughput, removal of foreign matter from biowaste, and lower screen overflow. Star screening is ideal for the application in question, and Komptech cooperates exclusively with Anlagenbau Günther in this area.

**CUSTOMER-SPECIFIC MODIFICATIONS**

The new setup consists of a Crambo 3400 pre-shredder, two-stage star screen, magnetic separator, film suction and rolling item

separator for heavy items. Christian Hüwel, who is in charge of "Stationary Technology" projects at Komptech Germany, explains: "The shredder and the screen determine the quality of the process. As a low-speed shredder, the Crambo is one of the best machines available for prepping organic waste, since instead of chopping up the plastic bags that the waste

unfortunately often comes in, it only opens them. This makes it easier to separate out the plastic later. On top of that, the machine is tough, and is powered by an electric motor in the stationary version. This significantly reduces the maintenance effort."

**REDUCTION OF SCREEN OVERFLOW**

Instead of a screen with uniform star size, RMD uses two screens in staircase sequence. Material that doesn't land on the conveyor after the first screening goes on to film suction and then to a second star screen. There, the organic waste is processed again and the remaining clumps are broken up. This new screening solution signif-



**Matthias Sternstein (Anlagenbau Günther) is convinced: "The starscreen technology is ideal for this application."**

icantly reduces screen overflow, and disposal costs for the overflow have been cut almost in half. Matthias Sternstein, in charge of sales at Anlagenbau Günther, says, "This success is due to the excellent project description on the customer side. Since RMD contributed its experience from its years of practical applica-

tion in teamwork with Komptech."

RMD Operations Director Heiko Scriba is visibly happy with the new solution: "What we have here is a system made up of different



**Christian Hüwel (left, Komptech) and Heiko Scriba (RMD) during the „fine-tuning“ the Crambo. The electronic control system offers a wide range of possibilities.**

components that is perfectly attuned to our daily work. If problems come up, Komptech is always right there to help. That's the dependa-

” Our costs for disposal of the screen overflow rose by around 400 percent from 2015 to 2020. We needed to get those costs down.

**Heiko Scriba**

bility we need."

**SUSTAINABLE ENERGY FROM BIOMASS**

New organic waste legislation requires plant operators to treat only organic waste whose foreign material content does not exceed certain limits. This is especially the case for film and hard plastic. At the same time, the amount

of care taken by private citizens in organic waste disposal leaves much to be desired. Therefore, a new Komptech system was a necessary and important investment for RMD.

Anaerobic digestion plants account for a third of the company's revenue. Costs for disposal of contaminants rose by around 400 percent from 2015 to 2020. Every year, from 50,000 tonnes of organic waste RMD generates around 10 million kilowatt hours of current, which is fed into the electricity grid, as well as heat, which is marketed to Hochheim as district heating. The fermentation solids are turned into some 17,000 tonnes of RAL-certified compost. The liquid digestion products, around 20,000 tonnes,

go from interim storage to use in agriculture, likewise under quality control. The biomass power plant at the Flörsheim-Wicker location burns about 115,000 tonnes of waste wood every year and sells the current thereby produced. Richter: "We've made a name for ourselves regionally with this energy concept, and even get requests for advice from other countries."

” The new 2022 biowaste legislation brings the foreign matter in biowaste into sharp focus.

**Thomas Richter**

# A sales network spans the globe

“Every time I look at a map there are new regions we can supply. We’re already active in over 80 countries,” says Ewald Konrad, Sales Director at Komptech, not without pride and gratitude. “Without reliable local partners we never could have reached this global presence.”

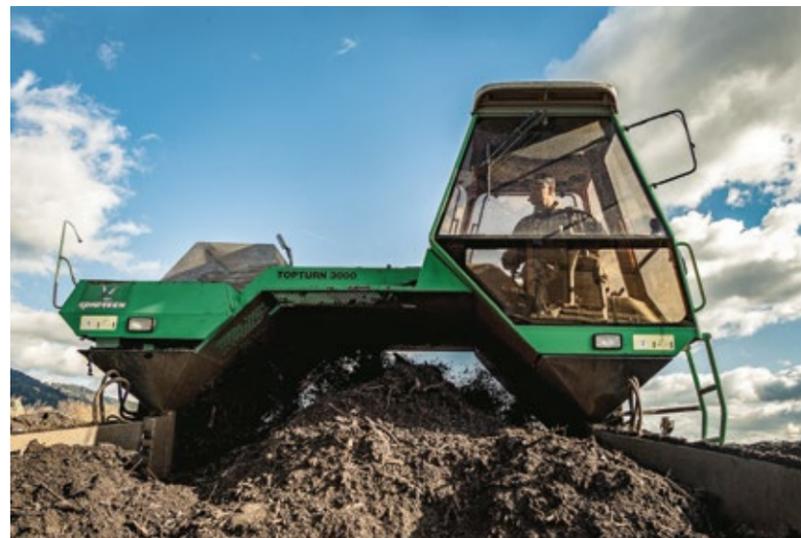
Ewald Konrad has been with Komptech for 23 years. When he started working for us here in Frohnleiten as a young mechanical engineer, we had just landed our first international customers for the Topturn, and were expanding our portfolio with shredders and our first screeners. Today we offer over 50 machine types. Every working day, on average two machines leave our production plant, and our sales network extends from Australia to Norway and from South Korea to Canada.

Recently Konrad had occasion to again reflect on the distances Komptech machines often travel to get to the customer. He was guest speaker in an auditorium in Adelaide, capital of the Australian state of South Australia, where the AORA association had invited him to speak to an international audience about Komptech’s experience in climate-neutral composting.

Travelling the world is routine for our Sales Director. He’s glad to educate others about the technical possibilities of waste processing in other countries. But the discussion at the AORA conference in Adelaide was different; the 50-year-old Konrad felt a little bit like he had gone back in time. The topic of the event was the Food Organics and Garden Organics directive, or FOGO for short, under preparation in Australia. It will set new framework

conditions. Biogenic waste, whether household or commercial, will now have to be collected separately and then treated biologically. “The planning of the FOGO regulation couldn’t help but remind me of the very earliest days of Komptech. It was very similar to the situation in our part of Austria exactly 30 years ago. The mandate to collect biogenic waste separately transformed the disposal industry, and was the initial motivator for the very first Topturn compost turner,” recounts Konrad.

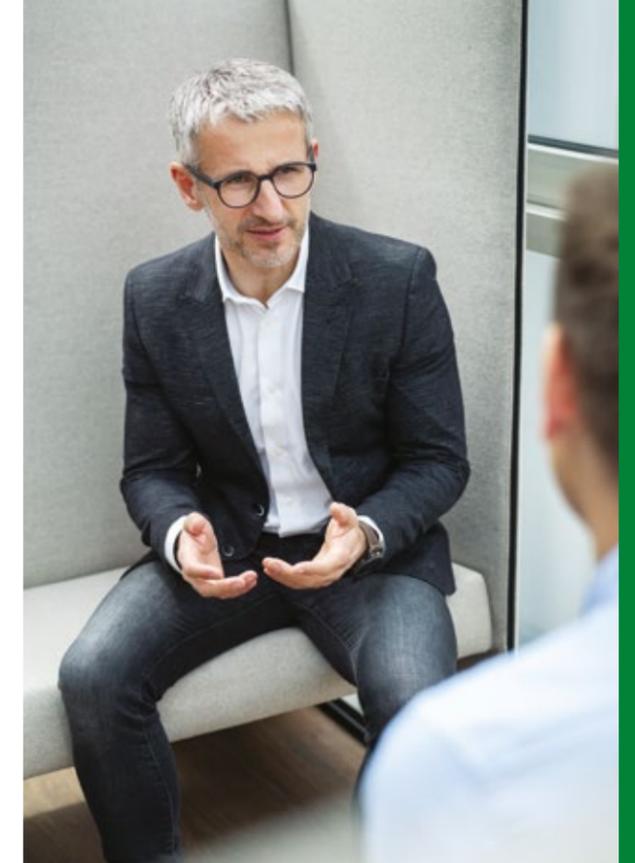
Initially, sales efforts by the freshly founded Komptech company were limited to the German-speaking countries, but soon enough an order came in from Spain, where a solution was needed for composting household waste. The new Topturn line was ideal for the task.



Spain was followed by Japan, thanks to a recommendation from right around the corner – a local irrigation systems company that worked with the Japanese company Ryokusan in the early 90s. Japan was one of the first countries to do agricultural composting, and Ryokusan was looking for suitable machinery. Thus, one of the first Topturns made its way to the land of the rising sun. And it wasn’t the last, as Konrad notes: “Japan is one of our most important export markets, and our collaboration with Ryokusan has been very successful over the years.”

In addition to the Topturn, Komptech sold shredders, drum screens, star screens and ballistic separators with growing success. Konrad: “At some point it became clear that Komptech would have to expand into a more global company. We had already gained lots of experience in composting, the company was established in the industry, and our machines were highly respected for their quality and performance.” It was time to go international. Komptech decided to do it with local sales partners, who were on board with the Komptech idea and would help to implement it. “In each case we seek out a long-term partnership that is successful for both parties,” says Konrad. “This stability creates trust and is the basis for being able to do good work.”

Komptech and its partner companies share three key attributes: Faith in sustainable value-creation through modern environmental technology, a commitment to efficient, climate-saving waste processing, and a reputation for quality in their respective



Ewald Konrad has been with Komptech since February 2000, almost 23 years. A mechanical engineer by training, he started at Komptech as Area Sales Manager. Since 2013 Konrad has been in charge of overall sales, and is himself on the Management Team. As Sales Director he leads a team of about 40 employees in various departments. Of his daily work the 50-year-old Konrad says, “What drives me is having a great team around me, the incredibly enriching opportunity to work with so many different cultures and people, and making the world a little bit more liveable with our technology. I myself have kids, and have a responsibility to the coming generations. We didn’t inherit the earth from our parents, we borrowed it from our children.”



” A great team around me and the incredibly enriching opportunity to work with so many different cultures and people. That’s what motivates me. Together, we can make the world a little more liveable with our technology.

Ewald Konrad



” I love being right where the action is with our customers, and learning from them.

Ewald Konrad

markets. As core elements in the worldwide Komptech sales network, the partners are important links to the waste economies of their respective countries, and help adapt our technology and know-how to local conditions. Konrad says he’s very proud that Komptech machines are in use on all continents, including Antarctica. The next big step on the sales map has already been taken – recently a sales partner in Brazil was added,, a country with a big need for waste processing machinery.

## FIND OUT MORE

**Our sales teams always advise customers with an eye to their specific needs. They know the full range of our machines for processing waste, and can present solution options.**

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### WHAT SETS OUR SALES PARTNERS APART

Technical knowledge, full-coverage service infrastructure, a large spare parts warehouse and a team of dedicated specialists for Komptech products are the basic requirements. But in a sales partnership the chemistry also has to work. The partners’ values, culture and vision must be congruent. For us, trust, respect, honesty and an appreciative approach are the foundation of a stable collaboration. Our network is made up of people with a passion for recovering recyclables from waste, and who live and breathe our business.



# High-quality compost in Colorado

Agriculture and turf markets find Humalfa's superior quality soil amendments essential to boosting crop yields and revenues while also replenishing the soil for long-term environmental benefits.



Humalfa is an advanced soil amendment producer in Colorado that creates an all-natural, 100-percent organic fertilizer that has proven to improve the health and quality of the soil. Products from Humalfa support microbial activity, which results in healthy plant development and speeds up growth.

For a business like Humalfa, maintaining high standards of quality across all their organic fertilizer products is essential, given the company's wide range of clients across the agriculture, professional turf, and residential fertilizer markets. Humalfa decided to purchase a Komptech windrow turner to help maintain the volume and quality of compost required to meet the ever-expanding market demand.

Due to this, Farrel Crowder, owner and manager of Humalfa, upgraded from the older X53 model to the newer X63 Komptech Topturn compost windrow turner.

“It's considerably more fuel efficient. They're doing it with less horsepower and way less fuel and doing more work. It's just good engineering.”

**Farrel Crowder**





Crowder and his team at Humalfa began their research years before the company started its fertilizer production operation, enabling them to recognize high-quality compost when they see it. And so do those who purchase Humalfa's fertilizer products for agricultural, turf and other commercial purposes.

"We start out with this raw beef manure and compost it. When we're done, it smells earthy," Crowder states. "The nitrogen is all organic nitrogen, which is the most stable form. It's just a very good fertilizer."

Crowder bought the Komptech Topturn X63 in partly because of its capacity to turn up to 5,800 cubic yards of compost per hour. This production capacity has allowed Humalfa to meet its high-quality standards without sacrificing efficiency. Crowder further asserts that he will be prepared to bring in another Komptech machine when the time comes, even though Humalfa's X63 turner is still relatively new to the company.



**”** I'd buy another Komptech in a heartbeat. The service, the way they take care of it, and their machines. It's just a heck-of-a good machine.

**Farrel Crowder**

Farrel Crowder and the team at Humalfa enjoy being able to depend on their Topturn X63 to help produce high-quality compost efficiently and consistently. More importantly, they take pride in knowing they can meet the needs of their customers while remaining environmental stewards committed to replenishing the soil for generations to come.



# Green Teamwork in Australia

Green Care Mulching's Russell Norton discusses his business and its partnership with equipment distributor CEA.



Led by rapidly evolving technology, processes, and community expectations, the waste management game is often in flux. But, in some corners of the industry, there are fundamental services that will always be in demand – the shredding, processing, and recycling of green waste is one of these.

Green Care Mulching specialises in grinding services, primarily for green and timber waste, but is well equipped to handle anything from plastic waste to tyres. The family-owned company is based in Geelong, Victoria, where it processes green and timber waste into mulch and compost for businesses, government departments, and the general public. “We process an enormous quantity of timber and green waste, which we resize, process, and manufacture into different-sized products,” says Russell Norton, Green Care Mulching Managing Director.

The business has developed a customer base across a range of markets, including poultry and dairy farms, landscaping businesses, and bioenergy producers. “We also provide material grinding services on-site around Victoria and interstate,” Norton says. “We’ve even been involved in cyclone clean-ups, including one that went through the Yarra and Macedon Ranges in June 2021. “That project resulted in four of our grinders processing debris for months. The project generated more than 300,000 cubic metres of mulch, which we resized down to 50 millimetres.”





### MUTUAL GROWTH

The origins of the business date back to 1988, when Norton began his professional life as an arborist. He began exploring the shredding and processing side of the tree business in 2008, which led him down the path to the world of compost. Green Care Mulching in its current form began in 2015. It was at this point the business purchased its first Komptech Crambo shredder – the start of what would develop into a positive working relationship with CEA, which distributes and supports JCB, Komptech, and a range of other brands in Australia.

Today, with a staff of 50, Green Care Mulching operates a large fleet of machinery, including 10 JCB machines – excavators, telehandlers, and loaders; four Komptech shredders; and two Komptech screeners. As well as the value and reliability these machines offer his business, Norton says being able to rely on a single point of contact for support is a big reason he continues to deal with CEA. Russell says Green Care Mulching’s relationship with CEA has developed to the point where he’s happy to demonstrate his Komptech or JCB machines for those considering purchasing one for themselves. “These days, people will do a lot of their machine research on YouTube,” he says. “And when people in our region find out that we’re running them, they’ll often come to us for our opinion, or to help decide whether they want to hire or purchase.”

### COLLABORATIVE DEVELOPMENT

Norton says the communication he and his business has with CEA is a two-way street. “They often have questions for us about how we’re using their equipment, what material we’re using it for, our throughput rates,” he says. “And they’re able to share that information with prospective customers of theirs.” Norton says CEA is always willing to let Green Care Mulching trial products, including prototypes, to ensure they know what they’re getting before a purchase. “It’s helpful for CEA to see how contractors might use these products.”



**Green Care Mulching relies on a large fleet of Komptech and JCB machinery.**



We’re currently trialling a new screen basket with our Crambo shredder, and we’re getting very good results from it.

**Russell Norton**

### GREEN FUTURE

Norton is excited for Green Care Mulching to embrace new, more sustainable solutions such as electric and hydrogen. “It’s an exciting time to be in this business,” he says. “Four of my children are involved in the business, and that next generation is going to be able to use that new technology to help take the business to levels I never dreamed of.”



I’m looking forward to turning off the diesel and running with alternative fuel sources as it becomes more commercially available.

**Russell Norton**



**Managing Director Russell Norton (front) and the Green Care Mulching team.**

# Process accelerant for Green Power

Each year, UK company Severn Trent Green Power (STGP) turns half a million tonnes of organic waste into green energy. That's enough to power 50,000 homes. For three years now, the machines have been green too.



As one of the largest combined food waste recyclers and composters in the UK, Severn Trent Green Power (STGP) provides food waste recycling services to waste collection businesses and over 50 local authorities. Today, they do this with machines from Komptech. “The fleet that we were operating before was aging and getting break-down-prone,” relates Operations Director Neil Pollington. Replacing it provided the company with an opportunity to move towards a more mechanical process. As an industry leader in machinery and systems for the mechanical and mechanical-biological treatment of solid biomass, Komptech’s product range includes over 30 types of machines covering the process steps in waste handling, such as shredding, separation and biological treatment.

## GETTING THE PLASTIC OUT

The relationship between the two companies began in 2018, when STGP initially bought a Hurrikan S mobile windsifter that removes light plastics, film and foils from screened overflow, with a separation efficiency of up to 95 percent. STGP uses the Hurrikan S at their South Mimms site, which has an annual throughput of up to 50,000 tons.

“With the Hurrikan from Komptech the process is definitely safer, cleaner and more efficient.”

Neil Pollington

“One of the things that really surprised me when we started to use the Hurrikan S, was that due to the integrated magnet roll and roller separation we saw quite a lot of stone and metal being captured, in addition to a

high level of plastic,” says Pollington, adding that formerly such oversizes had been sorted out by hand. That is now outdated. “With the Hurrikan the process is definitely safer, cleaner and more efficient,” he says.

## MORE IS BETTER

This gave Pollington the confidence to invest further in Komptech. “I then purchased a second one for Ardley, which is our other in-vessel composting site, so basically replicated the same process. We could see the benefits clearly. Then from there we purchased two Crambo low-speed shredders.” This was preceded by a demo of a Crambo 5200 direct at STGP’s Wallingford site. Pollington ran it against his existing high-speed shredder to compare the output, and decided to switch to the Crambo after finding fuel savings and increased throughput with higher-end product yields. There were other benefits as well. “Previously, the high-speed shredder would be running all day to get through the amount of waste that the Crambo can do in maybe five, six hours. And the Crambo just opens plastic



bags instead of tearing them to bits like the high-speed shredder did. That means they can be captured again by picking.”

### BIGGER THINGS

STGP also invested in Komptech’s Topturn X63 Track, a compost windrow turner with an intake width of up to six metres and a turning capacity of 4,500 cubic metres per hour. “Again, Komptech GB organised a demonstration for us so we could see an X63 in operation on a composting site,” says Pollington. The site managers were impressed with how it worked. “I think the key thing to me was making sure it could fit into our operation. Could it get over our windrows, which are slightly bigger?” The on-site test showed that it could. The Topturn X63 is now at work at STGP increasing the windrows’ oxygen content and fine compost yield.

### THE KEYS TO A PARTNERSHIP

Since starting to use Komptech machines, STGP has seen an increase in odour control and a reduction in odour complaints, something that the Environmental Agency also noted during site visits. Most importantly, the investment in Komptech has allowed STGP to move from a manual-based to a more mechanical operation, which has boosted efficiency. Komptech GB is a driving force behind all of this. Pollington recalls that as work with the initial Hurrikan S began, Komptech GB rolled out a training programme which STGP has since incorporated into their own training plans. As well as providing training to operators at STGP, Komptech GB has ensured that their staff are always available to respond to any enquiries quickly. For Pollington, this support has been key to the continuation of the partnership. Very much in the interest of green power!



“ Previously, the high-speed shredder would be running all day to get through the amount of waste that the Crambo can do in maybe five, six hours.

Neil Pollington



## SERVICE CONTRACTS AT JOHN HANLON

John Hanlon Ltd, Komptech’s UK distributor, is a pioneer in after sales and service. Sales & Product Support Manager Simon Burrow tells us in an interview how our partner operates in these areas. Burrow also explains the benefits customers gain from service contracts and why not a single machine should be sold without a service contract.

**Opportunity:** What is the procedure for selling machines at John Hanlon Ltd: How are service contracts integrated at the beginning?

**John Hanlon:** The role of a salesperson is to go to a customer, consult with the customer and try to find out from your questions what his requirements are. What does the customer want to produce from the machine? What is his budget? You will find out, if he has his own engineers. He may want to service his machines inhouse and if he does not, then he is most likely going to require a service contract. However, just because he has his own service engineers does not rule out the service contract. We are going to give a proposal, supply a machine and offer an extended warranty complete with a service contract. It all must be in the initial interview. You are going to find out what the customer need and then you can put a proposal to him.

**Opportunity:** How do customers react to the service contracts?

**John Hanlon:** Very strongly. As we go into the new generation of machines and we have Connect! on the machines, we are now actively chasing customers to say ,in a in a week’s time, we anticipate that your machine will be requiring a 500- or 1000-hour service and you can arrange the date and time to carry out this service. It is great that you are taking the responsibility away from the customer of them having to contact us. This makes us look professional and organized. Connect benefits both the customer and John Hanlon & company Ltd.

We have a customer who we sold a new Crambo 5200 replacing his Crambo 5000 in May this year complete with a service contract. We were confident that the new machine would be more efficient than the previous generation and would cost less to own and to operate throughout its lifetime. With the new Crambo 5200 complete with Connect! and visible on his computer, they have monitored fuel consumption and have seen a reduction in the operating cost of around £1 per ton.

**Opportunity:** Where do you see the added value for the customers?

**John Hanlon:** Added value is what we are trying to give to the customer. The more benefit we give them, the more chance we have got of selling a machine. Now if you have a service contract and you have been servicing that machine from zero up to let us say 2,500 hours and at the 2,500-hour service we have a problem (water in the oil for example). We have now got the data over 5 services to ask for support from Komptech for a warranty claim. Komptech can go on to an engine manufacturer and with all this service data accumulated we have a greater chance of getting warranty than we would if we did not have a service contract. That is the added value and that is what also makes service contract a great option.

**Opportunity:** Where do you see advantages for Hanlon regarding the service contracts?

**John Hanlon:** Engineer utilization, sales of parts, revenue and machine data, because we have a history of that machine. If we trade it in, we can say we serviced it from new. Therefore, it becomes a more viable proposal for another customer and will have a greater resale value.

**Opportunity:** How does Komptech help you to contribute to a greener world?

**John Hanlon:** Komptech makes great machines and the issue we have currently is plastics in the waste stream. We have the Komptech Hurrikan S to remove plastics from compost oversize. An absolute phenomenal machine. Once you demonstrate to the customer that you if have a heavily contaminated heap of product that we can clean up and physically see the results it’s a great feeling of satisfaction.





# Never waste an opportunity.

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