

The REMONDIS Group magazine

REMONDIS AKTUELL

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Election 2017

A good choice for recycling?

German parties clarify
their position ahead of
the general election

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AKTUELL

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Federal Environment Minister visits the Lippe Plant

MdB Dr Barbara Hendricks calls for the most
to be made of the opportunities to protect
the environment & curb global warming

24 refugees working at the REMONDIS Group

Norbert Rethmann believes the private
sector must also do its part to promote
integration

Not one and the same thing

Amendment to the Fertiliser Regulation
ignores the positive effect of humus
fertiliser on the climate & on soils

A good choice for recycling?

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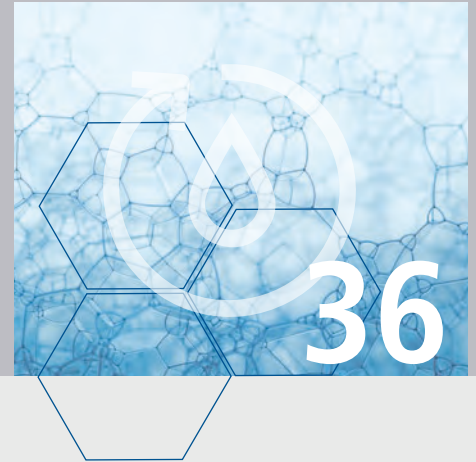
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Thomas Conzendorf, REMONDIS Board Member

Dear Readers!

In Germany super election year 2017 is well underway. The Saarland election has already taken place, with Schleswig-Holstein and the most populous of the German Länder, North Rhine-Westphalia, set to follow in May. General elections for the Bundestag will then be taking place in September. In these times of populism and fake news, this election will play a pivotal role. Germany has the strongest economy and largest population in Europe. The outcome of the election will have repercussions for all of Europe and influence economic and political relations with other countries around the world. In view of the dimensions involved, a key topic unfortunately often takes back seat: recycling and its importance to climate and environmental policy. We wanted to size things up accurately and enquired with all the major political party groups about their platforms concerning environmental policy in the upcoming legislative period and beyond. You will find a summary of the responses in this issue's feature article and the complete responses online at remondis-aktuell.de. Whether elections turn out to be good for the climate and the environment in general and our growth sector in particular will ultimately be decided by hopefully well informed, active citizens.

Some legislative bills have been initiated shortly before the elections – for example, the new Commercial Waste Regulation (Gewerbeabfallverordnung). It will involve important changes that have a major impact on our commercial customers when the new regulation goes into effect on 1 August 2017 at the latest. Under the new version, companies producing waste in connection with housing construction will be obligated to separately collect the waste items of paper, cardboard and pasteboard with the exception of hygienic paper, glass, plastics, metals, wood, textiles, organic waste and additional commercial and industrial waste already where it comes about, i.e. at companies themselves.

The same goes for construction and demolition waste, which is already to be separated at the building site into the various waste categories such as glass, plastics, metals, wood, insulation material, bituminous mixtures, building material based on gypsum, concrete, bricks, tiles and ceramics. This is no doubt good news for improved recovery of raw materials, but it also means greater expenses for customers, who REMONDIS will support professionally as accustomed with practicable services in line with laws and regulations.

And how do things stand at present when it comes to refugee policy? The number of new persons seeking asylum arriving in Germany has dropped significantly. The biggest challenge now is to successfully integrate these people in our society and the German world of work. REMONDIS is taking on this challenge, hiring young people as well as persons with work experience in various fields who have lost their home as a result of war, famine and displacement and now want to venture a new beginning in their adopted country of Germany. A real win-win situation, as a successful start to a vocational career is the best contribution that can be made to a society living together in prosperity and peace. Here as well, REMONDIS meets its responsibility to society as a whole, acting in the spirit of its own slogan: working for the future!

Yours

Thomas Conzendorf

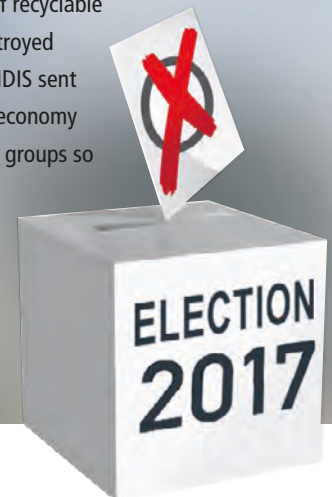
A good choice for recycling?

ELECTION TESTS FOR THE RECYCLING ECONOMY IN THE SPOTLIGHT

2017 is super election year in Germany. Several Länder will be holding elections to their state legislatures. Then comes national general elections for the Bundestag in September, which will lay down the contours for German policy for the next four years at least. This election in Europe's most populous and economically strongest country will have an impact on the entire EU and beyond. One important topic: recycling and its importance to climate and environmental protection. We wanted to size up the situation and asked the major party groups how they wanted to shape environmental policy in the upcoming legislative term.

The setting of the agenda in this election year is of tremendous importance to companies operating in the recycling and water-management sectors in general and to the REMONDIS Group in particular. The next legislative term offers Germany the opportunity to further expand its pioneering role in the area of resource and climate protection and as a result create a lot of new jobs in a sector that already offers more than 250,000 people jobs at present. Even though some path-breaking legislative bills like the Commercial Waste Regulation (Gewerbeabfallverordnung) and the new Packaging Law (Verpackungsgesetz) were initiated towards the end of the ongoing legislative term, the major opportunity to encourage significantly more recycling and

resource protection with the discontinuation of the Recyclable Materials Act (Wertstoffgesetz) has unfortunately gone largely unused. Around 7.8 million tonnes of recyclable material still continue to be irrevocably destroyed each year. Against this background, REMONDIS sent 10 questions on the future of the recycling economy to all major democratic parliamentary party groups so that the sector and interested voters could gain an impression of where things will be going in the political arena following the election when it comes to recycling, climate and environmental protection.



CDU

In the following we cite the statements made by the CDU to our Federal Association, the BDE, as REMONDIS has not received any more up-to-date responses to date. Saving valuable raw materials and fostering recycling are key topics for the CDU in the next legislative term. The idea of a voluntary recycling label that provides consumers simple information on the recyclability of a product is definitely viewed by the Christian Democrats to offer a possibility to save resources, but they emphasise that product responsibility on the part of manufacturers needs be expanded, e.g. by assuming the costs for collecting and recycling their products. This principle is tried and proven, for example, in the case of packaging waste. The CDU has a clear opinion regarding efforts by municipalities to reassert control over services in this area: competitive solutions offer the best guarantee of high-quality, inexpensive waste-disposal solutions for citizens and the

economy. The CDU categorically rejects restoration of public control over this sector, as only competition and strict waste requirements make Germany a leading actor in the international recycling economy. In the opinion of the CDU, the task is to expand and strengthen this successful system. The party also wants to work to ensure that the waste hierarchy is devoted more attention throughout Europe. A prohibition against waste landfills like those applying in Germany is held to be unrealistic in some countries. Nevertheless, placement of waste in landfills is the "worst of all solutions". The objective of the CDU is to apply Germany's recycling know-how internationally while eliminating differences between countries in the use of landfills.

The questions were as follows:

- 1 What importance does the recycling economy have in comparison to other sectors with regard to
 - a. saving resources
 - b. climate protection
 - c. impact on jobs
 - d. intensity of investment
 - e. export orientation?
- 2 How do you assess the development of the sector over the last ten years?
- 3 What legislative projects (in the area of environmental policy) will you be pursuing in the next legislative period?
- 4 Product design already has a major influence on recycling. What is your stance on the topic of recycling-friendly product design? Does Europe / Germany need an "eco-design directive"?
- 5 Our municipal waste contains considerable potential in terms of recyclable material. Studies cite a total quantity of up to 7.8 million tonnes per year. How do you want to leverage the potential of these reusable materials?
- 6 A trend can be discerned in several sectors towards restrictions on competition as a result of local authorities performing tasks themselves. What is your stance towards efforts on the part of the public sector to assume control of services in the area of utilities and waste disposal?
- 7 We have identified varying tax rates distorting competition (for example, value-added tax) between municipal enterprises and private commercial businesses operating in the area of the utility and waste management sectors. What are the grounds for this? How do you want to ensure fair competition between all market actors in the coming legislative term?
- 8 Are you planning another revision of law governing public tenders? If so, what things do you want to change?
- 9 Execution and enforcement of laws and regulations that apply already at present are woefully insufficient in part. How do you intend to and will you ensure that execution and enforcement of laws are improved in the future (especially with regard to the Packaging Law (Verpackungsgesetz) and the Commercial Waste Regulation (Gewerbeabfallverordnung))?
- 10 What measures or initiatives are you planning to strengthen and further develop the recycling infrastructure at the international level (EU, foreign countries outside Europe), but also promote the export of German recycling technology?

The responses by the CDU, SPD, Bündnis90/DIE GRÜNEN, DIE LINKE and FDP were all clearly positive in their affirmation of environmental protection and recycling as such, but they varied greatly in terms of their opinions of how these objectives can best be achieved.

SPD

In the view of the SPD, the recycling economy is of tremendous importance with regard to saving resources, securing the supply of raw materials, climate and environmental protection. The Social Democrats want to have statutory framework conditions for higher collection and recycling rates, requirements regarding the manufacturing of resource-saving products, material recycling and avoidance of waste. Investment and innovation should also be encouraged by means of greater recycling rates. The Party sees a need for greater research efforts at present, among other things with regard to the unsolved problem of recycling rotary blades from wind-energy systems. At the legislative level, the SPD will be basing its platform on the EU Circular Economy Package as well as waste avoidance and assigning priority to materials recycling above thermal treatment and will continue to pursue the idea of a law on reusable materials. With

regard to an eco-design directive, the Party will work for recycling-friendly product design and subject manufacturers to obligations. In order to leverage additional potential for reusable materials, the SPD is arguing for uniform collection of reusable materials, an information campaign for consumers and investment in sorting and recycling technology. The Social Democrats do not see any trend towards the public sector taking control over the sector, but expressly advocate equal opportunity for municipal and private enterprises with transparent competition. Public services, according to the SPD, should not be subject to value-added tax so that these remain affordable for citizens. It is unclear, however, how it intends to deal with privileges for municipal enterprises with regard to value-added tax. As for international growth, the SPD points to the existing export initiative for environmental technology by the Federal Ministry for the Environment.





BÜNDNIS 90/DIE GRÜNEN

As expected, the circular economy is viewed by the Greens to be a key element in environmental policy. The party also emphasises the link between recycling and climate protection, calling for additional investment in the expansion of recycling infrastructure and more ambitious recycling targets by law, and explicitly recognises the importance of the industry as a job engine. With regard to the legislative arena, the Greens attach importance to the Packaging Law and the Circular Economy Package of the European Union. The party is sticking to its declared aim and objective of instituting a law on reusable materials, a quota for reusability and an expansion of legislation to cover all beverage cans and plastic disposable bottles. The Greens are also open to ecodesign

requirements for producers and entities introducing products in the market. As far as the question of competencies is concerned, municipalities should in the view of the Greens have the right to decide whether to take over services of general interest or to assign these to private entities based on the municipalities' right to self-administration. The Party is in favour of leaving value-added tax exemptions largely untouched, while public tender law is to be made stricter with regard to environmental protection, social and human rights obligations. As regards execution and enforcement, the Greens would like to set up a new central office at the Environmental Protection Agency. At EU level, the Greens are calling for an EU-wide ban on landfills.

DIE LINKE.

DIE LINKE

For die Linke as well, a good recycling economy serves as the basis for raw material cycles which reduce consumption of primary raw materials, thereby also reducing environmental pollution through the production of raw materials. The party believes that municipalities should have control over execution and enforcement in the local economy, however, and categorically rejects a trend towards privatisation of waste management which it sees. In the area of legislation, die Linke would like to see an improved waste hierarchy with long usage times, product upgradeability and a positive list of packaging materials. In the case of ecodesign, the party advocates a disposal levy on all products the amount for which is to be linked to a product design suitable for recycling

and it calls for a levy on consumption of primary resources in order to promote use of recycled raw materials. To exploit additional potential and improve the collection of materials, die Linke want to set up containers for small-scale electrical appliances and small metal objects under the supervision and control of municipal authorities. The party wants to avoid the VAT exemption by placing the provision of services under complete municipal responsibility and control. Social and ecological parameters are to be given more weight in public tenders. Similar to the Greens, die Linke would also like to establish a central state office to improve execution and enforcement. In the international area, recycling processes are to be made an integral part of development aid.



FDP

The recycling industry also plays a major role with the FDP, as in the view of the Liberals recycling will continue to gain importance both in Germany and worldwide in view of ever scarcer resources. At the same time, in view of the positive growth in jobs in the industry, the FDP would like to ensure fair framework conditions at all levels. In contrast to Die Linke and the Greens, the FDP assumes that recycling in Germany would grow even more strongly without the reassertion of municipal control and with fair competition between state and private market actors. The Free Democrats thus view strengthening of the private economy to be of particular importance and are opposed to laws putting private enterprises at a disadvantage compared to state-owned companies. The party rejects an "ecodesign directive", however, because in the view of the FDP this

would be tantamount to government interference in entrepreneurial decision-making. The Liberals would like to revise regulations governing individual waste streams such as municipal, commercial and construction waste with the aim of instituting more ambitious recycling rates. The party opposes different taxation for private and municipal actors and calls for a fair market. Public tenders should be non-discriminatory, transparent, based on due course of law and business-friendly. In the execution and enforcement of laws, the FDP would like to see an improved set of instruments for agencies in charge of supervision and controls as well as government requirements. Internationally, the Liberals want to work to strengthen awareness of the opportunities offered by recycling.

You will find the complete responses by the parliamentary party groups in the Bundestag surveyed at www.remondisk-aktuell.com



REMONDIS praised for its pioneering role

FEDERAL ENVIRONMENT MINISTER DR BARBARA HENDRICKS VISITS EUROPE'S LARGEST RECYCLING CENTRE

Federal Minister for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), Dr Barbara Hendricks, was welcomed to REMONDIS' Lippe Plant, Europe's largest industrial recycling centre, on Friday, 17 February 2017. Accompanied by senior civil servant Dr Thomas Rummeler and German MPs, Sylvia Jörrißen and Michael Thews, the minister first toured the plant in Lünen to see the wide range of technology and recycling operations for herself before meeting with REMONDIS managing directors to discuss the future of the recycling sector in Germany and Europe.

Their talks focused on a number of areas including introducing ecodesign guidelines for manufacturers and improving current legislation to increase the volume of recyclables collected in Germany – two key factors for making recycling even more efficient in the future. Looking at the exponential growth of the world's population, it will become increasingly important to close product cycles and recover the raw materials for re-use to ensure there are sufficient supplies of raw materials in the future. If the most is to be made of this potential and consumers are to continue to have access to affordable and eco-friendly products, then politicians need to initiate far-sighted legislation. The idea of introducing ecodesign guidelines – i.e. regulations that would make it obligatory for producers to design their products so that preferably all of the raw materials in them can be recovered and reused – was discussed as a medium-term political goal. This opportunity was also used to talk about the latest legislative changes and to suggest how they might be improved.

Herwart Wilms, Managing Director REMONDIS Assets & Services GmbH & Co. KG (right), welcomed Federal Environment Minister Dr Barbara Hendricks (3rd from left) and German MPs, Michael Thews and Sylvia Jörrißen (from left to right) to the Lippe Plant in Lünen

The fact, for example, that the latest draft bill regulating the use of fertilisers actually puts compost that does not cause water pollution – and that is so important for our soils – in a worse position than slurry would not appear to be the most effective way of protecting our lakes and rivers. REMONDIS believes there is room for improvement here. During the press conference following her visit, the Federal Environment Minister praised the role REMONDIS was playing here – showing others how modern legislation can be used to promote recycling and create jobs to grow sustainable development in Germany.

The minister spoke out in favour of having modern legislation that promotes both recycling and sustainable development



Just how realistic is a circular economy?

REMONDIS ACTS AS AN EXAMPLE OF BEST PRACTICE FOR TWO STUDIES IN NRW AND THE EMSCHER-LIPPE DISTRICT

Industrialised nations with a strong manufacturing sector that relies heavily on exports need to have access to a reliable source of raw materials. If they don't, then their employees' jobs will be put at risk as indeed will prosperity levels across the whole of the country. It is, however, no longer possible to assume that there will be a reliable supply of raw materials in the future. As is the case elsewhere, Germany is being forced to find new and innovative ways to get hold of the resources it needs. One solution here is to head towards a truly circular economy – to break the link between economic growth and the consumption of natural resources. The raw materials that have already been removed from nature must be constantly circulated so that they can be re-used again and again and again.

Setting up a circular economy is also a great opportunity to create a large number of new jobs

Both the State Ministry for Economic Affairs responsible for North Rhine-Westphalia (NRW) and the Emscher-Lippe regional authorities, therefore, each commissioned studies to be carried out to examine the possibility of creating a circular economy in their region – i.e. to look into the potential of fully recycling all available raw materials and breaking away from the traditional linear 'take, make, dispose' economic model. The reasons for this are clear: as global problems, such as climate change, dwindling supplies of natural resources and the destruction of ecosystems, continue to intensify so, too, is there a growing awareness

for the need to curb global warming, protect the environment and conserve our planet's natural resources by harmonising production and consumer behaviour.

Besides carrying out extensive desk research work, the study authors also held a large number of interviews with a variety of companies to identify the opportunities that were already available as well as to pinpoint the limits and risks. REMONDIS was one of the companies selected by both studies to act as an example of best practice. The principle of a circular economy has been at the core of the company's philosophy since the very beginning. Norbert Rethmann, the founder of the company, made sure that his guiding principle, "Recycling rather than disposal", was written into the company guidelines back in 1978. Since then, the ultimate goal of the whole of the Group has been to close an ever growing number of product life cycles. Since this family-run business was founded, therefore, its operations have focused entirely on creating a circular economy.

It is even possible to measure the amount of natural resources it saves: 30 million tonnes of recyclables are recovered by the company every year so that they can be re-used. One major reason for this success is the new recycling systems that the company has developed itself – systems that are being operated in state-of-the-art recycling facilities and reflect the principles of the circular economy. Both studies show that innovation is vital for the creation of a circular economy as the range of materials able to be recovered and re-used can only be increased if innovative recycling processes are developed and implemented.



What's more, the studies also confirm the limits of the circular economy, at least in today's society. Recycled raw materials must unite environmental protection, competitiveness and efficiency. They must be accepted by the market and by final consumers and have the same properties and high quality as primary raw materials. A great challenge, therefore, for recycling businesses such as REMONDIS when they set about developing their own products. With this in mind, REMONDIS has been calling for it to be made obligatory for manufacturers to design their products so that they can be easily recycled. It is often the case that it is simply impossible to recover materials for re-use because the individual substances built into the current product designs effectively disappear in the many tiny elements and composite materials. "You don't need to be a recycling expert to know that it is practically impossible to separate the individual materials from one another," commented Herwart Wilms, a managing director at REMONDIS. The company is doing everything in its power to cooperate with industrial businesses by running waste management systems on their behalf and acting as an adviser for product designers. This situation, however, also highlights the need for ambitious rules and regulations that deal with the recovery of raw materials. If the most is to be made of the opportunities available to safeguard our raw materials and curb global warming, then parliament needs to pass clear-cut and unambiguous legislation. A further obstacle exposed by the studies.

Another important factor for creating a truly circular economy (quite apart from the rules and regulations) is to make society more aware of the need to systematically separate their waste. Every company and every person can help increase the volumes of recyclables collected – and the impact would be immediate.

A further 8 million tonnes of recyclable materials could be saved if Germans separated them rather than throwing them into their residual waste bin. This volume alone would cut carbon emissions by 1.6 million tonnes a year. Well aware of this situation, REMONDIS has developed its "RECYCLING PROFESSIONALS" initiative that offers educational theatre shows

and teaching material. Its goal here is to use a variety of fun activities to teach children at an early age about the scarcity of raw materials and the importance of collecting recyclables and separating waste.

Besides leading to more innovations and economic growth, the studies confirm that the creation of a circular economy would, in all likelihood, result in more jobs at industrial and business locations. Ensuring there is a sustainable supply of raw materials is a global challenge that everyone must face no matter where in the world they may be. The 32,000 people employed by the REMONDIS Group around the globe all have one and the same goal: to protect the environment and create a sustainable circular economy. REMONDIS is one of the biggest employers in Germany and is continuously growing its workforce.

Both studies conclude that a circular economy is possible in both regions, if the three following conditions have been fulfilled: firstly, companies and consumers must be made aware of this issue, for example by stepping up PR work. Secondly, technical innovations must be developed to increase recycling levels and thirdly local government must show and lead the way forward by passing modern environmental laws. Only then is it possible to promote and actively support a circular economy.



It is possible to measure the amount of natural resources it saves:

30 million tonnes

of recyclables are recovered by the company every year so that they can be re-used

"A circular economy should, above all, lead to more innovations and economic growth at industrial and business locations."



24 refugees working at the REMONDIS Group

FURTHER MEASURES TO BE INTRODUCED TO MAKE IT EASIER FOR REFUGEES
TO JOIN THE RECYCLING COMPANY



Germany's current workforce consists of 50 million people and this figure is expected to have dropped to 43.5 million by 2030. Federal Minister for Economic Affairs, Sigmar Gabriel, recently commented on this development at the REMONDIS Forum in Goslar when he said: "It is vital that the country responds to this extremely rapid demographic change and ensures that the refugees arriving in Germany are successfully integrated into society. What is essential here is having a strong and well-functioning economy."

Based in the Westphalian city of Lünen, REMONDIS is well aware of its responsibilities as the largest recycling company in Germany and has been making every effort to help refugees get a foothold on the job market. 24 refugees are currently working at the company, ten of whom have started an apprenticeship. They are training to become insulation specialists, pipe fitters, professional truck drivers or IT specialists or are taking part in special apprenticeship preparation courses.

The Rethmann family are, therefore, staying true to their company's mission of accepting challenges and taking responsibility.

"The private sector is one of the main cornerstones of our society and so it, too, must do its part to ensure the refugees who have recently travelled to our country are successful integrated," commented Norbert Rethmann, honorary chairman of the supervisory board of the RETHMANN Group. Taking responsibility also means opening up new horizons for these people who have been forced to flee their homes to escape violence and war, he continued.

It is a well-known fact that having a job is the best way for a person to become well integrated into society. Having your own income and getting to meet people in the workplace create the best conditions to start a new life in a new country. An apprenticeship is a great way for 18 to 25 year olds to lay the foundations for a promising career and a secure future in Germany.



◀ **Siyamend Ismail** from Syria (30) came to Germany two years ago and now works as an industrial cleaning specialist at REMONDIS Industrie Service in Recklinghausen

Yeazdan Sher Ahman from Syria ▶ came to Germany twelve months ago; last year he did an internship at REMONDIS IT Service in Lünen

“The private sector is one of the main cornerstones of our society and so it, too, must do its part to ensure the refugees who have recently travelled to our country are successful integrated.”

Norbert Rethmann, Honorary Chairman of the Supervisory Board of the RETHMANN Group



The successful collaboration work between the company and local initiatives is certainly one of the reasons why it has already been able to employ a number of refugees. These volunteers not only provide refugees with the support they so badly need but also help companies to overcome a number of obstacles, many of which are extremely time-consuming. Language problems can also make it difficult for companies and refugees to communicate with each other.

Moreover, explanations often need to be given to clarify exactly what the different careers entail: what Syrian refugees, for example, picture the work of an electrician to be has very little in common with the job of an electrician at a large German

industrial estate. Furthermore, voluntary groups offer valuable support when it comes to dealing with red tape and explaining cultural differences.

“We are currently working on drawing up concepts that will enable us to offer further refugees a career at REMONDIS. We can, though, be proud of what we’ve already achieved so far,” explained Frank Dohmen, Head of HR at the REMONDIS Group. The recycling company will continue to do everything in its power to take on more refugees. At the end of the day, REMONDIS is hoping that by taking responsibility now and helping those arriving in Germany, it is also ensuring that it has a well-trained workforce in the future.

It is a well-known fact that having a job is the best way for a person to become well integrated into society. Having your own income and getting to meet people in the workplace create the best conditions to start a new life in a new country



Hassan Sow from Guinea (22) arrived in Germany ► five years ago; last year, he joined REMONDIS Medison in Lünen where is currently doing an apprenticeship to become a warehouse operator



REMONDIS strengthens its regional presence in the Netherlands



ACQUISITION OF BRUINS & KWAST BIOMASS MANAGEMENT BRINGS COMPANY EVEN CLOSER TO ITS CUSTOMERS

REMONDIS' operations on the Dutch market continue to gather pace with the company taking over all shares in the Dutch family-run firm Bruins & Kwast (based in the Province of Gelderland), effective from 01 January 2017. The two companies have much in common: both are long-standing, family-run businesses that see themselves as being a regional provider of environmental and recycling services no matter where they may be located. Tradition, local colour and proximity to its customers are, therefore, values that are just as important to REMONDIS in the Netherlands as well.



With an annual turnover of around 10 million euros, Bruins & Kwast's operations focus on recycling park and garden waste, old timber and sludge as well as operating a household recycling centre. REMONDIS is planning to make the most of this takeover to strengthen and further expand its recycling and waste management activities in the country. Bruins & Kwast and REMONDIS have had dealings for many years – both on a business and personal level.

Bruins & Kwast has five guiding principles that have formed the basis of its corporate philosophy for many years now. These further underline what a perfect match this company is for REMONDIS and how its services benefit its customers:

Professional: "We are true specialists in our field!"

Trustworthy: "We do what we say!"

Eco-friendly: "We think green & we act green!"

Socially aware: "We are well established & well aware of our social responsibilities!"

Practical: "We solve problems!"

Dr Andreas Krawczik, managing director of REMONDIS Nederland, reiterated these shared values and explained just how important this acquisition was for the company:

"We're really excited to have been given this opportunity to be able to continue offering Bruins & Kwast's traditional business and customer-oriented solutions. REMONDIS is itself a successful family-run firm and so we really can identify with these traditions. We will also be looking to expand our company – by growing our customer base as well as by acquiring other businesses. By continuing along this path, we will be able to further improve our services which will benefit both our private and public sector customers."

Norbert Rethmann, Honorary Chairman of REMONDIS' supervisory board, visited the new company Bruins en Kwast in Goor. From left to right: Norbert Rethmann, Henk Kwast, Managing Director Bruins & Kwast, Dr Andreas Krawczik, Managing Director REMONDIS Nederland



Comparing apples with oranges

NEW FERTILISER REGULATION (DÜNGEVERORDNUNG) ASSIGNS SAME STATUS TO LIQUID MANURE AND COMPOST IN THE FACE OF EXPERT ADVICE TO THE CONTRARY

The new Fertiliser Regulation is intended to improve water conservation. Which is no doubt a good idea with a view to the quality of drinking water, but in terms of the details goes well beyond the aim. This is because lawmakers have simply assigned the same status to all organic fertiliser in the revised law. The different ways that they work and the negative effects of individual fertilisers are for the most part not taken into account. A fatal signal for the most environmentally friendly of all the substances that improve the soil: compost.

Nitrogen is an indispensable nutrient for all life on earth. But here as well, the axiom is: too much of a good thing has considerable negative effects on ecological systems. Although run-off into bodies of water has been significantly reduced over the last few years, run-off from agriculture constitutes a growing problem. Liquid manure is being applied in vast quantities on agricultural land, as extensive livestock farming has no other place to put livestock excrement. The debate over the revision of the Fertiliser Regulation has thus been raging for 3 years now. The background to this Regulation is the EU Nitrates Directive, which calls upon the Member States to adhere to certain limits in ground water. The German Fertiliser Regulation is actually the revision of the original Liquid Fertiliser Regulation and is intended to codify good technical practice in the use of fertilisers as well as reduce the risks associated with use of these substances. For good reason the original Liquid Fertiliser Regulation was limited to commercial fertiliser of animal origin, as this has also been shown to be the source of high nitrogen run-off.

Lawmakers have now assigned all organic fertilisers the same status in the revision of the Fertiliser Regulation, however, thus placing not only liquid fertiliser, but also farmyard manure, fermentation residues, compost and sludge, in the same category in order to be able to apply uniform rules

to these different materials. Specifically, this involves the availability of total nitrogen in individual fertilisers, whereby 90% availability has been determined for slurry from cattle or pigs, up to 60% for liquid manure, while for compost, depending on the quality, it is only 3 to 5%. In other words: when compost is used, only 3 to 5 kg per 100 kg of total nitrogen applied is available. The negative impact on ground water by compost is correspondingly low. Farmers have to calculate the entire nitrogen content in their balance sheet on the fertiliser used, however, without this leading to any true benefits. The difference in nitrogen is required to promote humus formation. For this reason, in addition to REMONDIS, various associations and even environmental associations like NABU have over the last few months been intensively endeavouring to have the positive effects of humus fertiliser for soil and climate separately assessed and adequately taken into account.

But neither the German Ministry for the Environment nor the Ministry of Food and Agriculture have been prepared to take the advantages of humus fertiliser sufficiently into account. Institutions that promote soil protection, humus formation and the storage of carbon, should not block off these options themselves by instituting ever more restrictions.

REMONDIS, NABU and other associations are calling for the positive effects of humus fertiliser on the environment and soils to be assessed separately



Putting liquid fertiliser and compost in the same category by law does not make any sense with a view to protection of the environment and water quality



Accepting returns of used electronic devices – fines looming beginning in June

THE AMENDMENT OF THE GERMAN ELECTRICAL AND ELECTRONIC EQUIPMENT ACT (ELEKTROG) ADOPTED IN NOVEMBER 2016 IS ENTERING INTO FORCE

Businesses dealing in electronic devices that fail to live up to their obligations to accept returns of equipment stipulated by law face juicy fines beginning in June 2017 at the latest. Adopted last November, the revised Electrical and Electronic Equipment Act (Elektrogesetz) requires for the first time specific proof of quantities beginning in April of this year. Failure to abide by its stipulations is punishable by fines of up to 100,000 euros. According to the German Federal Ministry for the Environment, enforcement is to be strengthened and law-abiding commercial enterprises protected against free riders. All commercial establishments with store, warehouse and shipping spaces of 400 m² and above are subject to the obligation to accept returns.

The Electrical and Electronic Equipment Act [ElektroG] is the German transposition of the European WEEE Directive regulating the introduction on the market, return and recycling of electrical and electronic devices. The German Federal Ministry for the Environment is in charge at the policy level. Legal and technical supervision as well as monitoring of the market is in the hands for the Federal Environmental Agency. The aim and objective is to permanently boost the quantity of electrical and electronic devices returns taken back by at least 65 per cent for all new equipment introduced in commerce beginning in 2018. This will save on resources and the environment.

In actual practice, acceptance of returns by businesses is lagging, however, as the Electrical and Electronic Equipment Act have thus far not provided for any sanctions on refusal to accept returns. This impression is not least corroborated by store and online checks carried out by Deutsche Umwelthilfe and testberichte.de. Thus, for example, Deutsche Umwelthilfe (DUH) has already sent the first admonishments to companies that register high levels of sales revenue like IKEA and Amazon and announced additional campaigns, but for the time being is not resorting to court action.





“WEEE Return helps business implement statutory requirements, from IT support to the provision of suitable container systems, collection, transport and recycling all the way to reporting,”

is how Gerhard Jokic, Managing Director of WEEE Return, sums it up

The new arrangement is additionally complicated by a restriction with hazy wording. Accordingly, the obligation to accept returns is to be limited to five used devices per device type if no new equipment is purchased. The draft act leaves completely unresolved, however, whether this is supposed to mean five devices per year, per end user or per request for acceptance of return. The draft act and statements by various delegates to the German parliament suggest, however, that five respective used devices per return transaction are meant. Theoretically, consumers could thus demand that businesses accept returns of five used devices every day anew without purchasing any new device, even if this scenario appears unrealistic. For businesses, this change in stipulations is especially important, as it means that the list of fines under the Electrical and Electronic Equipment Act is being expanded. In the future, it will be deemed to constitute an administrative offence if a business does not take back a used device, or does not do so correctly, completely or in due time. Such cases are subject to hefty fines of up to 100,000 euros.

At a special conference on “Enforcement and Further Development of Product Responsibility 2017” staged in Berlin on 19 January, consequences and recommended actions for the sector were discussed. The participants were largely in agreement that various regulations like the Electronic and Electrical Equipment Act and the Battery Act should be comprised together in the same law in order to boost transparency and optimise enforcement.

Moreover, the branch issued a plea for public-relations work to be made part of product responsibility in order to better inform consumers. Considerable need to catch up is seen with regard to the enforcement of the regulation. Stricter controls on registration, notification and monitoring are held to be crucial preconditions for effective implementation of the regulation with the objective of countering the flagrant “disappearance” of old equipment.

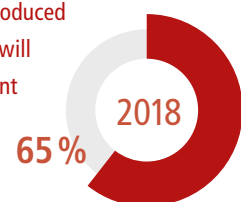
At present, professional return systems are gearing up to ease worries on the part of business enterprises over costly sanctions being imposed on them, including WEEE Return, which is based in Berlin. Its Managing Director, Gerhard Jokic, is offering to help out interested businesses. “WEEE Return helps the trade implement statutory requirements, from IT support to the provision of suitable container systems, the collection, transport and recycling all the way to reporting,” according to Jokic, and recommends that businesses introducing electronic and electrical equipment in the market should definitely seek professional support with regard to the collection and recycling of used equipment.



WEEE Return helps electronic and electrical equipment businesses, protecting them against significant sanctions. You will find additional information on this here



The objective is to permanently boost the quantity of electronic and electrical equipment returned to over 65 per cent of all new equipment introduced in commerce beginning in 2018. This will save on resources and the environment



Business continues to grow in Belgium

REMONDIS ACQUIRES FLEMISH RECYCLING FIRM EXTENDING ITS OPERATIONS IN THE REGION

At the end of 2016, REMONDIS took over the Belgian family-run company, BVBA Vervoer Depoorter – an important step towards expanding its recycling business in the Benelux countries. Thanks to its acquisition of this Ostend-based firm, REMONDIS has succeeded in considerably growing its operations in the country, particularly in the west of Belgium.

Depoorter is a well-known name in the Ostend region, leading the market when it comes to offering container services and handling commercial and mixed construction waste. REMONDIS is looking to make the most of this strong position and to further increase the volumes of materials collected and treated there. At the same time, it wishes to grow its activities in the neighbouring coastal regions. Werner Hols, a managing director at REMONDIS International, believes that the takeover of Depoorter (officially valid from 01 October 2015) is a long-term investment that will help promote sustainable development across the whole of the region. What's more, he continued, this was an important location as it could support REMONDIS' UK activities in the area of refuse derived fuels (RDF).

It all began with a municipal contract

REMONDIS Belgium first entered the Belgian market six years ago when it began offering its services in Wallonia, in the south of the country. It had previously taken part in a Europe-wide tender process and been awarded a major contract by IDELUX (an association owned by a group of local authorities) to collect household waste from 50 districts in the Belgian province of Luxembourg. One particular challenge that the company had to face here was the fact that this region is so sparsely populated. Double-chamber waste collection trucks and pay-as-you-throw systems (measured by weight) were introduced across the area to ensure the complex task of storing and collecting residual and organic waste was carried out efficiently.



In 2015, Depoorter collected and processed almost 80,000 tonnes of recyclables in the West Flanders region



All in all, REMONDIS currently serves more than

500,000

people living in Belgium



Further public sector contracts have followed since then – for example in Antwerp, where REMONDIS is responsible for collecting household waste and organic waste. In addition to this, the company also works for the municipal association IBW in the province of Walloon Brabant collecting household waste from a number of different districts (around 80,000 local inhabitants) south of the capital city Brussels. One of REMONDIS' latest successes is the contract awarded by INTRADEL, a large waste management and recycling association owned by a number of different local councils. Thanks to this contract, REMONDIS has been responsible – since the beginning of 2017 – for collecting waste from the 120,000 people living in and around Liege as well as for the subsequent invoicing process. Modern electronic pay-as-you-throw systems and double-chamber waste collection trucks are being used here, too, to store and collect residual waste, organic waste, packaging, paper and cardboard. All in all, REMONDIS currently serves more than 500,000 people living in Belgium.

Close collaboration between the sister companies

Several different REMONDIS Group companies operate on the Belgian market besides REMONDIS Belgium's own businesses. XERVON, BUCHEN and REMONDIS Industrie Service

all have branches there, all of which primarily provide services for industrial businesses.

A further name joined the network at the beginning of the year when REMONDIS' firm, RHENUS Recycling, purchased a share in GRL Glasrecycling, a family-run company based in Lummen, Flanders.

With the network spread across the whole of the country, there is a huge potential for the different companies to collaborate closely with one another. Matthias Illing, managing director of REMONDIS Belgium, commented: "We have a very good reputation among our public sector clients. Our task now is to build on this and grow our activities in the area of commercial waste. We will be making the most of the opportunities available here in Belgium to work with our sister companies, such as BUCHEN, REMONDIS Industrie Service and GRL Glasrecycling."

GRL Glasrecycling joined the REMONDIS Group's Belgian network at the beginning of 2017



REMONDIS[®]
WORKING FOR THE FUTURE

BUCHEN[®]
WORKING FOR THE FUTURE

XERVON[®]
WORKING FOR THE FUTURE

A REMONDIS crash course for management trainees

TRAINEE DAYS PROVIDE A CHANCE TO NETWORK AND TAKE A CLOSER LOOK AT THE GROUP

This year got off to an interesting start for 24 REMONDIS trainees and assistants when they were given the opportunity to take part in the company's Trainee Days. All trainees receive an invitation at some stage during their traineeship to travel to Lünen for two weeks so that they can prepare for their future role within the group.



The objective of the REMONDIS Trainee Days is to provide the participants with in-depth knowledge of this family-run business, to enable them to hone their negotiating skills and to give them a chance to network. Those taking part in this year's Trainee Days were first welcomed by Frank Dohmen, HR manager of the REMONDIS Group, and then taken on a tour around the Lippe Plant.



Being able to talk to so many different managers provides the trainees with a wealth of information that will help them in the future as they grow their careers

The alumni trainee get-together is always a popular part of this event. This is the moment when the participants are able to talk to former trainees to find out more about their careers within the REMONDIS Group and to ask any questions they may have about the different fields of business and promotion opportunities. And this year was no exception with there being a lively discussion from beginning to end. Other events organised during these two weeks included seminars on business etiquette and the fundamentals of waste law.



Indeed, a whole variety of events had been planned throughout the two weeks. One of the highlights was most certainly the trip to the harbour town of Bremerhaven where the trainees not only got to see REMONDIS' subsidiary, BEG, but also to visit the Klimahaus which took them on a "journey" through the world's different climate zones. A networking evening then rounded off this highly successful day. All the other places visited during the Trainee Days were, of course, well worth seeing and just as informative. The first trip took the participants to the City of Oberhausen with a tour of the waste incineration plant and the public private partnership, Wirtschaftsbetriebe Oberhausen. Other destinations included a visit to the "scrap island" run by

REMONDIS' subsidiary TSR in Duisburg, AHE's biogas plant in Witten and the sales packaging sorting plant in Bochum. No matter where they went, the trainees were always welcomed by the local management teams who discussed the business processes and challenges of their particular field.

During the visit to the "scrap island", Dirk Saerbeck, regional manager of TSR Rhein-Ruhr, gave a talk on management skills and the importance of having a positive working environment. Being able to talk to so many different managers provides the trainees with a wealth of information that will help them in the future as they grow their careers.

THE RECYCLING PROFESSIONALS reap applause in Rees

You will find additional information and learning material at the RECYCLING PROFESSIONALS website



REMONDIS EDUCATIONAL PROJECT BANKING ON COOPERATION WITH EDUCATIONALISTS

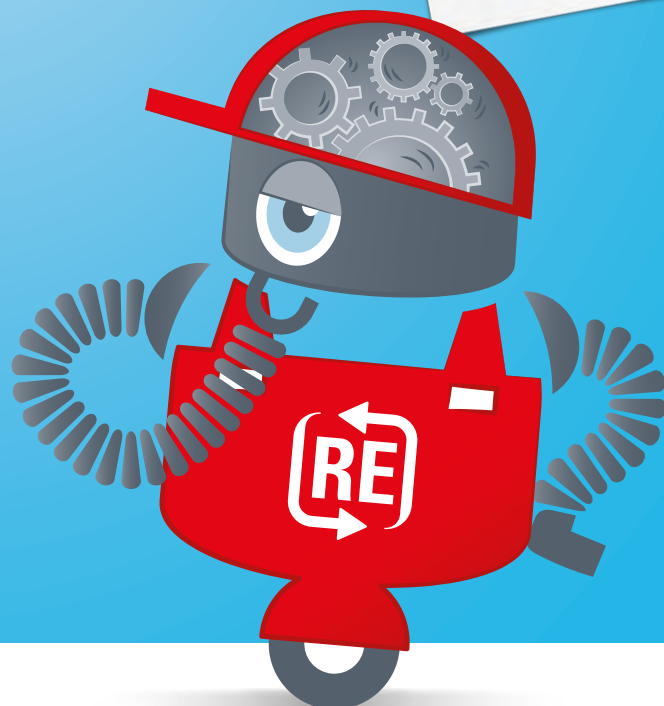
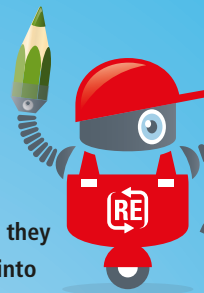
Friedhelm Susok and Jürgen Schardt are heavily weighed down with large plastic bags as they enter the front of the gymnasium at Haldern Elementary School, which they have turned into a stage. "On the way to you, we collected everything that we found along the side of the road," says Friedhelm. The two begin to unpack the contents of their bags. When they finish, the floor of the gymnasium is strewn with tins and aluminium trays, a piece of styrofoam and a lemon, dried leaves and a used toothbrush. What is a raw material and recyclable here? These are the questions examined once again at the learning theatre THE RECYCLING PROFESSIONALS, whose performance is followed by 200 children from Haldern with bated breath.

Social pedagogue and entertainer Susok and co-moderator Schardt, who as Professor Schardt contributes useful facts throughout the 75-minute show, once again have the mission of training all the children into real "RECYCLING PROFESSIONALS" with their performance. Thanks to the animated robot, Robbi, who has been projected onto the big screen, the children quickly grasp what waste is to be collected in the recycling bin, the organic waste bin and the paper bin so that it can then be recycled, and what residue material is supposed to be placed in the residual waste bin and end up in the incineration plant. At the end of the learning theatre, the freshly appointed RECYCLING PROFESSIONALS are in agreement: "If we sort our rubbish, nothing bad can happen to the earth!"

The elementary school in Rees' district of Haldern as well as the two nursery schools there joined together for the staging of THE RECYCLING PROFESSIONALS in Rees because they were above all convinced of the educational value of the project.

This is because the REMONDIS educational project was developed by experienced social pedagogues especially for nursery schools, child-care centres and schools. Following the entertaining show by the two entertainers, the child-raisers and teachers moreover receive appropriate learning material on the topic of environmental education adapted to the age of the youngsters. The close collaboration with the pedagogues makes it possible for them to integrate the topic in the curriculum long term and individually. It was against the background of the need for environmental and climate protection recognised in the areas of policy-making, business and society and to secure sources of raw materials over the long term that THE RECYCLING PROFESSIONALS was created by REMONDIS in order to sensitise children and teenagers to this topic at an early age.

Interested child-care centres, elementary and secondary schools as well as additional educational facilities can contact the RECYCLING PROFESSIONALS directly by e-mail at bildung.dialog@wertstoffprofis.de



The customer is king – the environment the queen

WORK ON BEHALF OF MORE SUSTAINABILITY MAKE SWECON BAUMASCHINEN GMBH AND REMONDIS STRONG PARTNERS



Swecon Baumaschinen GmbH is Germany's biggest trader and importer of Volvo construction machinery. With 18 sites and 200 installers specially trained for Volvo construction machinery, the company serves more than two-thirds of its market. In addition to the sale of Volvo construction machinery, Swecon's portfolio includes above all services relating to the XXL vehicles. This means repairs, maintenance, leasing, sale of used machinery as well as tailored solutions for especially demanding building sites.

In addition to the high level of quality and customer satisfaction, Swecon Baumaschinen GmbH is notable for its major commitment to sustainability and environmental protection. Its guiding company values are without exception compatible with those of REMONDIS. The two enterprises

have been working together in a partnership-like manner for more than two years. For Swecon, optimum waste management within the company is not only an important factor conditioning success – it is also an obligation to the environment. From substances containing oil to metallic substances all the way to packaging material, they produce a wide range of residual substances every day.

Every year, the Swecon Baumaschinen branches cut carbon emissions by at least 40 tonnes



40 t CO₂



By equipping each Swecon branch with the exact bins they need, the staff have shorter distances to walk and more time to focus on their actual work

“Thanks to REMONDIS, we can not only assert that we have attained a very high level of quality and environmental standards in this area, but also that all waste is channelled into the most sustainable recycling path,” says Stephan Rothe, in charge of Procurement at Swecon.

Swecon has already opened two new sites this year, the planning of which REMONDIS has been involved right from the outset: one in Siek, northeast of Hamburg, and the other in Monheim, which will be moved into in the near future. With the site in Siek, the company, whose headquarters are located in Ratingen, is seeking to significantly boost the productivity of its work. Thus, for example, it has invested in an 8-tonne crane that makes it possible for installers to replace heavy sub-assemblies more simply and quickly. Creating a possibility to drive a lorry through the facility also saves time and tedious manoeuvring when leaving the premises. Just as important to optimisation, however, is also above all optimum waste management. To be able to tailor an individual strategy for the site, REMONDIS analysed, for instance, spatial factors, waste balance sheets of comparable plants or the routes that staff members have to cover by foot in advance. After this, a system was devised to cover all waste categories with as few containers as possible and that can be adapted precisely to the quantity accruing as well as the places where waste accrues.

Swecon Baumaschinen GmbH also meets its claim to sustainability through the waste management of REMONDIS: “By equipping itself with our special containers, Swecon

can collect all the waste in separated categories. This is crucial to then be able to recycle the material at high quality levels,” explains Mark Bördeling, Key Account Manager at REMONDIS. The well thought-through container arrangement furthermore shortens the distance staff have to walk.

Many hours of work each year can be used more effectively to concentrate on the company’s core competence. On top of this, smart conveyance of information helps save high transport costs. Fewer emptying actions at the same time reduce CO₂ emissions. Thanks to the professional waste management concept employed at each of its sites, Swecon Baumaschinen GmbH saves at least 40 tonnes of CO₂ each year. That is roughly as much greenhouse gas as a mid-size car emits in 340,000 kilometres. Almost the distance between the earth and the moon.

The company has now had its model contribution to climate and environmental protection documented in the form of a REMONDIS sustainability certificate. Among other things, the certificate shows that Swecon is able to avoid the consumption of 26,000 kilograms of petroleum, 64,000 kilograms of wood, 2,400 kilograms of metal and more than 350 kilograms of minerals each year solely through the sustainable recycling of packaging waste, paper and cardboard, used wood and used metals. On top of this, at least as many waste substances containing mineral oils are saved. Thanks to the environmentally sound recycling and thermal treatment of these substances, Swecon also makes an active contribution to easing pressure on natural reserves of raw materials.

More than just marketing:
Find out about the advantages for companies that have their contribution to environmental and climate protection certified here



“By equipping itself with our special containers, Swecon can collect all the waste in separated categories. This is crucial to then be able to recycle the material at high quality levels.”

Mark Bördeling, Key Account Manager at REMONDIS



Public-private partnerships: a way to increase community wealth

BY CHRISTIAN MONREAL, REMONDIS ASSETS & SERVICES GMBH & CO. KG

The debate over the usefulness of community and private cooperative ventures, so-called public-private partnerships (PPP), has been raging for years. Especially in times when municipalities face major challenges, but also considerable uncertainty vis-à-vis the private economy, it is advisable to analyse the topic in a rational manner. After all, what really matters is the answer to the question: can municipalities increase the wealth of the community through public-private partnerships?



Numerous examples of successful PPP models and their advantages both for public and private partners are discussed at length in our special PPP issue

Examples of public-private partnerships can be found in almost all walks of life in our society. Be it in schools or child-care centres, in the construction of a new section of motorway, in the construction and operation of nursing homes, in the supply of energy and water or the collection and treatment of waste and sewage – in all of these areas services are being performed in public-private partnerships. Even the most important national standards organisation, DIN e.V., has been a public-private partnership since 1975. It is responsible, for instance, for all standards being set in the public interest.

Public perception of public-private partnerships is as wide-ranging as their areas of work. While advocates are fond of citing the economic successes of these joint ventures, the media is increasingly propagating a negative picture of PPPs. Why is this so? Lack of information is no doubt one reason, technical sloppiness another.

Public-sector motives

For municipal partners, there are numerous reasons favouring a PPP: The resources of private enterprises can be used for public tasks, while the risk is split up in investment decisions, the use of market and competitive structures or also the advantage of tasks being efficiently performed in a reliable, economical manner can serve as the motive for founding a PPP. Another positive effect is that the financial resources of municipalities that are recuperated through PPPs translate into greater options in the pursuit of other strategic objectives. Often, the possibility of securing stable fees serves as the sole aim of a public-private partnership.

Another aspect in the motives for a municipality is the ability to select between a contractual or an institutional PPP:

The first model is based exclusively on a contractual relationship between the partners such as is the case, for example, in a concession model. The structure of the agreement or controls on adherence to the agreement are the sole possibility under this model for the municipality to stipulate its desires regarding the service to be rendered and successful execution. One has to weigh out the interest in catching up with overdue investments and hence an improvement in the infrastructure against future obligations to effect payments to the private partner.

The model for the institutional PPP is based on the founding of a joint economic structure or the involvement of a private partner in an existing enterprise. This ensures that the public sector, which generally keeps the majority of shares in the company, is able to retain control. It can work together with

Definition and features of PPPs

Public-private partnerships are understood to mean all forms of cooperation between a community facility and a private enterprise. These partnerships above all thrive on close collaboration, but also from the long-term nature of the undertaking, sharing of risk, joint further development and, not least, joint financing as well. This is because PPPs above all offer the public sector an alternative procurement variant.

Christian Monreal, Desk Officer for Distribution Steering, Municipal Distribution and Public Affairs



Christian Monreal has worked for REMONDIS Assets & Services GmbH & Co. KG in the field of distribution steering since 2005. His areas of specialisation include municipal distribution as well as public affairs. Christian Monreal has already published guest articles as an expert on public-private partnerships in the journal UNTERNEHMERIN KOMMUNE (publisher & chief editor: Prof. Dr. Michael Schäfer).

the private partner to further develop the company. In addition to the one-off sales revenue for shares in the joint venture, the public sector also participates in profits.

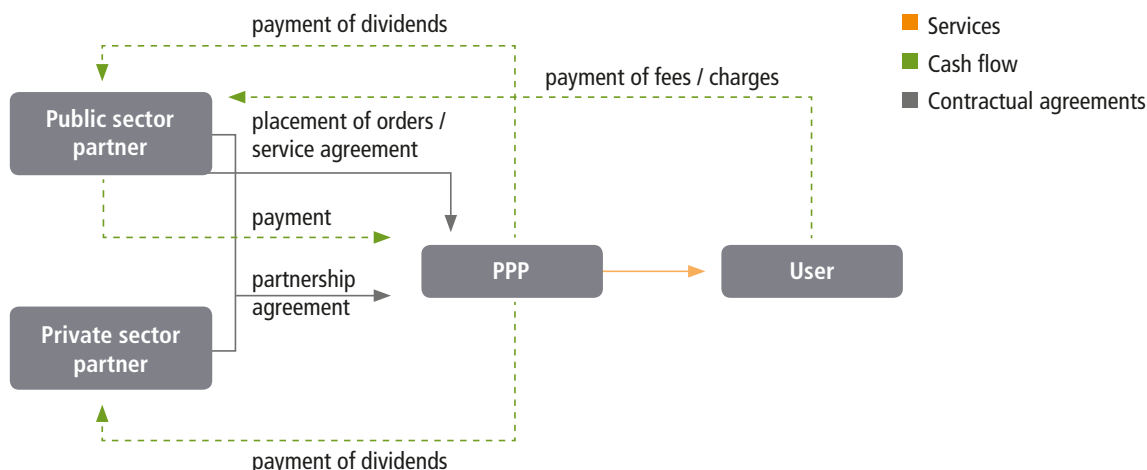
Even if both forms of PPPs have to be evaluated in a discriminating manner as a result of their major differences, one thing they have in common is that the selection of the right partner is of key importance. This fact accordingly needs to be taken into account in tender procedures.

German and European lawmakers have therefore deliberately laid down non-price-related criteria for the award of contracts in laws in order to avoid forcing public sector actors having to opt for the "cheapest" bidder or, in the case of a PPP, the partner "offering the most".

The best partners are namely those that pursue similar strategic objectives. In addition to a sustainable footing for the company and company management, this above all includes ensuring that excellent services will be rendered as demonstrated by means of references.

In closing, the initial question as to whether PPPs can increase community wealth can be answered with a clear yes in the case of institutional PPPs. The procurement process is optimised in such a manner so that, in addition to the one-off proceeds, it also generates financial assets in the form of ongoing earnings.

The institutional PPP model



Freiburg Cup replaces disposable cups

FREIBURG REDUCES WASTE VOLUMES IN THE INNER CITY WITH A REUSABLE SYSTEM

Freiburg is not only boosting the international status of the Green City – it is also moving its ecological profile up another notch. Only recently it became one of the first major German cities to launch a reusable cup system for coffee to go throughout the entire municipal area. Coffee to go is also very popular in Freiburg, but causes a waste volume to a tune of 12 million empty cups a year to accumulate there.



Abfallwirtschaft und Stadtreinigung Freiburg



Mayor Gerda Stuchlik and Michael Broglin, Managing Director of ASF, at the official launch of the Freiburg Cup

All 72 businesses that have already joined the deposit system are listed here



Used disposable cups cannot be recycled and have to be disposed of as residual waste. Damage to the environment by coffee packaging is under discussion throughout Germany, but no political solution to the problem has emerged yet. Freiburger Abfallwirtschaft und Stadtreinigung (ASF), a public-private partnership between REMONDIS and the City of Freiburg, has for this reason developed the Freiburg Cup and a strategy to reduce waste together with café operators.

The most important partners of the Freiburg Cup are the operators of cafés and bakeries that sell coffee to go. As an alternative to disposable coffee cups, the ASF produces its reusable cups from stable plastic that holds up in dishwashers. Café businesses do not incur any costs, the City of Freiburg is bearing the costs for launching the system, while coordination is in the hands of the ASF.

Customers also have a choice between the returnable cup and a paper cup. The deposit on the Freiburg Cup is 1 euro. Used cups can be returned at any one of the 60 businesses in the inner city taking part in the initiative. The cups are washed there, with defective or missing cups being replaced by the ASF. Merely the covers are disposable. After use, they are supposed to be disposed of in recycling bags.

The concept offers numerous advantages for participating cafés: not only do they reduce the quantity of residue waste – they also demonstrate that they are making an active contribution to cleanliness in Freiburg. “The more people who take part, the more effective the campaign will be, both for the cafés selling coffee as well as for consumers,” sums up the Mayor, Gerda Stuchlik. According to ASF Managing Director Michael Broglin: If the Freiburg Cup gains acceptance among customers, the campaign will be expanded to additional city districts beginning in the summer of 2017”.



14,000

Freiburg Cups are already being used

A step forward in sustainability for Poland

CITIZENS LOOK FORWARD TO STABLE FEES OVER THE NEXT THREE YEARS

REMONDIS Sp. Z.o.o. has been in charge of household waste in the municipality of Marki, located in eastern Poland near the capital city of Warsaw, since the beginning of 2017. The approximately 30,000 inhabitants of the city are looking towards the next three years with optimism in this regard: waste fees are to remain stable.

REMONDIS Managing Director Gerard Sobota signed the new agreement together with Zbigniew Zalas, the Deputy Mayor of the Municipality of Marki, setting out the collection and recycling of household waste for the years 2017 to 2019 as far back as 2 September 2016.

Thanks to what has now become a major network of around 50 sites in Poland and long years of experience with the collection of household waste, REMONDIS Sp. Z.o.o. was able to offer the Municipality of Marki the most inexpensive services. Both those persons in charge in the Municipality as well as the city inhabitants are particularly pleased that waste management fees will not rise in the coming years, stressed Zbigniew Zalas upon the signing of the agreement.

Already months before this, REMONDIS was very well-prepared to begin rendering the services in January. Thus, modern collection vehicles have been driving through the streets of Marki for the first time since the beginning of the year. "I am very satisfied with the start-up of the waste



management services in Marki. We have invested both in new equipment as well as in the expansion of manpower at the company here in Poland," emphasises Gerard Sobota, REMONDIS operations manager in Warsaw. A total of 10 jobs have been created through winning the tender in Marki.

REMONDIS Sp. Z.o.o. has not only assumed the task of waste management in all sectors in Marki since January – since then it has also been operating the collection point for separated household waste in central Marki.

Gerard Sobota (above left), REMONDIS Managing Director in Warsaw, and Zbigniew Zalas (above right), Deputy Mayor of the city of Marki, at the joint signing of the agreement

"I am very satisfied with the start-up of the waste management services in Marki. We have invested both in new equipment as well as in the expansion of manpower at the company here in Poland."

Gerard Sobota, REMONDIS Operations Manager in Warsaw

Stable fees until 2019 – all those living in Marki are happy REMONDIS is their service provider



Mobile on a secure footing

REMEX MAKES A SPLASH IN THE AREA OF ROAD-BUILDING WITH ITS SUBSTITUTE BUILDING MATERIAL GRANOVA®

In building streets and roads in Germany, recycled building material or secondary industrial products have been in use for a considerable period of time. By the same token, North Rhine-Westphalia is one of the leaders in the area of sustainable road-building, where around 4 million tonnes of secondary building material were produced – primarily in the construction of road embankments – in the years 2004 to 2014.

REMEX®
WORKING FOR THE FUTURE

granova®
Ein guter Grund

Road-building measures often involve the use of primary mineral building material such as gravel, sand and crushed stone. Reserves of these raw materials are becoming ever scarcer, however. Against this background, substitute building material made of recycled mineral substances offer an alternative that is just as safe and economically interesting.

Highway project points the way towards sustainability

One marked example of climate- and resource-saving use of premium-grade mineral residue material in road-building is the new bypass road around Münster-Wolbeck in Westphalia. The approximately six-kilometre-long stretch of road with its seven new bridges will take the traffic pressure off the historical city centre in a sustainable manner. Moreover, it is of tremendous infrastructural importance to the region.

The bypass road was built upon the commission of Straßen.NRW, Landesbetrieb Straßenbau Nordrhein-Westfalen, which is in charge of all motorways, federal trunk roads and regional highways in North Rhine-Westphalia. At the same time, Straßen.NRW designed the tender in such a manner that substitute building material could be used wherever this was environmentally possible and warranted.

100,000 tonnes of granova® for road embankments

As a result of the route design, with road embankments of up to 6 metres high, major quantities of material had to be applied throughout the entire building period. This included around 100,000 tonnes of granova®, which was used as an embankment material. This substitute building material,

which is quality-assured, has been supplied, installed and compacted in the same familiar way as primary building materials. MAV Mineralstoff-Aufbereitung und Verwertung Lünen GmbH was in charge of delivering the material in the proper form and in due time for the project. The company is one of the subsidiaries and affiliated companies of REMEX which are responsible for the distribution and production of quality-assured granova® substitute building material.

The manufacture and marketing of substitute mineral building material has been one of the core competencies of the REMEX Group for years. Its specialists not only recycle bottom ash from household waste incineration plants to recover valuable metals – they also apply their experience and know-how in order to produce the quality-assured substitute building material granova® from the mineral part.

Areas of use at a glance

REMEX supports customers in the use of substitute building material as well. For example, when planners, public administrations and building companies address technical codes and environmental requirements. This is often a time-consuming process, as guidelines and regulations in the area of civil engineering and road-building projects in Germany may differ among the Länder.



This short film explains how granova® is produced

REMEX substitute building material granova® is predominantly used as aggregate in road-building and earthworks

3.6 million
tonnes

The REMEX Group produces and markets more than 3.6 million tonnes of quality-assured replacement building material per year, tendency rising

Among other things, REMEX has developed the practical granova® cube in this connection. It can be used to simply and quickly determine whether the use of household waste incineration ash is possible in a building project. After comparing environmental provisions and regulations applying to technical building aspects, the cube shows the

respective areas of application. Background information on the application possibilities shown on the cube is explained in detail in an accompanying manual.



The free-of-charge granova® cube and the accompanying manual can be ordered at: www.granova.de



FIFA World Cup promotes development

NUMBER OF SEPARATE WASTE COLLECTION SCHEMES IN RUSSIA CONTINUES TO GROW THANKS TO THE UPCOMING 2018 FIFA WORLD CUP

With Russia hosting the 2018 FIFA World Cup, large sums of money are currently being spent on improving the country's infrastructure. This huge sporting event, however, should not only help to grow the economy. Russia is also working together with FIFA to ensure it promotes sustainable development across the country as well. Saransk, one of the towns hosting the cup, is leading the way here.

64 games, eleven stadiums, more than three million fans from Russia and abroad: the "Russia 2018" FIFA Organising Committee has drawn up a detailed waste management concept for next year's World Cup. REMONDIS Russia was given the opportunity to find out more about the concept at an early stage and pass on their knowledge about west European standards. Such background work is important for REMONDIS Russia – as is the operational side of the concept during the actual World Cup itself, especially in Saransk. This city, situated 640km south east of Moscow, is the capital of the Republic of Mordovia and will also be hosting a number of World Cup matches. REMONDIS' branch there will be helping them throughout this time.

Stadiums to set an example

REMONDIS began setting up a system in Saransk four years ago to enable recyclables to be collected separately. The logistics and previous collection schemes were completely overhauled; dedicated areas

with special containers for different recyclable materials were set up at the blocks of flats around the town. Svetlana Bigesse, managing director responsible for Russia at REMONDIS International, explained: "This system is acting as a role model and showing other cities – also those beyond our region – what standards can be achieved. This is exactly what the World Cup organisers are looking for as they wish the stadiums to set an example and promote recycling and resource conservation."

The FIFA Organising Committee's waste management concept contains a list of requirements which the stadiums are expected to meet. Priority here has been put on ensuring that all waste and recyclables are collected separately from each other and that these materials are recycled so that less waste is sent to landfill. This is precisely what REMONDIS is already doing in Saransk today, although the existing structure will have to be adapted for the World Cup.

Saransk is hosting a number of 2018 matches and is a best practice example demonstrating how recycling can be increased by separating waste materials.

The new football stadium is being built at the moment. Being the town's official service partner, REMONDIS is responsible for managing the waste at this construction site as well



What Mordovia Arena will look like when it's finished: an oval orange, red and white stadium. It is due to host its first World Cup match (two Group C teams) on 16 June 2018



Preparing for thousands of fans

Saransk is expecting to welcome around 65,000 fans to its city on the days a match is actually being held. The number of visitors passing through has been put at approx. 200,000. Quite a challenge for the town which itself has just 330,000 inhabitants. What is important here is that the waste management requirements are met throughout the city and throughout the whole of the tournament. Not only in the fan zones and public areas, therefore, but wherever there may be large numbers of visitors – including the city's airport and two train stations, the park and ride car parks on the edge of the town and the main roads leading to the stadium.

Work is already being carried out on drawing up a detailed waste management concept for the matches. The city authorities and REMONDIS are cooperating here with the local "Russia 2018" Organising Committee. A number of build-
underway, for example to build the
rt terminal and runway as well as two
ing the town's official service partner,
sible for managing the waste for these
s are for it to be in charge of waste
tadium, too.

er, the "Russia 2018" FIFA Organising
ee and REMONDIS signed a memoran-
vering their collaboration in Saransk
cluded a number of topics including
te waste collection schemes, environ-
educational programmes and PR work.

Year of Ecology

Russia's government is also pushing for greater sustainable development: not long ago, the president of the Russian Federation signed a decree officially making 2017 the Year of Ecology. REMONDIS will also be extending its business operations (besides its World Cup plans) to ensure the environmental targets can be met. Hundreds of new containers, for example, are to be placed around Saransk to increase the volumes of recyclables collected. Every day, a short film is shown on the local TV channel in which REMONDIS explains to the residents how best to separate their waste. What's more, events are being held regularly at kindergartens, schools and colleges to raise awareness for environmental issues. Svetlana Bigesse commented: "Communication and education are key to making progress in this area. The children and adolescents understand now just how important it is to handle waste responsibly to achieve a sustainable and environmentally friendly future."

REMONDIS is helping the city authorities to prepare for the World Cup wherever it can – from giving advice, to supporting the planning committees, to providing the actual waste management services themselves



Schoolchildren from Saransk have joined in the campaign calling for more waste to be collected separately

Hot work

BUCHEN AND XERVON WORK IN A VERY UNUSUAL ENVIRONMENT TO REMOVE ASBESTOS

BUCHEN®

WORKING FOR THE FUTURE

XERVON®

WORKING FOR THE FUTURE

Is it possible to remove asbestos from pipes that make up part of a pipe bridge and reach temperatures of 350°C? Can they then be re-insulated straight away? These were two questions that BUCHEN UmweltService was asked by one of its customers not so long ago. BUCHEN decided to join forces with its sister company XERVON to take on this very unusual challenge. And this special project has proven to be a great success: having first drawn up a complex safety and remediation concept, a trial was carried out on a small section to remove the asbestos and reinsulate the pipes. This showed that renovation work can indeed be performed under such extreme conditions – a first in Germany.

Asbestos was used in pipe lagging and surface insulation systems to insulate plant parts for many, many years. A large number of companies still have such insulation in their plants and are keen to have it removed, especially as the insulation materials that are available today are far more energy efficient. What's more, everyone is well aware of the potential problems caused by asbestos. The demand for alternative solutions is great: such renovation work not only makes good business sense, it also means existing structures can be upgraded to meet the latest technical standards making them fit for the future.

A special status project

The insulation in question contained loosely bound asbestos, which meant that stringent safety measures would have been needed even under normal circumstances. The combination of asbestos and high temperatures made the task significantly more difficult.

The project was given special status right from the start as none of the authorities in Germany had reference data available for such work. What was crucial here was to develop a concept that made the work as easy as possible for the operatives and kept them safe throughout despite the extreme conditions.

Fundamentals first

Such renovation projects can only be carried out if the relevant background work has been done first. This is precisely what BUCHEN and XERVON did. To begin with, the two REMONDIS companies drew up a comprehensive HSE concept that covered health issues and other special safety measures. The customer then commissioned them to carry out the project as soon as this had been completed and all the necessary discussions had been held with the relevant authorities. This then cleared the way for the next step: to carry out a trial on a section of the pipe bridge – on both the pipes (between DN 150 and DN 350) and the corresponding pipe bends.

It was essential to gather comprehensive lists of data before the renovation work could actually be carried out



The operatives' vital functions – core body temperature and pulse – were monitored in real time throughout and the data written down in health records

In autumn 2016, a number of small openings were drilled into the section of the pipe bridge that was to be renovated to gather some vital information. The engineers needed to know exactly what state the old insulation material was in as well as to measure the maximum fibre concentration and the surface and radiation temperatures.

Stringent health & safety measures

Particular focus was put on monitoring the vital functions of the operatives carrying out the work. They all wore special protective equipment that was able to provide a particularly effective barrier against the heat, including a body suit and breathing apparatus. Their vital functions (core body temperature and pulse) were monitored in real time throughout and the data written down in health records. An occupational physician was also present at all times to watch over the process. Moreover, measurements were continuously taken of the workplace environment to make the work even safer – such as humidity levels, ambient temperature and the surface temperature of the body suits.

BUCHEN first carried out simulations to test different methods, materials and types of equipment – with continuous measurements being taken here as well. There were a number of reasons for doing this: to find the best cleaning process and the most suitable heat-resistant suit as well as to see whether it was possible to deploy ready-to-use glove bags to seal the workplace off from the rest of the area.

Green light for online renovation work

The results of these trials revealed that it was indeed possible to remove asbestos from 350°C pipes and then re-insulate them immediately if specific health and safety measures were complied with and strict working times kept to. In fact, the operatives did not find their work to be overly difficult with these measures in place. Thanks to all these steps, renovation work can now be carried out on the pipe bridge – once it has been approved by the relevant authorities, of course.

According to the schedule, up to four years will be needed to remove all the asbestos and re-insulate the pipes. BUCHEN and XERVON will be doing all the renovation, scaffolding and insulation work. This concept, therefore, offers the customer a top quality, full service solution – a solution that can be provided by just one company and that meets all health and safety factors set out in the 'TRGS 519' [Technical Regulations for Hazardous Substances].



Thanks to BUCHEN/XERVON's concept, it is possible to renovate the pipes despite their high temperature – operations at the production plant can carry on as normal

350 °C



It is not always possible to shut plant parts down so that they can be renovated when they are cold

Protecting and preserving property

XERVON OBERFLÄCHENTECHNIK RENOVATES TANK FARM AT THE LIPPE PLANT

The service life and operating efficiency of industrial machines and equipment are very closely entwined. Professional maintenance work not only considerably extends the length of time they can be used but also ensures operations run smoothly. This is also true for a tank farm at the Lippe Plant which is currently being re-coated by XERVON Oberflächentechnik.

XERVON®
WORKING FOR THE FUTURE

REMONDIS processes and recycles alkaline solutions at its Lippe Plant, the largest industrial recycling centre in Europe. To be able to do this, it operates a tank farm that has the capacity to store up to 35,000 cubic metres. The majority of the tanks (each twelve metres high) are indoors and have been around for much longer than the Lippe Plant's recycling operations. They were installed when the site was still being used to produce aluminium which means the tanks must have been in operation for at least 80 years now.

XERVON Oberflächentechnik is well known for its high quality work and its exemplary levels of safety and performance

XERVON Oberflächentechnik is currently overhauling the tanks so that they can continue to be used for many years into the future: the interior coatings are being completely renewed in many of these large-scale tanks as are some of the exterior coatings. Work that is well worth its while as

these tanks have solid steel jackets and secure rivets and were obviously built to last.

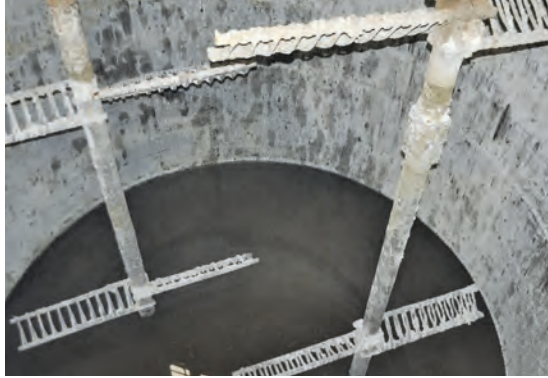
Collaboration within the Group

One by one, the individual tanks are being taken out of service so that they can be overhauled using a multi-stage process. The first task is to remove the deposits that have gradually built up over the decades from the interior walls of the tanks. REMONDIS' subsidiary, BUCHEN, is responsible for this work – dislodging all of the coarse deposits using their high pressure water jetting equipment (around 1,000 bar). XERVON Oberflächentechnik then moves in afterwards to get rid of any remaining substances once their colleagues from XERVON's scaffolding division have erected the work platforms so they can access the tanks.



The tanks, each twelve metres high, can store up to

35,000 m³



Before: the tanks at the chemicals processing plant in Lünen were beginning to show their age – the chemicals and alkaline solutions had certainly left their mark



After: XERVON Oberflächentechnik coated the twelve-metre tanks after REMONDIS' subsidiary, BUCHEN, had removed all the deposits from the surface

Meticulous preparation work is vital if the best conditions are to be created for the subsequent coating. XERVON Oberflächentechnik needs three individual stages to coat the tank interiors and provide them with a 750 M μ (i.e. 0.75 millimetres) protective layer, which has been specially selected to suit the alkaline solutions that will be stored in the tanks afterwards. Measurements are taken throughout the process to ensure the three-layered coating has the right thickness.

Specialist knowledge combined with excellent workmanship

“The biggest challenge when dealing with tanks is to ensure you find the right coating material and application system that best suit the medium being stored,” explained Frank Dörnemann, managing director of XERVON Oberflächentechnik. The requirements are as diverse as they are complex. The substances being stored in a tank may, for example, be corrosive or abrasive and all these factors must be added to the equation when selecting the right coating. What’s more, other variables such as safety issues, staff and guarantees need to be taken into account for each individual project.

XERVON Oberflächentechnik specialises in all automated and manual coating processes and systems. In addition, the company also performs specialist coating work that has been adapted to meet particular application requirements, including hot spray coating techniques. Besides working on tanks, it also coats steel structures, floors, machinery and cranes, protects industrial plants against corrosion and carries out conventional painting work. Many of these tasks are performed in the company’s own blasting and coating facilities which are equipped with state-of-the-art technology.

Frank Dörnemann was appointed managing director of the newly founded company, XERVON Oberflächentechnik GmbH, at the end of last year



XERVON Oberflächentechnik often has permanent teams working on site at their customers – such as at large industrial plants and chemical parks – so that they are always on hand to carry out any work needed.

Reorganisation of the surface technology division

“In-depth know-how, highly qualified staff and specialist technology are our particular strong points,” Frank Dörnemann continued. This division was, therefore, reorganised at the end of last year to enable the business to further strengthen its position on the market: on 01 December 2016, XERVON turned its surface technology division into a company in its own right, XERVON Oberflächentechnik GmbH, by way of an asset deal. The new company’s head office is in the German city of Bottrop. This move reflects XERVON’s goal to turn its individual business divisions into specialist companies. Frank Dörnemann commented: “By doing so, we can pool together our activities and grow our services to meet the exact requirements of our customers.”

Using the right coating not only ensures structures remain fit for purpose, it also considerably extends their service life



“The biggest challenge when dealing with tanks is to ensure you find the right coating material and application system that best suit the medium being stored.”

Frank Dörnemann, managing director of XERVON Oberflächentechnik

New operating agreement in Rheingau

PUBLIC-PRIVATE PARTNERSHIP IN HESSE IS EXTENDED

EURAWASSER

Beginning on 1 January 2017, the operation of Rheingauwasser GmbH, Abwasserverband Oberer Rheingau and Wasserverband Oberer Rheingau will be secured by the old service provider REMONDIS EURAWASSER. The new agreement on this was signed in Eltville as far back as the middle of last December. Representatives of the Supervisory Board and the Association Board and the management of REMONDIS signed the new operations-management agreement for the coming years.

The municipalities of Oestrich-Winkel and Eltville as well as the Communities of Schlagenbad and Walluf are to be supplied with drinking water by Rheingauwasser GmbH. The Community of Kiedrich is also affiliated with the Abwasserverband (Sewage Association), while in Oestrich-Winkel only sewage from the city district of Hallgarten is disposed of. The partner in Rheingauwasser GmbH is Wasserverband Oberer Rheingau, which represents the municipalities of Eltville, Walluf and Schlagenbad as well as the City of Oestrich-Winkel. The Sewage Association was founded by all the municipal authorities.

The Chairman of the Supervisory Board, Michael Heil, Mayor of Oestrich-Winkel, stated with regard to today's signing of the agreement: "We have been working for many years with our Managing Director with outstanding results." Manfred Kohl, Mayor of Walluf, added: "The tried-and-proven model contributes the experience and know-how of a competent enterprise in our region. We are very satisfied that it has been commissioned."

REMONDIS EURAWASSER GmbH has been in charge of operations for the municipal corporations since as far back as 2009. The company has once again been successful in winning a pan-European tender.

(sitting, from left to right)

Deputy Director of the Association AVOR Winfried Steinmacher (Mayor of Kiedrich)
Association Director of AVOR and Deputy Association Director of WVOR, Manfred Kohl (Mayor of Walluf)
Chairman of the Supervisory Board, Michael Heil (Mayor of Oestrich-Winkel)
Deputy Chairman of the Supervisory Board, Patrick Kunkel (Mayor of Eltville)

(standing, from left to right)

Managing Director of REMONDIS EURAWASSER GmbH, Torsten Ohlert,
Management of REMONDIS Aqua, Dieter Helkenberg
Managing Director of REMONDIS EURAWASSER GmbH, Mario Schellhardt





Preparing for life back home

LWG instructors Jörg Lange (left) and Marten Schneider (middle) helped refugee children perform filing, observed by the organiser of the visit, Georg Schneider (2nd from left) (photo: LWG)

LWG PRESENT THEIR WORKSHOP TO CHILDREN WHO HAVE RECENTLY ARRIVED IN GERMANY

LWG Lausitzer Wasser GmbH & Co. KG had some very special guests recently. 20 refugee children aged 12 to 16 visited the teaching workshop Am Großen Spreewehr 6 upon the instigation of Georg Schneider.

“At the school we convey basic knowledge to children in German and other subjects and prepare them to be able to learn in a regular school class after about half a year,” reports the teacher at the vocationally-oriented Gutenberg-Oberschule Forst. But it is equally important in his opinion to interest children in vocations now that will some day help rebuild their home country. “A stable supply of drinking water is one of the most important things that has to be guaranteed everywhere,” comments Georg Schneider. “And because LWG trains machine mechanics to this end it appeared only logical to acquaint children with these skills.”

Girls and boys from Syria, Afghanistan, the Congo and Chechnya visibly thought it was fun to stand at a workbench themselves. Under the tutelage of LWG instructors Jörg Lange and Marten Schneider, they practiced filing for the first time in their lives, quickly finding out that it looks easier than it is. Nevertheless, Georg Schneider hopes that they will also enjoy this practical work over the long term and that they

“That is why it would be good if our government funded vocational training of refugees so that they can later return to their home countries as well-trained specialists.” Georg Schneider

will above all receive the possibility to learn a profession after finishing school in Germany. “We probably have the best vocational education system in the world here in our country,” observes Georg Schneider, who has already entered into retirement. “That is why it would be good if our government funded vocational training of refugees so that they can later return to their home countries as well-trained specialists.” At any rate, there is room for additional apprenticeships at LWG Lausitzer Wasser GmbH & Co. KG.





Wastewater: a valuable raw material

2017 WORLD WATER DAY FOCUSES ON WASTEWATER

The UN's 2017 World Water Development Report was published on 22 March – on World Water Day – and is entitled "Wastewater: the Untapped Resource". REMONDIS Aqua not only supports this global message wholeheartedly, it also has a number of solutions to offer in this area.



The family-run company attaches great importance to research and development work

The choice of this year's subject is closely connected to the 2030 Agenda for Sustainable Development that was adopted by the UN's General Assembly in autumn 2015. Goal 6 of this agenda is to "ensure access to safe water sources and sanitation for all" and lists a number of targets. One of these is, for example, to halve the proportion of untreated wastewater and substantially increase recycling and safe re-use globally. The General Assembly has, therefore, made it very clear that wastewater is no longer simply a product that must be disposed of but must be seen as a resource that can be re-used. Treated wastewater can be put to good use as a substitute for fresh water – e.g. to irrigate crops or in industrial processes. What's more, important substances can be recovered from the wastewater that can be recycled or used to generate energy.

Energy efficiency levels at the municipal sewage treatment plants being run by the REMONDIS Group are continuously being improved by using sludge digestion and co-digestion, both of which produce enough energy to cover most of the plant's requirements. The facilities that the company uses at its industrial customers go even further with the Re2Energy process producing up to 50 percent more energy than is needed. Wastewater treatment can, therefore, be a great source of energy.

Besides generating energy, REMONDIS also focuses on recovering vital substances from the wastewater. Around 2 million tonnes of dewatered sewage sludge are generated in Germany every year which contain approx. 60,000 tonnes of phosphorus. A significant amount, therefore, which could be recovered and recycled – especially as natural reserves around the world are gradually being depleted and the quality of these reserves is deteriorating rapidly. REMONDIS has been looking into this subject for many years now and has developed a number of processes that are creating the groundwork and setting standards for recovering phosphorus.

Its intention here is to enable the phosphorus to be used as a fertiliser as well as for it to be supplied to industrial businesses as valuable phosphates. Indeed, this family-run company attaches great importance to research and development work. Well aware that this raw material is becoming ever more scarce, the experts have been looking closely at finding ways to recover and recycle phosphorus – as phosphorus is vital for plant and animal life and, of course, for humans, too. With our planet's natural supplies of phosphorus becoming harder and harder to come by, REMONDIS has intensified its efforts to recover phosphorus and is now running its first pilot plant together with HAMBURG WASSER to recover phosphorus from sewage sludge ash.

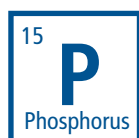
What is particularly special about this innovative TetraPhos® process is the fact that sewage sludge ash containing phosphate is dissolved in diluted phosphoric acid. The phosphoric acid solution is enriched with the phosphate from the ash and then treated in four different stages. Various products are available at the end of the process including RePacid® phosphoric acid (used to produce phosphates, incl. fertilisers), gypsum for the building supplies industry and iron and aluminium salts which can be returned to the sewage treatment plant and used as precipitating agents to eliminate phosphorus. This all helps to conserve considerable amounts of natural resources: not only can up to 500kg of phosphoric acid be produced from 1,000kg of ash but also over 500kg of gypsum for the building supplies industry and iron and aluminium salts for treating wastewater at sewage treatment plants.

A further process deployed by REMONDIS is to recover a high quality fertiliser straight from industrial wastewater. By using its RePhos® system, the company is able to remove phosphorus and nitrogen from the wastewater so that they can be re-used immediately.

Thanks to its award-winning TetraPhos® process, REMONDIS Aqua can recover vital raw materials for re-use – including phosphoric acid, gypsum, iron salts and aluminium salts



Watch this film to find out more about the innovative TetraPhos® process – the winner of the 2016 GreenTec Award (Recycling & Resources category)



Around 2 million tonnes of dewatered sewage sludge are generated in Germany every year which contain approx.

60,000 t of phosphorus

Thirsty for innovations

THE DMK GROUP AND REMONDIS AQUA MAKE THE MOST OF THE CHALLENGES THEY FACE TO CREATE NEW PROCESSES

Being one of the leading companies for wastewater treatment, REMONDIS Aqua also has a number of well-known industrial businesses among its clients. Just one example is the Deutsches Milchkontor GmbH (DMK) which has been collaborating with REMONDIS Aqua for more than a decade now. DMK was established in 2011 as a result of a merger between Humana Milchindustrie GmbH and Nordmilch GmbH. With 26 business locations across ten German states, the DMK GROUP has become one of the leading dairy companies – both at home and in Europe.



One of the company's factories is located in Altentreptow in the Mecklenburg lake district. Each day, up to 1.2 million litres of milk are delivered to the site which DMK then uses to produce cheese, both for its own Milram brand and for leading food retailers. wheyco GmbH, a subsidiary of the DMK GROUP, can also be found at the site. Its task is to transform up to four million litres of whey into special whey protein and lactose products which are then marketed to the food and drinks industries around the world as concentrate and/or powder.

REMONDIS Aqua has been providing DMK's factory in Altentreptow with reliable wastewater services since 2006. This collaboration began after DMK decided to extend its cheese-making business to include a new and innovative whey pro-

cessing plant. REMONDIS Aqua was commissioned with the task of extending and running the wastewater facility there. The production operations have steadily grown since then which has meant that the wastewater treatment facility has also had to be extended three times – with the last upgrade almost doubling the facility's capacity. DMK put REMONDIS Aqua GmbH in charge of operating this part of its business and last year their cooperation agreement was extended by a further ten years. As the operator of the facility, REMONDIS is also responsible for ensuring all discharge values are met and for maintaining and servicing the technology.

The wastewater from both the cheese production and whey processing operations contains high levels of organic pollutants which means it needs to undergo special treatment and recycling processes before it can be discharged. Using a special buffer management process, the majority of the pollutants



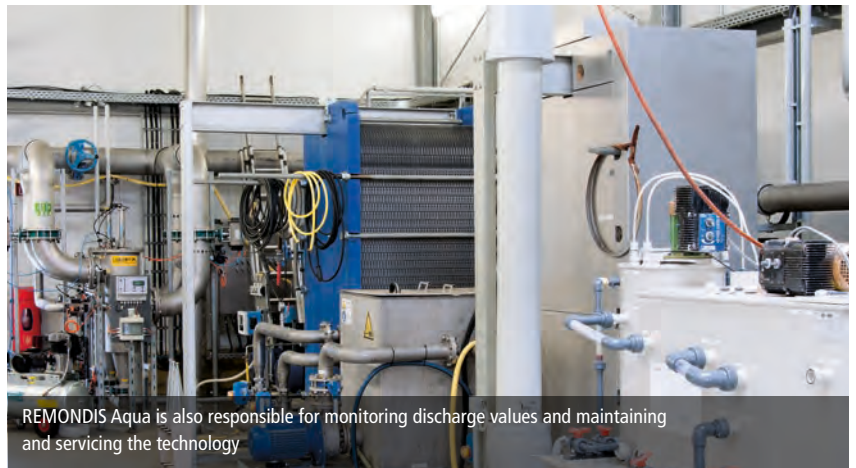
100%

The amount of electricity produced from the wastewater exceeds the total amount of energy needed by the whole of the wastewater treatment facility

are first transformed into biogas which is then turned into electricity in REMONDIS' own combined heat and power plant. The amount of electricity produced by the combined heat and power plant exceeds the total amount of energy needed by the whole of the wastewater treatment facility. The buffer management process ensures that the levels of pollutants are evenly distributed and that the biological treatment stages are protected from the cleaning and disinfection agents. The heat generated by the combined heat and power plant is used for the wastewater treatment process.

The wastewater also undergoes the patented REPHOS process to enable the phosphorus to be recovered. Thanks to this REPHOS system, wastewater treatment can help to conserve natural resources, recover raw materials and protect the environment, as REPHOS not only improves the properties of the sludge for the downstream aerobic stage but also generates a pure, concentrated product. This is a popular product among agricultural businesses as it is a very effective fertiliser. What's more, the REPHOS process helps make the facility even more cost effective as the different material flows can be managed more efficiently and fewer flocculation agents are needed.

A further challenge faced by the operators of industrial wastewater treatment facilities is the quality of the wastewater which can fluctuate greatly depending on production levels. The amount of pollutants in the water can vary from zero during a production break to extremely high levels in the case of machine failure. The latter led to DMK and REMONDIS testing a further innovative system. Unexpectedly high levels of pollutants may not only make it difficult to meet discharge values but could also lead to a sudden increase in the amount of biogas produced which in turn creates its own risks. To avoid such occurrences, a large-scale control system has been integrated into the wastewater treatment facility which continuously measures and analyses the amount of carbon in the water entering the facility. Highly polluted water can be detected early on and be automatically diverted into an emergency tank, allowing small amounts to then be gradually mixed with the water being treated. This ensures that the levels of pollutants are evenly distributed and that the same amount and quality of biogas are produced.



REMONDIS Aqua is also responsible for monitoring discharge values and maintaining and servicing the technology



DMK's wastewater treatment facility has already been extended three times

Thanks to the breadth of its experience, REMONDIS Aqua is able to develop innovative processes and then implement these in collaboration with its customers, such as DMK. REMONDIS has considerably reduced DMK's workload in Altentreptow by taking over the wastewater treatment operations and the risks involved. DMK is very clear about what it expects REMONDIS to achieve: the operations must not only be cost effective but also sustainable. Indeed, one of the goals of DMK's sustainable development strategy is for it to have further improved its own environmental performance by 2020. The above-average efforts being made by the DMK GROUP in this area led to it being recognised by EcoVadis in spring 2016.



[A great example to follow: learn more about DMK's 2020 sustainable development strategy here](#)

RESPRAY still in the running for a 2017 GreenTec Award



The innovative aerosol can recycling system RESPRAY has been named one of the TOP 4 nominees in the 'Recycling & Resources' category for this year's GreenTec Awards – not least thanks to the support given by our readers. REMONDIS Industrie Service GmbH still has the chance, therefore, to take the world's most prestigious environmental and business prize home with them during the awards ceremony which is being held on 12 May in Berlin. As to whether RESPRAY beats the other two competitors or not depends entirely on the decision of the 70-strong jury, who already chose the winner during their meeting on

22 February. The jury is made up of business people and scientists as well as representatives of trade associations and the media. The winners are to be announced and the prizes handed over during the awards ceremony – always a spectacular affair – on 12 May in Berlin. Many well-known names from the worlds of music, film and fashion are also expected to attend the event, some of whom have been supporting these awards from the very start. The GreenTec Awards are celebrating their 10th anniversary this year.



Herwart Wilms appointed member of the BDI committee for raw material policies



REMONDIS managing director Herwart Wilms joined the BDI committee responsible for raw material policies at the beginning of this year. He had been appointed to this role by the BDE (Federal Association of the German Waste Management Industry) last year. Committee chairman Hans-Joachim Welch officially welcomed Herwart Wilms to the BDI (Federal Association of German Industry) during the committee's first meeting.

Being a member of this BDI committee, Herwart Wilms will now be working together with associations representing manufacturing industries to raise awareness for raw materials, to develop strategies to conserve natural resources as well as to promote a more sustainable use of existing resources. "One particularly important task will be to further develop and strengthen the collaboration work between

the industrial and recycling sectors," stressed Herwart Wilms. The 38 members of the committee will also be passing on their message to those responsible for developing environmental and raw material policies.

The BDI is the umbrella organization for 36 trade associations representing German industry and industry-related services. It speaks, therefore, for more than 100,000 enterprises and over 8 million employees in Germany.

Herwart Wilms, REMONDIS Managing Director and Member of the BDI committee responsible for raw material policies





REMONDIS containers keep carnival goers safe

The City of Düsseldorf considerably tightened their security measures for this year's Rose Monday carnival parade. Besides having a huge police presence throughout the city centre, containers were also placed at a number of points to act as road blocks. These were to prevent vehicles getting anywhere near the revellers as well as to make the carnival goers feel safe. The containers had already been put in place around the city centre by REMONDIS' branch by 7am and they were gradually removed according to a strict timetable after the parade came to an end. Several meetings had taken place beforehand with the police, fire brigade and the Mayor's office to look at and check which areas needed to have such a road block. A total of 15 REMONDIS employees and 8 trucks were in action on Rose Monday to set up and later remove the containers. In addition, a member of



staff was on hand throughout the day to offer advice and a further employee on duty in the office to provide information whenever it was needed.

The containers, filled with construction waste, made sure all vehicles were kept apart from the carnival goers



German MP from Bonn visits REMONDIS

Dr Claudia Lücking-Michel, a German MP representing the CDU Party, visited REMONDIS' branch in Bonn at the end of February. Accompanied by managing director, Reinhard Hohenstein, branch manager, Nicolas Müller, and Lars Nehrling, head of municipal sales NRW, she went on a tour around the site to learn more about REMONDIS' operations in the city. This visit also enabled her to see the volumes of sales packaging being handled by the company and the way paper is sorted into different qualities. A whole range of recycling subjects was discussed throughout the meeting – from separating and collecting waste in countries such as Indonesia and Pakistan, all the way through to the state-of-the-art technology used to collect waste here in Germany. One particular focus of the talks was REMONDIS' collaboration work with the municipal waste management

company, Bonn Orange, and the waste incineration plant in Bonn. Moreover, a number of subjects were looked at that will, in all likelihood, lead to further talks being held in the future between Dr Lücking-Michel and managing director Reinhard Hohenstein.

Dr Claudia Lücking-Michel (left), German MP, was welcomed to Bonn by Reinhard Hohenstein, Managing Director REMONDIS-Rheinland, (3rd from left), Nicolas Müller, Branch Manager Bonn Rhein-Sieg-Ahr, and Lars Nehrling, Head of Public Affairs NRW, (left to right)



New fashion against the backdrop of waste paper



FASHION DESIGN STUDENT STAGES HIS OWN RECYCLING COLLECTION AT REMONDIS IN DÜSSELDORF

Fashion design student Martin Appelt had pretty precise ideas regarding the location where the photo-shooting for his new collection was to take place: against the backdrop of a mountain of waste paper. What sounds at first like a very unorthodox idea is a concept for his semester project that has been thought through into the last detail. This is because, like the design for the clothing, the task in the project examination is also to come up with the right way to present the designs. The 23-year-old featured his work under the rubric of "resources and recycling". And REMONDIS supplied the fitting stage for the Haute Couture.



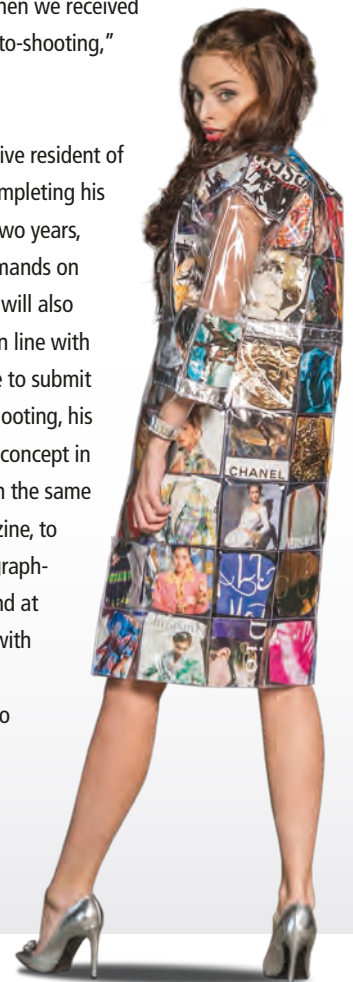
Thomas Tölle, branch manager of the REMONDIS recycling facility in Düsseldorf, made his sacred halls available for the photo-shooting on a Sunday morning in January. Because operations are shut down at 2.00 p.m. on weekends, Martin Appelt and his three-person team were able to arrange the set in peace and quiet without any hazards. While the mask designer was still putting make-up on the model, Martin together with the photographer looked for an appropriate place, projecting floodlights on them. The most important tool is already present in massive quantities: waste paper. The mountain was properly mixed and stacked up high by REMONDIS staff Friday afternoon to prepare for the shooting.

"Using waste paper made out of the most influential fashion magazine in the world creates the ideal connection between the two topics of fashion and recycling," explains the fashion design student attending AMD (Akademie Mode und Design) at Fresenius University in Düsseldorf. He is not planning on selling the collection afterwards, which is not necessarily designed for everyday life, anyway. Instead he wants to draw attention to the way society wastes resources. "We support this message one hundred per cent. That is why we did not hesitate for one second when we received the enquiry about the photo-shooting," explains Thomas Tölle.

Even though Martin, a native resident of Düsseldorf, will only be completing his fashion design studies in two years, he already places high demands on himself at present. Martin will also be submitting his project in line with this concept: he would like to submit the results of the photo-shooting, his analysis of trends and the concept in printed, bound form and in the same format as a fashion magazine, to his examiners. "Both the graphics and the art as well stand at the forefront," he relates with confidence. That is what is called: "thought through to the end".

"Using waste paper made out of the most influential fashion magazine in the world creates the ideal connection between the two topics of fashion and recycling." Martin Appelt, fashion design student at the AMD (Akademie Mode und Design) at Fresenius University in Düsseldorf

Then it was time for the show: model Saskia Negro posed in the fashion designed by Martin surrounding the topic "recycling and resources". The individual articles are a combination of plastic, denim material and waste paper. In this case, it is not just any waste paper, but rather handpicked pages from the magazine Vogue, which adorn the inner sides of both costumes and the coat. Its selection is well thought-out:



> Impressions



◀ Raphael Schürmann (29) was commended for his "excellent" final apprenticeship examination at REMONDIS Chiemgau GmbH to become one of the best apprentices in Germany

The SME association CDU/CSU from North Rhine-Westphalia visited the Lippe Plant in Lünen at the end of January



▲ The elementary school Blauer Planet in Annahütte was able to explore the waterworks in Tettau and the Lauchhammer sewage treatment plant of WAL-Betrieb on World Water Day, 23 March



REMONDIS ON ICE – REMONDIS catches the eye at the popular ice-skating rink at Heumarkt in Cologne's inner city in winter

Visit with the Mayor of the Municipality of Lichtenvoorde at the headquarters of the regional administration of REMONDIS Netherlands and home community of REMONDIS Dusseldorf. From right to left: Jan Kempers (Regional Director Achterhoek), Norbert Rethmann, Honorary Chairman of the Supervisory Board of REMONDIS, Annette Bronsvort, Mayor, Dr. Andreas Krawczik, Managing Director of REMONDIS Netherlands, Jos Hoenderboom, Wethouder Municipality Lichtenvoorde





Recycled raw materials are better than raw materials

The best choice for our future: recycled raw materials are not only raw materials, they are often much better than those from primary sources. Why? Because they are of an excellent quality, require less energy and space to produce, are carbon neutral and can be found here on our home market. Recycled raw materials help grow our economy and ensure we continue to have a world worth living in.