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## Making the Green Deal a success

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OF THE CIRCULAR ECONOMY AS A MEANS TO  
TACKLE CLIMATE CHANGE

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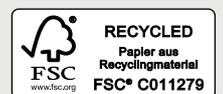
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**Dear Readers!**

This editorial was written and ready for print and focused primarily on the EU's Green Deal. And then coronavirus spread around the world and the text had to be revised. Despite the current situation, though, the Green Deal remains one of the most important projects for the European circular economy. And many other things have happened as well – the question surrounding DSD, for example.

It is now official. On 22 April 2020, the first Cartel Panel of the Higher Regional Court [Oberlandesgericht] of Düsseldorf dismissed our appeal against the Cartel Office's decision. Their ruling surprised us as we were sure that we had the better arguments in favour of us acquiring Duales System Deutschland GmbH. But we live under the rule of law and we will, of course, accept their decision. What we need to do now is to take the time required to take a detailed look at the Panel's reasons for dismissing our appeal and then carefully decide what our next steps should be. In light of the fact that all other major competitors operate in this market, it will be interesting to see to what extent REMONDIS will get involved in the Dual System in the future.

It is not so easy to look ahead at the moment, though, faced with the current coronavirus emergency. When the first media reports came through on 29 December last year that China had informed the WHO that it had an unexplained cluster of people suffering from an unidentified lung disease, no one realised just how hard or how fast this virus would affect the globalised economy. It is practically impossible to estimate the costs incurred by the economy grounding to a halt as a result of the virus. And it is not just the private sector that has felt the impact. Many city and district authorities were already in financial difficulties before the crisis began. Their situation can only get worse, now that their revenue from local business tax and their takings from their local amenities have plummeted. Maybe it is time to set aside old arguments and enter into long-term partnerships with the private sector that will benefit both parties – especially when it comes to delivering essential public services. Setting up public private joint ventures dedicated to providing essential services could help mitigate the consequences of the crisis. At the end of the day, 'a load shared is a load halved'. One positive coming from these unprecedented times is the



Thomas Conzendorf, REMONDIS Board Member

increased sense of solidarity among the population and towards many sections of the economy. REMONDIS, too, is there to help and support its municipal partners – during this crisis more than ever.

Past pandemics have rarely lasted longer than two years. At some stage – whether with or without a vaccine – public life and business will return to normal. This will be the moment when it will become clear to all that our planet's biggest problem – climate change – has not solved itself. Once again, the spotlight will be turned on the European Union's Green Deal. Looking at a list published from within the EU, there is a danger of important regulations being watered down, especially in the area of the circular economy. In contrast, the German National Academy of Sciences, Leopoldina, expressly advises against neglecting climate action and environmental protection following the Covid-19 crisis in its ad-hoc statement published on 14 April 2020. In fact, it recommends the exact opposite. The economy must be kick-started so that it can grow again and should, it says, be "guided more firmly than before by considerations of sustainability, not least because this offers vast potential for economic growth." Climate change is and will continue to be the biggest challenge for the future and REMONDIS, being one of the leading water and recycling businesses, will continue to put forward its solutions and play an important role.

With this in mind: stay safe and stay positive.

Yours

A handwritten signature in black ink that reads "Thomas Conzendorf". The signature is stylized and written in a cursive-like font. Below the signature is a diagonal line.

Thomas Conzendorf

# Making the Green Deal a success

EUROPE HAS FINALLY RECOGNISED THE IMPORTANCE OF THE CIRCULAR ECONOMY AS A MEANS TO TACKLE CLIMATE CHANGE

The European Green Deal was officially launched by the President of the European Commission, Ursula von der Leyen, in December 2019. Its goal: for the whole of the European continent to be climate neutral by 2050. With the circular economy included in the Green Deal, it is certainly to be welcomed that the efforts of this sector have finally been acknowledged and appreciated. The pioneering role that the recycling sector in general – and REMONDIS, one of the leading recycling businesses, in particular – have been playing to promote qualitative growth by conserving resources and combating climate change is increasingly being recognised. This is a role that they have been playing for many years now, serving businesses and private individuals and protecting the environment. The recycling industry's innovations and technologies are also effective as they have a positive impact on all of the sectors that are relevant for the Green Deal to be a success. Starting with the development of closed loop concepts for the mobility sector, to solutions for generating renewable energy, all the way through to producing recycled raw materials for industrial and construction firms. The message is clear: if the Green Deal is to succeed, then efforts across the EU to grow and improve recycling activities must be further intensified.

**“To absolutely decouple growth from resource use, we must change the way we produce, market, consume and trade, and the way we deal with waste.”**

EU Circular Economy Action Plan

66%

of European CO<sub>2</sub> emissions  
are directly linked to materials  
management

"It [Green Deal] resets the Commission's commitment to tackling climate and environmental-related challenges that is this generation's defining task." This was one of the opening statements made by the new Commission in its official communication when it launched one of the biggest projects to be faced by this generation just two weeks after taking office. The name has been adopted from the American "New Deal", a series of economic and social reforms that were enforced by US President Franklin D. Roosevelt between 1933 and 1938 in response to the Great Depression.

A first proposal for a European climate law was announced as a legal framework for the Green Deal at the beginning of March. This aims to enshrine the 2050 climate neutrality objective in legislation. The commitments put forward by the EU Commission are certainly ambitious:

- From 2050 onwards, more greenhouse gases should be removed from the atmosphere than are emitted across Europe.
- Plans are to increase the EU's greenhouse gas emission reduction target for 2030 to up to 55% compared to 1990 levels (currently 40%).
- By 30 September 2023 and every five years following this date, the EU Commission shall assess the progress achieved by all the member states.
- From 2030 onwards, the EU Commission shall have the right to amend the Climate Law should it become apparent that the 2050 climate neutrality objective will not be able to be achieved with the measures undertaken up to that point.

The Commission has not yet set out concrete plans for all the different sectors to describe how the increased climate objectives can be reached in practical terms. Everyone is in agreement, however, when it comes to the subject of the circular economy: it is seen as being indispensable for achieving European climate neutrality by 2050. One of the objectives put forward in its EU Circular Economy Action Plan, which was presented during a press conference at the beginning of March, is for the volumes of municipal waste in the EU to have been halved within a decade.

In the document, the EU Commission underlines the fact that 66% of CO<sub>2</sub> emissions are directly linked to materials management. For this reason, the circular economy is one of the main drivers of climate neutrality and should be included in the national climate action plans that member states are obliged to draw up as part of the Paris Agreement. The significance of the way waste is handled is also highlighted in the introduction to its new strategy. "To absolutely decouple growth from resource use, we must change the way we produce, market, consume and trade, and the way we deal with waste."

Many of the points that the EU has now specifically put on its agenda correspond with those that REMONDIS

has been initiating and implementing for many years now. It, too, has been calling for such a development across Europe in position papers. In a recent interview, REMONDIS managing director Herwart Wilms explained how the Green Deal can be successfully implemented. →

According to official sources, the circular economy with its new waste management and recycling laws will make up half of all EU efforts to become climate neutral by 2050. It is, therefore, a fundamental pillar for the European Green Deal – one that has been given the highest priority



# GREEN DEAL

## An interview with Herwart Wilms

Managing director of REMONDIS Assets & Services



**Mr Wilms, from REMONDIS' point of view, what is the all-important first step that has to be taken to achieve a climate neutral Europe?**

**HW:** That all-important first step has already been taken as the upper echelons of the EU institutions have at last recognised the true significance of the circular economy and made it a principle of action for the future. This future must be climate neutral. The current Covid-19 pandemic changes nothing here. Sooner or later, the virus will either disappear or be overcome; whenever this happens, climate change will still be the most urgent problem that we will have to face. Which means the EU will not give up this objective. One thing is certain: fully closed production cycles must be set up for this goal to be achieved. In other words: it cannot be achieved without the recycling sector.

**"As products are generally sold in other countries as well and must also be recycled, the principle of 'ecodesign' or 'design for recycling' – something REMONDIS has been calling for for many years now – will automatically have a positive impact and create growth in all member states."**

Herwart Wilms, REMONDIS Managing Director

**The European Union is not exactly well known for speaking in one voice when it comes to overcoming complex challenges. What needs to be done to ensure the Green Deal is a success across Europe?**

**HW:** The Action Plan particularly emphasises the fact that there will be regulations for sustainable products and production processes to promote a "circular design" for all products and their packaging. This means using fewer primary natural resources and putting priority on ensuring products can be reused and repaired. As products are generally sold in other countries as well and must also be recycled, the principle of 'ecodesign' or 'design for recycling' – something REMONDIS has been calling for for many years now – will automatically have a positive impact and create growth in all member states. And I mean growth in employment here as well as economic growth. Put in a nutshell: products that are made with recycled raw materials and are designed so they can be recycled will be treated better than those that aren't. The reason for this is because they have a better environmental footprint.

**So move away from multi-layered packaging and other types of composite materials that are impossible for even the most technologically advanced sorting plants to separate?**

**HW:** Exactly! This is one of the most important prerequisites if material life cycles are to be closed. This, in turn, will strengthen the demand for recycled raw materials. The Commission is quite rightly planning to strengthen the market for recycled raw materials and is currently looking at the possibility of prescribing a minimum recycled content for certain products. We believe that this is a good approach as making the use of recycled materials mandatory by introducing an obligatory "substitution rate" will increase demand for recycled raw materials. It will also create a market for materials that some European regions are still sending to landfill at the moment. Europe, which has so few natural resources of its own, will become less dependent on raw material imports and add considerable value to its economy.

**There are so many materials and products on the market. What concrete steps need to be taken to achieve this objective?**

**HW:** The Resources Commission at the German Environment Agency has already drawn up some specific ideas. Firstly, it suggests that any technical obstacles, which may make it difficult for obligatory minimum recycled content requirements to be introduced, should be examined. A minimum recycled content or "substitution rate" should then be established over the long term. It proposes that this rate should be the ratio between the recycled raw materials used and the total amount of materials used. The overall goal must be to implement this substitution rate at product level rather than restrict it to individual products. Respective mandatory minimum recycled content requirements should then be set for product groups. These should be based on economic and environmental factors and be continuously adapted to changing conditions.

**What else can be done to kick-start demand for recycled raw materials?**

**HW:** One of the central measures being planned by the Commission is to gradually introduce compulsory green procurement criteria. If the EU makes it obligatory for public procurement officials across Europe to prioritise the purchase of products that are not only recyclable but have been manufactured using recyclates as well, then this is a paradigm shift that would have a considerable positive impact both on growth and on our climate. Public authorities, which spend around 2 billion euros on products and services across Europe every year (making up 14% of the EU's gross domestic product), would quite rightly be seen as being an influential market player spearheading the creation of a sustainable circular economy. By introducing sectoral legislation and setting mandatory green procurement criteria for resource and carbon-relevant industries, public authorities can drive forward this transition by being "Public Buyers for Climate and Environment". It is not just up to councils, though. We – the consumer – and industrial businesses must also be empowered to recognise the difference.

**What difference do you mean here?**

**HW:** Both consumers and public and industrial buyers must be able to recognise the difference between bad products, i.e. those that could potentially harm the environment, and good products, i.e. those that have been sustainably produced with as high a recycled content as possible. For this reason, the Commission is considering revising the ecolabel as an additional supportive measure. REMONDIS, by the way, has been calling for such a label for three years now. We have already put forward our own suggestion for an ecodesign label. This uses the well-known traffic light labelling system and makes the raw material efficiency level of a product clear to everyone immediately.

**“One thing we definitely need to have is a strict ban on untreated municipal waste being sent to landfill. Landfilled organic waste is a big producer of methane gas, which is 24 times more damaging to our climate than CO<sub>2</sub>.”**

Herwart Wilms, REMONDIS Managing Director

**Are there any concrete plans in this direction in the Green Deal?**

**HW:** There are but we believe they may have overshot the mark here and are in danger of creating yet another mountain of red tape. The Circular Economy Action Plan aims to improve the availability of information about the products sold in the EU. So far, so good. The Commission has proposed introducing digital passports that should provide information about the origin and composition of a product as well as to what extent it can be repaired and dismantled and how it should be handled when it reaches the end of its useful life. This aims to make it easier for consumers to make sustainable purchases. However, there is not only a danger here of having disproportionately high information costs. A digital passport also creates an unnecessarily large obstacle, as it can't simply be read on site at the shops and presumes that consumers are prepared to actively gather information about a product beforehand. REMONDIS believes a product label that provides information about a product's sustainability and recyclability levels using the easy-to-understand traffic light labelling system is a more suitable solution to enable consumers to make sensible purchase decisions.



One example of what a universal recycling label could look like. It would make it easier for consumers to buy more sustainable products

**Looking at it realistically though, it is going to take quite a while before all products meet the requirements you mentioned and consumers and public and industrial buyers fully adopt the principle of sustainability. What needs to be done in the meantime to minimise carbon emissions?**

**HW:** One thing we definitely need to have is a strict ban on untreated municipal waste being sent to landfill. Landfilled organic waste is a big producer of methane gas, which is 24 times more damaging to our climate than CO<sub>2</sub>. Germany has already shown how this can be done. It has been illegal to send untreated municipal waste to landfill here since 2005. Other countries have also been able to reduce the amount of their landfilled municipal waste to under 1% over the last few years. Unfortunately, this is not the case across the whole of the EU. In 2018, the share of landfilled municipal waste in Romania, for example, lay at over 70%. The EU average is 20%. Just taking Germany as an example, it can be seen that it is indeed possible to reduce the amount landfilled to below 1%. The EU has not acted quickly or systematically enough in this matter to make the most of the positive impact that recycling has on combating climate change. The European Green Deal provides the perfect opportunity here to harmonise the EU's standards in this area. If effective efforts are to be made to tackle climate change, then it is essential that no waste be sent untreated to landfill. REMONDIS is calling for a Europe-wide landfill ban for untreated municipal waste to be added to the Green Deal or as an amendment to the Waste Framework Directive. Just two immediate positive side-effects of such a mandatory measure would be the creation of jobs and an increase in material recovery rates. It is precisely this kind of 'low-hanging fruit' that the Green Deal needs – both to make it a success and to underline its credibility.

## COVID-19: simply delaying matters

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Public and business life began shutting down while we were putting together this issue of REMONDIS aktuell as the Covid-19 pandemic spread around the world. CO<sub>2</sub> emissions have dropped temporarily as industrial businesses consume less energy and the number of trips made by plane and car has dropped dramatically. However, the first countries had already begun to slowly ease the massive restrictions that had been imposed on their populations by the time this issue was sent to print. Politicians, business leaders and doctors expect public life to eventually return to normal – certainly by the time herd immunity has been achieved. This will be the moment when it will become clear to all that the problem we have been facing with climate change had simply been put off for a while. It is and will continue to be the biggest challenge that humanity must overcome. REMONDIS, being one of the leading water and recycling businesses, will continue to put forward its solutions and play an important role as part of the Green Deal.

On 14 April 2020, the German National Academy of Sciences, Leopoldina, published a number of recommendations, one of these being that measures taken to protect the environment and tackle climate change should not be neglected after the Covid-19 crisis. In fact, it recommended the exact opposite. The economy must be kick-started so that it can grow again. This should be “guided more firmly than before by considerations of sustainability, not least because this offers vast potential for economic growth”, the scientists write in their paper. “We must continue down the path we set out for ourselves and the EU Commission’s “Green Deal” must, in particular, be implemented,” commented paleoclimatologist, Gerald Haug.

A number of people from the world of politics and business are calling for the environmental restrictions on industrial businesses to be eased or postponed after the coronavirus crisis – a suggestion the experts at Leopoldina most definitely reject.

During her speech at the XI<sup>th</sup> Petersberg Climate Dialogue at the end of April, Federal Chancellor Angela Merkel also stressed the need to keep climate protection in mind when taking steps to restart the economy following the Covid-19 emergency. “We face difficult discussions about distribution,” she said. “It will therefore be all the more important, when launching economic stimulus packages, that we keep climate protection very firmly in view.” One of the biggest positives to come out of the coronavirus crisis could be, therefore, the restructuring of the economy to reflect greater sustainability by targeting investments towards climate-neutral production and logistics.

**If there were one thing you would like to see added to the Green Deal, what would it be?**

**HW:** One thing that we really need to see is fair competition between all market players. The transition from a linear to a circular economy not only requires society as a whole to rethink the way they lead their lives, it also means large investments. The companies involved in restructuring the economic system will have to carry out extensive research and development work and set up the infrastructure needed. They will only be able to invest the large sums of money required if they know there is a high level of investment security. Which is why all of the plans in the Green Deal must ensure competitive neutrality. By the way, this also very much applies to the measures being taken to promote alternative fuels as they are key to carbon-neutral logistics. Simply for technical and physical reasons, we should not be limiting ourselves to just one form of fuel for the future, such as e-mobility. If the transition is to succeed, then we must remain open and unbiased and be smart about the way we use the existing infrastructure. The high levels of investment for the future can only be guaranteed once it is finally clear what the best mix of climate-friendly and most efficient technologies actually is.

**Mr Wilms, many thanks for the interview.**

# Biogas-fuelled vehicles in the Rhineland

GVG RHEIN-ERFT DELIVERS A RELIABLE INFRASTRUCTURE – REMONDIS TO GROW ITS FLEET

Following the official opening of the modernised biogas filling station owned by the energy provider GVG in Hürth, REMONDIS is now looking to increase the number of its vehicles run on carbon-neutral biomethane in the Rhein-Erft District – and across the whole of the Rhineland region – in the future.

## Tests confirm: suitable for everyday use

GVG opened the first ever natural gas filling station for cars for public use in the German state of North Rhine-Westphalia (NRW) back in 1995. This regional gas provider has now retrofitted this filling station so that larger vehicles in the region can also fill up their tanks with biogas. Working closely with REMONDIS, GVG Rhein-Erft has spent the last 18 months implementing and optimising this showcase

project. A total of six refuse collection vehicles were used to test this green fuel to see how suitable it is for everyday use, how far they could travel on a full tank and how much time was needed to actually fill the vehicles. "This phase has now been completed and we're ready to convert all our short-haul routes to carbon-neutral biomethane – from waste collection to heavy transport," Werner Abromeit, managing director of GVG Rhein-Erft, announced during the opening.





In this video, REMONDIS driver, Markus Röder, shows how the pumps are used at GVG's filling station in Hürth



Many politicians and business leaders joined REMONDIS and GVG to celebrate the opening of the new filling station

### 130 cars or 20 lorries a day – green light from the politicians

Following the conversion work, the natural gas filling station now has two compressors (which compress the gas from the gas network), two storage tanks (each able to hold 6,000 litres) and two fuel pumps that can be used by both cars and lorries. Up to 130 cars or 20 trucks can fill up their tanks here every day. During the official opening ceremony, Klaus Vossemer, traffic spokesperson for the CDU party in NRW's state parliament, praised this new development saying: "Using gas-run vehicles sends a strong signal as it demonstrates how we can remain mobile and still combat climate change. Gas-run buses and lorries are no longer dreams of the future – they are here on our streets and are part of our everyday lives," he stressed, saying he hoped that this project would be copied across the country.



Reinhard Hohenstein, Managing Director of REMONDIS Rheinland

### Walking the talk

"We have to take action now to curb climate change. We can't keep waiting for alternative fuels – such as e-mobility – to become suitable for our sector," said Reinhard Hohenstein, managing director of REMONDIS Rhineland. "If you nail the strapline 'Working for the future' to your mast, then it is your duty to drive forward measures to protect the environment and curb climate change – and to see how carbon emissions can be cut as quickly as possible," Hohenstein continued. What better way to do this than to use the biomethane produced from recycling organic waste as a fuel for the company's own vehicles? Reinhard Hohenstein was very pleased with how quickly the trials were carried out and is determined to use biomethane in the Rhineland from now on: REMONDIS is planning to have a further 60 such trucks on the roads by 2021 and further trials are already being performed in two major cities, namely Cologne and Düsseldorf.

### BACKGROUND INFORMATION:

Biomethane has proven to be a great alternative fuel for trucks as it produces 90% fewer carbon emissions and 60% fewer nitrogen oxides compared to diesel-run vehicles. What's more, biomethane vehicles are up to 5 decibels quieter than conventional waste collection trucks. The last point is not only good for the local residents but also means improved working conditions for the drivers.

# Exiting the crisis together – stronger than before

## COVID-19 AND ITS IMPACT ON MUNICIPAL BUDGETS

The global coronavirus pandemic is changing the way we live and work. Supply chains have been disrupted or are in danger of collapsing altogether. Besides being forced to deal with the unpleasantness of social distancing, people are having to increasingly cope with the economic effects of the crisis. And, with no vaccine or suitable therapy yet available, nobody is able to say when life will get back to normal. What is clear, though, is that both large sections of the economy and municipal budgets have been badly hit by the pandemic. With many city and district authorities already being in a precarious financial position before the Covid-19 crisis began, the backlog of investments is likely to get even bigger. It is time, therefore, to rethink the way problems have traditionally been solved and to enter into long-term partnerships with the private sector to ensure essential public services are delivered.

**“The idea, the infrastructure and the services should be further developed as efficiently as possible both with a long-term view and in the interests of the local citizens. All three should be seen as being more important than the prospect of generating short-term one-off revenue.”**

Ludger Rethmann, REMONDIS Board Chairman

The coronavirus crisis has meant that council revenue has plummeted. Business tax income has dried up, theatres, swimming pools and exhibition centres are closed (and still generating costs), regional airports, municipal hospitals... practically all public sector areas have been affected. Over the medium-term, fees and charges may have to be increased, pushing up the bills local inhabitants have to pay, many of whom are themselves facing financial ruin as a result of the pandemic. Just how big this problem is can be seen in the City of Wuppertal. On 21 April, the City's treasurer, Dr Johannes Slawig, appeared on the "Tagesthemen" show (Germany's most important news programme) to describe just how dramatic the situation is in this city with its approx. 350,000 inhabitants. He believes Covid-19 will cost the city 150 million euros – and this was just a conservative estimate.

As councils search for a way to overcome their problems, the spotlight is once again being turned on public private partnerships. Over the last few years, many councillors have dismissed this business model both for political reasons and because a number of negative examples involving infrastructure projects have made them sceptical. Long-term partnerships, however, set up with private sector businesses – in particular to deliver essential public services – create benefits for both parties and not just in the face of the extraordinary burdens caused by Covid-19. Public private partnerships dedicated to providing essential services could prove to be one of the ways to successfully get through this crisis. At the end of the day, 'a load shared is a load halved'.

"There is a growing need for alliances. The task of providing essential public services is becoming increasingly more complex and more complicated. Just one example here is waste management. The old waste dumps – a thing long gone – and the almost complete recovery of raw materials for reuse, i.e. the circular economy, are poles apart. It is practically impossible for local authorities to set up all the technical and technological resources required to run top quality recycling operations. And, from a business point of view, it makes absolutely no sense to build and operate plants that a city or district could never run to full capacity as they generate only a fraction of the materials needed," writes Professor Michael Schäfer in his book "Öffentlich-Private Partnerschaften" [Public Private Partnerships], which was recently published by Springer-Verlag and written together with co-author Ludger Rethmann.

What is also true is that setting up a joint venture for the wrong reasons can lead to unequal partnerships. And desperation is rarely a good springboard for setting a new strategy. A local authority, therefore, that is weighing up whether to enter into a public private partnership to provide essential public services should never see this option as a way to achieve short-term relief or be prompted to do this by an acute emergency. On the contrary, a joint venture between the public and private sectors is a suitable means to unite economic and business know-how with municipal responsibilities and close customer ties over a long-term period.

"One of the determining factors behind the success of such a partnership is the reason why it was set up in the first place. The idea, the infrastructure and the services should be further developed as efficiently as possible both with a long-term view and in the interests of the local citizens. All three should be seen as being more important than the prospect of generating short-term one-off revenue. Collaborating with a large and well-established private sector business, which has both the know-how and the financial strength to invest, can enable local authorities to bring their current offer into line with the latest technical capabilities and, where necessary, with changing requirements," co-author Ludger Rethmann, REMONDIS board chairman, writes in the book, describing the potential of such partnerships. "It is, therefore, both a sensible and smart decision when a local authority, which is responsible by law for these services, searches for a partner that already has the infrastructure needed or can deploy it for such a large number of users that it can be performed profitably. One of the keys to the success of such a joint venture is the close collaboration between the managing directors, one of whom is always from the private sector firm and the other a representative of the local authority. This enables the very most to be made of the know-how of both managing directors. The power of decision here normally lies with the public sector partner in line with the size of their shareholding."

REMONDIS is a family-run business with strong ties to the regions it operates in and is not a listed public limited company with widely held stock. The firm, therefore, thinks and acts on a long-term and sustainable basis adapting its services to reflect the needs of the local, city and district authorities. Enabling the public sector partner to access know-how, innovation, business expertise and long-term planning security – this is the essence of public private partnerships dedicated to delivering essential public services.



People's everyday lives are being impacted by social distancing and the economic effects of the Covid-19 pandemic



PPPs dedicated to providing essential services could be one of the ways to successfully get through this crisis

# Collaboration between the public and private sectors – how and how not to do it?

SPRINGER PUBLICATION AUTHORED BY LUDGER RETHMANN AND PROF. MICHAEL SCHÄFER ON PPPS DEDICATED TO PROVIDING ESSENTIAL PUBLIC SERVICES



Order Ludger Rethmann and Prof. Michael Schäfer's book [here](#)

Are public private partnerships (PPPs) – set up to enable local authorities and privately run businesses to collaborate with one another – a promising way to get things done or are they putting the politics of the common good at risk? Prof. Michael Schäfer and Ludger Rethmann discuss this and other questions in their recently published book: "Öffentlich-Private Partnerschaften. Auslaufmodell oder eine Strategie für kommunale Daseinsvorsorge?" [Public private partnerships. A discontinued model or a strategy for providing essential public services?].

In the authors' opinion, this kind of cooperation work between the public and private sectors is by no means obsolete but is often examined from too narrow a perspective. In their book, they provide plenty of facts to show how, over the past few years, both the media and the scientific community have primarily focused their attention on PPPs

involved in infrastructure projects. While there is a whole series of negative examples that have attracted much publicity in this segment, the authors concentrate instead on the myriad of long-standing successful collaborations dedicated to delivering essential public services.



Taking a critical look at this specific type of cooperation work and providing concrete examples, the conclusion they draw is considerably more positive: PPPs between municipal companies and private partners with high levels of expertise work smoothly, are structured to run over a long period of time and benefit both parties. This is underlined by the results of a poll of district authority leaders and mayors – the first of its kind – that showed them to be in favour of a joint venture. Around half of those canvassed prioritised a company with the public sector partner as the majority shareholder, while the versions “awarding contracts to third parties” and “a company with the private sector partner as the majority shareholder” were less popular. This factually based book also reveals that PPPs are particularly common in the energy sector (31.5%) followed, some way back, by waste management and recycling (7.5%).

### Searching for a strong partner for the future

Looking ahead, one thing is certain: demography, digitisation, sustainability and infrastructure will create huge challenges for compartmentalised, local structures. It will be very difficult for councils to overcome them on their own. One solution here is to team up with a suitable partner, who has the necessary know-how and can grow efficiency and guarantee that essential public services can be delivered reliably with maximum cost stability – and not just in one but in all areas. This not only includes efficient waste collection services but also clean drinking water, public transport and the provision of electricity, gas and the internet. So what is special about these particular services? Local authorities in Germany are obliged to deliver these essential services to their local inhabitants – even if competitors and the market fail. The provision of such public services is, therefore, very different to other segments of the economy – and considerably raises the demands on a PPP business.

Looking ahead, one thing is certain: demography, digitisation, sustainability and infrastructure will create huge challenges for compartmentalised, local structures. It will be very difficult for councils to overcome them on their own.

### Turning an ‘ÖPP’ into an ‘ÖPD’

In their book, the authors introduce a new term, moving away from ÖPP (PPP in German) to ÖPD (a public-private sector collaboration for delivering essential public services). The ÖPD cooperation between local authorities and private sector partners guarantees that citizens are provided with the essential services they need reliably and efficiently despite the ever more complicated framework conditions. There are some excellent PPPs around as the authors’ fact-based conclusion clearly shows. “Joint ventures set up between the public and private sectors to deliver essential public services have become the norm when the parties work together closely and sensibly. What’s more, they will become a must looking at the increasing division of labour and the objective coexistence of privately and publicly owned productive property,” explains Ludger Rethmann, REMONDIS Board Chairman.



Ludger Rethmann,  
REMONDIS Board Chairman



Prof. Michael Schäfer



November 2018

March 2020



# Stormy times on the waste paper market

AN INTERVIEW WITH REMONDIS MANAGING DIRECTOR FREDERIK JASTREMBSKI

A new face has been leading REMONDIS Trade and Sales – the company specialising in recycling and marketing recovered paper – since November. In a recent interview, Frederik Jastremski (32), the company’s new managing director, talked about the business he is now in charge of – one he describes as being both susceptible to change and exciting at the same time.



**Good morning Mr Jastremski, coming from Hamburg, you know all about bad weather. Just how stormy is it on the waste paper market at present?**

**FJ:** It’s definitely experiencing squally winds at the moment – something even I am not used to despite coming from Hamburg. Prices plummeted soon after I took up my job in November – so much so that some kinds of recovered paper were at below-zero pricing. The Covid-19 crisis and the lockdowns in force across Europe then led to a shortage – practically overnight. Prices recovered within just a few days and in some cases are now much higher than last year.

**Why is the market so susceptible to change?**

**FJ:** Basically speaking, Europe has a surplus of around eight million tonnes of waste paper a year, although Germany’s well-organised paper industry was able to cope with this well. However, much greater volumes of paper began arriving in Germany from other European nations after other countries such as China began accepting less and less waste, including recovered paper. By the beginning of this year, recovered paper was having to be stored in warehouses as paper mills were unable to take any more.

**FOR MORE QUALITY:  
WHAT SHOULD NOT BE PUT IN THE WASTE PAPER BIN?**

Soiled paper, e.g. pizza boxes

Drinks cartons

Disposable tableware, e.g. paper cups

Sanitary paper

Paper table cloths and serviettes

Wax / greaseproof paper, e.g. sandwich paper

Wallpaper

Till receipts

**And then everything changed?**

**FJ:** Yes, the coronavirus measures have dramatically changed the situation. The volumes of paper coming from other countries nosedived almost immediately and then there was a slump in Germany as well. The automobile industry closed down its operations, as did furniture stores and other retailers. Huge volumes of recovered paper that would otherwise be on the market are no longer there. The paper industry soon became worried – and justifiably so – that they would not be able to access the supplies they need to run their mills.

**What impact would this have, if that were to happen?**

**FJ:** If you think about the circular economy, then it's pretty clear what would happen if paper mills had to shut down. It would not just affect supplies of toilet paper, which is so popular at the moment, but the food industry as well as much of their packaging depends on recovered paper. We would have the food but not the packaging to put it in. The work we do collecting and supplying waste paper is, therefore, also an essential service.

**Is the situation on a more solid footing now?**

**FJ:** Solid is not the right word to use here. There are still too many uncertainties. No one is able to predict how the situation will develop in the future. Fortunately, the volumes of recovered paper from households have remained the same but those from commercial businesses have dropped dramatically. Over the short to medium term, the way and the speed that the coronavirus lockdown measures are lifted will have a major influence on supply and demand. It's not possible to rule out that the current artificial shortage of recovered paper will suddenly be reversed and that the prices will fall rapidly again. This would mean the business would experience the third dramatic change in prices within a really short period of time.

**So what is important for you right now?**

**FJ:** What everyone probably needs to have at the moment is security. For us that means continuing to be able to secure delivery of the volumes of paper that are still available. Which is why local authorities certainly mustn't make the rash decision to stop kerbside collections of waste paper in their regions as the City of Würzburg has just done.

What's more, some more information from the central and state governments about the Covid-19 measures would enable us to plan ahead – something that is very important to us. The more we know, the quicker we and the paper industry can react and adapt.

**Your first six months as managing director have no doubt been very different to what you had imagined. Despite this, what points are on your medium and long-term to-do list?**

**FJ:** Basically speaking, what is important is that there is more stability on the market. We must avoid having a situation like we had at the beginning of the year – when the whole logic of the market was turned completely upside down, partly as a result of negative pricing. It is our job to provide the industry with a reliable supply of high quality raw materials. Besides having modern sorting systems, it is also very important that the waste material is separated correctly. Local authorities must take on much more responsibility here and ensure that the right materials are being thrown into the waste paper bins. Even if environmental policies are being pushed into the background at the moment, it is still essential to cut carbon emissions and conserve natural resources. We are all being forced to rethink the way we live and work and it is our task to make the most of this shift and work more closely with politicians, industrial businesses and consumers to find ways to sustainably protect the environment and the economy.

**Many thanks for taking the time to talk to us, Mr Jastremski.**

**"We are all being forced to rethink the way we live and work and it is our task to make the most of this shift and work more closely with politicians, industrial businesses and consumers."**

Frederik Jastremski, Managing Director of REMONDIS Trade & Sales





# “The risks can no longer be kept under control”

THROWING E-WASTE OUT WITH HOUSEHOLD WASTE IS INCREASINGLY PUTTING PEOPLE AT RISK

While the EU Commission continues to discuss minimum collection rates and the German Bundestag obligatory deposit return schemes, the recycling sector is finding itself facing an ever more dangerous situation as a result of the mass production and use of li-ion batteries. More often than not, consumers throw away their devices into their black bin without a second thought when they are no longer needed. The result: dozens of fires at recycling plants, machines standing still for months on end and a large number of employees and front-line workers put at risk.



How exactly do such fires start and how should e-bike batteries, for example, be stored properly? Find out more in this video.

Mobile phones, notebooks, electric tools and e-bike batteries that have been damaged or handled incorrectly are a major hazard as they can all potentially cause a fire. While consumers tend to be extremely careful about the way they treat their electronic devices the whole time they are using them, these products are very dangerous indeed once they

have been discarded. If they are damaged during transport or from simply being dropped, this can cause a short circuit, set off a chemical reaction and lead to sudden fires breaking out at sorting plants or in the refuse collection trucks. Most consumers are unaware of this huge risk.

**"It is essential that consumers realise that electronic devices should never be thrown away with household waste but must be collected separately and recycled."**

Gerhard Jokic, Managing Director of REMONDIS Electrorecycling



"The recycling sector can no longer keep the consequences and risks of these fires under control," explained Gerhard Jokic, managing director of REMONDIS Electrorecycling. They are a serious health hazard. The substances contained in lithium-ion batteries and that are released during a fire can cause serious smoke poisoning. Besides the worry that employees and rescue services may be harmed, the sector also has to face the costs of repairing the damage to the buildings and machinery, which can reach an eight-figure sum. "Insurance companies have also been sounding the alarm for a long while now," Jokic continued.

#### **Orderly & structured collections**

This problem is only going to get bigger. The recycling sector will find itself facing an ever growing volume of e-waste as millions more electronic devices containing lithium-ion batteries are produced and e-mobility continues to grow in popularity. The solution is to systematically implement information campaigns, orderly and structured collection schemes mandated by parliament and a clear labelling of products.

It is essential that consumers realise that electronic devices should never be thrown away with household waste but must be collected separately and recycled. For this to happen, they must be handed in to household recycling centres or specialist retailers. The situation is a far cry from this at the moment. Just 45% of old electronic devices are actually handed in as they should be. The mandatory collection rate for this waste stream has been 65% since 2019. Which is why, for example, both REMONDIS and the BDE [Federal Association of the German Waste Management Industry] are calling for a deposit return scheme to be introduced for devices containing lithium-ion batteries. This will create an incentive for consumers to return their old products, reduce the risks of fire over the long term and, above all, ensure important raw materials can be recovered and reused.

#### **Safe bins protect human health, the environment & machinery**

This alone, however, will not minimise the risk of self-combustion as fires can still break out at the retailers and household recycling centres. Which is why discarded devices containing lithium-ion batteries should only be collected and stored in special containers. The recycling sector is, therefore, calling for this to be added to the Battery Law to make this mandatory.

If devices should self-combust, then special containers can reduce heat generation and ensure the gases are released in a controlled manner. Not until such containers are used can the risk of large fires be prevented and employees protected. Moreover, the recycling industry wishes to see the manufacturers of products with li-ion batteries be obliged to implement the highest possible safety levels. This primarily includes clearly labelling their products and making sure they are handled correctly at the end of their useful life.

RETRON's speciality containers offer the highest levels of protection and safety for storing and transporting li-ion batteries. Further information at [retron.world](https://retron.world)

# New disinfection facility for healthcare waste

A RELIABLE, LONG-TERM WASTE MANAGEMENT SOLUTION FOR HOSPITALS – ESPECIALLY DURING A PANDEMIC

REMONDIS Medison's plans to build a second disinfection facility for infectious hospital waste at the Lippe Plant in Lünen have received official approval. "Coronavirus-infected waste also falls into the category of infectious waste and is already being transformed into non-hazardous waste in our other disinfection facility," explained Ulrich Hankeln, managing director of REMONDIS Medison.



**"The safe collection and treatment of infectious waste is an important component of our healthcare system here in Germany – and not just since the spread of coronavirus."**

Ulrich Hankeln, Managing Director of REMONDIS Medison

"Disinfection facilities are extremely important – especially in a pandemic," Hankeln continued. Commissioned in 2015, the company's current facility uses steam to destroy germs, spores, viruses and bacteria, so that infectious hospital waste can be transformed into non-infectious waste. The high-calorific substitute fuel produced as a result of this process is then used by the Lippe Plant's fluidised-bed power station to generate electricity and steam. Making the most of these facilities prevents the spread of viruses such as the latest coronavirus, SARS-CoV2.

Medison had submitted its planning application to build a second disinfection facility back in April 2019, long before the Covid-19 emergency began. "The safe collection and treatment of infectious waste is an important component of our healthcare system here in Germany – and not just since the spread of coronavirus. It is our daily bread to handle these materials responsibly and help prevent the spread of disease," commented Ulrich Hankeln. The company is planning to have its second disinfection facility up and running in Lünen this year to ensure there continues to be a reliable waste management service for infectious waste generated by hospitals, doctors' surgeries and care homes in the future as well. This specialist company belonging to the REMONDIS Group will be installing state-of-the-art technology that will ensure that practically all stages of the disinfection process are fully automated – providing its employees with the highest levels of protection.



**Medison's special bins have been certified by the Robert Koch Institute. Once they have been locked, they can withstand a fall of 2 metres without being damaged**

# Welkom in Noord-Brabant

REMONDIS ACQUIRES THE BAETSEN GROUP BASED  
IN THE SOUTH OF THE NETHERLANDS



**REMONDIS has acquired the recycling operations of Baetsen Containers B.V., Baetsen Recycling B.V. and Baetsen Bouwstoffen & Sloopwerken B.V., with retroactive effect from 01 January 2019.**

Over the last few years, the Baetsen Group has become an important market player in its industry. With branches in Veldhoven, Son and Echt, the Group delivers its services to companies, private individuals and local authorities. Based in the south of the Netherlands, this family-run company operates in the areas of waste collection, recycling, transport, excavation and demolition work as well as crane hire. Each year, it handles around 175,000 tonnes of mixed construction waste, 100,000 tonnes of wood and 350,000 tonnes of mineral waste.



Dr Andreas Krawczik, Managing Director REMONDIS Nederland, and Hans van Roosmalen, Managing Director Baetsen (front row, from left to right), signing the contract in the presence of Ton François, Baetsen Board Member, Dr Gerd Terbeck, Managing Director REMONDIS Nederland, and Helma van Roosmalen, a Baetsen shareholder (back row, from left to right)

Following the signing of the contracts, Hans van Roosmalen, managing director of the Baetsen Group, explained why he was so pleased with this development: "We went through a very careful selection procedure before opting for REMONDIS. REMONDIS is a leading family-run business that will continue to invest in sustainable waste treatment systems. This is a good time to take the next step forward. We are proud to be able to move our successful company forward into this new phase – and to be able to continue operating our original activities. The future has been secured for our recycling businesses as well as for Baetsen Transport and Baetsen Kranen."

Dr Andreas Krawczik, managing director of REMONDIS Nederland, commented: "The Baetsen family's long-standing operations are steeped in tradition. This – combined with its innovative spirit, customer orientation and performance capabilities – make it an ideal business for REMONDIS. We know that we will be able to continue to deliver the same high quality service. We are delighted to have been given the opportunity to acquire this large company in Noord-Brabant, which will enable us to provide our customers with an extensive range of services."

Thanks to the takeover of Baetsen, REMONDIS will be able to strengthen its waste management and recycling activities in the south of the Netherlands. The acquisition also included taking over all 200 employees and several business locations in Noord-Brabant and Limburg with their 80+ vehicles.



# Choose France held for the third time

## LUDGER RETHMANN AT THE SUMMIT HOSTED BY PRESIDENT MACRON IN VERSAILLES

The Choose France Summit was held in Versailles in January for the third time to showcase France's economic appeal and encourage foreign businesses to invest in the country. President Macron and Prime Minister Philippe invited numerous foreign companies to attend the event including the RETHMANN Group, which was represented by its board member, Ludger Rethmann.

A very special honour had been bestowed on Ludger Rethmann at the end of 2018 when he was presented with the Légion d'Honneur at the Ministry of Economy and Finance in Paris, the only German national to join the group on that day. The RETHMANN Group acquired a 34% share in Transdev, the international leader for mobility solutions, at the beginning of 2019. Its French partner here is the French Caisse des Dépôts, which is answerable to the French Parliament.

The company is particularly proud of the excellent collaboration work between the boards of directors – a great example of a French-German partnership. The RETHMANN Group currently employs just under 40,000 people in France, including those working for the Transdev Group. REMONDIS, SARIA and RHENUS are all enjoying growth in the country as can be seen, for example, by its acquisition of shares in Semardel.

Learn more about the Légion d'Honneur, the highest French Order of Merit, here:



Transdev is helping the world to become more mobile. How? Where? Find out here:



# Helping French local authorities with SEMARDEL

## SEMARDEL AND REMONDIS FOUND A FRENCH-GERMAN INDUSTRIAL PARTNERSHIP

In December 2019, REMONDIS officially became a shareholder of SEMARDEL, a French company jointly owned by public and private sector partners (SEM = Société d'Économie Mixte) with extensive know-how in the areas of collecting, treating and recycling residual materials along the whole of the supply chain. REMONDIS is, therefore, now contributing its comprehensive expertise to the largest public private partnership operating in this sector in France. From now on, SEMARDEL and REMONDIS will be working together to promote resource conservation in the Île-de-France region, helping to create a more sustainable future.



Founded in 1984, SEMARDEL – just like REMONDIS – closes material cycles by recovering substances and returning them to production cycles as recycled materials and energy. Each year, SEMARDEL processes more than 1.6 million tonnes of municipal and commercial residual materials from France's most heavily populated region, Île-de-France. Besides collecting municipal waste, recycling commercial waste and producing substitute fuels and compost, SEMARDEL also generates 250,000 MWh of energy and heat every year. SEMARDEL employs more than 550 people who are out and about serving their customers every day. REMONDIS' collaboration with SEMARDEL sees it working with the Caisse des Dépôts and EDF (Électricité de France) as well as 17 French local authorities, associations and districts including SYCTOM and SIREDOM, Grand Paris Sud, Coeur d'Essonne and the Département Essonne.



Eric Braive, Chair of SEMARDEL's board of directors, commented: "REMONDIS joining SEMARDEL bears witness to the great confidence placed in our public-private venture. This opens up new opportunities to improve recycling systems and contribute towards the energy switch in our region by diversifying into and growing the amount of renewable energy we produce."

SEMARDEL is the first public private partnership that REMONDIS has entered into in France: "It is a great honour that SEMARDEL chose us to be their partner and that we were able to convince them of our high levels of water management and recycling expertise. Thanks to this new partnership, the REMONDIS Group will be able to continue its strategy of helping French local authorities and developing further collaborations in France," said Pierre-André Vasseur, managing director of REMONDIS SAS. The foundation stone has already been laid with the Group's numerous successful public private partnerships in many other countries.

**"REMONDIS joining SEMARDEL bears witness to the great confidence placed in our public-private venture."**

Eric Braive, Chair of SEMARDEL's Board of Directors

# All possible thanks to 5G

## RHENUS, REMONDIS AND FRAUNHOFER IML LAUNCH SMART BINS

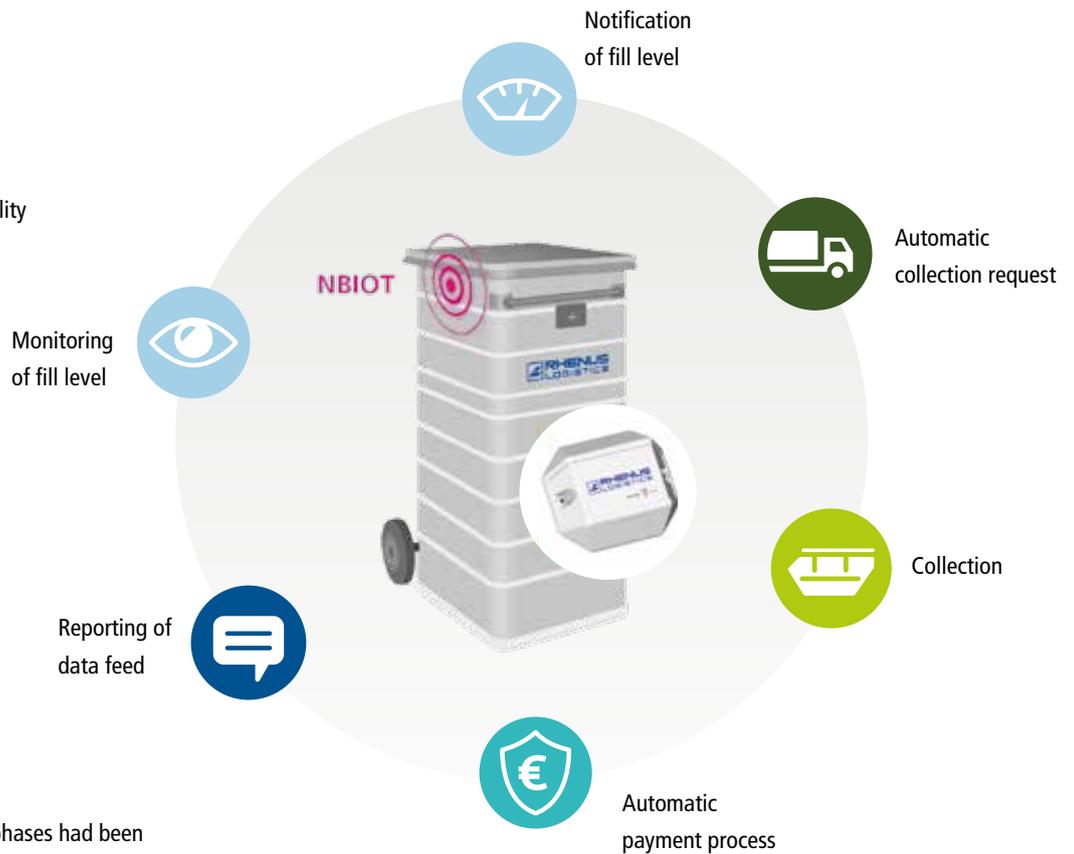
Rhenus, REMONDIS and the Fraunhofer Institute for Material Flow and Logistics IML in Dortmund have developed a sensor for the Internet of Things (IoT) as part of an enterprise lab that tracks the fill levels and movement of bins. Two important pieces of information for improving the coordination of bin-emptying schedules. Transmitted to a cloud via the 5G-compatible machine and sensor network Narrowband IoT (NB-IoT), the recorded data can then be used to optimise bin collection routes. This will make it easier to plan routes and schedules and enable this task to become automated over the medium term.

The benefits offered by these smart sensors are obvious: economical, reliable, maintenance-free and extremely energy-efficient, they are perfect for being used at scale with IoT technology and are a valuable instrument for both customers and Rhenus and REMONDIS as their service provider. "We will be able to optimise our collection schedules to such an extent that we only ever travel to bins that are registered as full in the cloud. This means we save both time and fuel and can avoid unnecessary empty running.

As a result, our staff have more time to deal with customer requests – increasing the quality of our service and relieving the pressure on our own organisation as well as our customers'," explained Michael Wiegmann, a managing director at Rhenus and the person in charge of this project. This also means, of course, that the system helps protect the environment, underlining both Rhenus' and REMONDIS' sustainable corporate philosophy.

**Potential benefits of integrating blockchain technology**

- End-to-end digital résumé of the service
- Complete automation of all information sharing processes
- Full information transparency & traceability
- Reliable auditing



**Positive feedback all round**

Once the initial development and project phases had been successfully completed, the sensors were installed in both Rhenus’ bins used for collecting confidential documents, files and data storage media and REMONDIS’ recycling bins at the end of 2019. Focus was primarily put on fitting them into customer systems that either require large numbers of bins or involve a complex ordering and time-consuming fulfilment process. “The feedback from our customers has been positive across the board. They see us as being an innovative service provider and some of them are even planning to make this sensor technology a mandatory requirement in their future procurement projects. Both sides benefit from this system,” Michael Wiegmann continued, adding, “All of our staff involved in this project have also reacted extremely positively.”

**Further applications possible in the future**

Long-term plans are to increase the number of bins equipped with this sensor from the current 1,000+ to over 100,000 as well as to use them for similar applications within the company group. Other types of data (such as shock/vibration levels or the angle and inside temperature of the bin) can also be measured and recorded by the sensor and these are being planned for the future. By developing innovative bins, Rhenus and REMONDIS are not only showing their customers that they are the best partner for the services they need. They have also taken a further important step towards setting up fully digitised and, in the medium term, fully automated chains of processes.



**“We will be able to optimise our collection schedules to such an extent that we only ever travel to bins that are registered as full in the cloud.”**

Michael Wiegmann, Managing Director Rhenus

# Successful disposal of mercury – for the first time from Guatemala

REMONDIS QR AND REPELSA SUCCESSFULLY  
COMPLETE THEIR JOINT MERCURY PROJECT



Mercury can still be found in many products – particularly outside Germany – and emerging countries are now increasingly taking the disposal of this hazardous liquid heavy metal more seriously. As is the case in Guatemala. Working together with its Guatemalan partner REPELSA, REMONDIS has successfully completed its first project to export mercury-containing waste from this Central American country in collaboration with Blackforest Solutions.



Exporting mercury for disposal? This is how it's done

The whole project lasted almost two years – from setting up the partnership, to receiving the required notifications, all the way through to exporting the materials to Germany and disposing of them properly at REMONDIS QR's branch in Dorsten. As a result, activated charcoal and other types of mercury-containing waste from a mine in Guatemala owned by a Canadian mining company were safely disposed of in line with the Minamata Convention.

#### Curbing mercury emissions worldwide

The objective of the Minamata Agreement, which has been in force since 2013, is to protect human health and the environment from this extremely toxic substance as well as to curb mercury emissions and contamination.

"We are reliant on REPELSA in this partnership – the company knows the local market and has important business relationships with the customers."

Martin Pakulat, Commercial Manager at REMONDIS QR

Its medium-term goal is to permanently eliminate mercury from economic cycles all together. "Thanks to our project, we have moved a step closer to this goal. We are reliant on REPELSA in this partnership – the company knows the local market and has important business relationships with the customers," explained Martin Pakulat, a commercial manager at REMONDIS QR and the person in charge of this project. By the same token, REPELSA needs a German partner to emphasise its credibility in its own country and the region as a whole so that it is awarded contracts.

#### Protecting human health & the environment

The project, of course, not only benefits the companies but also human health, ecosystems and the fauna and flora. International projects such as this one show emerging nations around the globe that even though they might not have sufficient treatment plants in their own country, it is still possible for them to have their mercury disposed of safely.

# REMEX part of Singapore's NEWSand initiative

## PROCESSED INCINERATION BOTTOM ASH AS A REPLACEMENT FOR SAND

Very few people are aware that sand is not simply sand and that we do not have endless supplies of this material. Singapore is currently looking at ways to use processed incineration bottom ash (IBA) in construction materials instead of gravel and sand. The country's National Environment Agency (NEA) has commissioned field trials to be carried out, which also involve REMEX Mineralstoff's Singapore subsidiary.

The main difficulty of this project is producing a material that meets the necessary structural requirements and fulfils the very stringent limit values regarding pollutant content. These are much stricter than German and European standards, as two-thirds of Singapore's surface area are a water catchment area. The IBA being used for the field trials comes from REMEX's plant in Singapore, which was officially opened by the country's Environment Minister Masagos Zulkifli in 2015. The facility, which is located in Singapore's Tuas district, currently processes around 550,000 tonnes of IBA a year – material that is produced by Singapore's five household waste incineration plants. Both the ferrous metal and valuable non-ferrous metals, such as aluminium and copper, are first removed from the IBA for recycling.

The mineral fraction is the largest volume of material left over at the end of the process and this is currently being sent to landfill. This situation, however, should change in the near future to further protect the environment. This project also involves REMEX collaborating closely with its Dutch subsidiary HEROS Sluiskil B.V., which is further processing the ash in its facilities before it is used in the field trials in Singapore.

### NEWSand: a step closer to a zero waste nation

The goal of the Singapore Ministry of the Environment is for the NEWSand initiative to enable the unrestricted use of recycled IBA as a construction material. This would help the Government to meet its target of landfilling 30% less waste a year, from 2030 onwards, in order to extend the lifespan of Singapore's only landfill beyond 2035. This project highlights REMEX's expertise in supplying recycled raw materials for road construction work and earthworks projects and will help Singapore on its way to becoming a zero waste nation.

**REMEX®**  
WORKING FOR THE FUTURE



IBA from Singapore is processed at REMEX's plant in the district of Tuas

# Stylish metal products – no melting required

60% FEWER CARBON EMISSIONS – 100% FUNCTIONALITY

**HKS**

THE METAL COMPANY

TSR's Dutch subsidiary, HKS Scrap Metals, the design agency, Scope Design & Strategy, and the vocational institute, MBO Amersfoort, have joined forces and developed 'Raw Metals' – high quality stylish products made from recycled non-ferrous metals. The special feature here: conventional metal processing stages, such as smelting, are not needed at all. This reduces carbon emissions by 60%. This joint team recently won an award for their project.



Delighted to have received the 'Goed Industrieel Ontwerp' Award for their Raw Metals project: Pim Jonkman, owner of Scope Design & Strategy (front row/left), and Sebastiaan Meijs, Supply Chain & Operations Manager at HKS (front row/right), together with the jury

Functionality, ergonomics, originality, design and respect towards humans and the environment – these are the criteria that the Dutch Designlink foundation focuses on when assessing products and production processes that wish to receive its "Goed Industrieel Ontwerp" seal of quality.

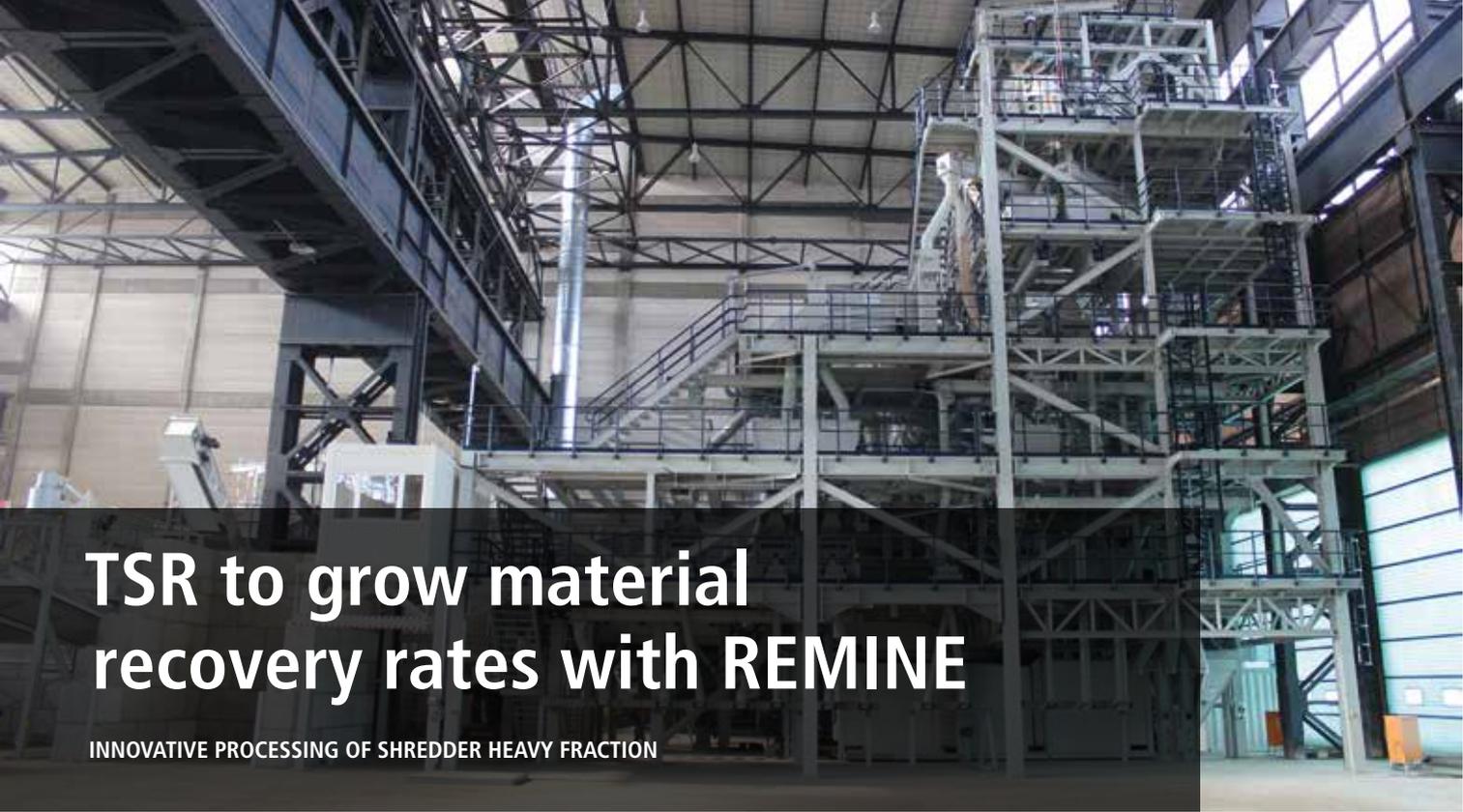
HKS, Scope and MBO were presented with this prestigious award for their joint Raw Metals project back in 2019. The two companies and the vocational institute have developed a special process for its Raw Metals initiative that enables them to make stylish products from shredded non-ferrous metals.

This method does not involve smelting the materials, nor does it use so-called semi-finished products. This new production process needs far less energy than conventional methods and reduces carbon emissions by 60%. The small metal particles are pressed together to create functional and robust products with an unusual design. Besides receiving the foundation's universal seal of quality, Raw Metals was also presented with a special award for the "Respect" criterion – a sign of the jury's appreciation of the way these products promote environmental protection and sustainability.

"The raw material comes from our milling facility. The pressed metal composite is extremely versatile, is a great material for working with and is suitable for making a whole range of products," explained Sebastiaan Meijs, supply chain & operations manager at HKS Metals. The Raw Metals team have created a variety of prototypes, which comprise high quality, sustainable and marketable finished products such as towel hooks and other bathroom accessories. "There's practically no limit to the number of everyday objects we can produce – door knobs and coat stands to name just two," Meijs continued naming some of the initiators' ideas. Raw Metals was subsidised by the Toekomstfonds Duurzame Ontwikkeling (Sustainable Development Future Fund). This fund supports sustainable and innovative projects and initiatives in the Dutch City of Amersfoort.

The first Raw Metals prototypes: bathroom towel hooks. The system used to make these products generated 60% fewer carbon emissions than conventional metalwork processes





# TSR to grow material recovery rates with REMINE

INNOVATIVE PROCESSING OF SHREDDER HEAVY FRACTION

The foundation stone for transforming the way the smallest particles found in shredder heavy fractions are processed has been laid: in the second quarter of 2020, TSR's business in Brandenburg an der Havel will begin recovering valuable non-ferrous metal concentrate from the material streams generated by large-scale shredder facilities. Up to now, this work has been performed by external companies.

TSR's subsidiary REMINE is currently preparing the area and installing state-of-the-art technology to enable it to implement its innovative processing system – in an old steelworks building just 500 metres from TSR's Brandenburg branch. From the spring of 2020 onwards, this plant will be used to process fine material from TSR's three large-scale shredder facilities (in Brandenburg, Mannheim and Hamburg) as well as from INDRA Recycling GmbH, a REMONDIS Group company, and from other partner firms. "We are creating our very own central solution for shredder heavy fraction material streams in Germany," commented REMINE managing director, Florian Berger. His fellow managing director, Dr Sebastian Jeanvré, added: "At the moment, about one-third of the building is being rented out to Recyclingpark Brandenburg GmbH – a company partly owned by the REMONDIS Group. This provides us with a flexible set-up and means we can expand REMINE's capacity if the volume of incoming material increases."

## Separating materials – strengthening partnerships

The technological centrepiece of the section of the building dedicated to this system (currently approx. 7,500m<sup>2</sup>) will be the new facility for processing fines, i.e. finely grained, metal-containing fractions. The finely grained shredder heavy fraction will undergo a dry mechanic, fully automated process: once the composites have been uncovered and the metals shaped into balls, the raw materials will pass through

a number of different systems to separate the material stream into its individual components: minerals, plastics and non-ferrous concentrates. The results are clean aluminium, copper and brass concentrate which can be sent straight to foundries.

Dr Ansgar Fendel, managing director of REMONDIS Assets & Services GmbH & Co. KG, and his team provided technological support – especially when it came to designing the new plant. "Both their knowledge and experience were a huge help. Dr Georg Timmel, project manager for processing facilities, and Viola Möbs, project engineer, both played a key role in further optimising our technology," agreed Jeanvré and Berger, praising the collaboration work.

## A safe investment

REMINÉ was founded as a fully owned TSR subsidiary back in the spring of 2014. Construction work on the plant in Brandenburg then began in early autumn 2019 following a complex approval and publicity procedure. Jeanvré is convinced that REMINE will be a resounding success: "By opening this facility, we will be strengthening our own key areas of expertise and increasing our material recovery rates. At the same time, we will have a stronger position on the market, as – together with INDRA – we will be able to process and market the shredder heavy fraction ourselves."

**TSR**

THE METAL COMPANY

**REMINÉ**

WORKING FOR THE FUTURE

TSR's first screening facility for shredder heavy fraction will be up and running in the second quarter of 2020

# Innovations for greater sustainability

BUCHEN IS AN INNOVATOR WITHIN THE INDUSTRIAL CLEANING INDUSTRY – A STRENGTH THAT WILL ALSO CREATE ADDED VALUE AS THE GREEN DEAL IS IMPLEMENTED

**BUCHEN®**  
WORKING FOR THE FUTURE

The EU Commission's Green Deal will fundamentally change the way business is done. Industrial firms, from practically all sectors, will have to adapt to new regulations and framework conditions. Appropriate services will be needed to help them make the necessary changes. Such as groundbreaking industrial cleaning solutions – a field in which BUCHEN can deliver effective support.

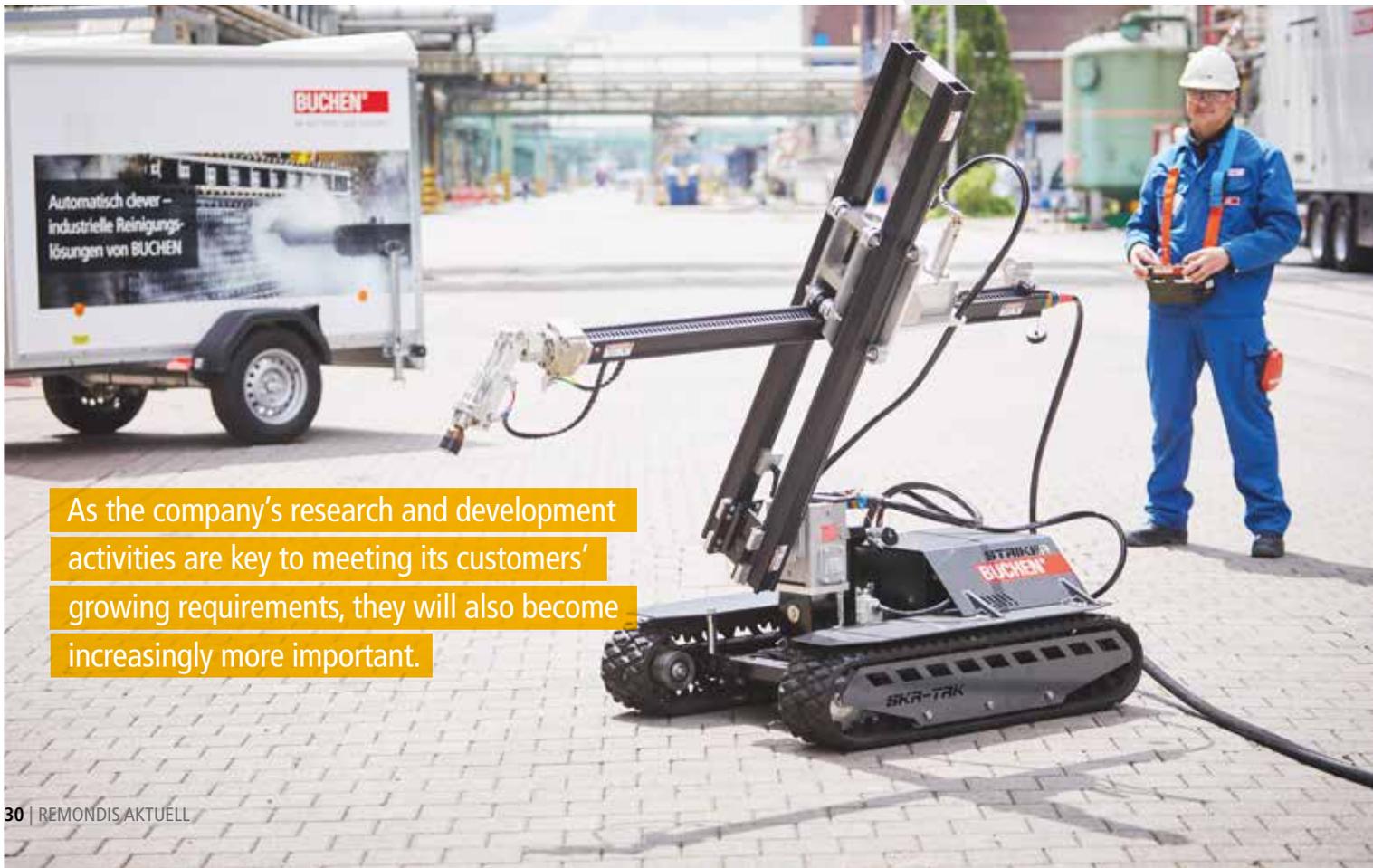
BUCHEN works for many energy-intensive industrial sectors, including chemicals and heavy industry



The more ambitious the plan, the more important each individual contribution becomes. An appropriate mix of measures will be required to achieve the goals of the Green Deal. Industrial cleaning work, BUCHEN's key business, can help provide momentum here. This is particularly true when it comes to energy efficiency, as it is only possible to ensure industrial processes consume low levels of energy, emit fewer volumes of CO<sub>2</sub> and achieve high performance levels if the production cycles are not disrupted by deposit build-up and residue.

## R&D work for optimum services

To be able to offer an innovative range of services delivering maximum customer benefit, BUCHEN is continuously looking at further developing the equipment and machinery it uses. Its goal here is to make sure that its teams of operatives are able to apply the best techniques by making new and advanced technology available to them.



As the company's research and development activities are key to meeting its customers' growing requirements, they will also become increasingly more important.

Modern systems, such as 3D simulations, are part of BUCHEN's standard equipment



Its development initiatives in this area are primarily focused on a number of points that are important for achieving a sustainable industry, one of the goals of the Green Deal: cleaning quality, safety and sustainability. Safety covers both work safety for employees as well as the safe protection of ecosystems.

BUCHEN is driving forward technological progress by carrying out research and development work on its own as well as together with universities. The focus of these projects is on automated systems and processes. Automation is considered to be an ideal solution for industrial cleaning activities as this technology can simultaneously fulfil a number of different requirements. Top quality cleaning results can, for example, have a positive impact on the energy consumption of a customer's business. At the same time, automated systems increase safety standards even though the work is often performed more quickly.

#### Development work with specialist trials

BUCHEN is continuously and systematically screening the market to discover general technological developments that may potentially be able to be used for industrial cleaning work. Moreover, the company's day-to-day operations create their own development opportunities – either in connection with customers' wishes or as a result of its own practical experiences.

Customer benefit, cost-effectiveness and time to market are all key criteria for these multi-stage development processes as is the aspiration to make the company's own work processes as safe, environmentally friendly and energy efficient as possible. Modern systems, such as 3D simulations, are now part of BUCHEN's standard equipment and create some significant benefits, especially during the conceptual and construction phases. In some cases, BUCHEN has set up its own testing stations to be able to professionally trial its prototypes in the field.



#### Importance continues to grow

As the company's research and development activities are key to meeting its customers' growing requirements, they will also become increasingly more important. BUCHEN currently has about thirty development projects a year. This work has led to twenty patent and design applications over the last five years.

The company's successes over the past few years clearly demonstrate BUCHEN's ability to make advances and move the business forward. It has developed several innovations that have taken industrial cleaning to a completely new level. These developments have now been fully integrated into the company's portfolio. Just a few examples here are its mobile industrial robot, its through-feed wash system and its mobile ultrasound equipment. These facilities, machines and pieces of equipment are already being used in a whole range of industrial sectors and promote energy-efficient, environmentally friendly production processes. By developing its own systems, BUCHEN is ensuring that it fulfils its tasks in the best possible way – in the interest of its customers and most certainly in line with the Green Deal.

The demands on service providers are increasing as regulations become stricter for manufacturers



# A new future for old buildings

XERVON IS HELPING TO MOVE STRUCTURAL CHANGE FORWARD IN THE RUHR REGION BY RENOVATING ITS INDUSTRIAL MONUMENTS

Disused mines, idle furnaces, decommissioned gasometers: historical industrial plants are much more than just relics from the past. Renovated and retrofitted for new tasks, they can be turned into sites that are fit for the future. XERVON is helping to bring about this conversion work, particularly by making the most of its surface technology expertise. The services required are similar to the company's wide-ranging portfolio and yet in many ways very different – renovating industrial monuments has its own set of rules.

The Ruhr region is undergoing a structural change. Areas that used to be dominated by coal, coke and steel are gradually turning to services and tourism. And more often than not, it is the industrial sites from the past that have been providing the momentum for this transformation. They have been given a breath of new life and help make the region even more attractive – as museums, event locations, business start-ups and much, much more. Before this change of use can be brought about, however, they must first be renovated. A task for XERVON, as professional corrosion protection, specialty coatings and concrete repair work are all really important to shield monuments from the ravages of time.

## Jet blasting work with skill and finesse

Practically all historical industrial buildings have constructions made of iron and steel. If these are to be protected long term, then the surfaces – many of which are beginning to look the worse for wear – have to undergo extensive preparation work.

**“Industrial monuments bring the region's history to life. Maintaining them and making them fit for the future is a project that is close to our hearts.”**

Frank Dörnemann, Managing Director XERVON Oberflächentechnik GmbH

A balancing act as, unlike projects involving modern plants, people often want to see signs of ageing on these monuments. In other words, this means using today's expertise on the surface of the building while ensuring it retains a certain historical appearance. Both finesse and know-how are needed, therefore, to carry out the jet blasting work and to choose the right blasting material. What's more, experience in handling contaminated substances is imperative here because the old coats on the metal – which may be decades or even centuries old – are often considered hazardous according to today's standards.

## High-tech with a historical appearance

This is all true for the next stage of the work: the coating of the surfaces. On the one hand, the coat should provide the protection needed but, on the other, it shouldn't look too new. XERVON's surface technology specialists use both standard systems and bespoke solutions to bridge this gap. Indeed, their first step is to draw up a detailed coating concept so that the application of the coat meets the exact requirements – regarding both its function and the way it looks. Besides working on metal constructions, XERVON also carries out repair work on concrete structures. Damaged areas are removed and replaced and the outer walls of the buildings are carefully sealed. In many cases, the company is



## DEEP IN THE WEST: FOUR RECENT RUHR REGION PROJECTS

**A UNESCO World Heritage Site.** Zeche Zollverein in Essen: previously one of the most productive coalmines in the world, now a UNESCO World Heritage Site. Here, XERVON is in the process of applying a modern coating system to a bunker (used in the past to store backfill material) and a 100m-long historical bridge conveyor.

**Mining museum.** XERVON is renovating the machine building at Zeche Sophia-Jacoba, an old colliery in Hückelhoven, that now offers guided tours. Moreover, it is also using wet and dry blasting technology and applying three layers of coating to the 48m-high headgear and its rope sheaves to make them fit for the future.

**The steel giant.** XERVON can also be found at the sites that used to process 'black gold'. Its job here: to jet blast, repair and recoat the platforms around the outside of this 77m-high gasometer in Dortmund – one of the stops along the Route of Industrial Heritage.

**A European masterpiece.** Renovation work began on the gasometer in Oberhausen in the autumn of 2019. This site is a monument of international importance and has already housed many spectacular exhibitions. XERVON is recoating the stairs that run up around the outside of the gas tank. Right next door, in fact – in the company's jet blasting building in Duisburg.

requested to deliver its whole range of services for a project – as is the case at the old colliery, Zeche Sophia-Jacoba, in Hückelhoven. Today this mine offers its visitors guided tours and XERVON is currently renovating the timber-framed machine building and the striking headgear above Shaft 3.

### Keeping the visitors in mind

Besides having to focus on the professional and technical aspects of these projects, the company must also take into account that such industrial monuments are also public spaces that attract many visitors. This is true for both the results at the end of the project and how the actual renovation work is carried out. The Zeche Zollverein, for example, (an old colliery in Essen) welcomes around 1.5 million guests a year. XERVON's job here is to renovate a historical bridge conveyor – a task that will take several months to complete. To be able to do this, they are gradually erecting an enclosed, fully dustproof scaffold structure around the bridge conveyor, section for section – to keep the visitors safe as well as to keep as much of the plant open as possible. More than 3,500 structures are listed as protected industrial monuments in the German state of North Rhine-Westphalia alone. A wide range of buildings and an industrial heritage that are perfect for uniting the past, present and future.

The Zeche Zollverein in  
Essen welcomes around

**1.5 million**



guests a  
year

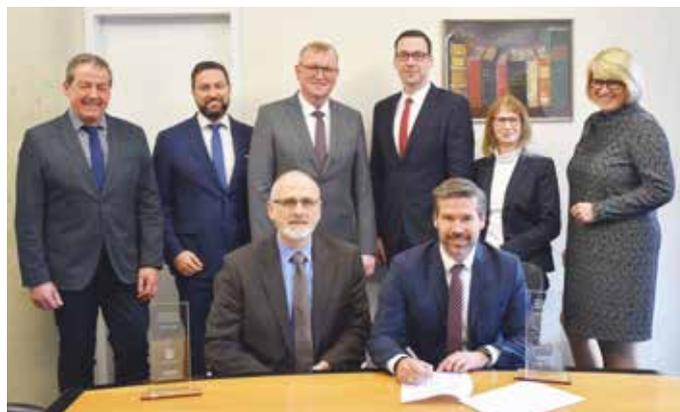
# A great success for public-private collaborations

## REMONDIS AND THE DISTRICT OF GRAFSCHAFT FOUND REGIONALWERKE GRAFSCHAFT GMBH

Good news from Grafschaft: this local authority located in the rural district of Ahrweiler founded a public private partnership (PPP) with REMONDIS EURAWASSER GmbH at the beginning of the year. Due to run for a period of 10 years to begin with, this collaboration promises to deliver reliable water management services and stable fees and charges as well as additional services for local industrial firms.

For over 12 years now, REMONDIS EURAWASSER has been providing Grafschaft with an extensive range of services covering both the commercial and technical operations of its wastewater plant and waterworks. The local authorities decided to put these out for tender across Europe in 2017 – a contract that would also include building and operating a wastewater pre-treatment facility. The goal of this tender process was to found a PPP firm, which would then take over responsibility for providing all these services. Following some renegotiations, the contract was signed in February 2020

to establish Regionalwerke Grafschaft GmbH, in which the District of Grafschaft owns 51% and REMONDIS EURAWASSER GmbH 49% of the shares. On signing the contract, Mayor Achim Juchem expressed his pleasure at this latest development: "By founding Regionalwerke Grafschaft, we have succeeded in setting up a strong partnership for the future that will be able to make the most of REMONDIS EURAWASSER's experience and know-how to deliver the best possible services for both our residents and the industrial businesses in our region."



Putting pen to paper: (front row, from left to right) Andreas Schneider, Treasurer of the District of Grafschaft, and Christoph Lasek, Managing Director REMONDIS EURAWASSER GmbH, signing the PPP contract in the presence of (from left to right) Dieter Dismont (District of Grafschaft), Robert Ristow (EURAWASSER), Achim Juchem (Mayor of Grafschaft), Mario Schellhardt (EURAWASSER), Andrea Thelen (EURAWASSER) and Kathrin Brenner (REMONDIS)

**“Investment models such as this one enable local authorities to control how central water supply and wastewater treatment networks are set up in their district while limiting their risk by making the most of our know-how.”**

Mario Schellhardt, Managing Director REMONDIS EURAWASSER

Guaranteeing reliable services, protecting districts against flooding and generating innovative energies are all topical subjects that affect everyone and must be tackled together.”

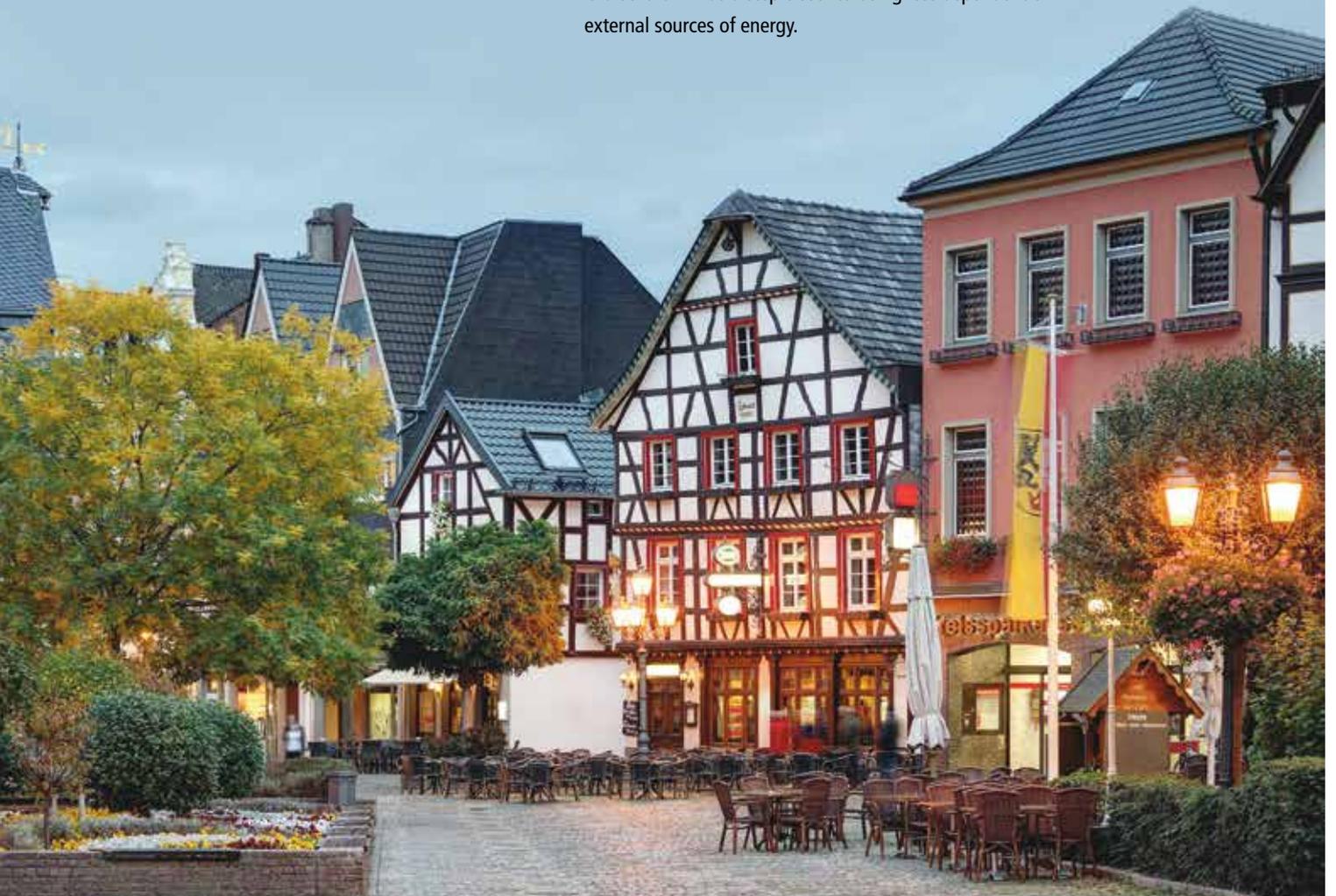
#### **Everyone loves it so – including HARIBO**

One of the biggest companies in the region, the sweets manufacturer HARIBO, will also benefit from the public private partnership between the local authorities and REMONDIS. In the future, the firm’s production wastewater, which contains high levels of sugar, will be used to make biogas. Plans are to build a new pre-treatment facility in the Innovationspark Rheinland (IPR / Rhineland Innovation Estate), close to the firm’s premises, and have it up and running in 2021. The green energy generated by this system will then be fed into the grid. By doing so, the District of Graftschaft will be a step closer to being less dependent on external sources of energy.



#### **Shared risks – common goals**

This public private partnership will create a number of benefits for the District of Graftschaft, which is home to around 11,000 inhabitants and numerous industrial and manufacturing firms. Besides having direct access to the REMONDIS Group’s know-how and network of plants and facilities, this PPP will also allow the investment risks to be shared. Both partners have taken advantage of this right from the start: a new plant for treating production wastewater is to be built by Regionalwerke in the future. Pilot tests have already started. Moreover, the joint venture will continue to deliver the services previously provided by REMONDIS. These include, among others, managing the more than 200 kilometre sewer and drinking water networks, nine pumping stations and six drinking water reservoirs stretching across 17 different districts. REMONDIS managing director, Mario Schellhardt, is looking forward to providing many more such Regionalwerke services: “Investment models such as this one enable local authorities to control how central water supply and wastewater treatment networks are set up in their district while limiting their risk by making the most of our know-how.



# Schweriner Umland: supplies secured until 2035

PARTNERSHIP DELIVERING HIGH QUALITY DRINKING WATER TO BE CONTINUED

Hanno Nispel, Managing Director WAG, Kay Cieslak, Plant Manager Zweckverband Schweriner Umland, Dr Josef Wolf, Managing Director WAG, and Georg Ihde, Chair of Zweckverband Schweriner Umland (from left to right)

**Glasses were raised in Schwerin just recently: the water association, Zweckverband Schweriner Umland, and Wasserversorgungs- und Abwasserentsorgungsgesellschaft Schwerin mbH & Co. KG (WAG) extended their drinking water supply contract until 2035. The contract extension came into force at the beginning of the year.**

Local residents living in the 12 districts belonging to the Schweriner Umland region have been supplied with fresh, high quality drinking water from the supply networks and processing plants run by EURAWASSER's subsidiary WAG for almost thirty years now. This successful long-standing partnership between the state capital's drinking water supplier and the Zweckverband Schweriner Umland will, therefore, continue as before.

WAG managing director, Hanno Nispel, was delighted to see the contract extended: "A contract should be based on trust and achieve a top performance. This is exactly what the collaboration with the Zweckverband Schweriner Umland delivers." The successful cooperation work has developed and grown over time and has also been intensified over the last few years. The result of this effective work is a new 15-year contract covering annual drinking water supplies amounting to approx. 600,000m<sup>3</sup>.

**"It is extremely important for us to secure high quality services over a long period of time."**

Georg Ihde, Chair of  
Zweckverband Schweriner  
Umland



## **Reliable supplies thanks to effective management**

The first agreement to supply drinking water to the districts around the state capital Schwerin was signed in 1993. This has been renewed several times and the latest extension, which officially began on 01 January 2020, guarantees stability and security for a further 15 years. "It is extremely important for us to secure high quality services over a long period of time. WAG is a high-performing, reliable and very good partner both when it comes to supplying drinking water and treating wastewater," commented Georg Ihde, chair of the water association.

# Utilities 2.0 – modern ideas for Altena

SUSTAINABLE ENERGY, A DIGITAL WATER CONTROL SYSTEM AND ELECTRIC VEHICLES FOR THIS TOWN ON THE LENNE RIVER

There are changes happening in Altena, a small town situated in the Sauerland region. Watched over by Altena Castle, it definitely has a more modern feel – both in its streets and on its promenade along the Lenne river. Hendrik Voß, head of the municipal utilities company (Stadtwerke), believes it is also one of his tasks to help develop Altena and make it more attractive.

## Making good use of the energy available

A number of measures have been taken to modernise Altena's energy management system, beginning with the construction of a new combined heat and power (CHP) plant in 2016. Now up and running, this facility is proving to be both more reliant and considerably more efficient than its predecessor. What's more, it is able to cut CO<sub>2</sub> emissions by 42 tonnes every year. The heat generated by the CHP plant is used to produce warm water for and heat the surrounding buildings; the electricity is supplied to the utility company's head office building. Moreover, it powers the buildings' outdoor lighting system, which has been completely converted to LED lighting, and will even be used to recharge the utility company's electric vehicles in the future.

## Firm's own electricity will power its fleet

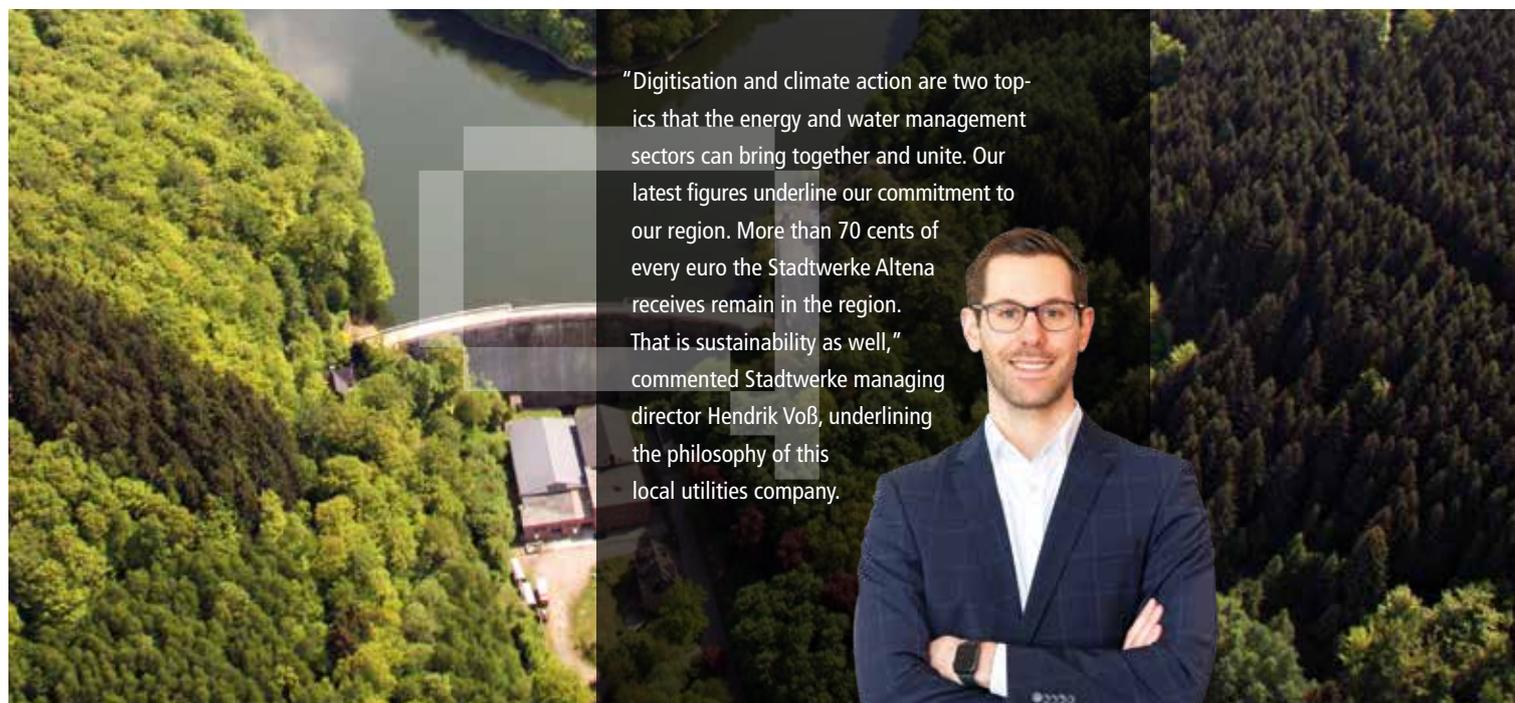
The Stadtwerke is planning to procure its first electric cars this year. Two electric box trucks will replace the diesel-run vehicles currently being used by the Stadtwerke engineers.

"Our employees have already tested the trucks and they were very happy with them," commented managing director, Hendrik Voß. This means that the capacity of the CHP plant can be further optimised. Its significance for the climate is an important argument for Voß as well: "Generating electricity from natural gas has an even better carbon footprint than the average electricity mix here in Germany," he explained.

## Using the potential of the reservoir and river

The utilities company has been deploying a digital water distribution management system for two years now to ensure the town has all the drinking water it needs – no matter how dry the weather. This system guarantees that all of Altena's water requirements can be covered, even in an extreme drought. Modern IT is used here to record data about the water levels in the reservoir and the water pressure in the different suburbs so that the water can be distributed around the town in the best possible way.

Altena's utilities company has signed up to a voluntary scheme in the German state of North Rhine-Westphalia that compares the performance of different companies to improve water supply



"Digitisation and climate action are two topics that the energy and water management sectors can bring together and unite. Our latest figures underline our commitment to our region. More than 70 cents of every euro the Stadtwerke Altena receives remain in the region. That is sustainability as well," commented Stadtwerke managing director Hendrik Voß, underlining the philosophy of this local utilities company.



# EURAWASSER and WALTER tecyard's early detection system warns of heavy rain

DIGITAL MONITORING OF FLOOD-CONTROL RESERVOIRS PROVIDES THE BEST POSSIBLE PROTECTION FOR LOCAL RESIDENTS AND LOCAL INFRASTRUCTURE

## EURAWASSER

Climate change has created a number of problems including a noticeable increase in heavy rainfall. In 2014, for example, 292 litres/m<sup>2</sup> of rain fell on the City of Münster within just seven hours. In 2017, the low pressure system named "Alfred" battered the Harz region with days of heavy rainfall (over 300 litres/m<sup>2</sup>), causing damage in and around Goslar that ran into an eight-figure sum.

The LoRaWAN concept – the result of the collaboration work between EURAWASSER and WALTER tecyard – has now been installed to warn Goslar in good time when heavy rainfall is likely, so that it can adjust its flood-control reservoirs and better protect its residents and infrastructure. These reservoirs are there to direct floodwater out of the sewer system when the weather is bad and take the pressure off the downstream open drainage systems.

**"This buys us a great deal of time – enabling us to make the best use of the flood-control reservoirs and sewer networks and so relieve the pressure on the open water system when there is heavy rainfall."**

Michael Figge, Managing Director of EURAWASSER

### Technology-based warning with LoRaWAN sensors

"Different types of data, such as the level of the water in the flood-water reservoirs and the amount of rainfall, are monitored in real time and then transmitted using LoRaWAN sensors. Thanks to this energy-efficient system, we will be able to handle situations – like the one in 2017 – better in the future," explained Benedikt Winkelmann, managing director of WALTER tecyard. This data is sent by radio transmission with LoRaWAN to the internet and from there to the mobile devices of the employees on duty and to the control centres. They can then detect critical situations in good time and use the information to forecast the filling of the flood-control reservoirs.

“This buys us a great deal of time – enabling us to make the best use of the flood-control reservoirs and sewer networks and so relieve the pressure on the open water system when there is heavy rainfall. This, of course, also benefits the town’s infrastructure and protects the local residents,” commented Michael Figge, managing director of EURAWASSER. This should help minimise major damage to private buildings, the public infrastructure and water facilities and reduce the workload of the emergency services – so that the town never has to suffer again as it did in 2017.

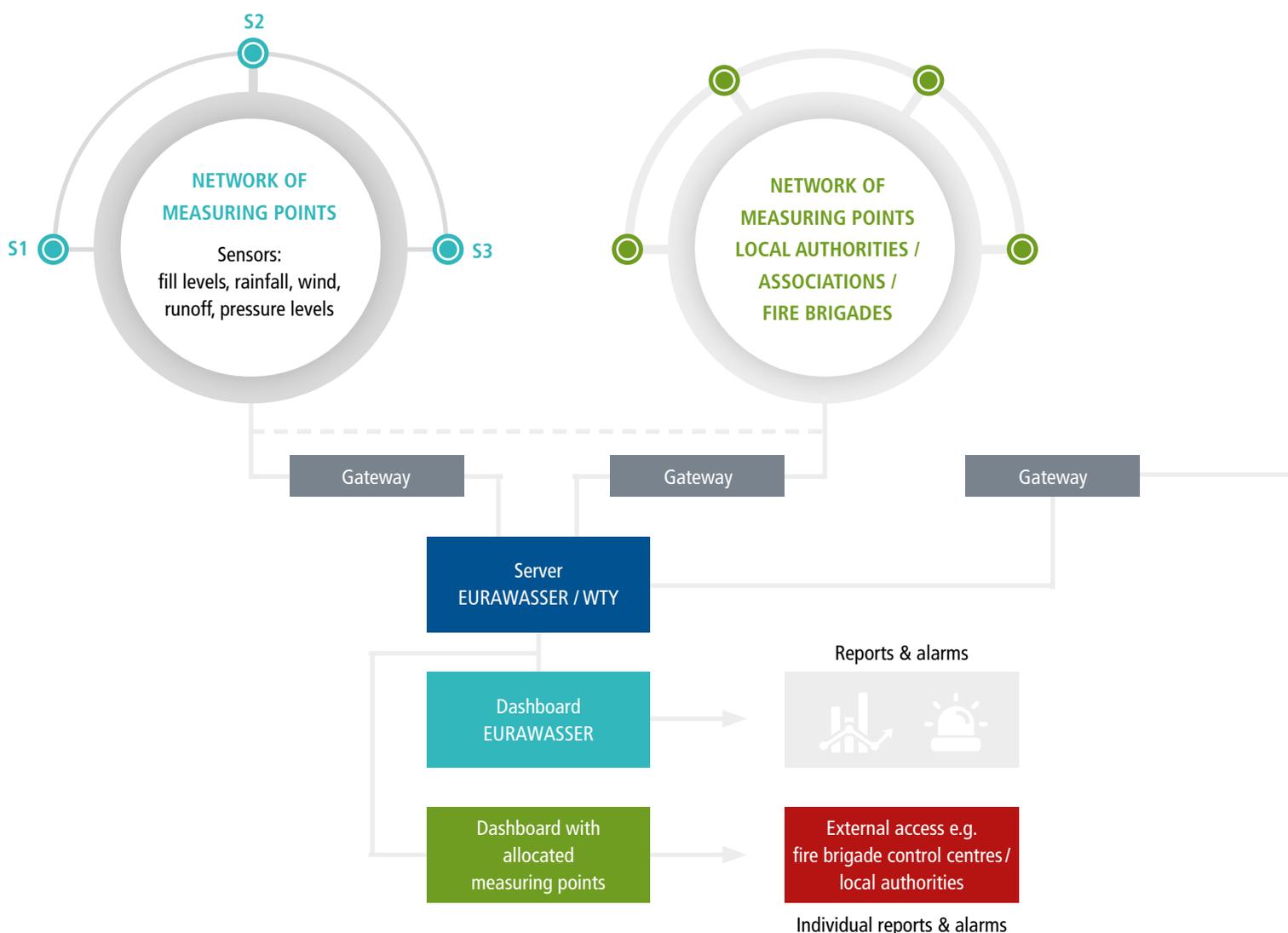
**Expediting smart cities**

Besides delivering data that enables dynamic control and warnings, LoRaWAN sensor networks also provide highly

relevant data that can be used for improving and validating models as well as for future integrated infrastructure and town planning processes.

Goslar, for example, will be using the LoRaWAN system for its winter services in the future. By measuring temperatures and moisture levels around the city, it can forecast changes in the weather so that gritters can be organised and deployed more efficiently. By doing so, other components of the infrastructure can be integrated, thus providing additional information that is vital during critical events. The technology is, therefore, helping to optimise EURAWASSER’s everyday work and paving the way for Goslar to become a smart city.

**LoRaWAN concept: “Smart reservoir control & resulting flood protection”**



# REMONDIS voices from around the world

CORONAVIRUS HAS BEEN KEEPING PEOPLE IN SUSPENSE FOR WEEKS NOW – SOMETHING THAT HAS BEEN FELT BY REMONDIS' EMPLOYEES RIGHT ACROSS THE GLOBE



## FRANCE

CLÉMENT CHAUVIN // PROJECT MANAGER  
FRANCE // 27 YEARS OLD // AT SEVERAL  
LOCATIONS IN FRANCE // SINGLE

How is business doing in France?

Just as is the case in Germany, municipal waste is still being collected and treated. There is much less commercial waste, though, following the economic downturn.



## SPAIN

ASSUMCIÓ FERRER I MATAS // PLANT MANAGER WASTEWATER  
TREATMENT FACILITY // BANYOLES // 46 YEARS OLD // DIVORCED,  
ONE DAUGHTER // HOBBIES: READING, COOKING, ZUMBA, VOLLEYBALL

What is the atmosphere like at your business?

The majority of people here are feeling very positive indeed. They want to do something for their community and help others – such as sewing protective face masks for the health workers as they're often sold out at chemists. People accept that they have to do without certain things at the moment to protect others.

# RUSSIA

## RUSSIA

SWETLANA BIGESSE // MANAGING DIRECTOR  
REMONDIS RUSSIA // MORDOVIA REGION  
53 YEARS OLD // MARRIED

How is the business doing where you are?

Here in Russia, we are responsible for managing municipal waste in a region that is home to 800,000 inhabitants. All Russian cities have mandated strict lockdown measures until the end of April but in such a situation – when the majority of people have to stay at home – they generate large volumes of waste. Our employees are working every day, at the weekend as well, to ensure the towns and districts in the Mordovia region stay clean.

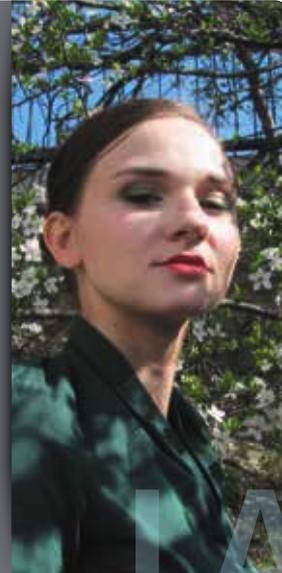


## POLAND

NATALIA MROZEK // SPECIALIST FOR RECYCLING  
MATTERS REMONDIS TARNOWSKIE GÓRY SP. Z O.O.  
29 YEARS OLD // SINGLE

How is the business doing where you are?

Unfortunately, customers have not been able to come to our offices since 16 March. We can still process any questions or issues they may have, though, electronically or by email. We continue, of course, to deliver our services to local inhabitants and companies every day and are there for our customers whenever they need us – just not face to face at the moment.



## AUSTRALIA

BARRY SISSON // TRUCK DRIVER  
63 YEARS OLD // WEIPA, QUEENSLAND

How has the current situation impacted on your everyday life?

As I love being out in nature, it's certainly had an impact on my social life. One positive thing of the current situation, though, is that it's bringing families closer together – as can be seen in my case: my wife and I can now spend more time together.



# AUSTRALIA

# Everyday heroes

MARCEL BEIER AND MANUEL SCHOPPE ARE TWO OF THE MANY THOUSANDS OF PEOPLE MAKING A DIFFERENCE – AND NOT JUST DURING THE CORONAVIRUS EMERGENCY

They were hardly mentioned until just recently. Now – with our country plunged into the Covid-19 crisis – everyone is talking about them: the front-line professions in Germany. People are now expressing their huge gratitude for the work being carried out by firefighters, the police, doctors, nurses and carers, those working in the legal system, IT and logistics, food and hygiene suppliers as well as all those involved in supply and waste management. Marcel Beier and Manuel Schoppe, both truck drivers working at REMONDIS, are, therefore, a little bit prouder than they might otherwise be of the job they are doing.



Manuel Schoppe



Marcel Beier

“Just last week, a complete stranger waved at me and thanked me for doing my job,” commented Marcel Beier from Kiel. “Children, in particular, seem to be thinking of us. Every day, we find their colourful chalk drawings on the roads – especially around the bins,” added Manuel Schoppe from Olpe. Which is why residents are now standing on their balconies or at their open windows at 9pm every evening to applaud these front-line workers and show their gratitude for all the extra work they are carrying out at the moment. Applause that they have, in truth, always deserved – not just now.

**“Just last week, a complete stranger waved at me and thanked me for doing my job.”**

Marcel Beier, REMONDIS driver from Kiel

## More waste, more parked cars

The coronavirus pandemic has had an impact in other ways as well – one that both drivers have noticed: the volumes of waste in the residual waste, organic waste and recycling bins are much bigger than normal. Hardly surprising, considering that around half the working population are currently working from home. “Panic shopping and the increase in online purchases are also playing a role here. We’re handling up to one-third more sacks than normal,” the two explain. Parked cars have always posed a problem for drivers of refuse collection trucks but the situation is worse than ever at the moment. “We rely on a number of turning areas to manoeuvre our trucks and these are more often than not full of parked cars,” Manuel Schoppe continued.

Both REMONDIS drivers are also well aware of the danger of catching the virus. Which is why they are both wearing considerably more personal protective equipment than usual and are well equipped with disinfectant. The different shifts have also been staggered to reduce contact between employees to a minimum. “The public health authorities have confirmed that it’s very unlikely that Covid-19 sticks to the surfaces. You can’t completely get the thought out of your head, though, that you might get infected from touching the overflowing bins and sacks,” Manuel Schoppe said.

## Recycling sector growing in importance

No one knows how long this crisis will go on for. The importance of the recycling sector, however, will continue to grow after it is over. An assessment will be made of what front-line services were provided during the crisis and the significance of recycling and the sector’s recovery of resources will remain as high as ever, even if the pandemic has given the climate a short breathing space. Marcel Beier and Manuel Schoppe certainly hope that people will continue to be grateful for and appreciate the work they do after the crisis is over as well.

# IMPRESSIONS



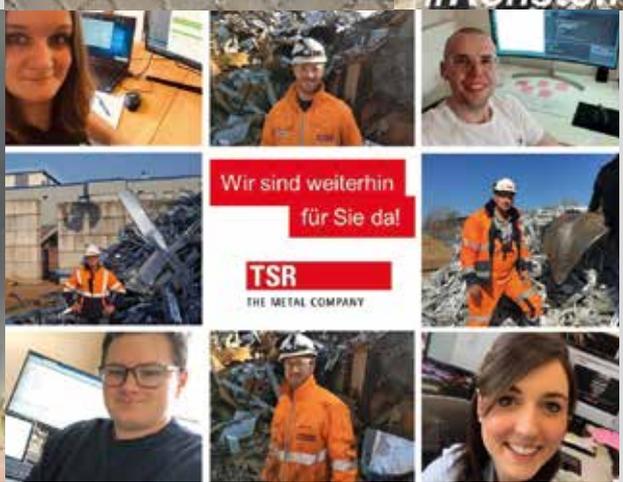
◀ Many of REMONDIS' companies have seen their workload increase during the Covid-19 crisis. The staff at REMONDIS Trade & Sales, for example, have made sure their customers can reach them – also when they are working from home



The staff who make sure the collected materials continue to be recycled are everyday heroes as well – such as here at AHE in Wetter



▲ Many people have shown their appreciation over the last few weeks for the work our drivers do. As can be seen, for example, in the Netherlands, where local residents have placed 'thank you' notes and flowers on the bins



▲ TSR also thanked its recycling heroes for continuing their work during the Covid-19 crisis – no matter whether they are on-site at the business or working from home



# Let's set our sights high for a man-on-the-moon moment

Europe has launched its Green Deal, with the President of the European Commission calling it a man-on-the-moon moment. REMONDIS is setting a good example here – demonstrating how this climate action milestone can be achieved in the shortest amount of time. We not only produce recycled raw materials, which are so much more energy efficient than their primary counterparts, we are also doing all we can to extend the way they can be used by industrial businesses. What's more, we are calling for the introduction of higher collection rates across the EU, for the closure of climate-damaging landfills as well as for an extension of the Ecodesign Directive to include raw material efficiency. All of which are essential if the EU is to become climate neutral by 2050.

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