

Sustainability Report 2018

Imprint

Published by

RKW SE Nachtweideweg 1–7 67227 Frankenthal, Germany rkw-group.com

Questions related to sustainability at RKW

Dr. Thomas Gröner thomas.groener@rkw-group.com T +49-(0) 62 33-87 09-144

Dr. Lutz Rethmeier lutz.rethmeier@rkw-group.com T +49-(0) 25 62-710-250

Lea Weiteder lea.weiteder@rkw-group.com T +46-(0) 722 33 15 79

Editor

Sabine Duddeck sabine.duddeck@rkw-group.com

Design

SMACK Communications GmbH, Berlin smack-communications.com

Printing

printjob24.de GmbH, Berlin printjob24.de

Image credits

p. 52: illustration courtesy of Industrievereinigung Kunststoffverpackungen e.V., IK pp. 8, 18, 22, 36, 42, 50, 58: portraits by Stefan Hoening landscape images:

p. 4: photo by Jay Mantri on Unsplash/p. 18: photo by Kea Mowat on Unsplash

p. 22: photo by Henry Be on Unsplash/p. 36: photo by Aleks Dahlberg on Unsplash

p. 42: photo by Daniel Beilinson on Unsplash/p. 50: photo by Tomoko Uji on Unsplash

p. 58: photo by Ishan Seefromthesky on Unsplash

All other images are property of RKW.

Further information

This is the second RKW Sustainability Report. The status of the content, of all figures and charts, is end of 2019. The RKW Sustainability Report will be regularly updated in future.

The information in the RKW Sustainability Report has been carefully compiled and reviewed. However, we cannot accept liability for potential errors or incompleteness.

The RKW Sustainability Report is printed on 100% recycled paper.

Index

1.0 Word of the RKW Management I	Board
1.0 Committed to the advancement	
of a circular economy	5
2.0 RKW Group: Who We Are	
2.1 Corporate Profile	
2.2 Core Values	
2.3 Corporate Structure	
2.4 Markets, Products, Applications	
2.5 Locations	14
3.0 Sustainability at RKW	
3.1 RKW's Three Dimensions of Sustaina	bility 19
3.2 Code of Conduct	
3.3 Management Systems and Corporate	e Policy 21
3.4 Ecology	,
3.4.1 Energy	23
3.4.2 Water	26
3.4.3 Products	28
3.4.4 Recycling	32
3.4.5 Ecobalance	35
3.5 Economy	
3.5.1 Company Key Figures	37
3.5.2 Key Facts	38
3.5.3 Reliability	40
3.6 Social Responsibility	
3.6.1 Safety	43
3.6.2 Corporate Social Responsibility	<i>y</i> 46
4.0 RKW Initiatives	
4.1 Zero Pellet Loss	51
4.2 Investments in Carbon Footprint Rec	
4.3 RKW Sustainability Award	
4.4 Membership in Organizations and A	
	3300.00013 37
5.0 GRI Reference	59



Word of the RKW Management Board

Committed to the advancement of a circular economy

t RKW, we are steadfast in our resolve to enhance sustainability. That's why we continually search for ways to conserve natural reserves, prevent waste, and optimize processes and logistics. We understand our obligation to help future generations enjoy a healthy ecosystem and have therefore made sustainability an integral element of our corporate business mission. Under the umbrella of sustainability, we promote a three-fold approach which includes ecology, economy, and social accountability.

Our aim is to pursue the ideals of a circular economy, with the goal of minimizing the use of resources, recycling and reusing supplies, and generating the least possible amounts of waste and emissions. Accordingly, RKW has initiated a Group-wide program to increase the use of recycled and biobased materials, which has shown a promising initial outcome. Further actions resulted in our development of several eco-friendly products, such as biodegradable waste bags and 100% recyclable packaging.

To reduce the environmental impact of our products, we have also made significant improvements with downgauging. This is the reduction of film thickness while retaining or even improving functionality. The secondary effects of downgauging include lower weight, less energy needs, savings on transport, and hence a smaller carbon footprint. Decreasing scrap rates and recycling of scrap are also of great importance, which is why every RKW Site operates its own recycling facilities where waste is converted into high-quality, reusable resin. In addition, we have implemented the "Zero Pellet Loss" initiative to minimize pellet loss across the process chain.

RKW is, moreover, active in driving sustainability efforts across the industry. To that end we are a member of a variety of organizations concerned with sustainability, including CEFLEX, EDANA, and APE Europe. ERDE (organization for recycling of crop plastics in Germany), of which we are a founding member, has made a voluntary commitment to collect and recycle 65% of all silage and stretch films sold on the German

market by 2022. In 2018 ERDE collected agricultural plastic waste amounting to 13,433 metric tons, which resulted in greenhouse gas emissions reduction of 19,486 metric tons.

At the same time, high economic performance and social responsibility play a major role in achieving sustainability and are directly related to our aim of protecting the environment. RKW believes in investing profits back into the company and in the creation and preservation of jobs. We value the health and safety of our people and carry out projects to optimize working conditions. In turn, these factors support our core values of respect, quality, and reliability, and foster sustainable, mutually beneficial customer relationships and long-term productivity.

As a leading plastic film producer, RKW is dedicated to the promotion of a circular economy. Within these pages you will find information detailing how we work toward an increasingly sustainable tomorrow.

Best regards,

Harald Biederbick

CEO

Reinhold Franke Board Member

"RKW is a valuebased company. Respect and reliability are our core values. They show what RKW stands for, and are an essential part of our company philosophy."

RKW Group: Who We Are





RKW Group: Who We Are

2.1 Corporate Profile

The RKW Group is an independent, privately owned company headquartered in Frankenthal, Germany, and is one of the world's foremost manufacturers of excellent film solutions.

RW is the market leader in the areas of hygiene and agricultural films, films for the beverage industry, and packaging for powdery goods. In addition, the company makes films and nonwovens for medical applications, for the chemical and converting industries, as well as for the construction sec-

tor. RKW's sustainable films enable its customers to improve everyday life of consumers all over the world.

In the fiscal year 2018, RKW generated total sales of EUR 878 million. About 3,000 employees process 367,000 metric tons of plastic materials at 20 locations around the world.

True to the corporate slogan "When excellence matters," the company, which was founded in 1957, offers outstanding performance in terms of quality and service. Respect and reliability are the core values of RKW and form the basis of the company's success.

- More than 60 years of experience in R&D and production of films and nonwovens made of polyolefins
- State-of-the-art technology
- Processing of approx. 367,000 metric tons of PE and PP per year
- 20 locations worldwide
- Around 3,000 employees
- Privately owned
- Sales EUR 878 million

2.2 Core Values

RKW is a value-based company

Our corporate values do not only contribute to our business success, but also provide added value for our customers, business partners, and employees.

Respect and reliability are our core values. They show what RKW stands for, and they are an essential part of our company philosophy.

⊘ Respect

Respect stands for mutual regard and openness. This applies both internally and externally. We strive to earn the respect of our customers and stakeholders day by day.

For us at RKW, respect is a virtue in itself. This means that respect is not just an important success factor, it guides and steers us as a privately owned company.

Reliability

RKW stands for reliability. Our customers can count on the reliable delivery, quality, and functionality of our products and services. And we keep our promises to our employees and customers. This is why reliability is the basis of our company's success.



Excellence

RKW's corporate slogan "When excellence matters" emphasizes our aspiration to consistently provide our customers with excellent products and services, and to set standards in terms of quality and performance. Excellence is our philosophy, featuring added value for customers, business partners, and employees.

Corporate Structure

Management structure

RKW Executive Management Board



From left: Harald Biederbick (CEO), Reinhold Franke (Executive VP)

- Group Accounting & Finance Reporting
- Group Communications
- Group Controlling
- Group HR
- Group IT
- Group Marketing
- Group Operational Excellence
- Group Purchasing
- Group R&D/Sustainability
- Group Strategy/Projects
- Group Treasury & Legal Affairs

DIVISION

HYGIENE AND
INDUSTRIAL



DIVISION **AGRICULTURE**



DIVISION **PACKAGING**



Markets, Products, **Applications**

RKW manufactures films, nonwovens, and nets for various applications and industries.

ur products are used in all sorts of day-to-day products, from robust cement bags to ultra-thin diapers.

RKW produces innovative solutions for baby diapers, feminine hygiene, and adult incontinence; films and laminates for medical applications and wound care; industrial films for lamination, labels and tags, barrier functions, surface protection, as well as release films. The nonwovens offering comprises carded, spunbond, and hydroentangled spunbond composites, as well as laminates.

There is a wide variety of potential applications for our packaging films. RKW's consumer packaging portfolio comprises printed packaging films and printed collation shrink films for multipacks, FFS films for the food, non-food, and construction industry, and household products (e.g. bags). In the sector of industrial packaging, we provide FFS films for industrial goods, converted sacks, and transport protection films.

RKW is one of the world's leading suppliers of films and nets for the agricultural and horticultural markets. The comprehensive product portfolio includes high-quality, optimized, and sustainable solutions: silage films and tubes, round bale films and nets, as well as greenhouse and horticultural films.

As declared in our business mission, RKW is committed to reduce the carbon footprint of our products and production processes.

HYGIENE AND MEDICAL



INDUSTRIAL FILMS



INDUSTRIAL PACKAGING



NONWOVENS



CONSUMER PACKAGING



AGRICULTURAL FILMS, NETS, AND GREENHOUSE FILMS



2.5 Locations Global footprint for local presence Finland Sweden Belgium Germany **France** US **Egypt Germany Belgium Egypt** Frankenthal (HQ) Hoogstraten Cairo Nordhorn Echte Petersaurach Liège **Finland** Gronau Wasserburg **China** Pori Halberstadt Michelstadt Guangzhou



Knowing and understanding the specific requirements of local customers all around the world is extremely important. This is why the internationally operating company is present with 20 locations and a large number of independent sales partners on four continents.

RKW supplies products to numerous business partners in over 80 countries. Our national and international locations help to expand the business locally and tap the full potential of the market.

Our local Centers of Competence foster innovation by focusing on key technologies and on the regular exchange of expertise within the corporation.

France

Saint-Galmier Saultain Ville-le-Marclet

Sweden

Helsingborg

US

Chester, SC Franklin, KY

Vietnam

Ho Chi Minh City

"With sustainable film solutions, we enable our customers to improve the daily life of consumers all over the world."

Harald Biederbick, CEO RKW Group RKW Business Mission

Sustainability at RKW





Sustainability at RKW

3.1 RKW's Three Dimensions of Sustainability

s a leading film manufacturer, RKW assumes responsibility for a habitable environment.

Sustainability is therefore a key component in our corporate policy and business mission.

We live sustainability based on a three-fold approach: ecology, economy, and society. These aspects govern our proactive behavior – driven by the commitment of a responsible and successful company.

We are convinced that environmental protection, high economic performance, and social accountability are inseparably connected.

Ecology

Protecting natural resources

Reducing emissions

Supporting circular economy by increasing use of recycled materials and by designing products for easy recycling

Avoiding environmental pollution

Reducing CO₂ footprint of production, products, and supply chain

Economy

Solidly financed, privately owned company

Reinvestment of profits in the company

Long-term, successful customer relationships

Quality and reliability as the basis of economic success

Creation and preservation of jobs

Social accountability

Comprehensive company health and safety

Work safety well above the industry standard

Optimizing working conditions

Responsibility for our clients

Employee training and development

Code of Conduct

The consistent adherence to all relevant laws and regulations is the prerequisite for sustainable business and credibility.

RW commits itself and all its employees to observe high ethical standards and to uphold all national and international laws.

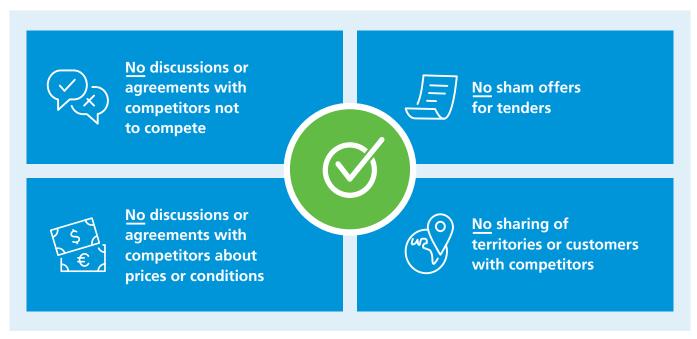
RKW has adopted the GKV's (General Association of the Plastics Processing Industry) Code of Conduct along with its corresponding certification.

These include:

- Working conditions such as safety, working time, and compensation
- Antitrust laws and fair competition
- Prevention of bribery and corruption
- Protecting and respecting copyrights, company property, and other forms of intellectual property rights

This Code of Conduct clearly defines the principles and ethical values of the company, the legal requirements, and fair and sustainable ethical standards.

The obligation to apply the same standards is also expected from RKW's business partners.



Compliance with antitrust and competition legislation requirements

Management Systems and Corporate Policy

Certified management systems and policies enable the RKW Sites and employees to reliably achieve RKW's business objectives.

By providing a set of policies, processes, and procedures, management systems define how a company manages the correlated areas of its business to achieve

its objectives and to fulfill potential legal obligations.

Our Sites have implemented various management systems and certifica-

tions according to the relevant national regulations. This includes, for example, environmental protection, energy management, quality management, work safety, and health.



This is a selection of the various management system certificates of the RKW Sites



Ecology

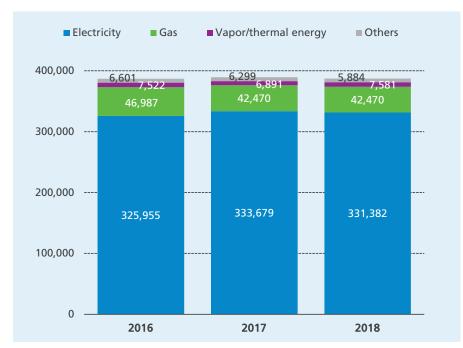
3.4.1 Energy

Film production is an energy-intensive industry. Utilizing continuous improvement programs, all RKW Sites steadily strive to reduce their energy consumption.

ince the manufacturing of films intrinsically consumes a large amount of energy, it is particularly important for us to monitor, analyze, and reduce in the best possible way our use of electricity, gas, and any additional energy sources.

All Sites in Germany are certified in accordance with the international standard DIN EN ISO 50001 for Energy Management Systems. Other European Sites conduct energy audits according to the standard EN 16247. The Sites in North America and Asia are not yet certified, but are assessed through data analysis systems to monitor their performance and consumption.

In 2018, 387 GWh of energy was used throughout the RKW Group, of which 86% was purchased as electricity and 11% as gas. Since the use of energy



Use of energy RKW Group (MWh)

and greenhouse gas emissions are in most cases directly related, we have pursued several strategies that lead to a reduction of emissions (see also 4.1).

- In some applications, natural gas has a better CO₂ footprint than electricity, therefore we replace electricity with gas wherever possible.
- However, the best way to reduce our carbon footprint is by reducing energy consumption as a whole. We therefore implement projects that directly contribute to an overall reduction of use.

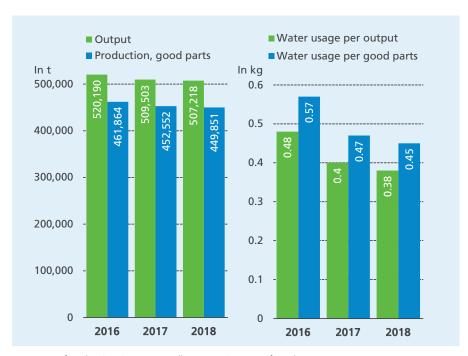
The projects to increase energy efficiency are initiated and fully supported by all RKW Sites. They have set up local energy councils that first assess and discuss inefficiencies, and then implement countermeasures. These include investments, organizational changes, and process improvements. The following list shows areas in which energy savings were achieved in 2018:

- Investments in equipment upgrades and building insulations
- Investments in modern cooling and heating equipment
- Stop or standby of technical equipment when not in production
- Smart illumination control in offices, warehouses, and production areas

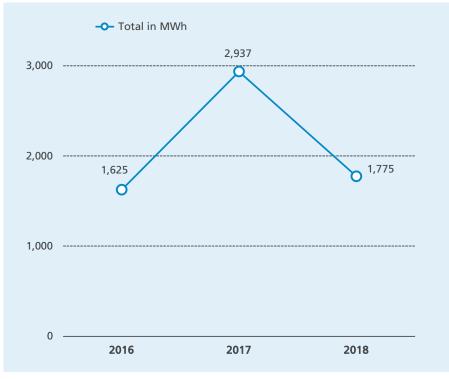
- Investment into new LED lighting concepts
- Replacement of inefficient switches and control technologies within production processes
- Heat recovery from compressor units, to be reused for heating
- Reduction/elimination of compressed air leakages

All these projects are generally organized in two ways. First, a group-wide investment program of EUR 200,000 p.a. is available to support energy efficiency programs (see also 4.2). Furthermore, our Sites set aside part of their budgets to individually pursue energy-saving measures.

Over the past seven years, the RKW Group has accumulated nominal energy savings of 16.1 GWh.



Percentage of total savings in 2018, overall energy savings came from these areas



The annual energy-saving achievement shown in the chart is measured per annum. Consequently, annual energy savings are in reality higher, since our actions have a positive impact on the following years, yet are difficult to quantify.

Saving energy through energy-efficiency projects (MWh)







Example LED installation

One example of our energy-efficiency projects from 2018 can be seen at our Echte Site.

Here, the existing indoor lighting systems were replaced with LED lamps. With an investment of EUR 5,000 we were able to realize annual savings of 19 MWh.

Example Air leakages

An example that even small investments can be helpful is the new measurement device at our Liège Site.

With an investment of only EUR 5,000 we were able to realize annual savings of 69 MWh by reducing the use of compressed air.

3.4.2

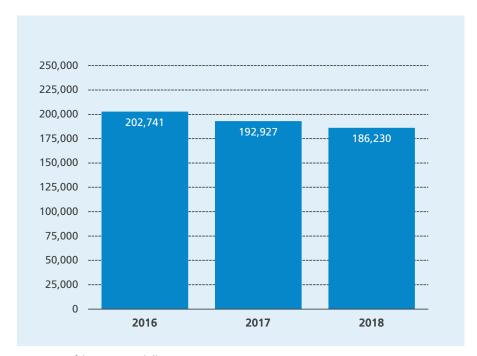
Water

Although water is only an auxiliary medium for the production processes of the RKW Group, we are aware that this resource has a very high value for the regions near our Sites.

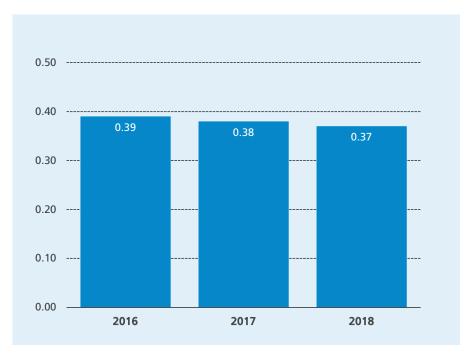
herefore, we actively monitor and assess water consumption by using the WULCA (Water Use in Life Cycle Assessment) methodology. This compares consumed water with available water in a specific region. Except for the Egypt Site, all RKW Sites observe a good ratio of availability and consumption. The annual demand for water at RKW Sites amounts to approximately 200,000 metric tons from public networks. Most of it is used as cooling water for the extrusion lines, process aids for aggregates and products, and as sanitary water.

During processing, leakage of additives or chemicals into water is very rare. Therefore, water that has not evaporated can be disposed of as normal wastewater through the local sewer system, without further treatment or cleaning procedures. There-

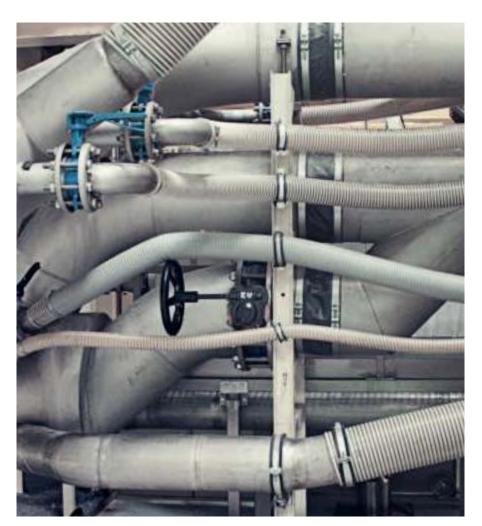
fore, water usage by RKW never pollutes the environment and does not create additional problems regarding drinking quality or use for agriculture. Nevertheless, water conservation makes up an important part of our efficiency efforts, and projects to reduce consumption are carried out at many Sites. From 2016 to 2018, the amount of water needed to produce our high-quality products was reduced by more than 8%.



Water usage of the RKW Group (m³)



Water consumption all products (I/kg)



Example

An example from the Gronau Site shows that even small modifications can save resources. During the production of RKW HyJet® spunbonded fabric, water is used to integrate fiber into the nonwoven material.

This high-pressure method requires large quantities of water. Thanks to a change in the water recirculation stream, demand could be significantly reduced by more than 1,500 m³/a. This optimization is a sustainability initiative that seamlessly fits into our strategy.

3.4.3

Products

RKW products portfolio comprises films and nonwovens for various applications and businesses. Industrial products in general create an environmental impact that must be balanced against their usefulness and the potential effect of alternatives.

herefore, all commercial producers have a responsibility to reduce the impact of their goods while maintaining or even improving their properties. All of our products contribute to the business mission of RKW: "With sustainable film solutions, we enable our customers to improve the daily life of consumers around the world." The reduction of the carbon footprint of RKW's core products by 25% per m² shipped by 2020 has even been implemented as a strategic goal for the whole RKW Group. The length and width of RKW products typically result from the size of our customers' products, while the properties needed to fulfill their purposes determine their thickness. Reducing film thickness while keeping or even improving film attributes is therefore one key goal in the development of nearly all product groups. This process is called downgauging. The advantage of downgauging for several exemplary RKW products are depicted on pages 30 and 31. Those shown have been in use for the same purpose for years. Therefore, their requirements have remained the same or become even more stringent. Nevertheless, down-

gauging by our R&D teams resulted in significant reductions of film thicknesses.

There are various ways to achieve downgauging success. This includes investments in new machinery and in-house development of crucial components and control systems. Intensive operator training results in higher quality awareness and shorter feedback cycles. Finally, raw material improvements lead to better film properties at lower film thicknesses. RKW is in constant and close contact to all relevant polyolefin producers and compounders. We also continually test and evaluate new or modified grades. The combination of improvements in three areas - men, machine, and material - have led to the accomplishments seen in the chart.

The reduction of scrap rates in production immediately improves material and energy efficiencies. This provides benefits both from an ecological as well as an economical point of view. RKW therefore puts huge effort into reducing scrap rates at all our Sites and with all our products. In 2018, ten out of 18 RKW production

Sites were able to further reduce their overall scrap rates. Our Group-wide Operational Excellence program aims to accelerate and broaden this development. Measures are specifically designed to fit the needs of the individual Sites and machines, and are strictly monitored. Plastic products have a huge potential to pollute nature after being used for their original purpose. The problem of marine litter is well known. While it is the obligation of consumers and public authorities to arrange for collecting and sorting systems, it is the duty of producers to create easily recyclable products. In the film industry, the first prerequisite for this is material homogeneity. RKW therefore produces films nearly exclusively based on uniform and thus recyclable materials. The various types of polyethylene used at RKW blend quite well when mixed during recovery processes and the recycled granules can be easily reused in a broad range of products.

There are, however, some products that do not allow for a collective recycling process as they require the use of diverse materials. One example is a silage film for agricultural applications



Films for agricultural applications





Films for baby diapers

that consists of layers made from polyethylene and polyamide. To nevertheless allow for recycling, RKW has designed this film so that the incompatible layers can be easily separated and then independently recycled. More details regarding the inhouse recycling activities of RKW will be given in chapter 3.4.4.

While RKW products have an impact on the environment, they also provide huge benefits and can therefore be considered sustainable.



RKW ProVent®: self-venting plastic bag for powdery goods

Their advantages are most obin our Hygiene Division, vious where their Babycare and Femcare products, as well as medical applications, directly improve the hygiene and thereby health of humans. This is especially true for infants, the ill, and the elderly; those who are most affected by unsanitary conditions.

Less obvious but equally advantageous are the benefits provided by plastic films from our Agricultural Division. Silage films protect animal food from vermin and mildew for months. The cultivation of fodder has a huge impact on the environment and loss due to insufficient protection would be an enormous waste. The products of our Packaging Division also protect valuable goods.

Our self-venting RKW ProVent® sacks provide packaging to safely store water-sensitive powdery goods in humid conditions, such as cement. These substances are produced at very high temperatures and undergo a costly and energy-intense drying process. Even a small amount of moisture would undermine this effort.

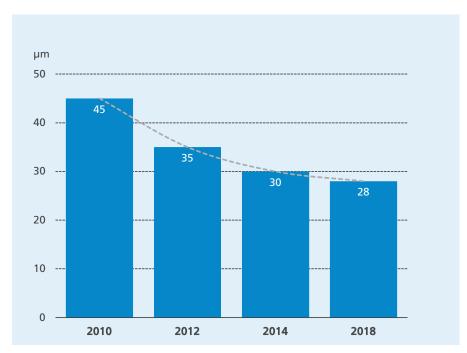
These are only a few examples, but they help to show that while RKW products do have an effect on the environment, they offer huge benefits. In addition, they play a part in reducing the much larger influence of the products of our customers and end users by protecting these goods. In line with our business mission, RKW continually works toward reducing the impact of our products while further improving their benefits.



Dr. Thomas Gröner, Director R&D/Sustainability RKW Group

"R&D continuously develops improved and more sustainable products which are creating added value for our customers and ensure profitable growth of RKW in balance with our increasing environmental responsibility."

Example



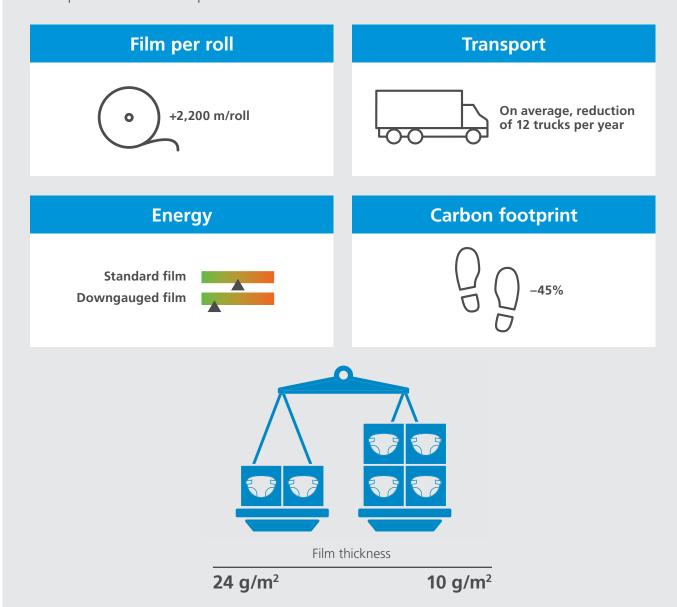
Downgauging: example shrink film from 45 μ m in 2010 to 28 μ m in 2018. Our goal is for a further decrease to 25 µm.

Secondary effects of downgauging

In addition to enhancement of material efficiency, downgauging shows secondary effects on the environmental impact of products. Thinner films result in less energy consumption, transportation weight, packaging material, and impact during the subsequent production steps.

Downgauging by 40% compared to standard film results in:

- → More film per roll reduces storage space
- → Reduced transportation and thus lower CO₂ emissions
- → Reduced energy consumption
- → Improved carbon footprint



3.4.4

Recycling

At RKW, recycling is one of the key actions we take in our aim to improve sustainability. Recycling allows for both ecological and economical gains.

t reduces the carbon footprint of raw materials, prevents plastic scrap from affecting the environment, increases supply efficiency, and reduces material costs. Thus, RKW does not regard production scrap as lost goods, but as valuable raw material that can and must be reused in production. We take steps to reuse production scrap either directly within the production process or between different processes. Each RKW Site has its own recycling facilities where scrap can be processed into high-quality regranulate. Furthermore, the solvents necessary are burnt in regenerative incineration facilities so that the energy generated can be used for heating.

While all RKW Sites implement measures to reduce scrap as part of our Group-wide Operational Excellence program, there will always be some residues during production. To name just a few sources, scrap results from modification of formulations and colors in extrusion, varying setup processes in printing and converting, as well as edge trimming to ensure quality. Depending on its source, scrap can be divided into categories with different potential usages. For example, scrap that is transparent can be reused in most films, while those that are dark or printed can only be used in similarly colored films.

As part of the ecological design of our products (see 3.4.3), RKW R&D teams develop formulas that allow easy sorting and recycling from the start. Multilayer films with incompatible and inseparable materials are avoided wherever possible. Predefining and labeling the scrap category of all products is an integral part of our design process. This makes it easy for operators to classify and mark scrap left over from production. The scrap of each class is then collected and recycled into a batch of homogeneous pellets.

RKW recycles using offline and inline methods. Exline recycling follows the pattern described above: Scrap is sorted and labeled during production and then aggregated and recycled in centralized recycling centers. Inline recycling utilizes specialized, small throughput recycling extruders that are directly attached to the production machinery. They absorb edgetrim stripes, regenerate them into pellets, and directly feed these back into the production process.



Harald Biederbick, CEO RKW Group

"Both efficiency and sustainability are the key drivers for our investments. When it comes to the handling of internal scrap, we aim to maximize the share of reused materials. Therefore, we invest continuously in extending our recycling capacities."

This allows for the smallest loop possible to reuse scrap in production. However, this process can only be utilized with certain products.

RKW assesses the processes of both forms of recycling for product suitability and accordingly invests in the recycling technologies. In 2017 several new recycling lines were put into operation. These include new inline recycling lines at various Sites of the Division Hygiene & Industrial, the extension of existing recycling facilities, as well as one completely new recycling center. This has increased the amount of material we can recycle and allows for the recycling of more special materials.

Not all types of scrap and recycled pellets can be reused. Reuse at the Site of origin is sometimes prohibited due to legal or customer requirements; quality, color, and formula concerns; or missing links between the available recycling technology and qualities needed. In these cases, RKW benefits from its status as a Group and the close collaboration of our Sites. Scrap definitions are common to all Sites, which allows for an intercompany scrap and/or regeneration business. This results in the most ecological and economical reuse of all types of scrap.

In case of logistical problems, this system is complemented by the use of local recycling companies and purchase of scrap.

While all Divisions of RKW use recycled scrap, the Division Agriculture and special products of the Division Packaging excel in the usage of regenerated material. The Agriculture Sites reuse all of their scrap and buy huge amounts of post-industrial scrap from other production and trading companies. In addition, they are members of the German initiative ERDE that organizes the collection, sorting, cleaning, recycling, and reuse of huge amounts of used agricultural films. In 2018 around 14,000 metric tons of films could be collected via more than 1,200 collection points and mobile collections. This has resulted in very high proportions of recycled materials in the film products of these Sites.

Another example of products with high contents of recycled raw materials are our industrial disposal bags. In these products, virgin material is only used as part of a master batch to create the distinctive blue color. The rest consists of recycled material, which exceeds 97% in total.

In 2018, the German Association for Plastics Packaging and Films (IK Industrievereinigung Kunststoffverpackungen e.V.) published ambitious sustainability targets to strengthen the circular economy:

- At least 90% of household packaging is to be recyclable or reusable by 2025
- At least one million metric tons of recycling material (or renewable raw materials) is used in the production of plastics packaging in Germany by 2025

As a member of the IK, RKW implemented the Group-wide strategic goal to increase the use of recycled and renewable materials from 7.6% in 2017 to 11% by the end of 2020.

Additionally, RKW is a member of the collaborative initiative CEFLEX, a European consortium of companies and associations representing the entire value chain. Since 2017, RKW has played an active role in different workstreams, such as developing guidelines for flexible packaging in a circular economy (D4ACE), and identifying and developing sustainable end markets for recycled materials.



Example

At RKW ACE, new state-of-the-art recycling equipment has decreased regeneration costs by more than 25%, and significantly reduced ${\rm CO_2}$ emissions, energy outlays, and water use.

3.4.5

Ecobalance

The most comprehensive way to measure the environmental performance of a company is to calculate the ecological footprint of its products while considering all contributing factors.

t RKW, we are working to fully assess all of our core products and to track the development of their demand on nature. To ensure successful growth, we focus on our core products with the aim of achieving market leadership and increasing business volume. All current and future investments will therefore be made to improve the ecobalance of these products.

The factors that impact our calculations have to do with improvements in material and energy efficiency. These can be increased by downgauging films and thereby providing the same functionality with less material. They can also be improved by reducing scrap rates and recycling scrap, thus utilizing lower quantities of raw material for the same amount of goods produced. The same is true for the reduction of customer claims (see 3.5.3). Investments in machinery and infrastructure as well as process optimizations lead to improvements in energy efficiency. The most relevant form of energy for RKW is electricity, but oil and gas for heating and processes as well as water consumption also have their effects. However, RKW is additionally working on more

plastics-specific measures to improve our ecobalance.

Today, thermoplastics almost exclusively consist of raw fossil materials such as oil and gas. A cradle-to-grave analysis of these materials leads to the obvious conclusion that they result in CO₂ emissions, which contribute to global warming. However, in recent years materials have become available that are either based on renewable sources (so called bio-based materials) or can be biologically degraded (biodegradable materials). RKW has tested both and we are actively promoting them to our customers. In 2017, these materials emerged to market maturity. Their production is almost identical to those of fossil origin and match their film properties. More than 800 metric tons of bio-based materials were produced at RKW Sites in 2018. These include FFS bags that require high strength and low creep properties. In the same year, a number of biodegradable products were launched, including star-sealed tie handle biodegradable waste bags.



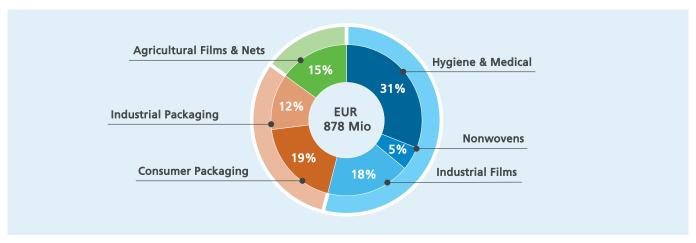
Biodegradable star-sealed bag for organic household waste in Germany. Certified as fully compostable by DIN Certco, it is also the first T-shirt star-sealed bag available on the market made of more than 50% renewable materials. It mainly consists of starch and polylactic acid (PLA), and other biodegradable components.



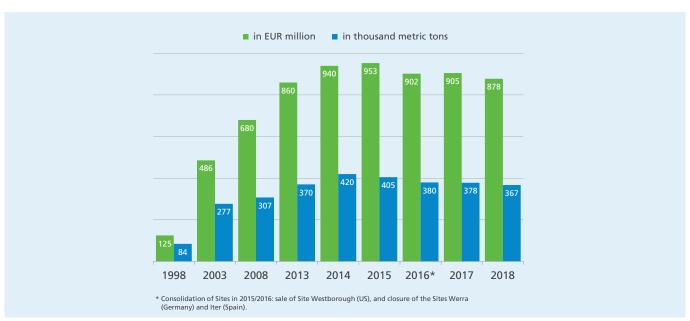


Economy

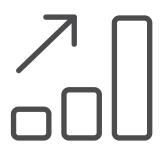
3.5.1 Company Key Figures



Markets and products



3.5.2 **Key Facts**



60+

years of experience

in the research, development, and production of polyolefin films set RKW apart. In 1957, Jakob Müller founded Rheinische Kunststoffwerke GmbH in Worms, Germany. The company has been expanding internationally since the 1960s. Since the end of the 1990s, RKW has grown through acquisitions in the USA, Vietnam, etc.



locations

of the RKW Group, including our headquarters in Frankenthal, are found in Germany, Belgium, Finland, France, Sweden, USA, Egypt, Vietnam, and China.



3,000

people

work for the RKW Group around the world.



367,000

metric tons of PE and PP

(polyethylene and polypropylene) are processed annually by our teams with advanced machines and technologies into films, nonwovens, and nets.



EUR 878

million sales

were generated in 2018.



100

percent

privately owned. The owners of RKW do not just promote the global growth of RKW, but also a strong and reliable corporate culture.

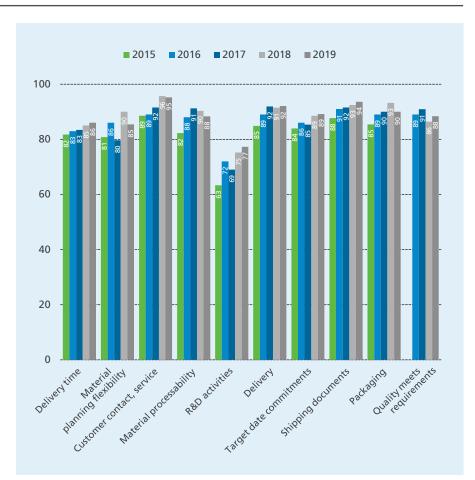
3.5.3

Reliability

One of the core values of RKW is reliability, as it relates to our interactions with customers, employees, and stakeholders.

e are committed to always deliver what we promised to our customers: products in the quality and time we agreed upon. RKW stands for excellent product performance. We ensure the quality of our products through a transparent and precise development process, systematic qualification, precise order definitions, well-maintained machinery, and strict quality controls. Proactive production planning and internal logistics ensure the in-time delivery of products to our customers. RKW aims to further improve these aspects of reliability. Therefore, we have set strategic goals for improving both quality and scheduling as part of our strategy to become an even more reliable business partner.

To assess customer satisfaction, we ask them several questions covering all aspects of the supplier-customer relationship. These include inquiries regarding quality and usability of products, lead times, and logistics, as well as service and joint R&D. The data received is then evaluated in order to rate the Sites or compare their performance with certain product groups or customers. When customer satisfaction in specific areas deteriorates or negative assessments from single



Customer satisfaction RKW Gronau 5-year trend

customers are discovered, we identify countermeasures or focus attention on that topic. These evaluations are typically performed once a year and are executed in a structured manner to gain information and optimize our processes.

One simple method to gauge quality is to measure the number of claims according to their value per thousand of the sales of each Site. This value is measured not only dependent on the reason for the claims, but also to get a basic idea about Site performance. At Site level the overall value is split into product groups and root causes. After having identified the root causes, actions are implemented to prevent such claims in the future. As one of our strategic goals, we aim to continuously lower the percentage of claims at all Sites. In 2017, 14 out of 18 Sites were able to reduce claims substantially or reached less than two per thousand of sales.

At RKW, the timing of deliveries is measured by the KPI "OTIF." OTIF stands for "on time" and "in full" and is measured as the percentage of all deliveries. Therefore, if a delivery consists of the full amount of product and arrives at the time agreed on, this will contribute to OTIF. In case only one of the two aspects is fulfilled, the delivery has not contributed to OTIF. RKW's goal is to reach an OTIF value of 98% at all Sites by 2020. In 2018, nine out of 18 production Sites already reached values exceeding 90% and 13 Sites showed significant improvements. The initiatives to boost OTIF fit quite well into the overall strategy of our Operational Excellence

program. These include the reduction of scrap, faster feedback cycles to ensure quality (in order to improve IF), as well as an improvement of utilization rates, line speeds, and planning processes (in order to improve OT). The goal, while ambitious, can be realistically attained by 2020.

All deviations from reliability are resolved by the same methods outlined in our Operational Excellence program. We perform thorough root cause analyses using standardized methods. At all Sites, we have trained specialists in various departments who lead small teams that optimize production lines and processes as well as eliminate resource waste. Depending on the scope, topics, and teams, we call these colleagues "green belts" or "white belts." They undergo training through an internal, standardized program, which includes exemplary projects that are evaluated by trainers and peers. The Sites identify reasons for wasted resources and evaluate potential savings resulting from the projects. Local steering committees, typically led by the General Manager, decide on the priority of the projects, assign resources to them, and monitor their progress and results. The outcomes of these projects show a great impact both on the satisfaction of individual customers as well as on the reliability and profitability of RKW as a whole.



Social Responsibility

3.6.1 Safety

RKW's company values of excellence and respect mean we strive towards ZERO accidents and the well-being of our employees at work. Safety always comes first.

t RKW, we have implemented a company-wide Operational Excellence Program. Its underlying principle is to support continuous improvement throughout the entire Group. Safety is one area which we intend to further optimize until we reach a point of ZERO accidents.

One of our company's core values is respect, which means, among other things, that we need to ensure our employees' well-being at every stage of their working processes. In every situation, whatever happens, safety always comes first. We are confident that by 2020, RKW will have outperformed the industry average in terms of safety standards.

To support our safety goals, we have initiated specific guidelines and activities. Those include establishing a network of safety officers; a plan for reporting, analysis, and communication; safety awards; behavior-based safety programs and audits; employee safety training; as well as 10 Golden Safety Rules. This is a booklet with mandatory safety instructions that must be adhered to by all RKW employees in order to avoid work accidents.

Although it may seem to be a smaller danger compared to accidents due to energized systems or traffic, cutting tools have been the cause of many injuries at work. That is why they have been awarded their own catego-

ry in the list of Golden Safety Rules. Due to the number of incidents with sharp blades, RKW has come up with several safety recommendations and procedures. In addition, we have replaced all individual cutting tools with special safety knives that will reduce the number of accidents.

The 10 Golden Safety Rules



1. HIGH-RISK SITUATIONS



2. ENERGIZED SYSTEMS



3. TRAFFIC: VEHICLES/PEDESTRIANS



4. CUTTING TOOLS



5. BODY MECHANICS AND TOOLS



6. PROTECTIVE EQUIPMENT



7. WORK PERMITS



8. LIFTING AND WORKING AT HEIGHT



9. CONFINED SPACES



10. MANAGEMENT OF CHANGE

Key Focus in 2018: the "5 WHY" methodology

Our aim as a company is to avoid any injuries at our Sites. However, when an accident occurs, either with or without days away from work, the local management will assign a small team to analyze the accident and understand the root causes. Then we eliminate them through a set of corrective and preventive countermeasures. For this the team uses the "5 WHY" methodology, which is a

simple yet powerful tool. So simple that we have included a Group training program to empower a significant part of our workforce, including line operators and first line leaders, in the root causes analysis. A few guidelines drive the success of the analysis. It first needs to be performed as quickly as possible after the incident/accident, the guicker the better, and with the

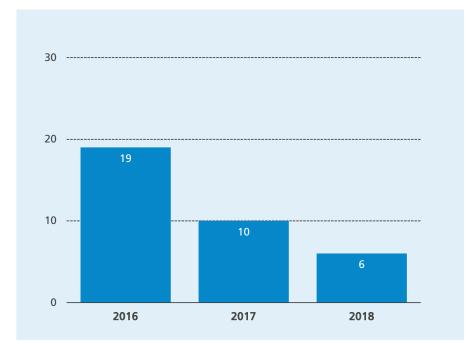
person involved or a direct witness to collect all facts and evidence.

A very common shortcut that the analysis team must overcome is the willingness to go directly to an already known cause. For that we have set a number of good practices to keep the analysis team open-minded and looking at all possible fields of cause.



Reduction of accidents

Based on all our safety-related activities, we were again able to significantly reduce our incident rate. In 2018, for the third consecutive year, we were able to outperform our own ambitious goal and reduce accidents by another 40% compared to 2017.



Lost-time accidents frequency rate/year



Lorenzo Cavalli, Director Operational Excellence RKW Group

"I am very proud of the accomplishment made by the RKW Group with regards to safety. Thanks to a significant mobilization of the entire organization, we were able to divide the number of accidents by a factor of five in the last four years. With that, RKW is now in the top quartile in our industry. Safety fits with our strong company value: Respect. As an employer, it is our obligation to respect employees by ensuring safe workplaces. The obligation of employees is to respect their equipment and safety instructions to avoid injury."

3.6.2

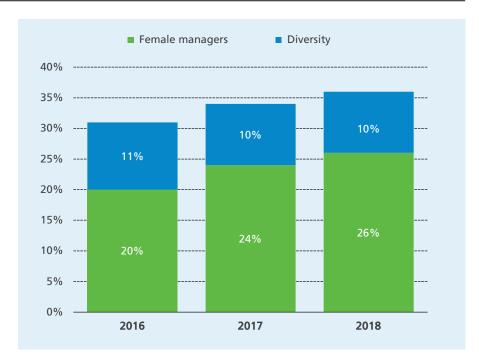
Corporate Social Responsibility

RKW assumes responsibility for its employees in a manifold way, ranging from health and safety to training and development.

s described in chapter 3, the RKW Group has a three-fold approach to sustainability. We are convinced that high economic performance, environmental protection, and social responsibility are inseparably connected. Assuming responsibility for our employees includes working toward the betterment of their health, well-being, and training and development.

One of our goals is to lead RKW with a diverse and experienced senior management team, including an increased share of female and international managers. That is why we are pleased to see our rate of female managers rise to 26% between 2016 and 2018. Within those years, we have maintained our diverse managerial level members, which now consists of people from ten different nations.

All employees are given training on our Group-wide code of conduct, compliance regulations, and work safety, with supervision from our corporate governance department. We also follow the principle of equal pay, and ensure that employees in equiv-



RKW Management team: gender and diversity rate (RKW defines diverse senior management team as: consisting of ten different nationalities, thereof minimum three outside of Europe)

alent positions receive the same pay, regardless of their origin or gender.

We do more than simply comply with the legal requirements of occupational health and safety regulations. One of the core values of RKW is respect, which stands for mutual regard and support. Through our "Company Health Management" program, we strive to ensure that our employees

are physically and mentally fit. Thanks to the efforts of an internal group, the goals of this project have spread to all Sites. This includes regular preventive medical checkups, local health days, influenza vaccination, as well as local team-building measures such as internal workshops, corporate runs, and much more.

After a thorough analysis of needs in 2014, the Group decided to place emphasis on workload, working atmosphere, organization, development opportunities, and general satisfaction. Subsequently, a team was set up at each Site to promote these issues and to organize activities for their specific requirements. These range from newly designed lounges and sport facilities to addiction prevention or the promotion of healthy eating habits.

We foster personnel development of our employees through various initiatives, for example our Leadership Excellence program that includes executive trainings and management evaluation. Furthermore, RKW supports part-time bachelor and master studies, trainee programs, and other continuing education measures. We also develop measures to encourage team building and sponsor workshops. This all follows our cultivation of respect – we respect personal career objectives. A good example of how effective our efforts are can be seen with the story of two employees. Both started as RKW trainees, quickly advanced to other positions in different countries, and now hold General Manager positions at our Sites.



Ali Korkmaz, RKW Petersaurach



Mari Valtonen, RKW Finland



Antony Taing, RKW Vietnam

Fit for RKW

The RKW Group offers many types of healthcare and fitness initiatives including influenza vaccinations, ergonomic examinations, back checkups, support to quit smoking, or memberships in fitness studios.

Examples

RKW China: The Guangzhou factory organizes outdoor badminton matches once a week and has created a multiple reading and fitness facility with bicycle ergometer.

RKW Nordhorn, Germany: Food tasting and resulting conclusion to pay more for healthier and more diversified food offered in the canteen.

RKW Echte, Germany: Cooperation with the local firefighting brigades, use of the factory area as a training ground.

"As a leading manufacturer of film solutions, we have a responsibility to support a sustainable future."

RKW Initiatives





RKW Initiatives

4.1 Zero Pellet Loss

To counter the growing pollution of coastlines and oceans, the trade associations PlasticsEurope and the VCI have founded the "Zero Pellet Loss" initiative, which is part of the global project "Operation Clean Sweep®." The aim of both organizations is to minimize the loss of pellets throughout the process chain. RKW has joined the ranks of numerous other companies and implemented the "Zero Pellet Loss" initiative in its plants.

lastic marine litter is one of the world's biggest environmental issues. According to a 2015 article published in the scientific journal "Science," between four and 12 million metric tons of plastic waste makes its way into the oceans each year. Although only a very small portion of this volume consists of plastic granulates, the RKW Group is working to raise awareness of the issue, both at its own plants as well as with suppliers and logistical partners across the industry. We also take steps to ensure that our own pellets, powders, and flakes do not end up in garbage or sewage.

As a leading manufacturer of film solutions, we have a responsibility to support a sustainable future. We are aware that, while pellets, i.e. plastic granulates, are only a minor contributor to marine pollution, we must also actively seek ways to reduce the loss of plastic granulates into the environment during production, distribution, storage, transport, and processing.

RKW has therefore joined the ranks of numerous other companies and implemented the "Zero Pellet Loss" initiative in its plants. This has been realized in cooperation with the two associations, and, in particular, with the German Association for Plastics Packaging and Films (Industrievereinigung Kunststoffverpackungen e.V., IK). Actions to further reduce pellet loss include audits (root cause search for leaks), clearly legible signage around the production Sites, disposal



Plastic pellets polluting oceans and beaches

points for cleaning pellet spillage, easily accessible cleaning tools, and the measurement of pellet loss.

Through the installation of sieves on rainwater drains, RKW prevents pellets from entering the environment. This means less leaks and spills. Dirty pellets are not disposed of in regular trash but immediately collected for recycling, thus preventing possible downstream pollutions.

Since the commitment of our employees is crucial, training and communication in the factories is key to successfully avoiding the leakage of pellets into the ecosystem. Furthermore, we have ongoing cleanup activities in our factories. During these sessions, employees as well as the General Manager and the management team collect waste (such as bottles, cans,

and plastic film) from the factory

premises. To further increase employee involvement, we also made zero pellet loss a topic of our Strategy Rally, an internal activity in which everyone was able to participate. Employees were asked to guess how many pellets were in a glass and answer questions about pellet loss and sustainability. This action resulted in a heightened awareness of the "Zero Pellet Loss" initiative among our employees.

To join the "Zero Pellet Loss" initiative, we first needed to carry out internal audits at all of our plants. Points of entry needed to be identified, for example at filling silos or cleaning pipes. We then initiated required measures to eliminate these leaks and were

able to become certified through the IK association. All RKW Sites are "Zero Pellet Loss" certified, with activities continuously taking place. We regularly monitor these measures and continually optimize them.







"Zero Pellet Loss" info table at an RKW factory. Regulations for truck drivers to avoid pellet loss during unloading of trucks in eight different languages

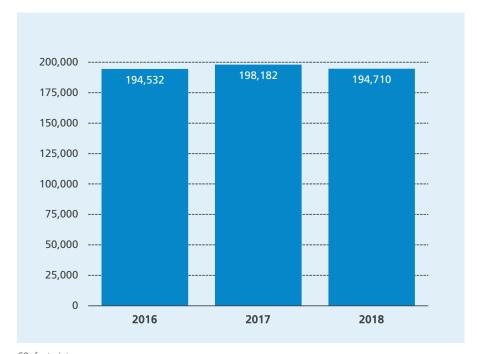
Investments in Carbon Footprint Reduction

As stated in our business mission, RKW is committed to developing sustainable actions that make wise use of our planet's valuable resources.

ur goal is to reduce the carbon footprint of our products and production processes. Evaluating our use of energy will help us to reduce CO₂ emissions, as both are closely connected.

The World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) have developed the Greenhouse Gas Protocol. This is an initiative that provides businesses and other organizations with standards against which they can measure and take steps to balance their greenhouse gas emissions.

At present, the RKW Group does not possess sufficiently detailed data to be able to accurately calculate all activities. However, we can estimate the effects of so-called "scope 1" (direct) and "scope 2" (indirect) emissions. The factors required to convert the use of resources into emissions are taken from the GEMIS database of IINAS GmbH (International Institute for Sustainability Analyses and Strategies, Darmstadt). All RKW Sites worldwide are measured using the same conversion factors.



 CO_2 tootprint

These CO_2 equivalents of approximately 190,000 metric tons per annum correspond to the emissions for which we are directly responsible. Upstream or downstream emissions resulting from the use of raw materials or from thermal recycling are not included.

With the uncertainties present in "use by customers" and "disposal/recycling" values, we are only able to influence a small part (approximately 10%) of the calculated total product emissions. Nevertheless, the RKW Group has set the goal of reducing greenhouse gas emissions within its area of responsibility.

We are doing this in several ways. First, we promote the development of more sustainable products with lower environmental impact (see also Section 3.5.3). For example, because raw materials generate the largest share of total $\rm CO_2$ in typical extrusion products, we strive to save material by downgauging. Over the past years, we have significantly reduced the thickness of

several of our products, such as those of backsheets or shrink films. Downgauging reduces storage space, CO, emissions due to transportation, and energy consumption.

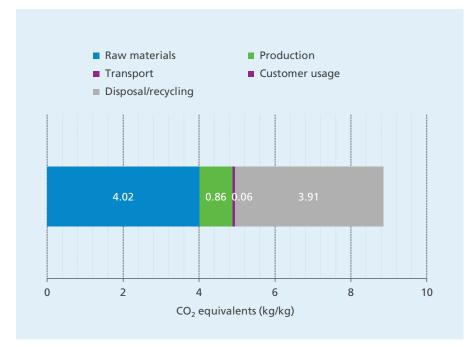
In addition, since 2017 we have initiated several programs aimed at reducing CO₂ emissions at our Sites. This includes our evaluation of the entire life cycle of products to measure their impact on the environment due to factors such as CO₂ emissions. Each phase is considered, from raw material, manufacturing, packaging, distribution and implementation, to disposal.

Supplementary to the efficiency measures of the plants, special projects have been financed with an annual budget of EUR 200,000. These have undergone an evaluation procedure that includes CO2 reduction as the most important criterion. In 2018, projects focused on illumination systems and insulation. Equipping several locations with the latest LED technology and improving the insulation of heat-intensive production processes resulted in savings of more than 900 metric tons of CO₂ emissions per year.

At RKW, we invest in projects that combine efficiency with sustainability and have the least impact on the environment - all with the aim of continuing along the path of CO₂ reduction.

Example Life cycle calculation

This is a calculation of the life cycle of a nonwoven RKW product, showing values for its different "life phases." This ranges from the provision of raw materials and manufacture to the downstream stages of transport, use, and disposal.



Nonwoven: CO, footprint





Example Networking and best practice

RKW SE is one of the cofounders of the IK Energy Efficiency Network in Germany in order to work towards the goal of a direct or indirect reduction in CO₂ equivalent emissions from our plants.

In 2017, 18 companies in the plastics industry joined forces and are working towards the goal of saving a total of 22,000 MWh by 2020, which corresponds to a CO₂ equivalent of more than 7,000 metric tons per year.

Since 2017, the participants have met three times a year to exchange experiences on the subject of energy efficiency.

More information on the IK Energy Efficiency Network can be found at www.kunststoffverpackungen.de



Example Change of energy source

At the Halberstadt Site, the energy supply for a drying oven was converted from electricity to gas in 2018. This not only had financial advantages, but an important criterion for us was the use of a low-emissions energy source. Here, an investment of more than EUR 80,000 resulted in a saving of more than 400 metric tons of carbon dioxide equivalents per year.

RKW Sustainability Award

RKW has regularly conducted internal sustainability contests between its locations since 2012. The RKW Sustainability Award goes to the Site that has demonstrated the most significant improvement over the previous three years.

KW is convinced that economic success and sustainability go hand in hand, and that environmental protection does not constrain financial achievement. That is one reason why the company has held internal sustainability contests between its locations since 2012. The RKW Sustainability Award goes to the Site that has demonstrated the most significant improvement over the previous three years. With this distinction, RKW encourages all Sites to strive toward continual betterment in the sustainability domain.

The Sites are evaluated in the areas of economy, ecology, and social responsibility, factors that are consistent with the strategic goals of RKW. Specific criteria for the evaluation are known by the Sites in advance. They include KPIs covering health and safety, leadership, customer satisfaction, business growth, material and energy efficiency, order and cleanliness, recycling quotas, and CO₂ emissions. The assessment takes into account development in the current year compared to the two previous years. This motivates Sites that have already been positively evaluated to continually improve their performance.

RKW Board Members personally present the award to the General Manager of the winning Site during a company-wide meeting. The prize includes a certificate as well as funding to carry out a project that will further improve sustainability at that Site. In 2018, the Site in Finland won the award after reaching the highest total score. The Site showed significant progress in the reduction of production waste and customer claims as well as an increase in profitability, the use of recycled materials, and positive evaluation of leadership.



Membership in Organizations and Associations

Agriculture Plastic & Environment (APE Europe)
BKV – Plastics, Recycling Concepts
CEFLEX Consortium
EDANA Sustainability Forum and Circular Economy Working Group
ERDE Recycling
Flexible Packaging Europe Sustainability Committee
IK-Energieeffizienznetzwerk
IK Industrievereinigung Kunststoffverpackungen e.V., Working Group Environment & Sustainability and Working Group Bioplastics
Irish Farm Film Producers Group (IFFPG)
"Zero Pellet Loss" Initiative



5.0 GRI Reference

G4 General Standard Disclosures Overview

GRI Standard	Page	External Auditing
Strategy and Analysis		
G4-1	5–6, 10	-

Organization Profile		
G4-3	9	-
G4-4	13, 28	_
G4-5	9	-
G4-6	15	-
G4-7	11	_
G4-8	13	-
G4-9	11–12, 14–15, 37	-
G4-10	38	-
G4-11	20	_
G4-15	20–21	_
G4-16	57	-

Identified Material Aspects and Boundaries		
G4-17	11, 39	-

Governance		
G4-34	11	_

Ethics and Integrity		
G4-56	20, 21, 40	_

GRI Standard	Page	External Auditing
Aspect: Materials		
G4-EN1	30, 32, 39	-
Aspect: Energy		
G4-EN3	23–25	-
Aspect: Water		
G4-EN8	26–27	-
Aspect: Emissions		
G4-EN18	53–55	-
Environmental Category		
G4-EN28	35, 51–56	-
Aspect: Occupational Health and Safe		
G4-LA6	43–45	-



Sustainability Report 2018

The RKW Group is an independent, privatley owned company and one of the world's foremost manufacturers of excellent film solutions. RKW is the market leader in the areas of hygiene and agricultural films, films for the beverage industry, and packaging for powdery goods. In addition, the company makes films and nonwovens for medical applications, for the chemical and converting industries, as well as for the construction sector.

In fiscal year 2018, RKW generated total sales of EUR 878 million. About 3,000 employees process 367,000 metric tons of plastic materials at 20 locations around the world.