

The REMONDIS Group magazine

REMONDIS AKTUELL

remondis.com

Recycling to prevent climate change

Fewer carbon emissions thanks to more
materials recycling

REMONDIS
AKTUELL
online at
remondis-aktuell.com

Greenhouse gases

The recycling sector is already cutting carbon emissions. More could be done

Recycling professionals

Children are learning at an early age to protect our planet's natural resources

Aiming high

XERVON erects scaffolding around a 92-metre-high church spire

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Editor: REMONDIS SE & Co. KG // Brunnenstr. 138 // 44536 Lünen // Germany // T +49 2306 106-515 // F +49 2306 106-530 // remondis.com // info@remondis.com

Press officer: Michael Schneider // Layout: atelier-14.de // Print: Lonnemann, Selm



Thomas Conzendorf, Board Member

Dear Readers!

Germany has set itself some ambitious goals in its move to support global efforts to reduce emissions of ozone-depleting gases – first and foremost CO₂. On signing the Kyoto Protocol, the governments agreed to reduce emissions so that global temperature increases are limited to below 2 degrees Celsius compared to pre-industrial levels. According to the Federal government, Germany’s contribution is to have cut its emissions by at least 40 percent by 2020 and by 80 to 95 percent by 2050 compared to carbon emission levels in 1990. This goal should primarily be reached by extending the country’s network of renewable energy sources and increasing energy efficiency.

The country’s simultaneous exit from nuclear power, however, has been like starting an experiment with an uncertain outcome. It has certainly got the network technicians reacting nervously to the slightest glitch in the system – as could be seen recently during the partial solar eclipse in Germany. In extreme cases, there can be fluctuations of up to fourteen gigawatts an hour – the result of the rapid growth of renewable energy sources – and these must be compensated for with electricity generated from fossil fuels. This is making it extremely difficult for the Federal government to reach its climate goals and so it is essential that moves are made to find alternative ways of cutting emissions. This is where the recycling sector can help. Aside from the fact that our sector is the only industry to have succeeded in completely turning itself around – from being an emitter of greenhouse gases as a result of sending organic material to landfill, to cutting carbon emissions through recycling and thermal treatment – there are still a number of other ways it can help prevent climate change. If the government makes the necessary adjustments now, i.e. with its new recyclables law, and ensures that the very most is made of the material and thermal potential of the recyclables in our waste, then our sector alone can achieve 6% of the 2020 climate goals.

This has been proven by studies carried out by the Fraunhofer Umsicht Institute.

Being one of the largest recycling, water and service companies, REMONDIS is already making an important contribution towards preventing climate change and conserving our planet’s natural resources. We would be very happy to be allowed to do even more. Introducing organic waste bins across the country is an important step towards achieving a more sustainable future. More and more often the public and private sectors are approaching each other to find ways of protecting the environment together to ensure future generations also have a world worth living in. Whilst it is certainly too early to say there has been a complete change of heart, one fact remains true: the public and private sectors are stronger when they work together – especially when they are looking to achieve ambitious goals!

The term ‘sustainability’ may have been overused in recent years but it still depicts best the challenges that all industrial and commercial businesses must face – both now and in the future. Many of our customers have added our sustainability certificate to their business models. The Steigenberger hotel group, for example, has not only achieved the best recycling rates in their industry thanks to REMONDIS, their “Green Meeting” concept, verified by our sustainability certificate, has given this successful hotel business a truly unique selling point. We are happy to help wherever we can!


Yours

Thomas Conzendorf

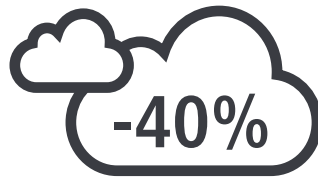
Recycling to prevent climate change

TEN HYPOTHESES ON HOW RECYCLING CAN HELP PREVENT GLOBAL CLIMATE CHANGE

Germany has been relying on two major developments to help it achieve its 2020 climate goals: on its so-called energy transition (moving from fossil fuels to renewables) and on the country's gradual changeover to electromobility. A hope that has – as yet – not been answered. Germany's rapid nuclear exit and its base load problems have meant that the country's network of renewable energy sources has been unable to keep pace with the demand for power. Consequently, the amount of electricity generated by power stations run on hard coal or brown coal has increased leading to higher carbon emissions. The 2020 goals can only be achieved, therefore, if more attention is paid to the one and only sector that has so far succeeded in completely transforming itself: having previously been an emitter of greenhouse gases, the recycling sector now reduces carbon emissions – and there are a number of other ways it can help prevent climate change.



Scientists are raising the alarm.
Urgent steps must be taken to
prevent climate change



The energy transition will not be able to reduce greenhouse gas emissions by 40% (compared to 1990) on its own. More recycling is needed

Despite everyone's efforts, the concentration of carbon dioxide (CO₂) in the atmosphere has now reached 400 parts per million (ppm). The Stockholm Resilience Centre, a research institute belonging to the University of Stockholm, has been looking into our planet's ability to adapt to change in order to establish what conditions need to be met so that it remains "safe" for humanity. According to the centre's latest model calculations, the safe limit is 350ppm – if the increase in global warming is to remain below 1.5°C. We have, therefore, already crossed this boundary and entered into the danger zone – and, the results of the study reveal, the high risk zone begins when concentration levels exceed 450ppm. Urgent action is needed to find additional ways to prevent climate change as well as to optimise those we already have in place.

Promoting recycling & preventing climate change

REMONDIS has joined various business and environmental experts and institutes to establish a new association, the "Klimaschutz durch Kreislaufwirtschaft" (recycling to prevent climate change). As part of the KlimaExpo.NRW initiative, it aims to make decision-makers more aware of the fact that greenhouse gas emissions can be reduced by intensifying and optimising recycling activities. The association has drawn up a list of ten hypotheses to show how greater efforts could be made to prevent climate change.

10 HYPOTHESES ON HOW RECYCLING CAN HELP PREVENT CLIMATE CHANGE

- 01** Global climate change will transform ecosystems which, in turn, will have a huge impact on the way many humans will be able to lead their lives.

One of the biggest environmental challenges of the 21st Century is and will be, therefore, to combat climate change. Countries must come together and implement worldwide measures to reduce emissions of ozone-depleting gases such as CO₂ and methane.
- 02** The volumes of greenhouse gases emitted by industrial nations are directly related to (a) the standard of technology they use in their energy and industrial sectors, (b) the level of mobility of their population (and corresponding technology) and (c) the way their recycling sectors have been set up.

Looking at the immense costs that countries must face to further develop and transform the technology they use in the areas of energy, production and mobility (something only a handful of nations have tackled so far), the recycling sector will play a key role in helping to ensure that the climate goals are achieved. Investing in material recycling processes and more efficient thermal treatment systems not only requires less money – the changes can be implemented more quickly and would immediately have a positive impact on carbon emissions.

03 The waste management and recycling sector is the only industry in Germany to have succeeded in transforming itself so that it no longer emits but cuts carbon emissions.

One of the main reasons for this can be put down to the movement in the country to ban organic waste being taken to landfill, which began in 1990. A law implementing this ban was passed in 2005 reducing carbon emissions by 28.4 million tonnes of CO₂ equivalents – especially as the landfill gas methane is 21 times more harmful to the climate than CO₂. The German government will have to support and further develop the country's recycling sector if it wishes to succeed in achieving its 2020 climate goals.

04 Germany's target is to reduce its greenhouse gas emissions by 40% (compared to its 1990 figures) by 2020.

According to the Federal Ministry of the Environment (BMU), for this to happen the pan-European commitment to reduce greenhouse gas emissions by 30% must also be achieved. Methane gas emissions were taken out of the equation in Germany when the 'TA Siedlungsabfall' (Technical Directive on the Recycling, Treatment and Disposal of Municipal Waste) came into force in 2005. Despite this fact, various studies have shown that the waste management sector still has the potential to cut up to 6% of all greenhouse gas emissions in Germany.

05 These goals can only be achieved if the very most is made of all the material and energy contained in waste.

Suitable legal regulations must be created and enforced to promote a modern, forward-looking recycling sector. This, in turn, requires the commitment and full support of all political parties.

06 According to the results of a study carried out by the INFA Institute, a further 95kg of recyclables (currently being thrown into the residual waste bin) could be collected per person per year in Germany – the equivalent of just under 7.8 million tonnes.

Together with the Fraunhofer Umsicht Institute, Prof. Martin Faulstich has converted this potential into CO₂ equivalents and calculated that these volumes alone could cut carbon emissions by a further 1.6 million tonnes. This is the equivalent of approx. 6% of the country's intended goal for 2020. To be able to make the most of this potential, however, the BMU must draw up a new recyclables law that contains ambitious – and obligatory – collection and recycling rates.

07 Organic waste is an important material stream. According to the Federal Statistics Office, the volumes of organic waste sent for treatment increased significantly between 1985 and 2002.

Since then, however, the growth in volumes collected has slowed considerably. Around 15 million tonnes of biogenic waste was biologically treated in Germany in 2012, with around 80% being turned into compost and 20% used to generate biogas in anaerobic digesters. The BMU is expecting these figures to have been practically reversed by 2020, i.e. 80% used for biogas and 20% for compost. The amount of collected organic waste is expected to increase significantly following the decision made last year to introduce organic waste bins across the whole of the country on 01 January 2015. Organic waste must be collected separately from other waste streams for the organic substances and nutrients to be recycled – the substances that had been the main cause of methane gas emissions before it became obligatory for them to be collected separately. High quality composts and digester residue, which can be used by agricultural and horticultural businesses or to generate biogas, can only be produced from properly segregated organic waste. It is, therefore, essential that the network of anaerobic digesters and composting systems, which effectively copy nature's own recycling process, is expanded. Once again, it is the recycling sector that is the driving force behind this development.

What our politicians need to set in motion:
higher collection rates +
more recycling =
fewer carbon emissions.

“REMONDIS already recycles 30 million tonnes of raw materials, helping to cut greenhouse gas emissions and reduce the consumption of land and natural resources. We are prepared to do even more.”

Thomas Conzendorf, REMONDIS Board Member

08

The thermal treatment of residual waste in waste incineration plants (WIP) and the co-incineration of refuse derived fuels (RDF) can also help to prevent climate change.

Whilst the European Waste Framework Directive clearly states that preference should always be given to materials recycling, it is neither technologically possible nor economically viable to send all waste for materials recycling and this is unlikely to change in the foreseeable future. The thermal/electrical efficiency of existing plants, therefore, must be improved and, as volumes of residual waste drop, outdated incineration lines should either be replaced or even closed down completely.

09

Waste policies at EU level need to be improved.

The EU Commission needs to raise the importance of resource conservation and set out uniform and obligatory environmental standards across the EU instead of watering them down – which they are currently considering doing. It is essential, therefore, that the European Waste Framework Directive is revised to drive European efforts to achieve sustainability.

10

At the end of the day, it is the consumers who determine whether the efforts made to promote sustainability are successful or not.

Both politicians and recycling businesses, therefore, need to make the public more aware of the link between their consumer behaviour, waste segregation, environmental protection and climate change by launching information campaigns and educational initiatives. Besides private and public sector educational initiatives, it would also be useful to have the subject of sustainability added to school curricula so that all types of school and all age groups get to learn about the many different aspects of environmental protection and climate change.

(Sources: BMU, Öko-Institut, INFA, Fraunhofer Umsicht)

With the long awaited recyclables law just around the corner, the Federal government now has the opportunity to set the course for the future and ensure that the recycling sector's potential to reduce greenhouse gas emissions by a further 6% of the 2020 climate goals is fully exploited. Besides being "world champions" in export and recycling, Germany could also be the country leading the effort to prevent climate change by implementing pertinent measures – such as setting ambitious collection and recycling rates. REMONDIS is already making a great contribution towards this goal with its 500+ plants and businesses in 34 countries around the world.

Go to remondis-aktuell.com
to read a recent report on
how the recycling sector
helps prevent climate change



Protecting the climate with organic waste



To learn more, go to klimaexpo.nrw.de

COESFELD BIOGAS PLANT PROJECT OFFICIALLY RECOGNISED BY THE KLIMAEXPO.NRW

At the beginning of the year, the project to optimise organic waste recycling activities in the district of Coesfeld was added to the list of officially recognised KlimaExpo.NRW projects. KlimaExpo.NRW is an exhibition that presents innovative, forward-looking projects across the whole of the German state of North Rhine-Westphalia (NRW) that aim to prevent climate change and offer a number of ecological, social and/or economic benefits. The recognition given to this collaboration project between REMONDIS and the district of Coesfeld means, therefore, that it will now act as a reference project for preventing climate change and will send an important signal to regions far beyond NRW's borders.



That, however, is not all. "The systematic use of the energy and material contents of the organic waste has also helped to reduce waste charges. This is a particularly positive aspect as we have been able to demonstrate that environmental protection can go hand in hand with cost savings," commented Dr Heinrich Dornbusch, senior managing director of KlimaExpo.NRW.

Organic waste has been collected as a separate waste stream in the district of Coesfeld for many years now and this has led to high collection rates. "Last year, we collected more than 39,000t of organic waste simply by emptying the organic waste bins in the district. That is approximately 181 kg per person and must be one of the best collection rates in the country," said Konrad Püning, head of the district council. Using the biogas as a renewable source to generate electricity and heat cuts carbon emissions by around 5,000 tonnes every year. The amount of power produced from the biogas is sufficient to supply up to 1,400 average households with heat. REMONDIS and the district of Coesfeld are, therefore, helping to secure the supply of power in the region.

This organic waste recycling project in the district of Coesfeld has been deemed by the KlimaExpo.NRW to be an excellent example of an "engine for progress" for preventing climate change. Fewer fossil fuels are needed thanks to the biogas being fed into the natural gas network.

39,000t
organic waste

The District of Coesfeld has one of the best collection rates in Germany, collecting 181kg of organic waste per person

5,000t
CO₂

The amount of carbon emissions cut by this predominantly rural region is exemplary

1,400
households

The biogas generated is sufficient to supply up to 1,400 households with heat

Innovative strategies – and more



Not only are global reserves of phosphorus running out, they are also located in just a very small number of countries outside Europe. This creates dependency

SUCCESSFUL PHOSPHORUS RECYCLING ACTIVITIES AND NEW TECHNOLOGIES

Sewage sludge has been used as a fertiliser for many years now and there is a good reason for this: the sludge contains phosphorus, an essential element for all life forms on our planet. The Federal government is intending to examine the use of sewage sludge as a fertiliser. This will raise a number of questions. What measures must be undertaken to ensure agricultural businesses have a guaranteed supply of fertiliser in the future? And what will happen to the phosphorus contained in the sewage sludge?

Eleven German associations – including the DBV (German Farmers' Association), the BDE (Federal Association of the German Waste Management Industry) and the VKU (Association of Local Utility Companies) – have come together to draw up a list of key parameters to develop a new strategy for sewage sludge. The associations believe that high quality sewage sludge should continue to be used by agricultural and landscaping businesses as a fertiliser, as it is an extremely efficient source of phosphorus, nitrogen and organic substances.

REMONDIS has been looking into this subject for a long while now. The company has been supplying farmers and landscapers with sewage sludge fertiliser for years. This quality assured fertiliser is a popular product as it is effective, efficient and safe – helping to provide plants with the nutrients they need and enriching the soil at the same time. In fact, it has been proven that this fertiliser improves all soil values – whether it be levels of nutrients, trace elements or humus. Moreover, there is the added advantage that absolutely all of the phosphorus in the material is used. Each year, REMONDIS' subsidiary,

RETERRA Service GmbH, returns around 10,000 tonnes of phosphorus to soils via its fertilisers.

Besides these advantages, the company can also adjust the composition of their phosphorus and nitrogen-based fertilisers to meet the requirements of their clients' crops or soils. As a result, fields can be spread with fertilisers that meet their exact needs and help balance out nutrient deficiencies.

The associations are also looking at alternative ways of recovering and recycling the phosphorus from sewage sludge that cannot be used as a fertiliser. Moreover, they are calling for the phosphorus to be recovered from thermally treated sewage sludge. With global reserves of phosphate ore dwindling, it is becoming more important than ever to recover this valuable substance from such sources – Germany alone consumes 170,000 tonnes of phosphorus a year. REMONDIS and its subsidiary REMONDIS Aqua have already developed a number of innovative concepts – such as its TetraPhos, RePhos and ThomPhos processes – to make the very most of this resource.

AGRAGENT®, a division run by REMONDIS' subsidiary RETERRA, specialises in supplying phosphorus to the agricultural sector

Up to

20%

of the volume of phosphate required by farms can be covered by high quality sewage sludge

REMONDIS' subsidiary, RETERRA Service GmbH, returns around

10,000t

of phosphorus to soils

Germany consumes

170,000t

of phosphorus a year



Teaching materials in high demand

PREMIERE OF THE RECYCLING PROFESSIONALS' NEW TEACHING MATERIAL AT THE DIDACTA IN HANOVER



Our planet's natural resources are finite. Whilst this is nothing new, too little is being done to right the situation. We continue to waste the supplies of raw materials we have, whether it be wood, minerals or metals. If we want to have sufficient volumes of resources in the future, then it is essential that we learn to handle them responsibly. High time, therefore, for a sustainable change of attitude! And this is precisely what the RECYCLING PROFESSIONALS' new teaching material aims to achieve. Presented at the didacta for the very first time, it proved to be extremely popular among the teachers and teaching specialists visiting the exhibition.

Once again, Europe's largest educational fair was held in Hanover this year, giving the more than 750 exhibitors five days to showcase their materials for kindergartens, schools, universities and further training institutes. For the second time now since 2013, REMONDIS' RECYCLING

PROFESSIONALS took part in the event. What began two years ago with a board game and a few worksheets has now become a comprehensive concept with educational theatre performances and on-tour events – such as attending the Federal President's Summer Festival in Berlin.

The winners of the draw were really pleased with their prizes, all of which had to do with teaching about recycling



The new teaching materials offer a range of fun and informative activities



Priority was put on giving the visitors the information they needed



Educational project takes yet another step forward

This, however, was not enough. Last year, a concept was developed to produce comprehensive, activity-oriented teaching material that could be used to help kindergarten and primary school children learn how to handle waste and recyclables correctly. "We feel it is really important that the facts about waste segregation and recycling are not simply taught to the kids but that they really have fun at the same time," said Johanna Spinn, manager of the RECYCLING PROFESSIONALS project, as she described the concept behind the new materials. These were presented to the public for the first time at the didacta – and proved to be a huge success. 1,000 educational packs were handed out to kindergarten teachers and a further 1,000 to primary school teachers after they had taken part in a detailed discussion about the new material. The RECYCLING PROFESSIONALS team has also been extremely busy since the event finished, processing the many enquiries they received.

What are the goals?

The goal behind this project is to make it clear that waste is not really waste but a mixture of valuable raw materials which can be recycled – and that everyone can help to recover these valuable materials so they can be re-used, simply by separating their waste correctly in their homes. Whilst this knowledge is passed on to children in kindergartens through play (by getting them to put the right stickers on the right wheelie bin poster), a special workbook has been developed for primary schools that has been divided up into different chapters which can be looked at in more detail during class. In addition, the primary school pack contains six different recycling posters for group work and a DVD with a number of short films.

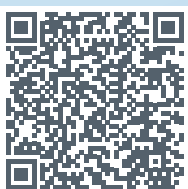
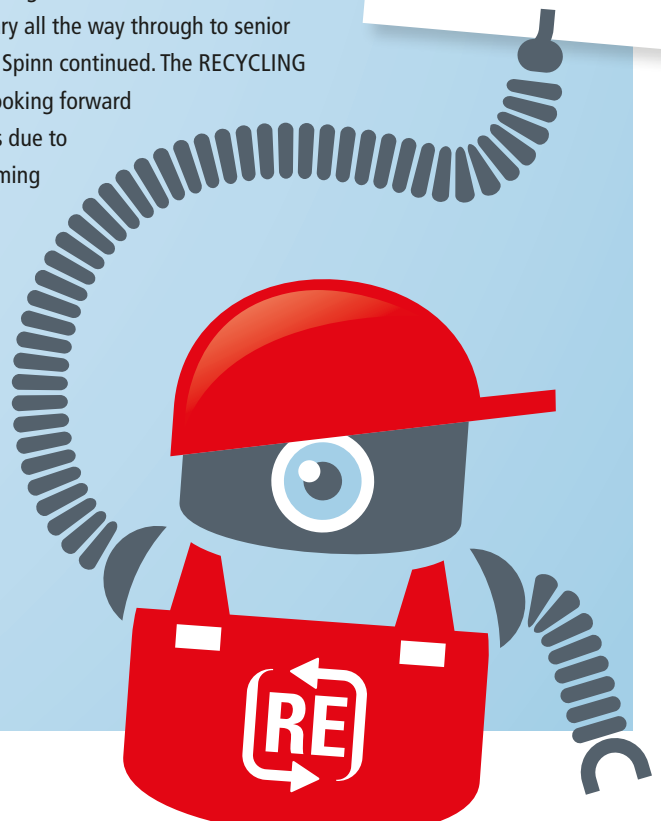
"This comprehensive collection of material has been specially adapted to meet the needs of the different age groups and can be used straight away by the teachers in their classroom. They don't need to change a thing," explained Johanna Spinn.

The next target group: secondary schools

The didacta was not, however, only used to present the new teaching material for the kindergartens and primary schools. Secondary school teachers were also asked about the importance of using class material on subjects such as recycling and the scarcity of raw materials. Around 300 questionnaires were filled out during the didacta and the information given in these will now be used to develop a concept for creating teaching material for secondary schools. The target is to have completed this over the next nine months so that it is ready for the next didacta. "We want to get young people to be genuinely interested in sustainability and environmental protection. This is an ongoing process throughout the whole of their time at school – from primary all the way through to senior high school," Johanna Spinn continued. The RECYCLING PROFESSIONALS are looking forward to the exciting projects due to take place over the coming months – both in and outside the schools. They are, for example, already putting together their plans for when they take part in the Federal President's Summer Festival this year.

Fun, informative, age appropriate, effective – four adjectives describing the RECYCLING PROFESSIONALS' new teaching material for kindergartens and primary schools

The new material will teach young children how to save our raw materials



Two films as well as further images can be found at remondis-aktuell.com and wertstoffprofis.de

Best Practice: The Organic Waste Bin

KERBSIDE COLLECTION INCREASES RECYCLING RATES

Organic waste is not waste – it is a resource. No matter whether it is used to produce compost or to generate energy: residual organic materials from households and gardens can always be put to sustainable use. It is, therefore, far too valuable for the residual waste bin. The current Federal Recycling Law stipulates that, as from the beginning of 2015, organic waste should be collected separately from other waste streams. This decision was made to drive recycling activities in this area – but very little has changed around the country so far.

Despite the fact that schemes had to be in place to collect organic waste separately from other material streams at the beginning of the year, there are still regions in Germany that do not have organic waste bins. The Federal Environmental Agency believes that between 57 and 69 of the corporations responsible for waste management were unable to provide a separate collection service for organic waste on 01 January 2015.

Organic material does not belong in the residual waste bin: it is a valuable and sustainable resource

There is no specific deadline as to when the local authorities must have provided their local residents with appropriate wheeled bins to ensure the organic waste in their regions is collected separately. Experience has shown, however, that this is by far the most effective way of making the most of

the ecological potential of organic waste. At the end of the day, there will always be people who are not prepared to take their organic waste to a central collection point or do not have the logistical means to do so. Kerbside collection schemes, therefore, increase the volumes of material actually collected. Local residents are also more motivated to join in as such systems are so convenient.

A source material for compost and energy

For many years now, REMONDIS has been providing local authorities and their residents with convenient solutions that have led to excellent recycling results. The company's portfolio of services ranges from supplying various sizes of organic waste bin, to providing a reliable collection service, all the





Organic waste bins have been provided across the City of Essen despite its largely metropolitan structure

way through to managing the recycling processes. These organic materials are used to produce high nutrient, quality assured composts, substrates and mulch – or as a source material for generating carbon-neutral energy.

Essen is showing how it's done

Entsorgungsbetriebe Essen GmbH (EBE), a waste management business operating in the German city of Essen, was one of the first companies to collect organic waste from households. This public private partnership between the City of Essen (51%) and REMONDIS (49%) established a separate kerbside collection scheme for organic waste back in 1996 – almost exactly 20 years ago. Initially introduced as a pilot scheme in a number of city districts, it was then implemented throughout Essen in 2002. The organic waste bin has become a normal part of life with around 30,000 being used around the city and emptied via a fortnightly collection service.

Property owners in Essen are free to choose whether they wish to use these bins for their residential and commercial buildings and can order them from EBE. A number of different sized bins are available – from 80l bins to 1.1m³ containers – and the owners are charged a small fee for using them. The users benefit financially, however, despite this

charge as people using organic waste bins generally reduce the volumes they throw into their residual waste bins, which are more expensive.

Recycling centres a useful addition

From tree and grass cuttings, to potato skins and coffee grounds, to sawdust and wood shavings: EBE provides information on the finer points of separating organic waste. It has not, however, launched extensive information campaigns on separating organic waste – and why should it? Segregating organic waste from other material streams is second nature to the people living in Essen.

Besides supplying organic waste bins, the city also operates six household recycling centres which accept garden waste – a free service if the amount of material the people wish to hand in is less than one cubic metre. A great opportunity for hobby gardeners: they can use this additional service to get rid of their garden waste when their organic waste bin is full and ensure these valuable organic materials do not end up in the residual waste bin.



A colourful trio:
EBE supplies a range of grey, blue and brown bins



Board members make way for younger generation

DIVISIONAL COMPANIES WITH GREATER DECISION-MAKING POWERS

Changes were made to the board of directors and supervisory board of RETHMANN Beteiligungs SE at the beginning of the year as well as to the boards of its three divisional companies, effectively passing on the business to the younger generation. As part of this transformation, RETHMANN SE & Co. KG has moved into the background by becoming a financial holding company and giving its autonomous divisional companies, REMONDIS, Rhenus and SARIA, more powers to make their own decisions.



The supervisory board and boards of directors have taken the next step to systematically further develop the business this family-run company has been operating for over 80 years to ensure its long-running success story continues



Dr Peter Nölke, aged 71, stepped down from the supervisory board of RETHMANN Beteiligungs SE on 31 December 2014. He had been a member of the board since 1999 actively supporting the company with his invaluable experience and advice for 15 years. "On behalf of all the RETHMANN Group shareholders, I would like to thank Dr Nölke for his dedication, his advice and his constructive criticism over the years," said Dr Martin Rethmann, chairman of the supervisory board of RETHMANN Beteiligungs SE.

Reinhard Lohmann also stepped down from the board of directors of RETHMANN Beteiligungs SE on 31 December 2014 to join the company's supervisory board. He has been part of the group's senior management team for over 35 years – the last 7 years as chairman of the board of directors. Over this period, the company's turnover has grown from 35 million deutschmarks to over 12 billion euros. Dr Martin Rethmann commented: "This growth alone is indicative of the depth of appreciation and gratitude of the family shareholders for Mr Lohmann's contribution. We are really pleased that Mr Lohmann will continue to play an advisory role as deputy chair of the supervisory board of RETHMANN Beteiligungs SE and be involved in the further development of the company." Board directors are now Ludger and Klemens Rethmann, with Klemens Rethmann holding the position of board spokesperson.

Dr Martin Rethmann has been appointed chairman of the supervisory board of both REMONDIS and SARIA. Holding the position of deputy chairman of the supervisory boards of both companies, Reinhard Lohmann will continue to contribute towards the development of both businesses in the future. REMONDIS' supervisory board remains otherwise unchanged.

Having made these changes to the various boards, the shareholders of RETHMANN SE & Co. KG decided that the three divisional companies, REMONDIS SE & Co. KG, SARIA SE & Co. KG and Rhenus SE & Co. KG, should be given greater decision-making powers. The amendments that needed to be made to the companies' rules of operation to make this possible were approved during the relevant meetings of the supervisory boards of the three divisions and the parent company – thus ensuring that the intended goal of giving greater decision-making powers to the autonomous divisions of the RETHMANN Group was put into effect. A further step has been taken, therefore, to transform RETHMANN SE & Co. KG from a management to a purely financial holding.

In the 35 years that Reinhard Lohmann led the company as board chairman, the business' turnover grew from 35 million deutschmarks to around 12 billion euros. He has now joined the supervisory board

Under the Australian sun

COMPANY NEWS FROM DOWN UNDER



REMONDIS' efforts to drive sustainability are making good progress in Australia as well. The country was the first to suffer the consequences of the world's careless attitude towards the environment when holes appeared in the ozone layer above their heads. Since then, Australia has been focusing on protecting the environment and preventing climate change. Is there a more obvious way of doing this than combining recycling and solar energy? There is certainly enough sunshine there.

Combining recycling and solar energy is one of the ways Australia can create a climate friendly future

For over 10 years now, REMONDIS' branch in Port Macquarie, a region on the Gold Coast situated between Sydney and Brisbane, has built up a reputation among agricultural, commercial and horticultural businesses as well as local authorities as being a reliable supplier of high quality compost. Besides producing this popular material, REMONDIS' Australian subsidiary also provides good value services, collecting and recycling commercial waste from around the region.

At the end of 2014, REMONDIS announced that it had succeeded in extending its contract to operate and manage the tunnel composting facility in Port Macquarie for a further 10-year period. A number of improvements are being made to the facility including the implementation of the SCADA system (supervisory control and data acquisition) which gathers and analyses real time technical data – providing important information for optimising plant operations.



REMONDIS' Mugga Lane waste transfer station

One of the highlights of the upgraded plant is the new solar system on the roof of the building. A total of 176 solar panels (each 250 watts) were installed there to generate climate friendly energy. This bespoke system was specially designed, engineered and installed by Harelec Services, a local company specialising in solar PV design and installation. Capable of generating around 67,500 kWh of electricity from the sun's rays every year, this new system will cut carbon emissions by a good 60 tonnes. This combined solar and recycling facility is



176 solar panels

A total of 176 solar panels have been installed on the roof of the tunnel composting facility



67,500kWh

Generating 67,500 kWh of electricity from the sun's rays every year, this system will cut annual carbon emissions by a good 60 tonnes

one of the largest on the continent and is setting an example for the whole of the country showing what measures can be undertaken to prevent climate change. The Mayor of Port Macquarie, Peter Besseling, praised REMONDIS' work during the official opening of the facility. The operation of the REMONDIS composting facility had, he said, been a great success for the local community. Almost half a million tonnes of material have been processed since 2001, mostly organic material into compost but also the stabilisation of general waste prior to landfilling. Commenting on the new solar system, the mayor said: "It is an exciting addition to the facility and shows the continued improvement in efficiency of operations."

For REMONDIS, the plant is a further milestone along its path to set up even more sustainable recycling systems in Australia – especially in the area of organic material. By extending the facility, REMONDIS is supporting the local economy, collaborating closely with Port Macquarie Hastings Council and helping to create more jobs in the region.

New contracts in the Greater Sydney region and the Sunshine Coast

REMONDIS has also succeeded in beating its competitors and winning contracts in the Greater Sydney region as well as in other areas in Australia. The company has been awarded a contract to collect, transport and recycle all domestic waste, recyclable waste and green waste in Wollongong and Shellharbour, approx. 80km south of Sydney. The Shellharbour contract also includes servicing public place bins. Wollongong is the ninth-largest city in Australia with a population approaching 200,000; neighbouring Shellharbour is home to 65,000 people. Moreover, REMONDIS was also awarded a contract to collect municipal waste in the Sunshine Coast, one of the largest districts in the country.

No matter what services it provides, REMONDIS' goal is to be one of the main driving forces in Australia – helping to grow sustainability in the country's waste management sector in order to protect the environment and prevent climate change.

REMONDIS is now responsible for waste management in the Sunshine Coast



Go to remondis-aktuell.com to view further images of REMONDIS' operations in Australia



Steigenberger – award-winning sustainability with REMONDIS

STEIGENBERGER LEADS THE MARKET FOR SUSTAINABLE EVENTS THANKS TO ITS GREEN MEETINGS

The Steigenberger Hotel Am Kanzleramt in Berlin is currently running a pilot project to develop sustainable meetings that will eventually be rolled out across the whole of the group. Hotel guests are given a conference package that includes full carbon compensation. This is just one concept resulting from the hotel's efforts to drive sustainability and it has been helped along by REMONDIS' bespoke certified waste management concept.

Green Meetings are truly unique in the hotel industry

The 'Green Meetings by Steigenberger' concept is based on five key elements: organisation, electricity/water/heat, waste management, equipment/furnishings and catering. As far as organisation is concerned, this well-known hotel group uses the accredited ISO 14001 environmental management system. A dedicated CR officer and an environmental working group, established specifically for this project, collaborate with atmosfair to ensure the events are carbon neutral. This includes, for example, giving guests the option to use a carbon-neutral mode of transport to travel to the event, i.e. by train.

Focus was put on sustainability right from the beginning with the hotel in Berlin being planned and built in accordance with DGNB standards (German Sustainable Building Society). Since then, the building has been awarded the Gold DGNB Certificate in recognition of its sustainable and environmentally friendly design. Many factors were

taken into account during the evaluation process including emissions, energy consumption and accessibility.

Steigenberger has made it its mission to only use electricity from renewable energy systems (hydropower); a percentage of its district heat is also from regenerative sources. Its list of environmentally friendly measures is long and includes, among others, LED lighting systems, heat exchangers, motion detectors, water saving technology, biodegradable cleaning agents and organic bed clothes. Moreover, the hotel supplies its guests with eco-friendly equipment as well as organic food (certified) and micro-filtered drinking water, which it bottles itself. Another of the hotel's goals is to avoid unnecessary transport routes. One very special feature of the Hotel Am Kanzleramt can be found on the guests' breakfast tables. Beehives have been placed on the roof of the hotel to promote biodiversity, so the hotel is able to serve its very own honey at breakfast and present it to the guests as a special give-away.



(from left to right) Torsten K. Schulze, General Manager Steigenberger Hotel Am Kanzleramt, and Associate Director, Thomas Schneider, are in charge of the sustainability initiative at Steigenberger. Christoph Haub (right) is a key account manager at REMONDIS and advises the Steigenberger Group on all matters involving recycling

Another key factor of this green concept involves the management and recycling of waste. The goal here is not only to reduce emissions of greenhouse gases by using the best possible recycling systems but also to generate carbon-neutral energy by thermally recycling residual waste that cannot be sent for materials recycling – and not only in Berlin, but in all of the Steigenberger hotels. To help them succeed, REMONDIS developed and implemented a comprehensive waste management concept that ensures recyclable materials are separated into 17 different categories – all strictly according to type. This concept has well and truly proven its worth. Today, Steigenberger is quite rightly very proud of the fact that it has the highest recycling rates in the German hotel industry.

For over 80 years now, the Steigenberger name has been well established among the top quality European hotels offering unparalleled hospitality and exquisite services. All of the Steigenberger hotels – whether they be of a traditional or more modern design – cater to the very highest of standards.

The Steigenberger Hotel Am Kanzleramt is located in the very centre of Berlin, just a few minutes away from the Office of the Federal Chancellor, the Reichstag and the main train station.

Steigenberger has now created a new flagship hotel with its Green Meeting concept – at its Hotel Am Kanzleramt in the heart of Berlin. To achieve its goals, it is relying on long-term partnerships and accredited suppliers. REMONDIS has helped it achieve the highest recycling rates of all German hotel chains thanks to its comprehensive recycling concept.

By implementing REMONDIS' certified waste management concept, the Steigenberger Group has succeeded in cutting carbon emissions across Germany by around 33,000 tonnes – every single year! The hotel group is now pushing forward its sustainability drive by introducing its Green Meeting Concept in Berlin with the aim of becoming the leading provider of sustainable events. By including all these value-added features, it has created a unique product giving it a decisive edge over its competitors.

And it has all been well worth its while. In February 2015, the Steigenberger Hotel Am Kanzleramt was awarded the 'Meeting Experts Green Award' in the 'Sustainable Events' category – a prize initiated by the GCB German Convention Bureau e.V. and the EVVC (European Association of Event Centres). This award is presented in five different categories and given to companies and institutions

operating in the events industry in Germany who have shown great commitment to the sustainability cause. Christoph Haub, key account manager at REMONDIS commented: "We are really pleased that our comprehensive recycling concept has helped grow the success of the Steigenberger Group and make it even more sustainable – in every sense of the word." The contribution that the Steigenberger hotels have made to protect the environment has been documented by REMONDIS in a detailed sustainability certificate.

REMONDIS has helped Steigenberger by developing a recycling concept for its hotels that separates recyclable waste into 17 different categories



High quality recycling

OVER 90 PERCENT OF ALL MINERAL CONSTRUCTION WASTE IS RECYCLED

Kreislaufwirtschaft Bau (KWB) – an initiative set up by the German building supplies, construction and waste management industries to promote recycling activities in the construction sector – published its latest monitoring report in the middle of February. Once again the figures presented in the report make it very clear that the contents of mineral construction and demolition waste are valuable raw materials which, when professionally treated, can be transformed into high quality aggregate.

KWB's 2015 monitoring report (based on 2012 figures) is available on the internet at www.kreislaufwirtschaft-bau.de/Arge/KWB_9.pdf (German only)



Sold under the brand name remexit®, the company markets premium recycled aggregate, whose high quality has been attested and verified in stringent tests. Their strictly defined chemical and physical properties ensure they always produce reliable results.

The different sized aggregate can be used for underground and road construction work. It is particularly suitable for creating frost protection layers and base courses or as a base for paving stones or indeed as a filler material. Moreover, recycled aggregate is increasingly being used to manufacture concrete products. The country leading the way here is the Netherlands which focuses primarily on using the material in concrete building blocks.

Jasmin Klöckner, managing director of the German association, Bundesvereinigung Recycling-Baustoffe e.V. (BRB), explained: "There are many good reasons for using recycled aggregate, the most important ones being that it reduces volumes of waste and conserves natural mineral resources. Both help to drive sustainability and protect our landscapes and the environment." The climate benefits as well: construction waste can be recycled close to where it is generated and the recycled aggregate then used in local construction projects. This reduces the need for primary aggregate or construction waste to be transported over long distances – an effective way, therefore, to cut carbon emissions.

12%

Recycled aggregate, such as remexit®, covers approx. 12 percent of the volumes of aggregate required by the German construction sector. It is one of the most important secondary building materials used by this industry

Waste from construction and demolition projects is by far the biggest waste stream produced in Europe – a waste stream generated year on year that can be recycled and converted into aggregate for the construction sector. Such recycling activities help to conserve our planet's natural resources and sustainably increase resource efficiency. KWB's latest monitoring report reveals that 91.2 percent of the 192 million tonnes of mineral construction waste generated in Germany in 2012 were recycled using environmentally sound processes. The recycling rate of waste from building and road construction projects was even slightly higher, clearly exceeding the future minimum recycling rate of 70 percent set out in the EU Waste Framework Directive.

High quality aggregate from REMEX

REMEX, a company belonging to the REMONDIS Group, is well known for its supplies of top quality mineral aggregate.



"There are many good reasons for using recycled aggregate, the most important ones being that it reduces volumes of waste and conserves natural mineral resources. Both help to drive sustainability and protect our landscapes and the environment."

Jasmin Klöckner, Managing Director of Bundesvereinigung Recycling-Baustoffe e.V. (BRB)

REMONDIS named one of the three most sustainable large corporations in Germany for 2014



GROUP DEMONSTRATES EXCELLENCE IN THE AREA OF SUSTAINABILITY

Every year, the German Sustainability Award (Deutscher Nachhaltigkeitspreis) is presented by the foundation, Stiftung Deutscher Nachhaltigkeitspreis e.V., in cooperation with the Federal government. The 7th awards ceremony was held in Düsseldorf last November with 550 companies and 65 local authorities taking part in the 2014 competition. The award was presented to companies who best unite running a successful business with being socially responsible and protecting the environment. A jury of sixteen experts named REMONDIS SE & Co. KG as one of the Top 3 "most sustainable large corporations in Germany".



REMONDIS Managing Director, Herwart Wilms, together with Johannes Remmel, Minister for Climate Protection, Environment, Agriculture, Nature and Consumer Protection of the German state of North Rhine-Westphalia, at the awards ceremony

On nominating REMONDIS, the jury said: "Guaranteeing supplies of raw materials and simultaneously conserving natural resources are two of the biggest economic, ecological and social challenges of our times. Creating raw material cycles offers companies and locations new opportunities to add value to their business and to become more sustainable. REMONDIS has seized this opportunity with its "REMONDIS.Rohstoffwende" strategy and is focusing on developing and implementing modern and efficient recycling processes. This family run company is looking to the future and demonstrating that it can overcome the

challenges of switching from natural resources to renewable raw materials. It develops concrete solutions and new methods for the recycling sector and implements these with a clear strategy. Thanks to its "REMONDIS.Rohstoffwende" programme, it has successfully transformed itself from a waste management specialist to a supplier of high quality raw materials."

REMONDIS managing director, Herwart Wilms, really appreciated the jury's praise. He said: "Being a family run water management and recycling company which has been looking at ways of conserving natural resources, protecting the environment and preventing climate change for decades now, sustainability has always been at the very core of our business. It is a great honour to receive this award. On behalf of our more than 30,000 employees who help ensure the success of our company remains sustainable in all senses of the word, I would like to express my thanks to the jury for naming our company one of the three most sustainable corporations in Germany this year."

The award is further proof that sustainability is not some short-term trend





Improved courses for operations officers

REMONDIS AND TSR RECYCLING INTENSIFY THEIR COLLABORATION WORK

REMONDIS®
WORKING FOR THE FUTURE

TSR

THE METAL COMPANY

Further training courses are an important component of REMONDIS' global operations. Just one example of the many courses on offer is the specialist seminar held every two years for plant managers in Germany. For the first time ever, a joint event was organised for REMONDIS and TSR Recycling employees which took place in the German city of Magdeburg at the end of 2014.

The REMONDIS Group's locations in Germany are all accredited specialised waste management businesses. This also includes appointing an operations officer responsible for running and monitoring on-site waste management activities. Every two years, these officers must take part in a state-recognised further training course.

Greater collaboration, more practical relevance
Around 50 TSR Recycling branch managers in Germany are also operations officers. In the past, their courses were always given by external trainers. Initiated by TSR's QSHE (quality, safety, health and environment) department, this course was reorganised and made even more practically relevant. Each seminar now consists of two parts. The first section continues to be held by external experts who are called in to inform the participants about any changes to environmental law or health and safety regulations.

8,000

There are more than 8,000 health and safety regulations in Germany



The TSR Group: exemplary metal recycling operations

The TSR Group has been part of the REMONDIS Group since 2006. Based in Germany, TSR is one of the leading companies in Europe for recycling scrap steel and non-ferrous metals. The company employs around 2,600 people at 150 business locations across the globe and handles more than seven million tonnes of metal a year. Its portfolio of services ranges from collecting, transporting and processing different types of metals, trading in metals and managing material streams as well as carrying out demolition work and industrial services. Metal recycling is a highly effective way of protecting the environment as it conserves primary raw materials and helps to prevent climate change.

The new part of this seminar involves in-house specialists who talk about company-related subjects. Jörg Benn, head of TSR's QSHE department, commented: "The feedback from the operations officers taking part in the first of these new courses has been extremely positive."

Another change: the TSR operations officers were joined by REMONDIS employees, helping to promote the exchange of information between the two companies. With this course being such a success, the organisers have decided to continue this collaboration so that TSR and REMONDIS operations officers will be able to participate in joint in-house courses in the future, too.

Environmental/health & safety management systems

The QSHE team has been using a new database system since the beginning of the year to help them with their complex work. There are more than 8,000 health and safety rules and regulations in Germany alone and this innovative system ensures operations at the TSR Recycling branches are run even more efficiently. There is, for example, an overview page for each individual branch which provides information on a number of subjects – such as

upcoming inspections, seminar dates and vacant positions – and automatic reminders are sent to the users. Branch managers are also sent a daily report about environmental matters affecting their branch and any upcoming tasks.

An additional database enables monitoring processes to be optimised in this field and makes sure any necessary correctional measures are implemented in the best possible way. The system used to transfer tasks between individual branches and delegate inspection duties to those responsible has also been simplified. Jörg Benn explained: "The system has a host of useful functions, helping us to fulfil our environmental and health and safety tasks. It also provides practical support – for example, making sure we renew our certificates on time."

External legal experts will continue to deliver training courses for operations officers

Energy for Schwerin

SAS GENERATES ECO-FRIENDLY ELECTRICITY FROM ORGANIC WASTE

SAS

The new organic waste recycling plant owned by Schweriner Abfallentsorgungs- und Straßenreinigungsgesellschaft mbH (SAS) was officially opened at the beginning of the year. This facility uses organic waste to generate climate-neutral energy which SAS then feeds into the national grid – a valuable contribution towards helping Schwerin (the capital city of the German state of Mecklenburg-Vorpommern) achieve its goal of becoming a carbon-neutral city.

SAS provides those living and working in and around Schwerin with a wide range of services. On 01 January 2015, it took over the additional task of emptying the organic waste bins in the city – the same day it officially opened its new organic waste recycling facility. The two events fit together perfectly as the organic waste is a valuable resource for the recycling plant.

Once delivered to the new facility, the organic waste is first taken to the 8,000m² hall where it is officially accepted and made ready for the anaerobic digester. Conveyor belts then transport the material to the digester where microorganisms break down the materials – an entirely natural process that produces methane and carbon dioxide, the two main components of biogas. At the end of this process, SAS transforms this biogas into electricity and heat in its combined heat and power plant.

Contributing towards a carbon-neutral city

The organic waste recycling facility is able to generate up to 2.6 million kilowatt hours of climate-friendly electricity every year – enough to cover the requirements of around 1,000 households over a twelve-month period. The majority of the electricity generated is fed straight into the national grid. Just 0.7 million kilowatt hours are kept back to cover the facility's own needs. The plant's operations

are very important for the city's efforts to prevent climate change. "Our goal is to become a climate friendly city and to have become fully carbon neutral by 2050. This state-of-the-art organic waste recycling facility is an important step down this path," commented the Mayor of Schwerin, Angelika Gramkow.

Company goal: to drive progress

The facility, built and now being run by SAS, was completed within less than a year. Construction work began on 20 January 2014 and the facility's various components underwent their first tests in October. Following a successful dry run (i.e. without material), operations started with the organic waste soon after. Indeed the whole project has proven to be a huge success: SAS generated its first electricity in November which it fed straight into the grid. "The first kilowatt hour of electricity was a really important milestone for us," explained Matthias Hartung, managing director of SAS. "We see SAS as being a traditional as well as an innovative company and we want it to be able to offer Schwerin's commercial and industrial businesses and its local residents the best possible solutions."

SAS was founded almost 60 years ago. REMONDIS acquired a 49 percent share in the company in 2007; the remaining shares are owned by the city council. The collaboration

18,000t

Around 18,000 tonnes of organic waste can be processed at the organic waste recycling facility in Schwerin every year



To learn more go to sas-schwerin.de



⚡ 2,600,000kWh

Using state-of-the-art technology, SAS is able to generate 2.6 million kilowatt hours of electricity, the majority of which is fed straight into the national grid

➡ 🏠 1,000

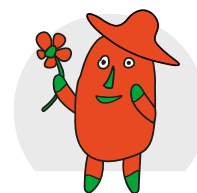
This is sufficient to cover the annual requirements of around 1,000 households

between these two strong shareholders has helped to drive forward SAS' business with the joint venture now employing around 80 employees, one third more than when REMONDIS purchased its share.

Initiatives for efficient organic waste collection schemes

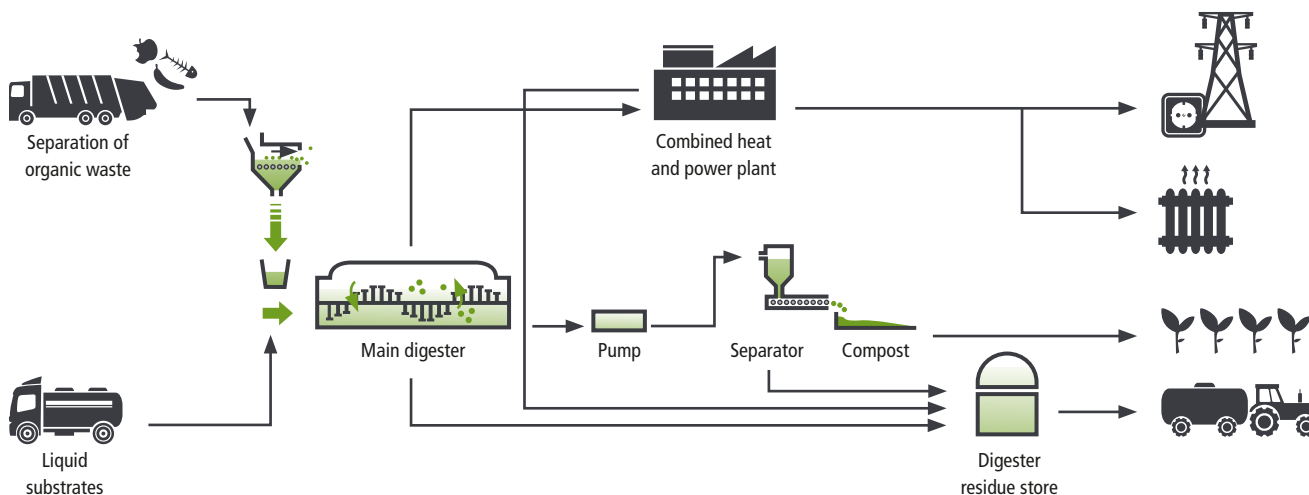
SAS has a number of strengths including its innovative technologies and its many and varied activities to motivate local residents to join in its collection schemes. The organic waste bins handed out at the beginning of the year, for

example, have been equipped with a chip and bin identification number. This helps the company to locate the organic waste bins as well as to improve the routes their vehicles take. SAS has created a special mascot to make people more aware of the subject of organic waste. This cute figure was designed by 12-year-old Lilly Kutta and has been christened 'Heini'. SAS managing director, Matthias Dankert, explained: "Our aim is to teach school children about the subject of organic waste. Our mascot will help to entertain the children as they absorb the information – a really fun way to point out the advantages of separating organic waste."



This cute mascot, christened Heini, was designed by 12-year-old Lilly Kutta

When recycling organic waste, priority is always put on closing as many material life cycles as possible



Development project sets the standards

GATEWAY GARDENS DISTRICT IN FRANKFURT AWARDED CERTIFICATION WITH FES' HELP



Sustainability is not only an effective way to add value to the environment but also to companies. Every sector has recognised the importance of having a verifiable and accredited sustainable set-up. Gateway Gardens, one of the biggest property developments among the European airport cities, is leading the way within the real estate and construction sectors when it comes to sustainability.

A competitive advantage: sustainability certificates make building projects even more attractive

A completely new city district is being developed in Frankfurt am Main: the 'Gateway Gardens' project. Due to be finished by 2021, it is located on the former US Rhein-Main Air Base, right next door to Frankfurt Airport. Whilst the majority of the developments will be office space and conference facilities, plans are also in place for a variety of hotels, shops, restaurants and leisure facilities – all in all the total floor space will amount to around 700,000m². Once completed, this 35-hectare site will provide jobs for up to 18,000 people.

A pioneer in the real estate sector

Gateway Gardens is a joint venture between a real estate company and the City of Frankfurt. It became clear right from the very start that this new district was aiming to lead the way and become a role model for sustainable development. The project developers have been given support here by FES Frankfurter Entsorgungs- und Service GmbH. This public private partnership, owned by the city authorities and REMONDIS, developed a bespoke waste management concept for Gateway Gardens. One of its tasks, for example, is



to ensure that as little waste as possible is generated during the actual construction period. At the same time, the waste that is produced is being segregated so that the very most can be made of its material and energy contents. All the building materials and the various construction processes have been integrated into the concept to guarantee the best possible results.

FES is also providing a wide range of services to help implement its concept – from identifying which materials need to be collected separately, to determining where the collection points should be set up, all the way through to optimising material flows. The project developers and site managers are also being given on-site advice on setting up recycling centres and deploying waste management specialists.

Sustainability provides competitive edge

“If a new building project is to be sustainable, then it is essential that it includes an innovative and efficient waste management concept,” explained Christian Tauchmann, country manager at REMONDIS International. It has been a well-known fact in the construction sector for a while now that sustainability is essential for a project to be a success. This is particularly true for real estate projects whose economic success increasingly depends on whether a sustainability certificate can be produced or not.

The most popular certificates are the LEED Certificate (Leadership in Energy and Environmental Design) and the DGNB Certificate (awarded by the German Sustainable Building Society). A whole list of criteria must have



The Rotex winter garden is part of a joint project between a real estate company and the City of Frankfurt

been met, however, to qualify for one of these certificates – including a sustainable waste management concept. FES helps its customers to meet these criteria so that real estate companies can increase their chance of getting a better evaluation and so gain a decisive edge over their competitors both at home and abroad.

Proof of environmentally sound operations

In addition, FES can also provide its commercial and industrial customers with a sustainability certificate, which documents the contribution these businesses make towards conserving natural resources and preventing climate change. This is the world’s first and only sustainability certificate

“If a new building project is to be sustainable, then it is essential that it includes an innovative and efficient waste management concept.”

Christian Tauchmann, country manager at REMONDIS International, responsible at FES for sustainability concepts involving the construction sector

and was developed by REMONDIS and the independent institute, ATZ. It is a sensible addition to the DGNB and LEED certificates as it demonstrates how a company’s waste management concept cuts carbon emissions and reduces the consumption of primary raw materials and energy. The method of calculation is based on the life cycle assessment as per DIN EN ISO 14040. The whole of the process chain is included in the analysis – from the collection all the way through to the recycling of the materials.

Responsible urban development: FES developed a waste management concept for the Gateway Gardens project that meets the DGNB criteria

Recognition has already been gained for the sustainability initiatives included in the Gateway Gardens project: the developers were presented with a DGNB certificate for their new district in October 2014 – the first commercial district in Germany to have been recognised by the society. This pioneering development project has, therefore, received the best possible award with the DGNB’s Gold Certificate for commercial districts.



3D
optical
scanner

360°

A wide-ranging portfolio

CCTV EQUIPMENT FOR INSPECTING MANHOLES AND SEWER SYSTEMS

It makes no difference whether a property is a private home or a large industrial facility: anyone generating wastewater is obliged by law to have their pipes checked regularly for leaks and to have this work documented. A perfect job for the experts at BUCHEN's sewer service division who are able to shed light into the darkest of corners thanks to their state-of-the-art technology.

BUCHEN®

WORKING FOR THE FUTURE

BUCHEN's sewer service division and its staff focus exclusively on professionally cleaning, inspecting and checking for leaks in sewer pipes, drainage systems and other pipe networks as well as oil/fuel and fat separators, collecting tanks and household pipe connections. The company's three businesses in Köln-Niehl, Duisburg and Karlsruhe have a total of 14 special vehicles equipped with cutting-edge CCTV technology to perform these specialist tasks. Their technology includes, for example, mobile camera systems, which can be attached to a variety of robotic crawlers and guided through the pipes by remote control or – if the robotic crawlers are too wide – pushed through the pipes. As the camera makes its way along the drains and pipes, it films the pipe network, digitally recording any damage so that the condition of the surface can be assessed.

assessed in a completely new way. Attached to a special camera cable, it can be lowered into the manhole. As it slowly moves upwards, it automatically takes individual images of the surface (every 5 centimetres) which are then transformed by computer into a three-dimensional image. The result is an extremely detailed picture of the inside of the manhole which enables the operatives to make an exact analysis of the general state of the structure. This technology has considerably shortened the time needed for damage assessment projects: in the past this work could only be done by operatives climbing into a manhole wearing extensive safety equipment and manually collecting the data themselves. Depending on the quality of the wastewater, they sometimes had to put on full protection suits and use breathing apparatus.

This camera technology should always be operated by experienced CCTV inspectors as they alone know how to get the most out of it. They not only have to guide the camera through the pipes from their computer workstation in the sewer inspection vehicle, they must also spot any damage to the surface of the drains or sewers and compile a detailed report. It is only possible to get a realistic picture of the overall state of the structure if the images are analysed

High-tech = greater safety

BUCHEN's sewer service division in Cologne recently acquired a state-of-the-art 3D optical scanner which allows the condition of manholes and other vertical structures to be

14 sewer service vehicles equipped with cutting-edge CCTV technology are available to inspect sewers and manholes



correctly. Such work requires high levels of concentration, specialist knowledge and a trained eye. "All our CCTV inspectors have taken part in excellent training courses and have many years' experience of doing this work which means the services we deliver are of a correspondingly high quality. This is also underlined by the fact that external engineering firms and assessors regularly use the results of our surveys to plan renovation projects," commented Bernd Engelhardt, manager of the sewer service division at the company's Köln-Niehl branch.

No surveys without cleaning work

He and his colleagues believe that BUCHEN's portfolio of cleaning, inspection and leakage test services provides a number of other advantages as well. "Over the years, our company has built up a reputation of being a top quality cleaning specialist. And as the sewer pipes always have to be cleaned before they are inspected, we can combine these two services for practically every project. We have an extremely versatile set-up." The company is even able to take on complex projects involving long stretches of sewer pipes up to 400 metres in length or clean pipes with a large diameter or an unusual shape by using its specialist technology. "And the really difficult cases – for example when an operative needs to enter the sewer to carry out manual work – are not a problem for us either as we have the equipment to cover every possible situation," Bernd Engelhardt continued.

The final stage: the leak tests

No matter how experienced and skilled the operatives may be or how well the sewers and drains may have been cleaned, it is not possible to detect the really small leaks or notice when seals are very slightly damaged. To rule these out, therefore, leak tests are always carried out once the inspection or renovation work has been completed. Air or water is pumped into the pipes to enable a pressure test to be performed. Diverse DIN EN standards stipulate exactly how such tests need to be executed which means they, too, have to be done by trained and qualified specialists.

The greater the potential danger, the greater the number of inspections

Just how often pipe networks need to be inspected depends on their potential danger and the size of the business. Major plants such as industrial, chemical and petrochemical facilities or electricity providers are subject to the 'VAwS' (Federal ordinance regulating facilities handling substances hazardous to water). These regulations are particularly stringent as environmentally hazardous substances sometimes flow

through their wastewater networks. Such systems have to be checked for leaks every five years. Tests at industrial facilities often involve highly sensitive equipment – for example light liquid, fuel and fat separators where the inlet pipes also need to be tested. A further example are the oil-cooled transformers at large substations. These stand on collection basins and are connected to separators. The whole of such pipe systems must be inspected every five years and include a leak test.

"The really difficult cases are not a problem for us either."

Bernd Engelhardt, sewer service division manager

The second large group of customers served by BUCHEN's sewer service division are businesses that own property covering more than three hectares. Since 1995, companies in the German state of North Rhine-Westphalia falling into this category must have all their drainage and sewer pipes checked by specialists. Their third group of customers are private households – as home owners must also have their wastewater systems checked at certain intervals. The same applies to new build homes as well as to homes that have been renovated or undergone major conversion work. The local bylaws stipulate how long the owners have to commission such inspection work which depends on whether the property is in a water conservation area or not.

It often makes good business sense for large industrial facilities with extensive pipe and sewer networks to arrange a framework service agreement with a company to carry out such work, as the networks have to be checked regularly and within relatively short periods of time due to the stringent environmental regulations. The CCTV inspection teams need several weeks, or in some cases months, to complete their tasks at large plants. In contrast, pipe inspections at detached homes are normally wrapped up within three to four hours – including the cleaning work. Bernd Engelhardt concluded: "No matter whether you own a home or a major industrial facility: we are the right port of call for every kind of inspection project."

The law stipulates that sewer and drainage systems must be inspected by specialists at regular intervals – and this applies to both major industrial businesses as well as to private homes

NEW TECHNOLOGY, NEW FIELDS OF APPLICATION

The BUCHEN team can now perform additional tasks thanks to its new 3D optical scanner system: not only inspections below ground but now also high up in the air. The camera is perfect for assessing the condition of industrial chimneys. Their latest project: the three chimneys at the central heating plant at the exhibition centre in Cologne.



Reaching the highest levels

RESTORATION WORK CONTINUES ON THE BASILICA OF ST. MARTIN IN AMBERG THANKS TO SMART SCAFFOLDING SOLUTIONS

XERVON®

WORKING FOR THE FUTURE

Erecting scaffolds around church spires is a challenging task that involves complex scaffolding technology. One essential component here is ensuring that all loads are safely transferred. The Basilica of St. Martin in the city of Amberg is no exception. The scaffolding experts at REMONDIS' subsidiary, XERVON, had to come up with some smart ideas to enable the urgently needed renovation work to be carried out completely safely and as conveniently as possible on the church spire.

200t

scaffolding material

25t

steel beams

Sophisticated constructions involving large volumes of material were designed to ensure the scaffolding can bear the various loads

At a height of 92 metres, the spire of St. Martin is truly impressive. At the moment, however, it is hidden from view as the tower (basic size: 12 metres) and its copper onion dome have been completely surrounded by scaffolding. A team of up to seven scaffold specialists needed several weeks to erect this complex structure which involved 200 tonnes of scaffolding material and 25 tonnes of steel beams. Further sections have had to be added to the scaffold as the renovation work has progressed, for example it had to be fully enclosed with a tear-resistant and dustproof cover whilst work on the façade was carried out. It has by no means been a simple process to erect this scaffolding, especially as access to the tower is restricted. The north side of the spire, for example, is in the middle

of a pedestrianised area which has meant that crane work may only be performed – and supplies delivered – at certain times.

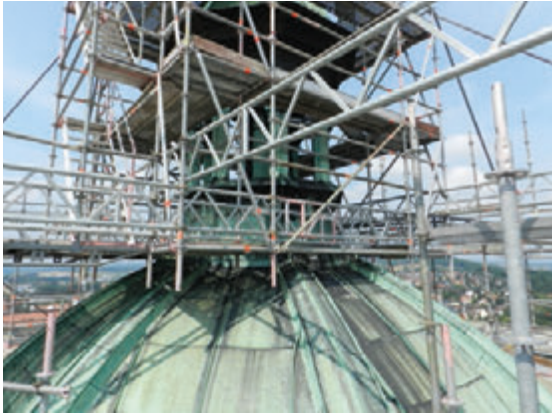
Access for all trades

The tower has needed extensive restoration work done to it as can be seen by the long list of planned tasks – from restoring the natural stone masonry, to renovating the historic ceiling beams, all the way through to repairing the metal on the roof of the tower.

The scaffolding specialists from XERVON's south-west region developed a complex scaffold construction to ensure all the workers have safe access to the tower and can perform their

The Basilica's 92-metre tower surrounded in scaffolding





XERVON's scaffolding specialists planned and calculated every section of the scaffolding for the Basilica in Amberg right down to the tiniest of details – an impressive example of their scaffolding expertise

tasks efficiently. This structure safely transfers all the loads to a suitable load-bearing surface. Due to the local conditions, very few sections of the scaffold are able to directly bear loads and transfer them vertically to the base. To solve this problem, therefore, special constructions of bar joists and steel beams were designed and erected to re-direct and distribute the loads.

With all these special requirements and conditions having to be met, no part of this scaffolding is a standard construction – on the contrary, it is absolutely unique with every single section having been planned and calculated right down to the tiniest of details. The west side of the tower, for example, is 23 metres long and is right next to the edge of the River Vils which means that the scaffolding has had to be protected against the force of the water and possible floods. The scaffold has, therefore, been erected on a special sub-structure which can bear any excess loads generated by faster currents or floods. Special scaffolding was also needed on the east side, where a self-supporting scaffold structure has been erected above the surface of the roof of the nave. Any loads generated here are transferred either straight to the tower via a steel construction or to the scaffolding on the north and west-facing sides via heavy duty bar joists. The base of the scaffold on the north side was extended to enable it to bear these extra loads. A further tricky task had to be performed in this area: around 20 metres of freestanding scaffolding had to be erected here.

The workers access the tower from the south side. Here, too, the base of the scaffold was extended to increase its load-bearing capacity. Thirty metres in height, this extension is topped by a 100m² load platform made from steel beams. A lift (max. load: 1,500kg) has been integrated into the

scaffolding here which transports the workers from the ground to the platform. A second lift (max. load: 500kg) then takes them from here to up to 80 metres above the ground. What is a slight breeze for the people in the market square is a strong wind at such heights that buffets the scaffolding and tarpaulin covers.

Despite all these challenges, the XERVON scaffolding experts have succeeded in completing their tasks. The work being carried out on the tower is also well within schedule – not least thanks to XERVON's extensive experience gathered from similar such projects and their smart access solutions. Much of the renovation work has already been completed even though the damage to the tower was worse than had been expected. There is still a long way to go, however, before the work on the Basilica of St. Martin in Amberg has been completed. The next stage of the plan is to erect scaffolding around the whole of the nave so that the sandstone façade and valuable stained glass windows can be repaired.



To learn more about the company, simply go to [xervon.com](https://www.xervon.com)

THE BASILICA OF ST. MARTIN, AMBERG

The historic town of Amberg (approx. 42,000 inhabitants) dates back to the Middle Ages and is one of the best preserved cities in Europe. Situated around 60 kilometres east of Nuremberg on the River Vils, the town's market square is dominated by the Basilica of St. Martin. 72 metres long and 20.5 metres wide, it is the second-largest church in the Upper Palatinate region (the largest being Regensburg Cathedral). Construction began on the church in 1421; the upper sections of the tower were then rebuilt and completed in 1727. The architecture and interior furnishings of the church have been influenced by many different eras since then: the Gothic, Renaissance and Baroque movements as well as the Reformation and counter reformations. Today, St. Martin is a late Gothic 'hall church' with a Neo-Gothic interior. Its unusual architectural feature: all three sections of the church's nave are of the same height with the same pitched roof.

The private sector – quality and efficiency means more jobs

POSITIVE IMPACT ON MUNICIPAL BUSINESSES

Even though the current trend towards renationalisation – via remunicipalisation – may tell another tale, both economic experts and fee payers are becoming more and more sceptical about the ability of local authorities to run a business. It is very rare to find a municipal business run solely by a local authority that is in the black. Depending on which political party is in power, one of the key arguments for operating municipal companies is that they provide secure jobs. Is this actually true though? A closer look at the current situation has brought some interesting facts to light.

What is important is to reduce the financial risk for local residents and to secure jobs

In its 20th Annual Report, the Monopolies Commission (an independent expert committee which advises the German government) makes the following statement regarding municipal business activities – quoting the Monopolies Commission Chairman, Professor Daniel Zimmer: “The overexpansion of municipal economic activities can give rise to distortions of competition and lead to a shift of significant financial risk to society. In addition, the level of fees and charges for the services of municipal undertakings is not subject to any functioning efficiency control at the moment, leading to additional charges for the public. Therefore, appropriate conditions must be established for better supervision by the public, the decision-makers and the supervisory authorities.”

The Monopolies Commission also has a very clear position on waste management activities. In its press release of July 2014, it says: “As concerns the disposal of household waste, the tender procedures have been successful for long, particularly in rural areas, showing that private undertakings can provide the required services at least at the

same high quality as the municipal utilities. Several arguments militate in favour of the assumption that an enlargement of the municipal tenders for household waste disposal would not only alleviate the burden on the general public, but also have ecological advantages.” The latter can primarily be put down to the fact that practically all the recycling plants that are able to recover materials for re-use – such as aluminium, copper, paper and plastics – came about thanks to private sector investment and are also operated by private sector companies. Such operations are in line with current European waste legislation which places the re-use of materials second in its waste hierarchy below the preferred option of reducing volumes of waste. The fact that many local authorities have chosen to send their household waste for thermal treatment over the last few decades can be put down to historical and financial factors. Nowadays, though, this method would appear to be more than outdated, not least thanks to the falling incineration prices and the ever-growing awareness for environmental issues.

Public private partnerships will continue to be a robust business model for achieving greater quality and efficiency



Three examples of traditional municipal activities – waste management, water management and local public transport – show that public sector jobs are by no means as secure as is sometimes claimed (see chart). The municipal water authorities in Berlin, for example, reduced the size of their workforce by around 38 percent between 1994 and 2013. During the same period, the municipal firm responsible for city maintenance in Berlin cut the number of people they employed by approx. 47 percent. In 2013, the Rheinbahn railway business employed almost 38% fewer people than it did back in 1992.

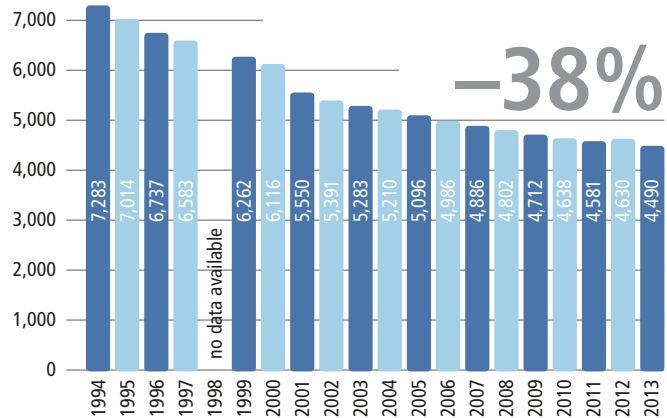
In contrast, the many successful public private partnerships – especially those involving REMONDIS – have not only demonstrated that their business methods and operations are more efficient, they are also much better at increasing and maintaining the size of their workforce.

One such example is Frankfurter Entsorgungs- und Service GmbH (FES), the largest public private partnership that REMONDIS operates together with the City of Frankfurt. 1,529 people were working for FES when the public private partnership first started in 1995. Today, there are now 1,669 employees who provide top quality services and ensure fees remain stable. This is a striking example of how PPPs can have a positive impact on jobs. A look at the development of the workforce at REMONDIS and its sister companies is equally impressive. Since 1999, this family run business has increased the number of people it employs in Germany by 243% – and globally by even 342% – so that it currently has just under 59,000 employees. With these impressive figures and its commitment to always provide the best value for money, REMONDIS also succeeds in growing efficiency at its municipal partners' businesses. Whether it be part of a public private partnership or providing individual services for local authorities: when the public and private sectors work together, the result is greater quality, efficiency and job security.

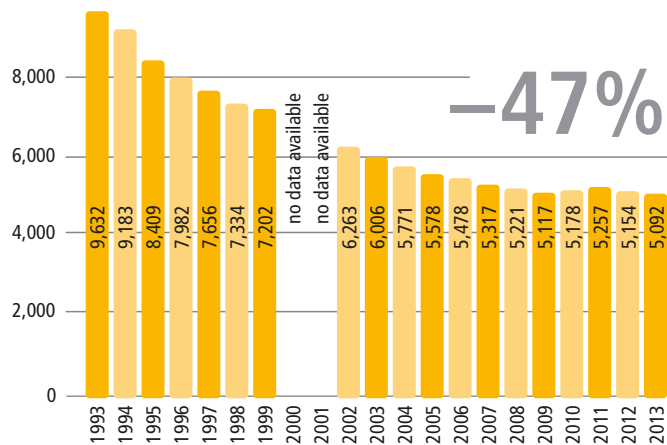
Change in the no. of employees

A long-term look at a selection of large corporations operated primarily by local authorities

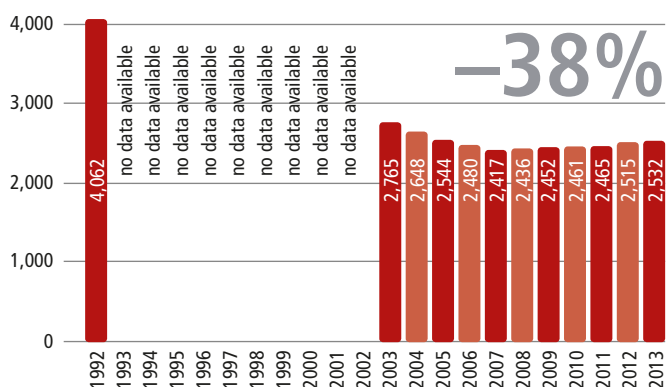
e.g "water": the water authorities in Berlin cut their workforce by a good 38% between 1994 and 2013



e.g "waste management": Berliner Stadtreinigungsbetriebe cut the number of people it employed by 47% between 1993 and 2013



e.g "public transport": Rheinbahn reduced its workforce by just under 38% between 1992 and 2013



Solving India's water problems

REMONDIS AQUA PARTICIPATES IN A LONG-TERM QUALITY INITIATIVE



Environmental technology. Industrial businesses in India have a lot of catching-up to do in the area of water management. Investments are needed urgently, whether they be in equipment, maintenance or staff training measures. Groundwater and surface water are becoming scarce in India. Five to ten percent of the country's demand for fresh water comes from industrial businesses alone – and this figure is rising all the time. At the same time, factories, power stations and refineries are among the biggest producers of wastewater. It is estimated that more than six billion litres of untreated wastewater flows into the country's rivers and lakes every year. The newly elected government is now looking to put a stop to all this with its latest version of the "Clean Ganga Mission".

This mission aims to clean up and improve the quality of the water in the 2,500-kilometre-long River Ganges. Moreover, it will make it illegal for industrial businesses, cities and villages to discharge untreated wastewater and industrial effluent straight into this sacred river. The Indian government made it clear that they also wanted Germany to be involved in this ambitious plan, as the country has extensive experience of such projects and also has an excellent reputation when it comes to project management.

The technology needed for processing fresh water and treating wastewater can, for the most part, already be found in India. Numerous domestic and foreign companies, including REMONDIS Aqua, operate in this market selling technology or building new facilities. The potential of this market is huge; the size of the country, however, creates its own challenges making it difficult for companies to commit. State-of-the-art technology is used by only a small number of industrial businesses – primarily

multinational firms or large local companies. The laws regulating the treatment of wastewater are becoming increasingly more stringent and are considered to be strict enough in many areas; however, control measures, for example in the area of wastewater treatment, are insufficient. The fundamental problem is the inability of the Indian authorities to enforce the regulations. Public sector businesses, in particular, are not inspected as they should be and private firms can also sometimes find ways in this less than transparent system to avoid having to stick to the rules.

Small businesses, which make up around 40 percent of the total volume of industrial wastewater, cooperate in the area of water management. The Government has been supporting so-called common effluent treatment plants for over twenty years now. There are currently around 250 such treatment plants throughout the country. "Such plants often fail, however, because they are badly

Clean water for India
is a huge project

maintained or because the machines are not operated correctly,” said Mr Anshuman, Associate Director of the Water Resources Division at the Energy and Resources Institute. This presents opportunities for service providers who are able to give advice in this area or indeed take over full management of such plants. REMONDIS Aqua is already doing this now.

Looking ahead, India will have to invest in training measures to ensure it has specialists in this field. As yet, there are no specialist courses on offer that are combined with

practical training. Representatives from the German water sector, the German Chamber of Commerce’s Bildungs-GmbH and Germany’s International Chamber of Commerce responsible for India are currently in the process of developing training courses covering industrial wastewater treatment. BIBS, a project financed by the Federal Ministry of Education and Research aiming to export vocational training measures in urban water management to India, is also working on a general training programme covering all aspects of water management.

Investments in equipment and staff training measures are needed urgently

An interview with Thomas Block, managing director of Remondis Aqua (India) Pvt. Ltd.

Remondis Aqua (India) Pvt. Ltd. provides water management services for both public sector and industrial customers. Between 2012 and 2014, the company, a subsidiary of the REMONDIS Group, carried out a number of projects to improve water and energy efficiency in the Indian sugar industry. REMONDIS was supported in its efforts by the DEG Deutschen Investitions- und Entwicklungsgesellschaft as part of its develoPPP.de programme.

1. You took a close look at twelve companies – including ten cooperatives – operating in the sugar industry in the Indian state of Maharashtra. Was there a great need for change?

The water systems at 80 percent of the sugar cooperatives needed huge improvements done to them. The existing facilities had to be either removed or new machinery had to be invested in. One of the main problems was the personnel’s lack of know-how. The condition of the equipment at the private sector firms was considerably better, as was the technical knowledge of the staff.

2. How did the people react to your programme?

The firms were really open right from the start. The managers and, in particular, the engineers were very interested in learning more about the latest technology used by a foreign company.

3. What suggestions did you make to improve their levels of resource efficiency?

The primary goal of the measures we put forward was to reduce water consumption. In addition, we drew up a number of suggestions to help them save energy – from operating their pumps more efficiently, to generating energy from organic waste.

4. Just how willing were the cooperatives to actually implement the measures?

Our training measures – both theory and on-the-job – were particularly popular. More often than not, though, the technical measures were unable to be implemented due to a lack of funds. The decision-making structures and processes at the cooperatives proved to be a hindrance as was the general lack of awareness regarding environmental issues.

5. You are already involved in water management processes at other Indian companies. Where do you believe the biggest potential to be in India?

It is still very difficult for foreign companies to participate in public sector projects even though the authorities could really benefit from their knowledge of operating plants and facilities. In some cases, there is a lack of transparency in public tender processes and the public sector is also very slow to pay their bills. There are already, however, some very good opportunities at large private sector firms. Basically speaking, all industrial businesses will have to invest heavily in their water management systems in the near future. We are expecting demand to grow rapidly in a number of the more dynamic consumer good sectors – such as the food processing or pharmaceutical industries.



Thomas Block, Managing Director of Remondis Aqua (India) Pvt. Ltd.

A new PPP in Poland for REMONDIS Aqua

WYSZOGROD PROJECT KEEPS THE VISTULA RIVER CLEAN

 80,000m³

of wastewater are treated at the Wyszogrod sewage treatment plant every year

 190,000m³

of drinking water are supplied to the company's commercial and private customers.



The Remondis Aqua Group is continuing to expand in Poland – purchasing a 40 percent share in a company owned by the Trzemeszno city and district authorities in June 2014. Thanks to this acquisition, a further town in Poland is now benefiting from the innovative advantages of a public private partnership as well as from REMONDIS' experience of operating modern water management systems.

Bespoke concepts will also be needed in the future so that local authorities can work together with specialists to master the ever growing challenges in their water management sectors

An agreement was drawn up between the parties that was able to satisfy their various needs and interests. As a result, REMONDIS has acquired a minority shareholding in the municipal company, Zaklat Gospodarki Komunalnej w Wyszogrodzie Sp. z o. o. (ZGK), and assumed responsibility for managing the company's operations.

The city and district of Wyszogrod is situated on high ground west of Warsaw and looks down on the impressive

Vistula River (Polish: Wisła). Located on such an exposed area, it is extremely important that the best possible processes are used to clean the wastewater generated there before it is discharged into the river. State-of-the-art technology is needed to further improve the quality of the water flowing through the Vistula.

One of the initial goals of this new partnership, which began on 01 January 2015, is, therefore, to optimise

Mayor Mariusz Bienek (centre) signing the contracts



The waterworks in Wyszogrod have been upgraded



Kobylniki also uses state-of-the-art water technology now

operations at the local sewage treatment plant and to convert it so that it is largely operated by automatic equipment. In addition, the 200km of pipes in the town's water and sewage networks need to be maintained and extended. Three waterworks supply the 6,000+ local residents with drinking water. Focus here is being put on improving the way the different areas are connected to one another, so that the infrastructure can be optimised and the customers can benefit from a higher quality of water and stable water rates.

Another immediate project is to set up a customer service centre which will be able to answer any questions the local residents may have about water management in their town. Moreover, modern technology is to be installed here to make the invoicing process easier for the company and its customers. As is so often the case, REMONDIS Aqua took part in a public tender to win this contract in Wyszogrod. Impressed by the clear concepts REMONDIS had drawn up regarding investment and facility management, both the local councillors and the mayor of the city, Mariusz Bienek, opted to enter into a long-term agreement with the company rather than with one of its competitors.

Further support will also be coming from the nearby town of Drobin, where REMONDIS has been operating a successful joint venture with the local authorities there to supply drinking water and treat wastewater since 2006. Plans are to collaborate on a long-term basis with the cities sharing both their know-how and resources.



Impressed by the clear concepts REMONDIS had drawn up regarding investment and facility management, both the local councillors and the mayor of the city, Mariusz Bienek (2nd from left), opted to enter into a long-term agreement with the company

Drinking water – clean and safe

SUCCESSFUL RESCUE EXERCISE AT WATER FACILITY



Having a guaranteed supply of safe and clean drinking water is a precious thing and is taken for granted in Germany – not least thanks to the considerable sums of money invested by the private sector. Top priority is also given to levels of safety when it comes to cleaning pressurised tanks and drinking water tanks. One such tank – operated by Wasserverband Lausitz Betriebsführungs GmbH (WAL-Betrieb), a REMONDIS Aqua subsidiary, at the pressure boosting station in Senftenberg – was scheduled recently to be inspected and cleaned. The company decided to use this opportunity to invite the Senftenberg fire brigade to join them and take part in a rescue exercise.

Not just safe water but
safe operations as well

The aim of the exercise was to practise responding to an emergency situation, rescuing and giving first aid to an injured employee – hopefully a situation they will never have to actually experience. With the operations manager at WAL-Betrieb and the Senftenberg fire brigade closely monitoring the exercise, the team practised rescuing a person from a 5,000m³ underground drinking water tank via a steep ladder descending approx. ten metres below ground. The poor light and tight spaces made the operation difficult even for the experienced firefighters. “Fortunately the rescue team did not need to wear special breathing apparatus as the air was okay. Breathing apparatus makes rescue operations in tight spaces far more difficult to carry out,” commented Frank Albin, officer-in-charge at Senftenberg fire brigade.



“Our colleagues have got to know the local conditions, practised rescuing a person from an underground tank and are now well prepared for such assignments.” WAL-Betrieb believes it is essential for the safety of their staff that they cooperate with the fire and rescue services in this way.

The only way to truly
practise a rescue operation
is when a volunteer steps
in to play the part of the
injured person

The rescuers strapped a WAL-Betrieb employee to a marine stretcher and then pulled him to the surface where, in an emergency, he would have been given any necessary medical treatment. The officer-in-charge was very pleased with the way the exercise went.

“We wanted to use this exercise to discover any potential weak points as well as to make sure that we have access to a professional rapid response team in the case of an emergency. We have held similar such exercises at the Brieske/Senftenberg sewage treatment plant which were just as successful,” concluded Christoph Maschek, managing director of WAL-Betrieb.



Industrial divers in action



DIVERS CLEAN DIGESTER AT THE GOSLAR CENTRAL SEWAGE TREATMENT PLANT

The industrial divers climb down into the sewage sludge wearing close-fitting, rubberised full-body suits and a 12kg helmet and carrying equipment weighing 65 kilos. Their job: to remove the deposits and solids from the warm (ca. 40°C), viscous mixture of brown water and digested sludge. Working for their client EURAWASSER, these specialists are able to carry out their work without the facility having to be shut down. At the same time they protect the billions of tiny helpers: the bacteria responsible for breaking down the organic material.



The environmental divers worked in 70-minute shifts using suction equipment to clean the 15-metre high tower at the central sewage treatment plant in Goslar. This length of time was necessary as divers must always ascend very slowly to the surface. Nitrogen bubbles accumulate in divers' joints when they are under water which cause pain similar to rheumatism. These are broken down when divers move slowly upwards towards the surface.

The divers had direct voice contact with their colleagues on the tower and they were also connected to a hose enabling them to cool themselves down with water if necessary – helping them to keep calm in these completely black surroundings. The consistency of the liquid helped them judge their position, as the sludge-water mixture is less thick in the middle of the digester. The further they moved towards the walls, therefore, the thicker the sludge became. Other resources were used to help them find their bearings such

as ladders which were laid across the inside of the tank. "The last time the tower was emptied, cleaned and renovated was 20 years ago," explained Jörg Hinke, head of water management technology at EURAWASSER, the operator of the sewage treatment plant. The build-up of deposits reduces the capacity of the digester which in turn considerably slows down the digestion process. By deploying environmental divers to clean the facility, there is no need to remove the sludge. Operations in the digester can continue as usual which means the bacteria, which are primarily responsible for breaking down the organic material in the wastewater, are not destroyed.

Industrial divers must also make safety stops as they move upwards towards the surface

Industrial divers have to keep a clear head even in the murkiest of waters



Film:
Cleaning a digester
at EURAWASSER

REMONDIS given “preferred partner” status by German Hotel Association

The German Hotel Association is a member of the International Hotel Association and represents the interests of over 1,400 hotels (independent, cooperation and chains), carrying out lobbying and PR work at both national and international level. Another aspect of the association’s work is to support its members by offering specialist services provided by so-called preferred partners. These partners are leading suppliers and service providers with experience of the hotel business



who are able to offer guaranteed top quality services and products. Having worked together with a variety of well-known hotel chains, such as Maritim and Steigenberger, for many years, REMONDIS has now been added to the association’s list of preferred partners for waste management and recycling. Christoph Haub, key account manager for the hotel industry at REMONDIS, was really pleased to see the company receive this honour: “This endorses the quality of our work within the sector and is a great recommendation for other hotels.”

Netherlands: REMONDIS takes over commercial waste collection operations from Twente Milieu

With the European waste legislation restricting the commercial activities of municipal companies, local authorities in the Netherlands are also finding themselves facing problems if the share of their commercial waste collection activities exceeds 10% of their overall turnover. Confronted with this dilemma, Twente Milieu, the municipal waste management business responsible for the region of Twente, has now handed over its commercial waste collection operations to REMONDIS (effective from 01 January 2015). As Twente Milieu’s main business consists of providing public waste management tasks and maintaining the region’s public areas and drainage systems,

the municipal company decided to look for a suitable partner to take over its commercial activities at the end of last year. They opted for REMONDIS who has been collecting and recycling commercial waste in the Netherlands for many years now. Twente Milieu’s management said that they were more than confident that their commercial customers would continue to receive the same high quality service they had grown accustomed to.

Andreas Krawczik, Managing Director of REMONDIS International, and Theo Lemmen, Managing Director of Twente Milieu, sealing the deal to transfer the company’s commercial waste collection operations



Compliance news

The company's chief compliance officer has been travelling to companies within the REMONDIS Group since the beginning of this year to inform the people there about the activities of the compliance department and the latest developments. In his talks, he makes particular reference to the newly set up compliance sections on the company's website and intranet. REMONDIS customers can also go to remondis.com to learn more about the company's compliance management system and print out the relevant brochures. In addition, the employees can go on to the intranet and download the company's code of conduct to read up on how they should behave as far as invitations and gifts are concerned. Plans are to hold compliance seminars for all levels of management during 2015 and, if necessary, to extend the programme into the

following year and beyond. Dr Ernst-Joachim Grosche, Chief Compliance Officer at REMONDIS, underlined just how important compliance activities are for the business: "It is essential that international compliance standards are met if the company wishes to enjoy sustainable success. To ensure we do this, we shall continue our information campaign both inside and outside the company."

Anyone with a question about corporate compliance can now contact Dr Ernst-Joachim Grosche, Chief Compliance Officer, and Zhanna Barysiuk, Assistant Chief Compliance Officer



REMONDIS gives careers advice at the Business Day 2014

For 16 years now, the "Business Day" careers event held by the University of Applied Sciences in Münster has attracted some well-known exhibitors. REMONDIS took part in the event for the first time alongside fourteen other companies from the region on 18.11.2014.

Pauline Schuschan (HR REMONDIS International) and Hilke Bendfeld (controlling department REMONDIS International and alumna of the university) first gave a presentation about REMONDIS in one of the lecture halls. Following this, they joined Friederike Beerens (HR REMONDIS International) and

Robert Märting (HR REMONDIS A&S) at the company's stand to inform students about how they can join the company – whether it be as an intern, trainee or employee.

Two alumni of the "European Business Programme" (EBP), who now work at REMONDIS, took this opportunity to spend a day at their old university. Thus, Martin Melms (managing director of REMONDIS International and alumnus of the university) and Hilke Bendfeld travelled to the Business Day to support the exhibition team and talk to the students about their career at REMONDIS.



(from left to right) Pauline Schuschan (HR REMONDIS International), Hilke Bendfeld (controlling dept. REMONDIS International and alumna of the university), Friederike Beerens (HR REMONDIS International) and Robert Märting (HR REMONDIS A&S)

Environmental heroes

PEOPLE AT GRASSROOTS LEVEL ARE HELPING THE MOST TO PREVENT CLIMATE CHANGE

More than 30,500 people work for REMONDIS around the world. Day after day, they do their job helping to protect the environment and conserve our planet's natural resources – whether it be collecting recyclables from a variety of container systems, transporting them to different facilities, separating and sorting them, processing them into top quality raw materials or carrying out research and development work. No matter which division they work for, they all have one thing in common: they are working to achieve greater levels of sustainability for the good of all. We have selected just three examples of our many environmental heroes and would like to thank and pay tribute to everyone for their vital contributions.

Frank Schmitz, professional lorry driver

Frank has been with our company since 2007. Every day, he completes his collection rounds, emptying the bins in the south of the Münsterland region and at the service stations along the A45 motorway. He not only collects residual waste so that it can be sent for thermal treatment and prevent emissions of the ozone-depleting gas methane. Depending on what day of the week it is, Frank Schmitz collects practically every possible type of recyclable material – from organic waste, to light sales packaging from the recycling bin, all the way through to paper, card and cardboard. Indeed, if it weren't for Frank, the raw materials would not be able to be recovered at all. An avid Borussia Dortmund fan, Frank Schmitz's everyday work is essential for cutting carbon emissions and reducing the consumption of primary raw materials. Thank you, Frank!



Frank Schmitz, a professional lorry driver at REMONDIS and an environmental hero

Markus Zander, sorting specialist

If it weren't for Markus and his team, it would be practically impossible to recycle waste electrical and electronic equipment. Since 2011, Markus Zander has been responsible for ensuring that all potentially hazardous components are removed from the input material before they are recycled. Indeed, he makes it possible for the equipment to be recycled in the first place as batteries, for example, are not allowed to be put through the shredder – a huge contribution, therefore, towards helping to protect our environment. His motto, "speed is of the essence", not only applies to his work but also to his hobby where he performs at clubs as a techno DJ. Thank you, Markus!



Markus Zander, a sorting specialist at REMONDIS and an environmental hero

Melanie Mehringskötter, chemical engineer

Now a graduate with a degree in chemical engineering, Melanie learned her profession from scratch having begun her career as a laboratory apprentice. She has been at REMONDIS since 2012 and is currently carrying out research work to develop innovative ways of cleaning up red sludge landfill sites and recovering the material buried there so it can be re-used – especially aluminium, iron and the rare metal gallium. Melanie Mehringskötter's work, which is part of a project sponsored by the Federal Ministry for Education and Research, is making an important contribution towards conserving our natural resources and ensuring there is a sustainable supply of raw materials. And she is not only helping to reclaim land – she is also helping to prevent climate change as the carbon emissions generated by aluminium recycling processes are forty percent lower than aluminium production processes using virgin material. She really is an environmental hero. Thank you, Melanie!

Melanie Mehringskötter, a chemical engineer at REMONDIS and an environmental hero





◀ Norbert Rethmann at a 'Kieler Kaufmann' event



▲ (from left to right) REMONDIS Managing Director, Aloys Oechtering, next to the Federal Minister for the Environment Barbara Hendricks and Stefan Bölte, Managing Director of Gesellschaft des Kreises Coesfeld zur Förderung regenerativer Energien mbH (GFC), during a visit to the biogas plant in Coesfeld



▲ Peter Meiwald (left), member of the Bundestag and spokesperson for the environment for the 'Bündnis 90/Die Grünen' party, and Hans Christian Markert (right), member of the NRW state parliament and spokesperson for the environment, consumer matters and anti-nuclear policy of the 'NRW Bündnis 90/Die Grünen' party, during a visit to the Lippe Plant in Lünen. In the centre: REMONDIS Managing Director, Herwart Wilms



▲ Anja Büning, a member of REMONDIS' in-house sales staff, explains the RECYCLING PROFESSIONALS board game to visitors to the didacta in Hanover



◀ REMONDIS' two RECYCLING PROFESSIONALS, Friedhelm Susok and Jürgen Schardt, at the didacta in Hanover



Recycling vs Climate Killers

Germany has already achieved the first sub-goal set out in the Kyoto Protocol: to reduce methane emissions by a factor of 20. This gas – generated by rotting organic material on landfills – is 26 times more harmful to the climate than carbon dioxide. Closing these landfills, focusing on systematic recycling activities and cutting carbon emissions from waste incineration plants have all taken us a step closer to reaching the Kyoto targets.