



# Corporate Social Responsibility

Sustainability Report 2022



# About This Report

2-2: Entities included in the organization's sustainability reporting | 2-3: Reporting period, frequency and contact point | 2-4: Restatements of information | 2-5: External assurance

The current sustainability report of Zerhusen Kartonagen GmbH, headquartered in Damme, is the second CSR report of the company. The first report went public in December 2019 as a print version and the online version was uploaded to the website for download.

The sustainability report 2022 is now comprised of fiscal years 2019 to 2022 (1. January 2019 – 31. December 2022). It is geared to the guidelines of the Global Reporting Initiative (GRI) and their newest version (GRI-Standard: Core option). The contents of the report will not be checked externally.

The 2022 report will show the development of the company in the past years as well as the current status quo with a look at the economic, environmental, and social sustainable activities. For the first time, Zerhusen also formulated concrete goals for the future.

With the establishment of a sustainability management team in autumn 2022 in cooperation with the management and senior executives, Zerhusen Kartonagen GmbH is now approaching the topic of sustainability even more strategically.

This report is available in German and English and is ready for download at:  
[www.zerhusen.de/nachhaltigkeit](http://www.zerhusen.de/nachhaltigkeit).

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# Zerhusen Kartonagen

Sustainability Report

CSR Report  
German



CSR Report  
English





# Contents

<b>About this Report</b> .....	1
<b>Preface</b> .....	3
<b>CSR Approach</b> .....	4
<b>Organization</b>	
About Us .....	8
Numbers, Data, Facts .....	12
Market Situation .....	18
Second plant – Niedersachsenpark .....	11
<b>Economy</b>	
Moving Forward Together .....	22
Cooperation and Trust .....	26
Sustainable Production and Innovation .....	30
More independent, efficient, energy-saving   Interview with Robert Zerhusen .....	36
<b>Social</b>	
A strong, family-oriented team .....	40
Attractive Employer in the Region .....	50
Appreciation and Intensive Guidance   Interview with Greta Fiswick .....	54
New Paths Together .....	56
<b>Ecology</b>	
Our Path to further Climate Protection .....	62
“Saving Energy and Protecting the Climate Concerns Us All”   Interview with Heinrich Kruthaup .....	76
<b>Target Matrix</b> .....	78
<b>GRI-Index</b> .....	80
<b>Company Details</b> .....	84

# Sustainable Growth – The Order of the Day

2.14: Role of the highest governance body in sustainability reporting | 2-23: Policy commitments



## Dear Readers,

Since we, at Zerhusen Kartonagen GmbH, have made our first sustainability report public, we have been dealing with multiple global crises: The Corona pandemic, the worsening climate crisis, Russia’s assault on Ukraine, the supply chain and raw material issues and the energy crisis.

It was and still is a time full of changing aspects and uncertainty affecting the corrugated board industry as well. We, as a family-owned company, have worked well together with our committed employees to overcome these challenges. We have grown, and we have invested in a second corrugator and much more. Zerhusen is working on sustainable innovation and expanding our location with the construction of a second factory on the A1. We are well prepared for the future especially since the third generation is now on board, Linda Stärk (administration) and Robert Zerhusen (engineering).

Sustainable growth is the order of the day – in view of compliance with the 1.5-degree target agreed by the United Nations, Germany’s intention to achieve climate neutrality by 2045, and the associated need for economic transformation. We are determined to continue along this path.

The positive feedback from our first sustainability report reassured us. It was a milestone for us: As one of the

first companies in the Oldenburger Münsterland region, we voluntarily wanted to be transparent and demonstrate how we should tackle sustainability, where we are and where we want to be in the future.

However, when it comes to that, we will not take a rest. Before we are required to follow the decision of the EU regarding the new Corporate Sustainability Reporting Directive (CSRD), which will take effect starting in the financial year 2025, we wanted to give an update about our sustainable activities up to the end of 2022 with this second report.

Therefore, we have honed our sustainability strategy and CSR approach. At executive and management level, we have developed fields of action and defined concrete, ambitious targets for the future by which we will be evaluated.

But read it for yourself, and let’s engage in a constructive exchange. Only together can we succeed in the sustainable transformation of our economy.

*R. Zerhusen*

Roland Zerhusen  
CEO, Zerhusen Kartonagen GmbH

# Humane, Reliable, Ecological

2-22: Statement on sustainable development strategy | 2-23: Policy commitments

Packaging is our passion. We know from our almost 40-year history, it's not just "what" a company produces that counts.

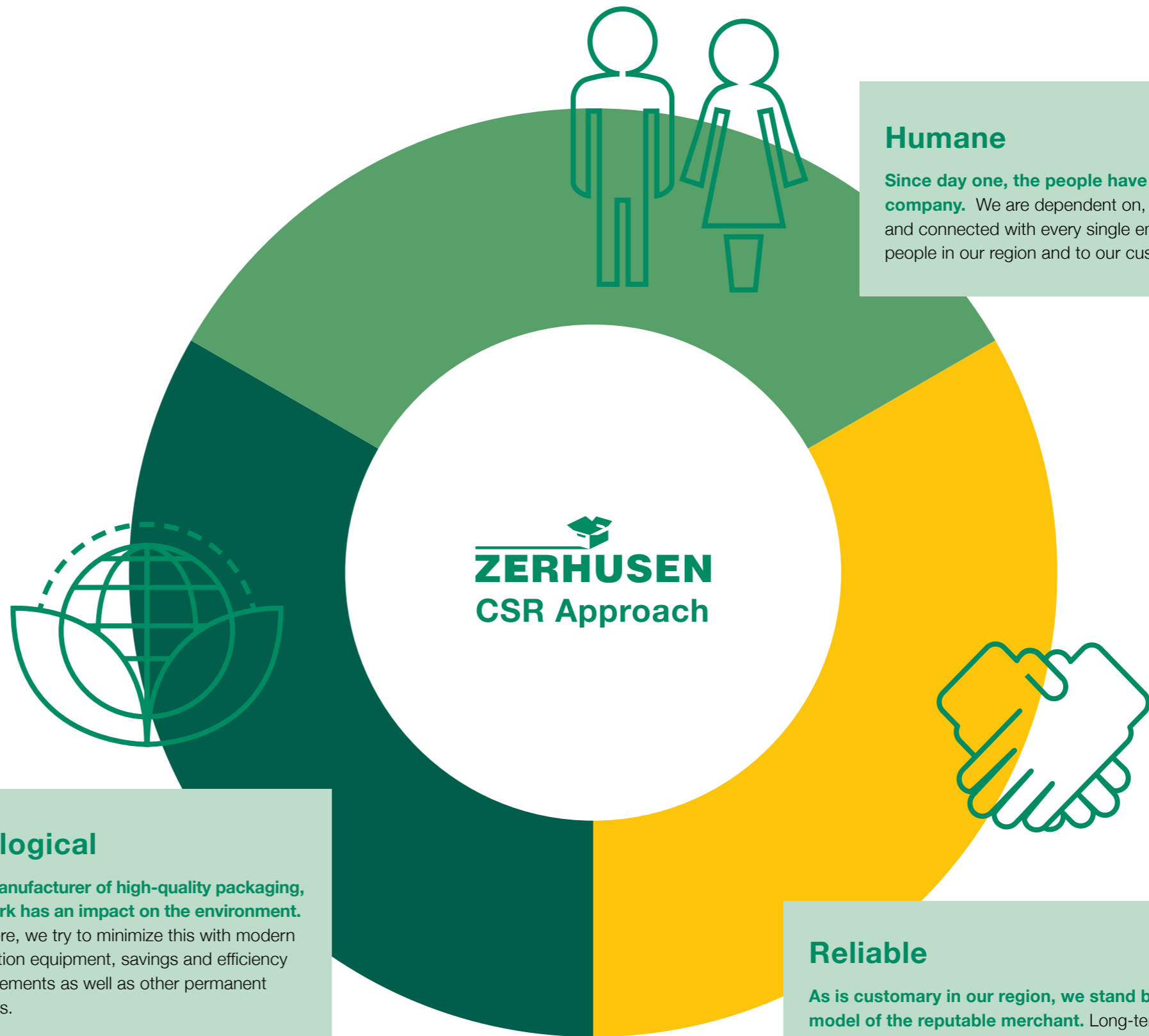
In order to be successful for a long period of time, it is just as important to consider the "how." Our CSR approach should act as a guide to constantly improve.

Since Zerhusen Kartonagen GmbH was founded in 1987, the people with whom we work have played an essential role: Employees, customers, suppliers, and partners. Our cooperation is based off mutual trust, respect, and loyalty. This philosophy remains a fundamental element of our corporate culture to this day. In view of our responsibility to the environment, ecological aspects are also playing an increasingly strong role in our sustainability strategy.



Our employees are the very core of our business and the foundation of our success. They are very close to our hearts, after all they are the ones who are the company's 'life' and ultimately are Zerhusen!

*Roland Zerhusen*



**Humane**  
 Since day one, the people have shaped our family-company. We are dependent on, feel responsible for, and connected with every single employee as well as the people in our region and to our customers and partners.

**Ecological**  
 As a manufacturer of high-quality packaging, our work has an impact on the environment. Therefore, we try to minimize this with modern production equipment, savings and efficiency enhancements as well as other permanent activities.

**Reliable**  
 As is customary in our region, we stand by the model of the reputable merchant. Long-term success, without conflicting with the interests of society, is more important than short-term profits. Values, virtues, and a handshake count.





# Organization

About us, Market, Figures



# About Us

2-1: Organizational details | 2-6: Activities, value chain and other business relationships | 2-7: Employees | 2-9: Governance structure and composition | 2-13: Delegation of responsibility for managing impacts | 2-14: Role of the highest governance body in sustainability reporting | 3-1: Process to determine material topics | 3-2: List of material topics | 201-1: Direct economic value generated and distributed

Our mid-sized, family-owned company, Zerhusen Kartonagen GmbH headquartered in Damme, Germany, is one of the biggest corrugated board factories in Germany. Günter Zerhusen founded the company in 1987 as a three-person trading operation. Today, our business includes the production and conversion of corrugated board as well as the manufacture of high-quality packaging.

Roland Zerhusen is now leading the company in the second generation. His children, Linda Stärk (management) and Robert Zerhusen (engineering), are on board as the third generation taking on positions with many responsibilities.

Zerhusen is deeply enrooted in the Oldenburger Münsterland region. We rely on long-lasting and trusting relationships with our employees, customers, suppliers, service providers and partners. In our actions, we act humanely, reliably, and ecologically.

The headquarters has 20 hectares of industrial real estate at its disposal, which we use for development, production, processing, logistics and administration. A state-of-the-art machine park and driving fleet have been put into action. There are construction plans for a five-hectare area

adjacent to Zerhusen which are currently in the approval phase.

## Investment in the Second corrugator

In order to cover the constant growing demand for corrugated packaging and to continue complying with the customer requirements, we have invested in a second corrugator in 2022. Through the significant increase of production capacities from 250 million m<sup>2</sup> to now 500 million m<sup>2</sup>, we have almost reached our production capacities in Damme. Therefore, in autumn 2022, we have started the construction of a second processing plant in the transregional industrial park known as "Niedersachsenpark" on the A1.

Together with our 671 employees, we have achieved an annual turnover of 178 million euros in 2022. We have converted 140,000 tons of corrugated base paper to corrugated packaging. E.g., folding boxes, set-up boxes, die-cut packaging, and heavy load packaging.

We are currently delivering up to 110 truckloads per day within a radius of 400 kilometers to our customers who primarily come from the food, wood, and furniture



industry as well as from online retail or the metal and plastics branch in Germany and the Benelux region. Our broadly established customer base contains approximately 1,100 customers, and 550 of them are regular customers. The 10 largest account for a share of 55 million euros (33% of the turnover). In the period, which is being reported, we were able to acquire several well-known new customers. The fluctuation of customers is very low.

## Concrete Sustainability Goals

Since 2019, we have also once again sharpened our focus on sustainable issues. At management and executive level, we have further developed our sustainability strategy, identified key areas for action, and backed up our activities with concrete targets. We will implement these gradually. Our focus is on energy and emissions (use of renewable energy), sustainable personnel development, waste management, process optimization, employee satisfaction, and digitalization. In our development center, which was finished in 2020, we are working constantly on new, sustainable products and innovations. Therefore, we have a great line of communication with our customers. When it comes

to packaging, there is a high demand for a switch from plastic to corrugated board. We have once again expanded our product range by introducing fanfold packaging in February 2023.

With a view to sustainable development of the industry and the region, we also cooperate with our partners such as VDW (Verband der Wellpappen-Industrie e.V.), PHWT (Private Hochschule für Wirtschaft und Technik), or the Verbund Oldenburger Münsterland. They launched a network in 2022 called "Transformation and Sustainability in the OM," of which we are members.



# Management Board



The management board from left:

**Kerstin Lübbehusen** (Head of Human Resources), **Michael Harpenau** (Head of Sales), **Greta Fiswick** (Director of Education), **Rebecca Behrends** (CSR - Team), **Robert Zerhusen** (Paper Engineer), **Martin Schafmeyer** (Head of IT), **Günter Zerhusen** (Senior CEO), **Dirk Goda** (Head of Management Systems), **Marc Zerhusen** (Head of Production), **Andreas Nordlohne** (CFO), **Roland Zerhusen** (Managing Director), **Barbara Niemann** (Head of Purchasing), **Erich Trage** (Head of Logistics)

## Second plant – Niedersachsenpark

In autumn 2022, we started the production of a second processing plant for the conversion of corrugated board primarily for the online trade market in the transregional industrial park known as “Niedersachsenpark” on the A1 in Neuenkirchen-Vörden. In this area we acquired a four-hectares piece of property from the Lower Saxony Park Association. There is a “right-to-buy” agreement for a further eight hectares.

Background: With the commissioning of our second corrugator in the middle of 2022 in Damme and the subsequent increase in production capacity from 250 million m<sup>2</sup> to now 500 million m<sup>2</sup>, we had almost reached our capacity limits.

The second plant in Niedersachsenpark is a good addition to the Damme location. We will create around 50 new employment opportunities. In the first expansion phase, we are building a 15,000 m<sup>2</sup> production hall, which will feature 2 folding gluing machines (Turbox 230 and Turbox XL) as well as a Masterline 2.1 with two printing units. The hall has enough room available for further modern and efficient machines in the future. The start-up of the processing plant is planned for late summer 2023. We have examined the investments made for sustainable alternatives. For example, the office building is supported by sustainability certification, which means only sustainable building materials are used. We are installing a photovoltaic system and will use electric forklifts. The second plant will strengthen our overall market position in northern Germany.

11.5  
Hectares

50  
Jobs





# Numbers, Data, Facts

2-1: Organizational details | 2-6: Activities, value chain and other business relationships | 2-7: Employees | 201-1: Direct economic value generated and distributed



## Headquarters

Industriestraße 9  
49401 Damme

## Operational Area (Damme)

Total: 190,000 m<sup>2</sup>,  
72,000 m<sup>2</sup> of that is developed  
Production: 45,000 m<sup>2</sup>  
Storage: 27,000 m<sup>2</sup>



## Number of Machines

2 corrugators for the manufacturing of corrugated board

## 18 Production Lines in the Converting Area

1 x Laminating line  
4 x Flatbed die-cutters  
2 x Rotary die-cutters  
5 x Inline machines  
1 x Container line  
4 x Folder gluers  
1 x SRE

## 9 Special Purpose Machines

1 x Trayline  
1 x Taper  
1 x Strongline  
1 x Flexpicker  
1 x Stapler  
1 x Rotary shear  
1 x Automatic Gluing Table



## Business operations and Scope

Manufacturing and handling of corrugated cardboard and products made of solid fiberboard

## Products

- All qualities corrugated board from micro flute to triple-wall
- Corrugated cardboard sheets
- Folding boxes in various designs
- Sheets, collapsible sheets, folded blanks
- Folding base and erector boxes
- Die-cut packaging
- Heavy cargo packaging
- Octabin
- Corrugated cardboard pads and folded padding arrangements
- Fanfold
- Corrugated rolls
- Erector boxes made of solid fiberboard
- E-commerce packaging with tearing strip, self-adhesive with sealing option
- Offset print up to 6 colors in flexographic print
- Preprint (pre-printed roll)



From left: Linda Stärk (Born Zerhusen), Robert Zerhusen  
Günter Zerhusen, Roland Zerhusen, Marc Zerhusen

100 %  
**Family Company**  
Since 1987

“We see our steady growth as an incentive for further investment, innovation, and efforts. With the aim of further optimizing our products, remain competitive and thus to lead the company into a sustainable future.”



Three-generation conversation

## We are tackling this together!

Our company is a family-run business and is already in its third generation. In this three-generation interview Günter, Roland and Linda talk about their experiences and visions for the future.



## Amount of Produced/Converted Corrugated Board

Since 2019 to 2022

	2019	2020	2021	2022
<b>Manufactured</b>	193,445,000	208,800,915	234,329,306	244,000,000
<b>Converted</b>	194,022,000	221,426,520	246,067,229	255,000,000



# Milestones



Distributor

1987

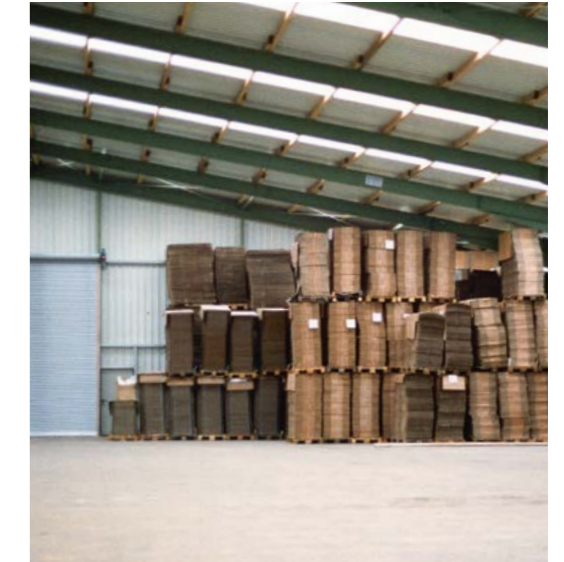
**Founding of the Family Business**  
Günter and Roland Zerhusen start in Damme with the distribution of industrial cardboard boxes



Processor

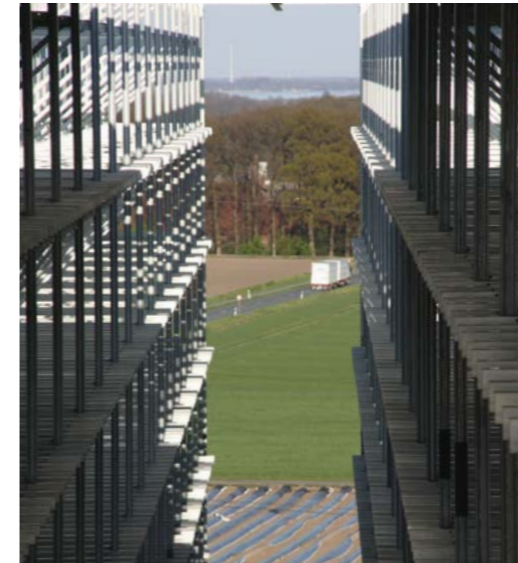
1993

**First Converting Machine**  
From corrugated board distributor to corrugated board processor



2009-10

**Fully Automatic High-bay Warehouse 1**  
Construction of the new high-bay warehouse



2012

**25 Year Anniversary**  
Zerhusen celebrates 25 years in business

2016

**Corrugator**  
Commissioning of the new corrugator Zerhusen becomes a corrugated board manufacturer



2018-19

**Fully Automatic High-bay Warehouse 2**  
Construction and commissioning of the second High-bay warehouse



2019

**Development Center**  
Construction of a new development center

2020

**Productions Hall 11**  
Construction and commissioning of the new production hall 11

2022

**Expansion of the Company**  
Commissioning of the second corrugator and the start of construction of the second plant in the Niedersachsenpark

History



### Turnover

in million euro



### Investments

in million euro



### Employee Development

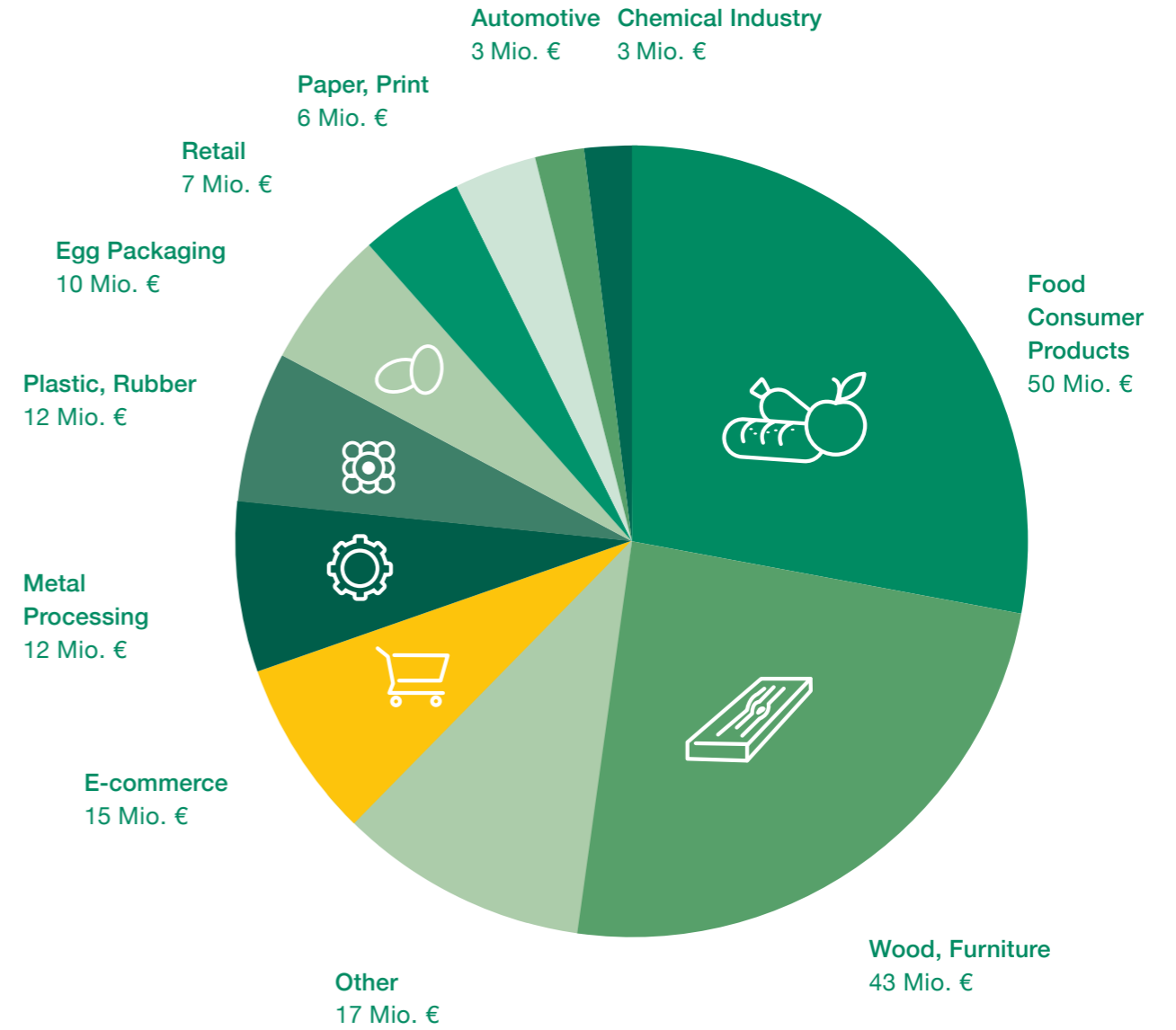


### Conversion of Corrugated Board

in million m<sup>2</sup>



### Turnover According to Customer Sectors





# Strengthened Market Position through Groundbreaking Investments

2-25: Processes to remediate negative impacts | 3-3: Management of material topics

Packaging made of corrugated board is in huge demand. Even in times of crisis, it can ensure that products are transported and delivered safely and reliably, and that security of supply is guaranteed.

Corrugated board has a good image because it is sustainable especially compared to other packaging materials as it has a favorable carbon footprint. Scrap wood and forestry wood, from which pulp is extracted for the production of corrugated base paper, binds CO<sub>2</sub> as it grows. The use of recycled material (more than 80% - at Zerhusen the figure is as high as approx. 93%) from used paper and corrugated board packaging also helps to reduce the impact on the environment that is harmful to the climate. In doing so, corrugated board promotes the circular economy as a recyclable packaging material.

## Living Up to the Responsibility

Nevertheless, our energy-intensive production and processing of the corrugated board as well as logistics and transport have consequences on the environment: We generate greenhouse gas emissions, produce waste, and use water. In view of the globally accelerating climate crisis, massive environmental pollution, rising CO<sub>2</sub> emissions or even increasing scarcity of resources, we will therefore live up to our responsibility and make our contribution. Therefore, we have developed a table of concrete actions.

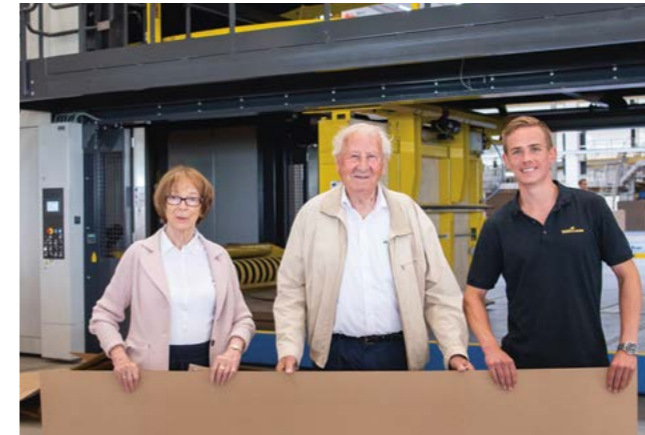
We are one of 35 companies with 102 factories in Germany, who produce and process corrugated board. These include numerous medium-sized family

businesses and a few internationally operating groups with several sites. Together, the industry generated an annual turnover of 6.6 billion euros in 2021. In comparison to 2010, the sales figures have increased significantly. Germany recorded corrugated board sales of around 12.1 billion square meters in 2021 (source: VDW). Around 2/3 of transport packaging in Germany is corrugated board. Zerhusen Kartonagen GmbH is one of the largest plants in the industry.

## Strong Order Volume Despite Challenges

During the reporting period, the market situation in the corrugated board industry was characterized by a shortage of skilled workers and the ongoing topic of digitalization, but above all by global crises such as the Corona pandemic, climate change and the war in Ukraine. This was and is accompanied by challenges such as supply bottlenecks, raw material shortages, immensely increased energy and raw material prices, and also inflation. Within the industry, this led to a high degree of cost uncertainty for the raw materials paper or glue and thus to considerable additional financial burdens for the companies. This was because revenue growth was unable to keep pace with the development of raw material prices.

On the other hand, the order situation was very good, mainly due to the strong growth in online business during the Corona pandemic. In some cases, the industry was barely able to meet demand, and competition came to a virtual standstill. We even supported other companies in production during this time.



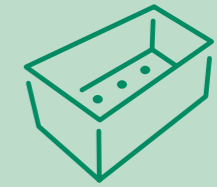
The extensive investments in operating infrastructure and new machinery in recent years are paying off for Zerhusen Kartonagen. In 2022, we recorded a noticeable relief in the area of large folding boxes with the commissioning of the Containerline. The start-up of the second corrugator in the same year brought the expected relief in the format area. The commissioning of the new conveyor bridge from the corrugator hall to hall 11 ensured a better internal material flow. The additional inline machine (Emba 1700) also provided additional relief in the folding box sector.

Consumer behavior has slowed down towards the end of 2022, in particular due to the energy crisis, and competition is accordingly underway again. Nevertheless, we were able to increase our turnover significantly and to strengthen our market position in northern Germany. We continue to benefit from regional value creation by customers, suppliers and service providers close to our operations, with whom we have close ties and with whom we cooperate in a trusting and appreciative manner, from our flexibility through a high degree of independence, and from our quality and reliability.

## Total Corrugated Board Sales Figures in Germany 2018-21

Bundesstatistik

Year	1.000 €	Tonnen	1.000 m <sup>2</sup>
2021	6,607,525	6,049,163	12,054,252
2020	5,644,066	5,589,283	11,194,882
2019	5,805,018	5,545,327	10,842,432
2018	5,726,420	5,433,830	10,625,452



The research group Circulus - Transformation Pathways and Barriers to a Sustainable Closed Economy in the Bioeconomy at the University of Freiburg discovered in 2021:

If plastic fruit baskets were replaced with corrugated cardboard throughout Germany, the annual CO<sub>2</sub> emissions for the production of fruit baskets could be reduced by 34 percent.

## CO<sub>2</sub> Emissions

-34%

Research Report







# Economy

Reliable, High-performing, Innovative





# Moving Forward Together

2-16: Communication of critical concerns | 2-22: Statement on sustainable development strategy | 2-23: Policy commitments | 2-26: Mechanisms for seeking advice and raising concerns | 3-3: Management of material topics | 205-1: Operations assessed for risks related to corruption | 205-2: Communication and training about anti-corruption policies and | 205-3: Confirmed incidents of corruption and actions taken

Appreciation, reliability, trust, closeness, and team spirit: Values that have always been close to our hearts as a medium-sized family business, both in corporate management and in our approach to our stakeholders. We laid down the corresponding guidelines in various documents of the corporate philosophy, the code of ethics and suppliers, and the quality policy many years ago. Other guidelines relate to occupational health and safety and environmental protection. All documents related to this are available on the company's Intranet and since 2023 can be viewed on the company website. New employees also receive these documents in their welcome folder.

## Future Involvement

Our organizational structure is formed by flat hierarchies and an open communication culture. The doors of the CEO, Roland Zerhusen, the management, and the Zerhusen family are always open. Zerhusen encourages active participation and focuses on independent action at all levels. We identified the topic of sustainable HR development and employee participation as one of our core tasks in sustainability management in a strategy meeting at management level in the fall of 2022.

Company Philosophy	Business Ethics	Supplier Code of Conduct	Quality Policy	Environmental Policy	Guidelines for Occupational safety and Health protection

The CEO, Roland Zerhusen, is responsible for strategic decisions - in close consultation with management and the family. Together, they analyze and talk about effects, opportunities, and risks of their business operations. If necessary, they also involve external consultants. A procedure for the delegation of authority has not been implemented. The basis for decision-making is an integrated management system (see listing), which we are currently expanding to include an ERP (enterprise resource planning) system in the course of digitization.

Once the strategic, long-term goals have been converted into operational goals, communication, planning, and control are carried out by the managers and specialist departments. Regular meetings and exchanges are held at management, executive and team leader level to monitor progress. We encourage employees to get involved in team meetings and through our company suggestion scheme. In addition, we inform them about our business activities at the annual company meeting and in our biannual company magazine "Papperlapapp."

## Management Systems and Certificates

- Hygiene Management System according to EN 15593
- Quality Management System according to ISO 9001:2015
- Energy Management System ISO 50001:2018
- Responsible Forest Management: FSC-STD-40-004 (License number: FSC® C126262)
- Authorized Economic Operator according to AEO-S
- IHK-Quality Seal "TOP Apprenticeship"
- Risk and Process Management
- Compliance with the General Data Protection Regulation (DSGVO)

All management systems are audited every year via a follow-up audit. Our quality, hygiene, and energy management systems are certified every three years, and the FSC certification every five years.



Das Zeichen für verantwortungsvolle Waldwirtschaft







### Trusting Cooperation

We aim to develop a close and trusting relationship with our suppliers, customers, and business partners. No employee of Zerhusen Kartonagen GmbH may offer or grant improper advantages to business partners or otherwise exercise improper influence. Paying and accepting bribes are prohibited without exception. In the event of non-compliance with this policy by an employee, employees who become aware of it may inform supervisors or the Human Resources Department. Possible consequences will be decided under the labor law.

Employees also may not engage in anti-competitive activities that exclude, restrict, or distort free competition. If we suspect that a supplier is offering inadmissible advantages, we reserve the right to investigate the suspicion within the framework of an unannounced supplier audit. If we identify a violation of our principles, we reserve the right to terminate the supplier relationship. We are not aware of any cases of corruption in the reporting period.

Sustainability management and the CSR approach were firmly established in our company during the publication of our first CSR report in 2019. These are the responsibilities of, reviewed by and coordinated by the management board - in which, in addition to Roland Zerhusen, his daughter Linda Stärk is particularly responsible. Since 2022, we have voluntarily participated in an annual assessment of our sustainability activities by the "EcoVadis" platform. An internal controlling system for all key sustainability indicators is being planned.

We monitor the following non-monetary indicators via our financial controlling or internal accounting system: cleanliness in the company, sick leave, accidents on the job, deliveries, rejected goods, internal complaints, customer complaints, downtime, old stock, shortages, suppliers' complaints for paper, and fleet costs. In the future, all departments will be required to form key figures that are typical for them and report them to quality management.

### Sustainability Across All Business Areas

To establish sustainability in all the business areas and departments, managers from purchasing, sales, logistics, human resources, QM, and organization are integrated into the strategic considerations. They report from their departments to the management, and together we develop new goals. Our ambition is to form a sustainability team in 2023 to coordinate all our activities in this area as well as reporting.

We also maintain an ongoing dialog with our stakeholders on economic, environmental, and social issues and communicate critical concerns. We address specific concerns in discussions with customers, suppliers, and employees. From 2023, in addition to the annual customer surveys introduced in 2019, we will also conduct regular, anonymous employee surveys in this regard.

There were no critical concerns during the reporting period.







# A Fair Cooperation

2-26: Mechanisms for seeking advice and raising concerns | 2-28: Membership associations | 2-29: Approach to stakeholder engagement

We have incorporated into our CSR approach that we stand by the guiding principle of the honorable merchant. More important than short-term profits is long-term success without running counter to the interests of society. For us, values, virtues, and a handshake are what count.

That is why we have always cultivated a loyal, cooperative partnership, mutual involvement, and open communication with our stakeholders. This attitude is at the core of our corporate culture. It creates trust and is a win-win situation for all involved.

It is reflected in our corporate philosophy, the Code of Ethics, and the Code of Conduct, all of which we revised in 2021. The guidelines set out in these documents guide us in our daily activities.

Our most important stakeholders are our employees, customers, suppliers, service providers, banks, policy makers and the authorities, the residents as well as the community. We identified these stakeholders in a workshop in 2018 at management level in the preliminary stages of our first CSR report. This selection still stands today.

## Our Partnership with Organizations and Stakeholders



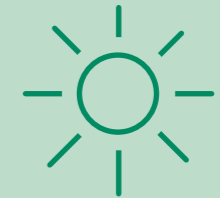
### Professional Organizations

- IHK (Oldenburgische Industrie- und Handelskammer)
- VDW (Verband der Wellpappen-Industrie e.V.)
- InPapier (Industrieverband Papier Nord e.V.)
- Verbund familienfreundlicher Unternehmen e. V. im Oldenburger Münsterland



### Culture

- Theater Dammer Berge e. V.
- Dammer Carnevalsgesellschaft von 1614
- Dammer Bürgerstiftung
- Kunst- und Kulturkreis Damme e. V.



### Environment

- Member of the group in the network "sustainability and transformation" of Oldenburger Münsterland
- Naturschutzbund NABU Damme
- Heimat- und Verschönerungsverein Oldenburgische Schweiz Damme



### Education

- PHWT (Private Hochschule für Wirtschaft und Technik)



### Health

- In cooperation with „Fachkliniken St. Marien - St. Vitus GmbH“
- aef (Agrar- und Ernährungsforum Oldenburger Münsterland)



### Feedback and Participation Culture

Management and executives keep their eyes on the heart of the workforce through an annual follow-up with employees. Moreover, management and team meetings as well as a companywide meeting take place yearly. This format serves as the exchange and information on corporate strategies and developments. They are used for a lively feedback and participation culture as well as the company proposal system for which Robert Zerhusen, Head of Corrugator production, is responsible.

Information platforms have been established such as the Intranet, the company magazine "Papperlapapp", and digital information blackboards in every department. New employees receive a welcome folder with important information about our company. They also participate in different training courses, in which they learn our corporate philosophy, code of conduct as well as safety and hygiene regulations. Corporate summer and family festivals, Christmas parties, trips, sport, and music events strengthen the "we-feeling." To be even closer to the concerns and needs of our employees in the future, we will introduce regular employee surveys from 2023.

### Open Communication

We hold discussions with our suppliers, from whom we procure raw materials, machines, and components, and with our customers, in some cases several times a year: on the status quo and the further development of our cooperations, but also on the market situation in general. In addition, we carry out supplier assessments and have been conducting customer surveys since 2018, with the last one being in 2021, to gather feedback and identify potential for improvement.

We meet you and our regional service providers, policy makers, media representatives, potential new employees, and the public in many ways such as:

- Company visits
- Industry, job, and training fairs
- Networking or organization meetings
- Public panels
- Other social events

In all these interactions, it is also important for us to exchange views on joint solutions for a sustainable future for the economy, our industry, and the region. Key topics in the reporting period were above all the effects of global crises such as the Corona pandemic, the climate crisis, the Ukraine war, and the energy crisis, as well as aspects such as raw material and supply bottlenecks, price increases, the shortage of skilled workers and digitization.

We are firmly connected with our region, the Oldenburger Münsterland and the city of Damme. We assume social responsibility there through engagements and fundraising activities.

Through our company proposal system, every employee can contribute ideas and suggestions for improving processes or the working environment. There are letterboxes at four locations in the plant (reception, hall 12, personnel entrance production and break room HRL) where suggestions for improvement can be posted. The LTic-system can also be used for this purpose via the intranet. The head of the corrugator, Robert Zerhusen, evaluates the proposals with the controlling department and the respective departments and department heads. A decision is then made as to what makes sense and can be implemented. The accepted suggestions are rewarded financially according to an internally established evaluation system. Five to ten suggestions are received each month.

### Examples from the Reporting Period:



Installation of a mirror on the SRE for increased work safety.



Installation of a knife grinding and lubrication control system at the corrugator's delivery system



Installation of a camera system in the baling press of the corrugator



Material savings through design changes



Purchase of a tablet for printing plate management



Reusable drinking bottles for all employees



Installation of a control system for automatic shutdown of infrared drying at the DRO



Paper savings through training and machine adjustment

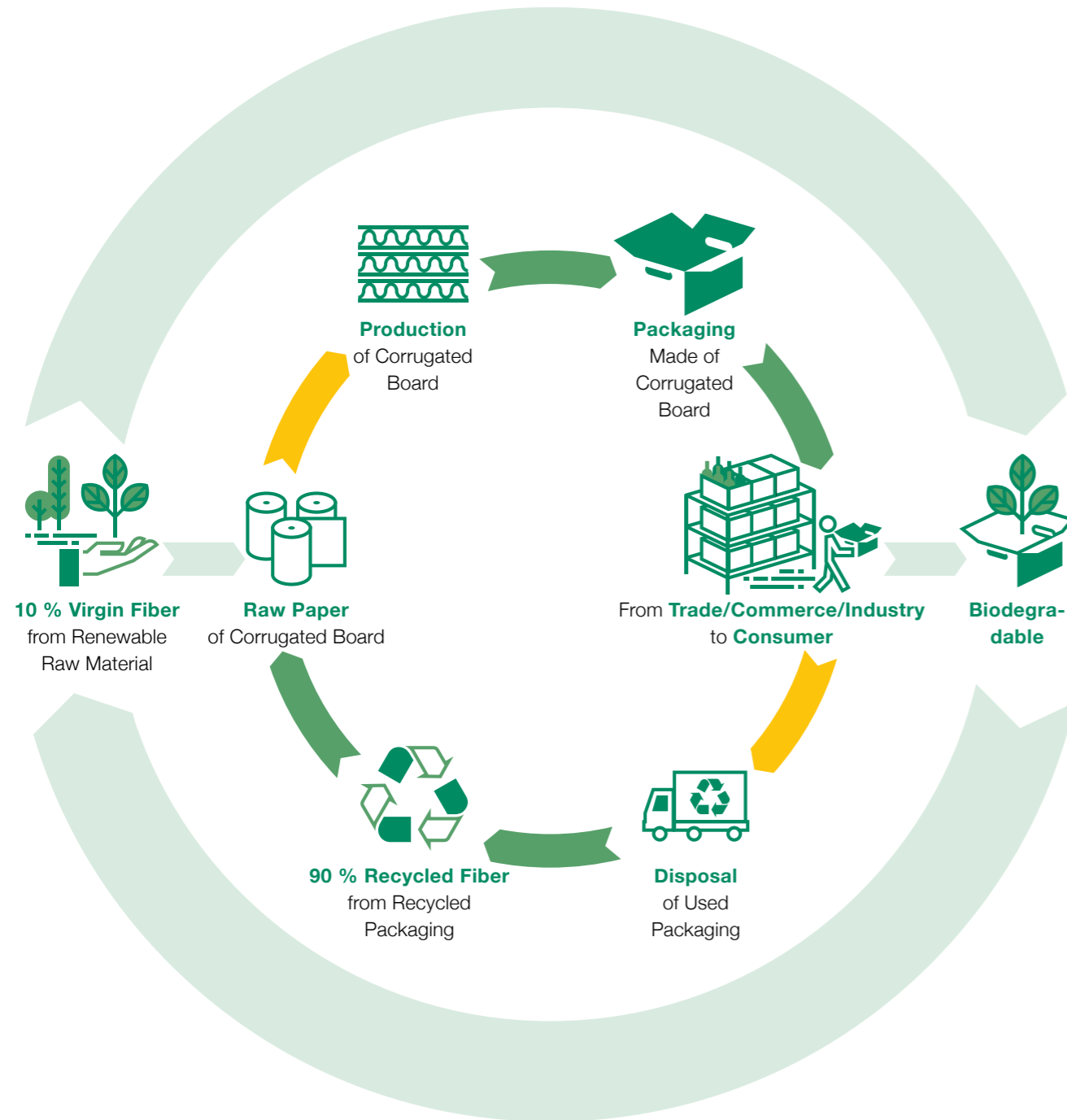


Ergonomic floor mats for standing work activities



# Sustainable Production and Innovation

2-6: Activities, value chain and other business relationships | 3-3: Management of material topics | 301-1: Reclaimed products and their packaging materials



## Material Cycle

The life cycle of corrugated board packaging starts with the extraction of raw materials and paper production in the paper mill, continues with the manufacture of the corrugated board and stops with the production of the individual packaging. This is shipped to the customer and used. The cycle usually ends with recycling, i.e., the return to the material cycle, and begins a new cycle by means of recycling. A functioning, sustainable cycle of a product that is completely recyclable for up to 20 cycles, based on renewable raw materials and is used sparingly.

A life cycle that has an impact on the environment and people, particularly in terms of resource use, energy consumption during production, and CO<sub>2</sub> emissions during transport have an impact on the environment and on people. Further minimizing this footprint, working on innovative and sustainable solutions, making production processes even more efficient and thus making a significant contribution to achieving the targets for climate is our goal.

### The Purchasing of Paper

The purchasing of raw material paper has almost doubled since 2016 with the steady growth of our company and the entry into corrugated board production with the help of two corrugators. In 2022, we purchased around 130,000 tons of paper from 13 different suppliers with whom we have been working reliably for many years. We attach importance to regional partnerships. This enables us to ensure high social and environmental standards in our supply chain and to avoid long

transport and emissions. 70% of the paper is delivered in a radius of up to 300 kilometers.

Approximately 93% of the paper supplied is recycled paper-based and only 7% is kraftliner consisting of virgin fibers. In 2018 the amount was still at 10%. During the reporting period, we continued to substitute kraftliner with testliner made from recycled paper.

The paper rolls were delivered by truck transport with a maximum of 7 rolls per truck equaling 23.5 tons. The accrued production waste (ca. 15%) is sold as wastepaper to the suppliers. Every sixth truck takes wastepaper back to the paper mill to be recycled. Therefore, many empty transports can be avoided. To give a brief background: Paper fibers of sufficient quality are generally and fully automatically recycled up to 20 times. Only when recycling is no longer possible is it incinerated in residual waste incineration plants, which many of the paper suppliers now have on their premises. The energy generated from the incineration of the wastepaper is used for their own paper production.

### The Production of Corrugated Board

In our highly modern corrugated board factory located at the headquarters in Damme, we converted close to 270 million m<sup>2</sup> of corrugated board in different qualities: From a micro flute to the heaviest double wall as well as in every possible grammage. That is equal to an area of 24,000 football fields. With the first corrugator, we are able to produce double wall corrugated board with a width of 2.8 meters. We can achieve top speed

of 400 meters/ min. In summer 2022, we obtained a second corrugator, which focuses on single-wall corrugated board with a top speed of 450 meters/ min. The start-up of the second corrugator, "Vicky", in the summer of 2022 brought the expected relief, flexibility and independence in the production of sheets as well as a safeguard and capacity expansion. Consequently, we were able to reduce material waste and CO<sub>2</sub> emissions and save shipping costs, which would have accumulated, if we had continued to buy corrugated sheets. Thus, we decreased freight kilometers by 50% and the number of consignments by 77%.

Robert Zerhusen has been responsible for corrugated board production since 2020. Since 2022, he is supported by 87 employees in the areas of machine control, materials handling, internal logistics including forklifts, maintenance, and coordination.

### Innovations and Goals

We are currently researching material reduction by processing even lighter paper (70 g/m<sup>2</sup> corrugated (70 g/m<sup>2</sup> corrugated medium). For context: Due to increasingly smaller or single households, packaging sizes are decreasing. Packaging is becoming smaller and can be produced with lighter paper. As a result of this development, the amount of packaging required is increasing, and we are thus trying to counteract the trend towards greater demand for resources. The lighter the paper, the fewer resources and energy used in production.

In February 2023, we started the production of fanfold corrugated board. Therefore, we ordered a module from our long-time machine supplier, Universal Corrugated B.V, which we installed at the end of corrugator 1 (Viktoria). Fanfold is a flexible concept for the most diverse packaging requirements. It saves process, storage, and transport costs - especially in the e-commerce industry. The corrugated board sheet is only cut lengthwise. The cross-cut section is omitted. Thus, it is ideal for very long and bulky packaging especially convenient for the furniture and online retail to produce tailor-made packaging. This would then avoid unnecessary packaging volumes and empty space in the packaging. The fanfold board is specifically folded before stacking and then is palletized and loaded as finished goods. That simplifies the logistics. Fanfold

can be cut to size individually by the customer. This saves a lot of individual packaging. In 2023 we expect a market demand of around 100 million m<sup>2</sup>.

In 2022, we also worked on minimizing our waste in corrugated board production. Dirty or damaged sections of a paper roll are peeled or cut off before it is fixed to the corrugator and the start of corrugated board production. By reducing the amount of paper stripped away, 25-30% of the peeled waste per paper roll could be saved.

Further sustainable aspects and targets in the production and converting process by 2025:

- From summer 2023, 75 % replacement of hot glue by cold glue (more energy-saving and sustainable) in the Flexpicker and in the Trayline
- Recycling of the water generated during production (see also chapter on ecology)
- Process optimization: fewer waste products, higher running performance, fewer shutdowns
- Extension of the second corrugator to the second shift to increase corrugated board production
- Improvement of the utilization of the transport vehicles by checking and adjusting the pallet height

### Converting Process into Cardboard Packaging

In the period under review, we continued to invest in our high-performance and modern machinery, with which we convert corrugated board with 18 production lines and new special machines in a 3-shift operation to produce corrugated board boxes. In 2022, we converted a total of 130,000 metric tons of corrugated base papers into corrugated packaging, for example into folding boxes, erecting boxes, or die-cut and heavy-duty packaging.

The commissioning of the new conveyor bridge from the corrugated board plant to Hall 11 in 2022 ensured a better internal flow of materials. The additional inline machine (Emba 1700) provided an added degree of relief in the folding box sector. With the start-up of Containerline, one of the most modern lines worldwide, we recorded a noticeable relief in the sector for large folding boxes. It replaced two old machines and works much more efficiently (up to 10 times faster than the

machines, which were used for large folding boxes) because it die-cuts and seals in a single step. It also has advantages in terms of internal transport.

### Sustainable Waste Management

For the disposal of waste from die-cutting during production, especially from the machine "Evolution 2", we have installed a new shredder in Hall 11 as well as another wastepaper baling press. With the investment in the new press, we now have four wastepaper presses on the entire company premises. That the need is there is made clear by these numbers: We receive 75 tons of wastepaper per day, which corresponds to three truckloads of wastepaper bales. They are delivered daily to the VPK paper mill, which then uses the valuable raw material to produce rolls of paper which is then delivered back to Damme. This is another way in which we are doing our part towards responsible use of resources and are fulfilling our own sustainability standards.

In 2022, we will have delivered 110 truckloads per day of corrugated board packaging to our customers. To meet special customer requirements and just-in-time deliveries, we have our own fleet of 18 trucks - from semi-trailers with tractor units to trailer trucks and medium-duty trucks. In addition, we commission third party service providers who drive exclusively for us.

### Expansion of the E-Vehicle Fleet

Since 2019, we have also been increasingly using electric vehicles in our car fleet including the versatile forklifts in the halls. As of 2022, five purely electric cars and nine hybrid vehicles are in use. We will acquire additional electric and hybrid vehicles in 2023. With regard to the future, we have installed 12 charging stations for e-vehicles.

In areas where long distances or large loads have to be handled (loading, shipping), we still rely on trucks powered by diesel fuel. The trucks outside the halls are powered by gas. The reasons for this are the greater level of durability and the ranges. We are continuously examining which alternative types of vehicles will become established in the medium to long term and how we can change over accordingly.

In view of the growth in our truck fleet, we have optimized our dispatching and introduced the YellowFox

telematics system in 2019. With the help of the system, processes can be automated, occupancy planned, routes optimized and driving behavior improved. Driving style analysis and driver evaluation, which provide technical data such as braking behavior or fuel consumption, have the positive effect of reducing CO<sub>2</sub> emissions through lower fuel consumption. Part of our fleet is equipped with an active tire pressure monitoring system: It guarantees the optimal tire pressure in each case, prevents unnecessary tire wear (abrasion) and thus also helps to save fuel.

Permanent inventory monitoring via modern EDP ensures that the customer is informed quickly and immediately about stock levels. Our fully automated high-bay warehouse is 150 meters long, 60 meters wide and 36 meters high with a storage volume of more than 42,000 pallet spaces.

The motors of the stacker cranes feed energy back into the power supply of the stacker cranes using recuperation (conversion of braking heat into electricity). In addition, we have two more conventional warehouses with 2000 and 4000 storage spaces, as well as another 3000 square meters of block storage. Automated warehousing speeds up warehouse processing and saves on internal transport routes. Previously, we stored and retrieved finished goods using floor conveyors spread across the plant premises, but this intermediate step has been eliminated thanks to automated conveyor technology. This is accompanied by a significant reduction in the use of liquid propane gas and its emissions and improved traffic safety.

### Higher Efficiency through Workshop Coordination

For the repair, maintenance and servicing of our machinery and vehicle fleet, we operate our own workshop and have our own spare parts warehouse for common spare and wear parts. The number of employees (electronics technicians for industrial engineering, mechatronics engineers, industrial mechanics) increased to 47 employees in the reporting period. Maintenance is scheduled on a regular basis. During maintenance, repairs are also carried out and wear and spare parts are replaced at the optimum time. Preventive rather than reactive action saves resources and has a posi-





tive effect on the energy balance. In addition, reliable operation with less downtime is guaranteed.

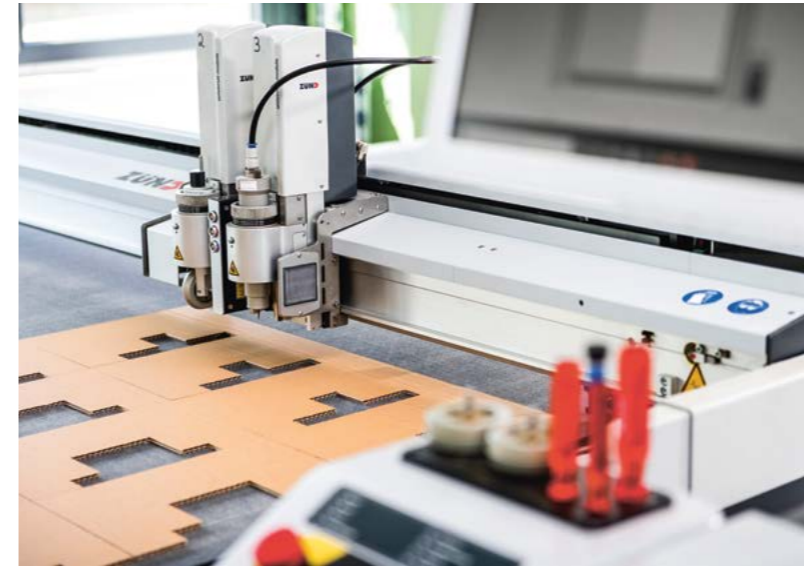
We use the "Retrofit" system to renew tried-and-tested machines and adapt the performance of our existing systems to the requirements in a targeted manner. Machine components that are obsolete or longer available on the market are replaced by new, technically up-to-date components. By doing so, we not only save costs and resources and avoid hazardous waste (compared to a new acquisition), but also stabilize and increase our productivity.

The compressed air supply for production is provided by several air compressors, which are managed energy-efficiently by a higher-level control system.

**In Exchange with Customers**

Customer requests for more sustainable and efficient packaging as well as special solutions are increasing. In 2022, there were a total of 1,500 inquiries. In our

new development center on Industriestrasse in Damme, which we moved into in March 2020 after a one-year construction period, we are working on future-oriented solutions for this demand. Four design engineers work there on innovations and new products, which we can also subsequently produce for our customers in small batches for our customers. Customer inquiries during the reporting period centered, for example, on the substitution of Styrofoam with corrugated board sheets for packaging (more environmentally friendly, less expensive, and easier to dispose of), the minimization of air shipment or bubble wrap (more space-saving, resource-saving), or the more environmentally friendly, less expensive, and easier disposal of corrugated board sheets. On the first floor, training and conference rooms, five design offices, two plotters for the production of samples and a warehouse for the raw sheets are available for the realization of ideas and the warehouse for the raw sheets.







## More Independent, Efficient, Energy-saving

Interview with Robert Zerhusen (Engineer/Corrugator)

**Robert, in 2019 Zerhusen Kartonagen has gained another 3rd generation family member in addition to your sister Linda Stärk. What does it mean for you to take over the company that your grandfather, Günter, founded into the future?**

**Robert Zerhusen:** My sister and I were always free to choose our ca-

reer path. At that time, I completed my training at a corrugated board plant in Bavaria. It was important for me not to learn in my parents' company as "the boss's son". Now it is a great honor for me to also be part of the team.

Our company is family-run. We maintain short decision-making paths and consult closely on major

investments. This is one of our great strengths. I am particularly proud that my grandfather Günter, who is 94 years old, is still very fit and active. In addition to performance, I attach great importance to a good working atmosphere. Our colleagues are the heart of the company.

**With the commissioning of the second corrugator in 2022, Zerhusen Kartonagen has taken the next big step into the future. How has production started and what advantages does the second corrugator bring?**

**Robert Zerhusen:** The production of the second corrugator "vicky" started without any serious problems. Already on the fourth production day, we were able to produce 145,000 running meters. Our current record is 196,299 linear meters (corrugator 1: 170,000 linear meters).

Now the machine must continue to be optimized and fine-tuned in order to exploit its full potential. Thanks to the second corrugator, we can greatly relieve our first corrugator "Viktoria" in the single flute area and generate new capacities in the double flute area. Furthermore, the dry end is geared towards heavy-duty corrugated board or the production of triple wall formats. This means that it would theoretically be possible to produce heavy double or triple flutes in the future. All this makes us independent of suppliers in the production of corrugated board, saves freight kilometers and thus CO<sub>2</sub>.

**Your company has already been focusing on sustainability aspects in all business areas for many years. What other levers do you have in technology and the corrugator to ensure that the company's overriding sustainability and CO<sub>2</sub> reduction goals are met?**

**Robert Zerhusen:** Our corrugators are the most modern, efficient, and powerful on the market. Our machines are continuously maintained and serviced, ensuring maximum performance and high reliability. Both plants are supplied with steam for production from the same boiler. Previously, the boiler supplied our first corrugator with 12.5 bar steam pressure. Today, we supply two corrugators with 14 bars. In addition, the boiler does not have to be fired up every day because our first plant produces in three shifts. So, we have significantly increased efficiency in energy use. The amount of steam generated depends on the grades of corrugated board that we produce.

Our goal now is to ramp up the new corrugator, which is currently running on one shift, to two shifts, and in the future to three shifts, to take full advantage of its efficiency and performance. For this we need the planned capacities and converting machines in Damme and in Niedersachsenpark.



**Robert Zerhusen**

**Head of Corrugator since 2019**

**Apprenticeship as Paper Technician**

**Further education as Paper Technician and Quality Manager**





# Social

Respectful, Cooperative, Caring





# A strong, Family Oriented Team

2-19: Remuneration policies | 2-20: Process to determine remuneration | 3-3: Management of material topics | 401-1: New employee hires and employee turnover | 401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees | 401-3: Parental leave | 403: Occupational Health and Safety | 403-1: Occupational health and safety management system, 403-2: Hazard identification, risk assessment, and incident investigation, 403-3: Occupational health services, 403-4: Worker participation, consultation, and communication on occupational health and safety, 403-5: Worker training on occupational health and safety, 403-6: Promotion of worker health 403-7: 403-9: Work-related injuries, 403-10: Work-related ill health | 405: Diversity and Equal Opportunity | 408: Child Labor

We can't do it without them: Our employees. They are characterized by their dedicated commitment, their qualified know-how and their loyalty. Many of them have remained with us for several years and have often and not infrequently developed into managers. Involving employees in the company's development and offering them a good, safe, and fair working environment is very important to us. We also encourage and challenge them through training, development, and continuing education measures. In view of the shortage of skilled workers in recent years, recruiting has taken on a central role for us in recent years.

We have an open-door mentality - right up to management level. We take employees' personal concerns just as seriously as their opinions and feedback on our business activities. This helps us to optimize processes and to work successfully on innovations and improvements.

We are a rapidly growing company. This can also be seen in the number of employees (as of December 2022). It has increased from 457 (June 2019) to 671 (2022) in the past three years. We employ 507 men and 164 women (share: 24%), including 549 fulltime employees, 45 part-time employees, 41 part-time work-

ers (mini-jobbers, students, and pupils), 36 trainees (5.04%) and five temporary employees. Three women hold senior management positions. This corresponds to a share of 23.1 percent.

## Integration and Inclusion

Our goal is to provide all employees with optimal working conditions. The topics of integration and inclusion also play a major role in this. 23 people with disabilities work for us. This corresponds to 3.4 percent and is eight more than in 2019. Under Section 154 of the German Social Code IX, public and private employers are obliged to fill at least five percent of their jobs with people with disabilities. To achieve this legal requirement, we also award work and contracts to severely disabled workshops such as Andreaswerk in Vechta. In the future, we want to include a sign language interpreter at meetings or lectures so that our deaf-mute employees can also participate properly.

The share of employees with an immigrant background has increased by 4.6% since 2018 and was 12.9% in 2022. In 2022, we integrated six people from Ukraine into our company. The turnover rate more than doubled in 2022 compared to 2019 (from 3.68% to 8.66%). One reason for this is the increasingly difficult situation on the labor market. Finding the right people for the jobs and

then also keeping them and then retaining them is one of the challenges of the next few years.

Due to the strong growth of our company, we made numerous new hires in the reporting period. This has influenced the length of service: currently, around 25 percent of our employees have been with us for more than ten years. In 2018, this figure was still more than 40 percent. 64 employees will have been with us for more than 20 years in 2022 (2018: 60 employees). The average age, on the other hand, is 38 years younger than in the 2018 reporting year (39.9 years of age).

## No Child Labor

We do not tolerate child labor - neither in our own company nor at our suppliers. The right to a healthy and happy childhood is particularly valued at our company and is backed up by a broad, corporate commitment. When hiring young employees, we comply with the occupational health and safety laws in force in Germany, and with the Youth Employment Protection Act.

If we have reasonable suspicion that a supplier is using children or young people under the age of 16 for operational work, we reserve the right to investigate the suspicion as part of an unannounced supplier audit. If we discover a violation of our principles, we reserve the right to terminate the supplier relationship immediately without compensation. The supplier will only be considered again if they can credibly prove to us that they do not employ children or young people under the age of 16 for operational work. Such a case has not occurred to date.

## Equal Opportunity and Tolerance

In our Code of Ethics and Conduct, we have stipulated that all employees at Zerhusen Kartonagen have the same opportunities. We apply the same standards in selection procedures with regard to employment and compensation for all (principle of equality). With the appropriate qualifications and motivation, everyone has the opportunity to further their education or to take on more demanding tasks.

We respect the dignity of every human being and reject any form of disadvantage or discrimination - whether it concerns ancestry, skin color, religion, gender, nationality, disability, age, language, sexual or political orientation. The same applies to any form of physical or psychological harassment or violence.

If an employee feels that he or she has been discriminated against, harassed, or abused, the incident may be reported to his or her immediate supervisor or to Human Resources. If an employee has been knowingly discriminated against, harassed, or abused, there will be consequences under labor law: A one-time incident is punished with a warning, a repeated occurrence is followed by termination. This aspect is also set out in the Code of Ethics. In the period under review, we did not identify any cases of discrimination.



### Corporate Benefits

Regarding the compensation of our employees, who are divided into different wage groups, we work with a company wage and salary index. This is strongly oriented to the collectively agreed wage. Our aim is to establish transparency in terms of earnings through a defined (grid) income system including a procedure for salary increases (affiliation, qualifications, assignments, etc.) and to use this from fiscal year 2025.

We value gender-equitable pay. The following applies: Equal pay for equal work. To date, we have not had a labor union to help shape legal, collective or company regulations.

The granting of various social benefits, the compatibility of family and career (parental leave, increasingly also taken by men), the topics of welfare and pension provision are a matter of priority for us as a family business.

### We offer our employees various social benefits:

- Christmas and vacation bonus (the same for everyone)
- Contribution to capital-forming benefits
- Annual vacation with continued pay
- Travel allowance
- Group accident insurance
- Direct insurance with allowance
- Subsidy for daycare and kindergarten fees
- Flexible adjustment of working hours: E.g., reduction of working hours or flexible
- Vacation planning in the event of parental or caregiving leave
- Compensation for overtime (can also be "compensated" as pool hours)
- Bonus for overtime: 100€ allowance for
- Voluntary work on weekends
- Possible time off in the scope of voluntary work
- Gratuities on birthdays, wedding, and for service anniversaries, etc.







## Occupational Health and Safety

The safety and health of our employees are of paramount importance to us and make an important contribution to the success of the company. This aspect is therefore of equal importance to our other corporate objectives and is set out in our "Guidelines on occupational safety, health protection and environmental protection". To optimize this, we are currently developing a new occupational safety program that will be completed by mid-2023.

We have an occupational safety team that ensures that the requirements are met, and that hazards and sources of danger are identified, reported, and eliminated. Operating instructions about occupational safety are posted in the company in German with easy-to-understand pictograms.

We have specifically entrusted Ulrich Wegmann, a specialist in the company, with the topic of occupational safety. He is in close contact with the management and regularly informs the workforce about dangers and developments in this area, for example in the employee magazine, or provides helpful tips. He meets regularly with the occupational safety committee, the company physician, and the safety officer. Our aim is to push this issue further. In 2023, for example, we will introduce a new external occupational safety specialist to restructure the area. Christian Lahrmann will further support Ulrich Wegmann as a new colleague.

We also receive external support concerning occupational health and safety from the Siewe company medical practice. It carries out all examinations and

consultations within the framework of occupational health care (compulsory, offered and requested preventive medical checkups, suitability examinations) and advises on all questions of occupational health and safety. Checklists and risk assessments are drawn up to ensure compliance with statutory legal requirements are met.

The hazard analysis we perform for each workspace increases the occupational safety and health protection of our employees. We check and improve effectiveness through regular safety rounds and internal and external audits. In addition, we have training plans: Every employee is instructed in occupational safety, the handling of hazardous substances and hygiene measures. Employees are also required to report hazards and potential hazards so that they can be assessed and eliminated if necessary. We thoroughly record and investigate accidents or serious incidents so that appropriate measures can be taken to prevent a recurrence. The safety standards also apply to employees of external companies on the company premises.

## Occupational Health and Safety

In the reporting period, we took the following measures, among others, to improve occupational health and safety:

- Installation of lifting tables behind the Powerpacker-machine for more back-friendly work
- Installation of soundproof booths in the area of the corrugator to reduce noise
- Training day and a wide range of fire protection
- Conversion of the former smoking rooms into First aid rooms incl. couch, emergency response kits, first aid), Communication to MHD and fire department
- Installation of a vending machine for issuing work equipment (gloves, knives, etc.) at the social wing "Production" via the chip, employees can receive the desired work equipment
- Corona safety measures

To increase the well-being, fitness and motivation of our employees and thus positively influence the health status quota, we offer the following services and programs:



- Cooperation with the "Fachkliniken St. Marien - St. Vitus GmbH" for long-term health care and fast re-integration after overcoming a mental or physical illness
- Offer for flu vaccination and corona vaccination and first aid training

lease  
a bike

- Cooperation with a lease-a-bike dealer

E G Y M  
WELLPASS

- Framework agreement with the company "eGym Wellpass GmbH": Use of the Injoy fitness studios on site for a monthly fee of 20 €
- Participation in the city run of the OSC Damme (company team) as well as in the cycling projects "STADTRADELN" (Damme) and "By bike to work" (AOK)
- Company soccer and volleyball team, Company music band
- Free use of water dispensers
- Monthly supply of fresh organic fruit in all departments



ÖFFENTLICHE BÜCHEREI  
ST. VIKTOR

- Free of charge borrowing for employee families in the St. Viktor public library in Damme



### Implementation of a CHM

We have started to establish a company health management system (CHM) in 2022 to bundle and further expand our voluntary services for workplace health promotion that go beyond the legal requirements. To this end, we will establish a steering committee in 2023 to evaluate and implement existing and new measures. The focus will be on

diseases such as diabetes mellitus, cardiovascular and musculoskeletal disorders, and mental illnesses and disorders. They currently account for a large proportion of the periods of incapacity for work in our company. To include employees in this topic, we will send out a questionnaire and ask about possible other key issues.

### Corona Safety Measures



At the start of the Corona pandemic, we set up a crisis team with representatives from every department of the company. We sent out regulations and measures that had been decided on using a mail distribution list, posted them on the information boards, and hung them in the entrances. There were maximum occupancy figures for the recreation rooms. Managing Director Roland Zerhusen regularly wrote letters to the workforce to keep them up to date. The following measures were among the standard:

- Distance and hygiene rules
- Mandatory use of masks
- Home office if required and possible
- Reduction of people in parking lots and in the changing rooms
- Supply of rapid tests and masks
- PCR test station on the company premises
- Vaccination services provided by the company physician
- Step-by-step withdrawal of these measures, depending on the requirements of the IfSG

### Injuries and Days of Absence Due to Illness

Despite all preventive measures, workplace accidents, injuries, or days of absence due to illness cannot always be avoided. We are striving to further reduce the figures:

	2019	2020	2021	2022
<b>Total accidents</b>	96	83	126	100
<b>Accidents at work</b> <i>(with at least 1 absent day)</i>	45	37	58	44
<b>Commuting accidents</b>	2	2	2	0
<b>Days lost due to accidents at work</b>	369	398	435	347
<b>Health rate</b>	92.75 %	94.14 %	92.89 %	91.72 %
<b>Average sick days per employee</b>	3.844	4.795	3.452	3.47
<b>Work-related fatalities</b>	0	0	0	0

### Occupations at Zerhusen Kartonagen (all f/m/d)



#### Production:

- Production assistant
- Machine operator
- Packaging technician



#### Maintenance:

- Industrial electrician (Electronics technician for operating technology)
- Factory mechanic (industrial mechanic)
- Mechatronics Technician (Mechatroniker)
- Automotive mechatronics technician
- Occupational safety specialist



#### Logistics:

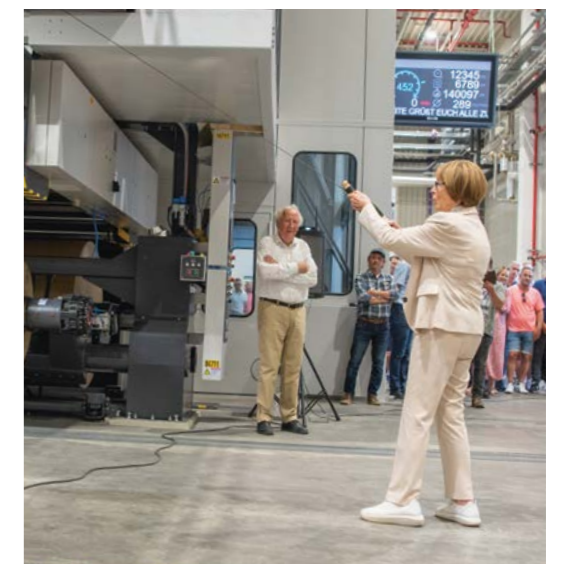
- Forklift driver
- Truck driver
- Warehouse logistics specialist
- Dispatcher



#### Administration:

- Sales representative
- Financial accountant/tax assistant
- Accountant
- Human resources specialist
- Media designer
- IT specialist







# Attractive Employer in the Region

3-3: Management of material topics | 404-2: Programs for upgrading employee skills and transition assistance programs

To remain an attractive employer in the region even in times of a shortage of skilled workers, we have been investing for many years in recruiting new employees and in the training and further education of our employees. Their professional skills and the personal relationships with our customers, partners and suppliers are of great importance to us. Our aim is to train our own expertise and retain qualified employees in the long term.

We conduct ongoing training in all areas of work on an annual basis. In 2020, we introduced the SAM instruction and training portal. This intuitive software system enables us to flexibly conduct and communicate in-house training and instruction (e.g., hygiene training, occupational safety instructions, machine instructions, training on the German Data Protection Ordinance) online. In view of the continuously increasing number of employees and shift operations, the system is helpful and useful for us.

## Recruiting

To recruit new employees and trainees, we rely not only on traditional job advertisements but also on meetings with young people: Through cooperation with schools, at cross-county job and training fairs, company tours or even by organizing open house days and internships.

Since 2018, we have also been making intensive use of social media (Instagram, Facebook, XING, LinkedIn) for this purpose. The introduction of an "employees

recruit employees" program is being considered. Employees who recruit new employees could receive a bonus if they are successful. We intend to expand the area of (HR) marketing even further in the future. This is one of the reasons why we have recruited Carina Wiese as our first marketing manager in 2022.

## Apprenticeship

In 2020, we were the first company in Damme to be certified with the "TOP Training" quality seal of the IHK (Oldenburgische Industrie- und Handelskammer). It recognizes companies that provide high-quality training. During the reporting period, we reorganized and restructured our training processes. Greta Fiswick has headed the training team since 2022 and accompanies and supports the trainees in theory and practice.

Our company currently has 36 trainees in the following occupations: industrial clerk, mechatronics, electronics for operating technology, machine and plant management, packaging technology, and a Bachelor of Arts degree program. This corresponds to a training ratio of 5.4 percent. This means that we did not achieve our 2018 target of increasing the ratio of trainees to the total workforce by 8-10%. This is due to the fact that the number of applicants has fallen sharply. At the same time, the number of employees has increased significantly.

In the summer of 2024, we aim to achieve an apprenticeship rate of 6%: 45 apprentices will then be taken

on. To achieve this goal, we will further expand our activities in areas such as school partnerships, company visits, internships, and social media.

## Advanced Training and Continuing Education

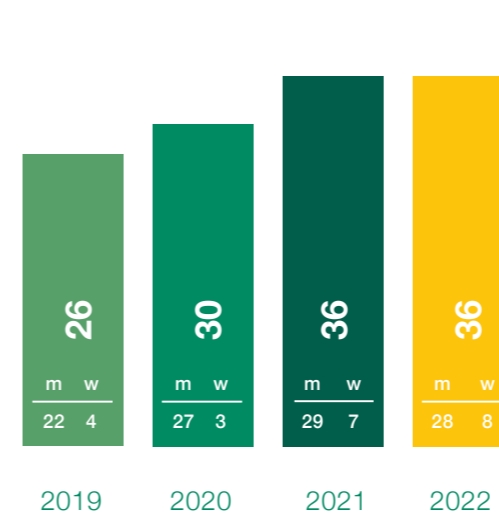
We want to retain our employees in the long term, while offering them opportunities to develop individually and systematically. This also enables us to hire more of our managers from within our own ranks. An appropriate training course is held annually in cooperation with GIMA (Gesellschaft für innovatives Management mbH). It comprises four to five training days. In the period 2020 to 2022, we have trained a total of 33 people as managers. This promotes co-determination, short communication channels and flat hierarchies. In addition, we distribute responsibility in our company on several pillars.

Through the annual discussions between employees and managers or the Executive Board, we assess past

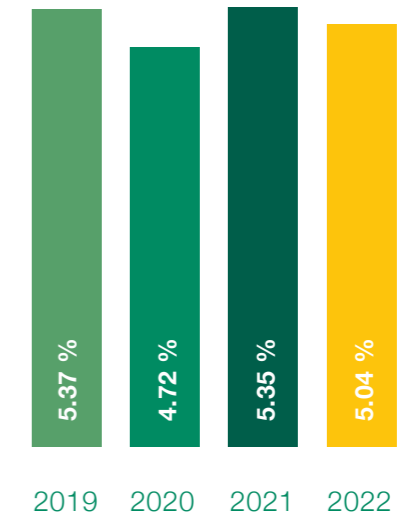
performance, agree on new target agreements, and talk together about potential for development.

With the expansion of our customer base during the reporting period, we are now increasingly dealing with international partners. Mastering the English language is essential in communicating with them, but also with international machine manufacturers or maintenance staff. We therefore train employees primarily from administration, but also from production, in "Business English" on a weekly basis and have hired a full-time English teacher for this purpose in 2022. Through the "Coffee Klatsch" format and the "Business English" seminar, we also offer all other employees the opportunity to brush up or improve their English skills together with the English teacher and others. For the future, we are planning to integrate the English lessons into the online training portal VISEM.

## Number of Apprentices



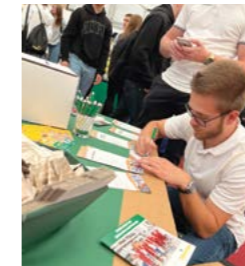
## Quota of Apprentices of the Total Workforce



Apprenticeship











# Appreciation and Intensive Guidance

Interview with Greta Fiswick (Director of Education)

**Greta, you became the director of education at Zerhusen Kartonagen in 2022. What is special for you about being involved in this field?**

**Greta Fiswick:** I enjoy working with young people. It is important to me to help shape their future, develop personally and professionally, and enjoy a sound education so that they can get off to a good start in their working lives. I want to introduce variety into their phase of training, so they feel comfortable and welcome.

**What makes Zerhusen stand out in particular when it comes to training and continuing education?**

**Greta Fiswick:** The intensive trainee induction days are certainly worth mentioning, but also the appreciation shown by the Zerhusen family as well as the intensive support provided by a training manager.

**Over the past three years, Zerhusen has set out to further**

**increase the number of trainees and the turnover rate, to establish a new training program, and to push forward the topics of advanced training and continuing education. Has it been successful?**

**Greta Fiswick:** Compared to 2021, one additional trainee was hired in each occupation because the need and capacity were or are there. Junior staff are the managers of tomorrow. Thus, it makes sense to hire someone from our

own ranks, as we build know-how from within. Since 2022, we have been offering machine training courses for employees, which are also aimed in particular at trainees. We will expand this internal training program even further in the coming years. We also offer further training in the areas of "technical technicians/master craftsmen" in various specialist areas, "financial accountant/balance sheet accountant", "human resources specialist", "commercial specialist" as well as in other courses of study and specialist areas if there is a need within the company.

**Young people are increasingly focusing on the issue of sustainability when looking for a job - and with it the question of how a company is positioned in this respect. Have you already noticed this kind of expectation?**

**Greta Fiswick:** The idea of sustainability and the awareness of it are becoming more and more important. Occasionally, questions about the implementation of this concept have already arisen at trade fairs or during visits to schools, but at the moment, the focus is still on the prospects we offer our trainees.

**Are there any other current challenges beyond this? What additional goals are being pursued for the area of education and training, and what measures are being taken?**

**Greta Fiswick:** Recruiting is currently a major challenge for us, i.e. reaching out to students in schools and at trade shows and getting them interested in our company. We hope to receive new applications as a result. Competition among companies is very fierce, and there are many different training opportunities - this is where we have to position ourselves. But also, the workload is an issue. Sick days are increasing, and the changeover to a 40-hour week has to be mastered. We want to provide trainees with the best possible support.



**Greta Fiswick**

**Director of Education**

**Apprenticeship as Industrial Clerk**

**Further qualification as a Human Resources Specialist**

# New Paths Together

301-1: Materials used by weight or volume | 301-2: Energy consumption outside of the organization | 414: Supplier Social Assessment | 414-1: | 414-2: Negative social impacts in the supply chain and actions taken | 416: Customer Health and Safety | 417: Marketing and Labeling | 417-2: Incidents of non-compliance concerning product and service information and labeling | 417-3: Incidents of non-compliance concerning marketing communications | 418: Customer Privacy | 418-1: Substantiated complaints concerning breaches of customer

When procuring and purchasing auxiliary materials, operating materials and equipment, and raw materials (see list), we rely on long-standing, reliable and, when possible, regional supplier relationships.

With the establishment of a new purchasing department being led by Barbara Niemann in 2022, we changed the ordering process from a decentralized to a centralized procedure. Since then, all changes have been developed and implemented together with the departments. The required materials are collected and ordered in a bundle. This ensures more transparency and promotes potential savings. This is already resulting in a lower number of orders and deliveries, and thus also in fewer transport and greenhouse gas emissions.

The objective of central purchasing is also to create an efficient structure for consolidating efforts and to streamline workflows through standardized processes. In this way, the strategic and operational alignment can be adapted to the company's development in the long term. Our business partners and suppliers come almost exclusively from Germany and the European Union. For example, we obtain paper for corrugated board production (wastepaper-based corrugating medium, Kraftliner and kraft test liner) from a total of 13 suppliers, 70% of the quantity from a radius of less than 300 kilometers. We have been working with many of them for decades. We have grown together.

**Auxiliary materials:** (Materials that become part of the product during production):

Inks, glue, and starch

**Operating materials:** (Materials that are consumed for production without becoming part of the product):

Energy sources, lubricants, films, adhesive tapes, packaging, cleaning agents or office supplies

**Operating equipment:** (Production factors): Land, buildings, operating and office equipment (including IT), machinery, plant, transport and floor conveyor vehicles, halls, storage and conveyor technology, die-cutting tools, or printing plates

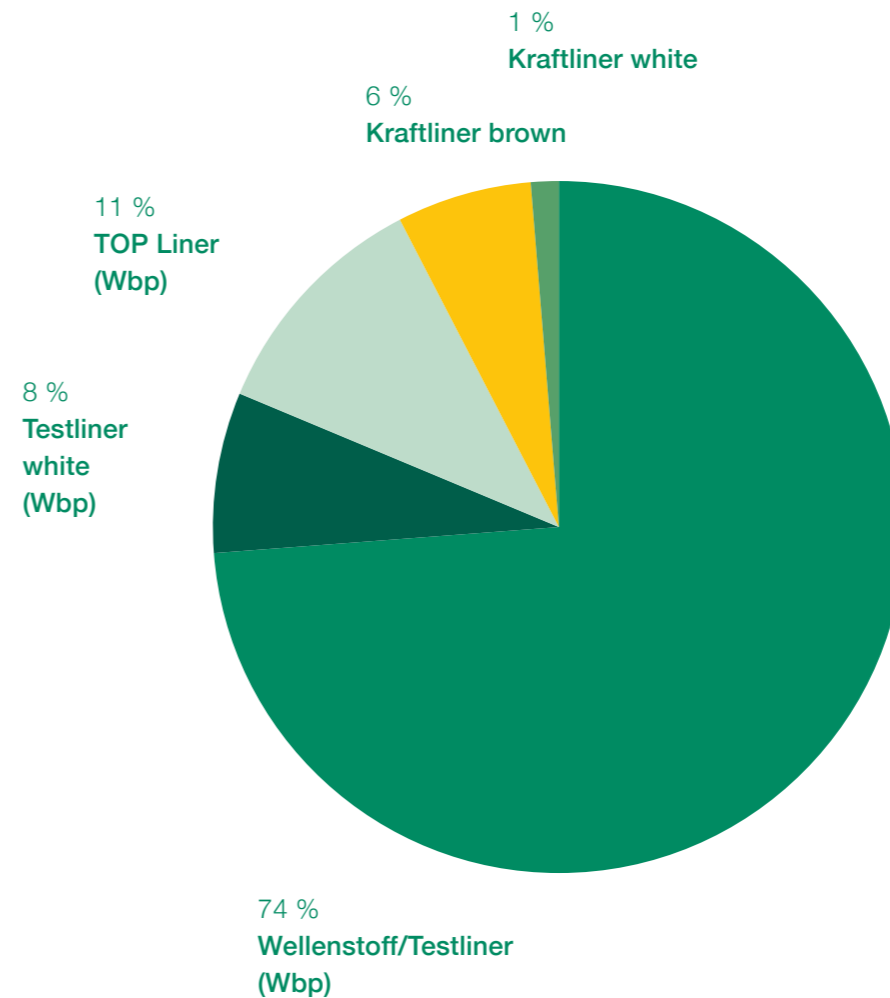
**Raw Materials:** (Unprocessed basic materials obtained from nature by primary production, which our suppliers supply for industrial processing): Corrugated base papers consisting of primary and secondary raw materials

## Supplier Management

86% of suppliers of recycled paper-based papers are based in Germany. We source 7% from France in order to maintain a link to the international market. In addition, the very light papers in particular are not yet produced in Germany to a sufficient extent.

As part of our management system, we ensure that the paper is FSC® and REACH certified and does not come from controversial sources. The purchase of exotic wood, for example, is excluded from these certificates. The complaint rate is very low at 0.03%. We have two to four suppliers for each paper grade in order to be independent and to be able to act flexibly in the event of supply bottlenecks.

## Share of paper varieties processed in 2022



Therefore,  
**92,4 %**  
of the paper used are produced  
on a recycled paper basis  
Compared to VDW: 83 %

As of 2021





We hold annual supplier meetings, carry out internal assessments and visit our partners on site. In the course of this, we also work together on sustainable solutions. For example, in 2022 we conducted a film test on our strapping (use: automatic stretch film for shipping pallets) with a supplier. The result: the amount of film used can be reduced by 50% without impairing the functionality of the packaging.

As requirements within the industry increase in terms of ecological criteria, environmental standards, quality, norms and supply chains, sustainable aspects play an increasingly important role in our relationships. We check whether there are alternatives before purchasing the required materials. We use inquiries to determine whether suppliers also have sustainable products in their range. For example, one supplier has developed an ecological version of a tear thread. Our development department is currently examining a possible use.

### Supplier Code of Conduct as Guideline

Our Supplier Code of Conduct is used as a guideline and as an assistance not only for us and our employees but also for our partners. The Code of Conduct is a minimum standard in addition to applicable national laws. Thus, we want to continuously improve our production environment and working conditions from a moral, ecological, and social point of view.

We expect our suppliers to act in accordance with our business relationship with a high degree of commitment and practice under our Code of Ethical Conduct.

This applies to these individual aspects:

- Behavior toward employees (team spirit, constructive cooperation, equal opportunities and anti-discrimination, occupational safety, health protection and working conditions, avoidance of conflicts of interest and prohibition of child labor)
- Actions towards the environment and future generations
- Conduct in the business environment (free and fair competition, refraining from gifts & donations, prevention of corruption, product safety, data protection, and supplier relationship)

Suppliers are obligated to make the necessary efforts to comply with the sustainability performance, principles and values described.

Access to the production sites and all relevant documentation must be granted to monitor compliance with the codes of conduct. Checks may be carried out at any time and without prior notice. In the event of non-compliance and if the supplier does not take immediate action, the business relationship may be terminated at any time and without financial disadvantages.

### The Supply Chain Act at a Glance

We did not register any violations of the Code of Conduct in the reporting period, nor was there any supplier relationship which had been terminated in this regard. In principle, we consider the risk of a systematic violation of labor rights in our supply chain as very low, as our business partners and suppliers operate almost exclusively in Germany and the European Union. We are not aware of any negative social impacts in the supply chain.

With a focus on the Supply Chain Act, which comes into effect on January 1, 2023, we will, in the future, monitor our supply chains even more closely to ensure compliance with environmental and social standards. The goal is to obtain a better assessment of procurement processes regarding resilient supply chains, environment, and sustainability. In the course of this, we are also planning supplier surveys, for example on the carbon footprint of the individual precursors.

As digitization in the company progresses, more efficient supplier management and the implementation of risk management in purchasing will be possible after implementation of the new ERP system in 2024. The management of procurement processes will thus be increasingly optimized and geared towards sustainability.

### Customer Health and Safety

With our guidelines on work safety, hygiene, health protection and environmental protection, we commit ourselves to the greatest possible care and concern for people and the environment.

Within our FSC®-COC system, we ensure that the FSC® products we process and traded FSC® products do not originate from controversial sources.

We are not aware of any violations in connection with the effects of products and services on health and safety.

Through our Basic Data Protection Regulation, we are committed to the confidential treatment of personal data and the fulfillment of legal requirements. Working with an external data protection officer, we have developed a team in our company to deal with these matters and report to the management. There were no complaints of data privacy violations in the reporting period.







# Ecology

Preserve Resources, Recycle, Climate Protection



# Our Path to Climate Protection

3-3: Management of material topics | 301: Materials | 301-3: Reclaimed products and their packaging materials | 302: Energy | 302-1: Energy consumption within the organization | 302-2: Energy consumption outside of the organization | 302-3: Energy intensity | 302-4: Reduction of energy consumption | 302-5: Reductions in energy requirements of products and services | 303-1: Disclosure 303-1 Interactions with water as a shared resource | 303-3: Water withdrawal | 303-4: Water discharge | 303-5: Water consumption | 304: Biodiversity | 304-1: Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | 304-2: Significant impacts of activities, products and services on biodiversity | 304-3: Habitats protected or restored | 305: Emissions | 305-1: Direct (Scope 1) GHG emissions | 305-2: Energy indirect (Scope 2) GHG emissions | 305-4: GHG emissions intensity | 305-5: Reduction of GHG emissions | 307: Environmental compliance | 307-1: Failure to comply with environmental protection laws and regulations | 308: Supplier Environmental Assessment | 308-1: New suppliers that were screened using environmental criteria | 308-2: Negative environmental impacts in the supply chain and actions taken

A responsible approach to our environment and the natural resources of our planet: For us as a family business, as well as in view of the special location of our company in the Dümmer Nature Park, this has been an important concern and an integral part of our corporate philosophy from the very beginning. At the same time, the topic of ecology remains a priority for us as a rapidly growing, manufacturing and energy-intensive company in the corrugated board industry.

The reduction of emissions, for example through the use of renewable energies, the reduction of resource consumption, the optimization of our production processes, and research into innovative, sustainable and resource-saving product solutions together with our partners are important goals and milestones of our sustainability strategy.

The packaging material corrugated board has a low CO<sub>2</sub> footprint. As a recyclable packaging material, it promotes the circular economy. And thanks to its high use of recycled materials, it helps to reduce the impact on the environment that is harmful to the climate. Nev-

ertheless, our energy-intensive production and processing of corrugated board, as well as logistics and transport, also have an impact on the environment: We generate greenhouse gas emissions, produce waste, and consume energy and water.

To protect the environment, we measure our emissions and strive to further minimize them. The Executive Board, as "top management", is responsible for implementing our environmental and energy policy. It provides personnel and financial resources and ensures the permanent implementation and further development. On the way to better sustainability, we are guided by an energy management system introduced in 2018 and is continuously expanding in accordance with the DIN EN ISO 50001 standard. Since 2020, responsibility has been in the hands of Heinrich Kruthaup. The energy management system helps us to better record energy flows in the company and to evaluate the energy efficiency of machinery, equipment, vehicles, and buildings.

The results are shared with an energy team set up specifically for this purpose in 2019, which uses these results to derive measures for improvement, such as the annual energy awareness training for all employees.

With consideration to an intended certification of an environmental management system according to ISO 14001, Zerhusen Kartonagen GmbH 2022 has developed an independent environmental policy. Based on this, we want to define our environmental policy objectives. It is flanked by the internal code of conduct for employees and the energy policy, which was also adapted in 2022.

Since the publication of our first sustainability report in 2019, the following developments have taken place in the area of ecology the following developments have taken place:

## Materials

We want to handle the resources we use responsibly. The economical use of raw materials, operating materials and auxiliary materials is therefore a task that is not only subject to economic constraints but should also help us to use materials more efficiently.

The most important raw material for our business activities is paper. Together with our customers, we continuously examine whether the use of materials in packaging can be further reduced. This can be achieved by changing the design or using lighter paper in some cases. However, there are limits to the amount of paper that can be saved: Due to the mechanical stresses in production, the lower limit for grammage is currently around 80 g/m<sup>2</sup>.

Not only the quantity of corrugated base paper we use is crucial for sustainability, but also the origin of the paper. We do not purchase any paper that has been produced from illegal logging or originates from exotic timber. We provide proof of this within the framework of certification in accordance with the Forest Stewardship Council (FSC-STD-40-004).



## FSC® Recertification 2022

The FSC® recertification took place in May 2022. We have been FSC® certified since the first audit in June 2015. After the mandatory annual follow-up audits, the more extensive recertification was due. Maria Hintze, Head of FSC® Management, and Michael Harpenau, Head of Sales, accompanied the auditor during his review. We received a new FSC® certificate with a validity of five years. FSC® is the abbreviation for "Forest Stewardship Council®" and expresses the sustainability of the product. The aim of FSC® certification is to promote environmentally friendly, socially beneficial, and economically viable management of forests. Transparency and credibility should be reflected throughout the value chain of a product, which is ensured by the Chain of Custody Certification (COC). This means that anyone wishing to produce, process or sell FSC® certified goods must guarantee sustainable forest management. Overall, there is an increasing demand from our customers for FSC®-certified material, which means that FSC® management is becoming more and more important and will continue to be of great significance to us in the future.



Das Zeichen für verantwortungsvolle  
Waldwirtschaft



We produce corrugated board from paper and then process it into cardboard boxes. We collect the excess part of the corrugated board or other paper and cardboard scraps resulting from trimmings and give them to the paper supplier as compact bales on the way from the factory to the customer's site, thus returning them to the production cycle. These remnants are used in the paper mill to produce new corrugated base paper, among other things.

We print our cardboard boxes according to our customers' requirements. With our largest machine, the Bobst DRO 1628 NT RS rotary die cutter, we can print sheets up to 2.8 m wide with up to six colors in a single pass. All the water-based inks we use are solvent-free and biodegradable. They do not contain toxic heavy metals or other toxic ingredients. Proof is provided by factory test certificates submitted by the supplier.

We glue folding boxes with solvent-free dispersion glue. It contains other things such as water, non-hazardous polyvinyl acetate and small traces of formaldehyde in the amount of untreated wood. The adhesive bond is formed by evaporation. What remains are the solid particles that form the durable adhesive film. The dispersion adhesives used by us are fully biodegradable.

The pallets are covered with corrugated cardboard for protection before the strapping machine firmly straps the cardboard boxes to the transport pallet. The strapping used is made of a plastic, mostly PET, which we generate as waste in partial quantities. We return this waste via collection containers to the supplier, who reprocesses it into new granulate. For the cover, underlays and liners, we use only sheets manufactured in-house, usually from scrap or surplus production in manufacturing and processing.

### Example: Strapping Foil

After strapping and before shipping of the goods our cardboard boxes are partly wrapped in foil.

This foil protects the goods from damage and provides transport and storage stability. In the past multiple layers of foil were used for this. Our colleagues in the packaging department around Torsten Dietz considered ways to reduce the amount of material used. So, we encountered a new supplier from the region of Stuttgart. This company offers very elastic foil which can be wrapped around the goods with stronger tension, allowing a reduction of the wrapping layers. In addition, the new foil is thinner due to its increased stretch limit, which is leading to extra material savings. This means we save approx. 60% of the foil without losing any stability or protection.



## Energy

The production of corrugated board and cardboard packaging is energy-intensive, our energy consumption increases with the company's growth from year to year and is expected to continue to rise despite our efficiency.

Our increased overall consumption from 2021 onwards is associated with the expansion of our production, in particular with the commissioning of production hall 11. In addition, the increased utilization of the "Victoria" corrugator compared to 2020 brought an increase in natural gas. The same applies to the start-up of our second corrugator "Vicky" in the summer of 2022, which led to a noticeable increase in gas consumption at the plant. Fuel consumption extends across all company vehicles.

The energy source, natural gas, is used in the corrugated board plant to generate industrial heat. It is used to bring the base paper up to temperature and into shape. The building itself is not heated. With the increased annual utilization rate of both plants, gas consumption grew significantly, especially from 2021 onward. We used the electricity for motors and lighting.

Electricity is used to produce corrugated board and transport the material. We use natural gas to heat the production halls. The changing demand naturally depends on the fluctuating outside temperatures. We supply the automatic warehouse technology with electrical energy. Here, electricity consumption depends, among other things, on the number of storage and retrieval operations in the high-bay warehouse (HRL). The increase in electricity consumption from 2021 can be explained by the commissioning of the second high-bay warehouse and the resulting increase in movements of aisle-bound storage and retrieval units. As a result of the further automation of warehousing, the number of forklift journeys decreased, with a corresponding drop in the consumption of LPG.

We ship our products with our own truck fleet. A year-on-year comparison shows that despite increasing output volumes, our fuel consumption for trucks remained virtually constant. The reasons for this are, on the one hand, the decision to rely on fuel-efficient vehicle models when replacing trucks, a fleet management system introduced in November 2019, and, in cooperation with customers, an optimization of loading. To enable a better comparison of the absolute consumption volumes, we set them for each energy source in relation to the quantity of corrugated board used and thus obtain the specific energy consumption as a key figure in Watts/m<sup>2</sup>.





To reduce overall energy consumption at the same rate as our company grows, we see it as our task to continuously reduce energy consumption across all energy sources and to further improve energy efficiency. To accomplish this, Zerhusen Kartonagen GmbH introduced an energy management system (EnMS) in accordance with the international standard ISO 50001 in 2018 and appointed Heinrich Kruthaup as a full-time officer in 2020 (see interview). In his role as a certified energy management officer, Heinrich Kruthaup monitors and tracks the energy flows in the company and continuously evaluates their energy efficiency. Their continuous improvement is a key standard requirement in this regard.

During a 2022 workshop, employees of Zerhusen Kartonagen GmbH addressed the topics of energy and emissions, across all areas. and developed five key sustainability targets.

1. Reduce specific electricity consumption
2. Reduce specific gas consumption
3. Increase the proportion of self-generated electricity
4. Reduce the amount of corrugated board by-products produced from corrugated board
5. Minimize the amount of unusable edge trim in corrugated board Production

Approaches to improvement for the near future include coordinated load, shutdown, and leakage management as well as plant and process optimization.

### New Approaches to Efficient Generation

Possibilities for replacing the fossil-based energies required in the plant with regenerative energies are currently being examined. Examples include the generation of industrial heat from hydrogen, the use of heat pumps for heating, alternative drive systems for commercial vehicles such as electric or hydrogen drive systems, and the generation of electricity from renewable energies. Two photovoltaic systems are currently being planned on the plant site with a total output of 650 kWp.

Another way is to improve efficiency within the company. Here, we have always focused on energy-efficient production processes and technologies (the steam boilers are equipped with exhaust gas heat recovery) as well as modern machinery, and we increasingly attach importance to sustainable procurement of operating resources, economical drives, or lower consumption. We also plan and build according to recognized standards (E.g., DIN V 18599, GEG, KfW 40).

Other practical steps include shutting down operations on weekends and during non-production periods, energy-efficient LED lighting, the use of motion detectors, recuperation in warehousing, and improved detection and repair of compressed air leaks using modern ultrasound equipment. All these energy-saving measures reduce the burden on the climate, while at the same time strengthening the economic efficiency and competitiveness of our company.

### Example: Three-phase Transformers

Our corrugator is connected to the internal medium-voltage network via three-phase transformers. Ongoing measurements have shown that all three transformers are operating below their specified ratings and that the total power loss is high in relation to the effective power. A subsequent calculation showed that the power of two transformers is currently sufficient. As a measure, we disconnected one transformer completely from the grid, raised the nominal point of the other transformers and achieved an energy saving of approx. 13 %.

### Example: Steam Boiler

The construction of a second, larger steam boiler accompanies the construction of the second corrugator. This is designed to supply the new corrugator with sufficient saturated steam when fully equipped. Here, too, analyses showed that instead of keeping two boilers under steam at a rather unfavorable operating point in terms of energy, as was previously the case, the second boiler supplies both corrugators with sufficient steam. The first boiler remains switched off during the current expansion.



### Earth Hour: Lights out. Climate Protection on

This was the motto of the "WWF Earth Hour" in 2022. The global climate protection campaign is held regularly at the end of March to demand a strong joint signal for more climate protection. We have also been taking part in this for several years. In 2022, we switched off the lights in the high-bay warehouse, the corrugator roundabout and the truck parking lot from 8:30 pm to 9:30 pm.





### The Complete Plant Energy Consumption in Absolute Terms 2019 - 2022

Energy Source	2019	2020	2021	2022
<b>Electrical Energy</b>	8,488,000 kWh	9,038,000 kWh	9,972,000 kWh	11,006,000 kWh
Δ	100 %	106 %	117 %	130 %
<b>Natural Gas</b>	15,792,000 kWh	16,361,000 kWh	19,330,000 kWh	21,321,000 kWh
Δ	100 %	104 %	122 %	135 %
<b>Liquid Gas (LPG)</b>	997,000 kWh	848,000 kWh	825,000 kWh	811,000 kWh
Δ	100 %	85 %	83 %	81 %
<b>Automotive Fuels</b>	2,540,000 kWh	2,458,000 kWh	2,571,000 kWh	2,689,000 kWh
Δ	100 %	97 %	101 %	106 %
<b>Total</b>	27,817,000 kWh	28,705,000 kWh	32,698,000 kWh	35,827,000 kWh
Δ	100 %	101 %	118 %	129 %

### The Complete Energy Consumption in the Production of Corrugated Board 2019 - 2022

Energy Source	2019	2020	2021	2022
<b>Electrical Energy</b>	3,944,000 kWh	4,000,000 kWh	5,552,000 kWh	4,101,000 kWh
Δ	100 %	101 %	143 %	104 %
<b>Natural Gas</b>	14,851,000 kWh	15,338,000 kWh	18,104,000 kWh	20,524,000 kWh
Δ	100 %	103 %	122 %	138 %

### The Complete Energy Consumption in the Production of Cardboard Boxes 2019 - 2022

Energy Source	2019	2020	2021	2022
<b>Electrical Energy</b>	3,885,000 kWh	4,288,000 kWh	4,975,000 kWh	6,127,000 kWh
Δ	100 %	110 %	128 %	158 %
<b>Natural Gas</b>	952,000 kWh	1,022,000 kWh	1,226,000 kWh	837,000 kWh
Δ	100 %	107 %	129 %	88 %

### The Complete Energy Consumption in Intralogistics 2019 - 2022

Energy Source	2019	2020	2021	2022
<b>Electrical Energy</b>	541,000 kWh	585,000 kWh	577,000 kWh	604,000 kWh
Δ	100 %	103 %	106 %	112 %
<b>Natural Gas</b>	997,000 kWh	848,000 kWh	825,000 kWh	811,000 kWh
Δ	100 %	85 %	83 %	81 %

### The Complete Energy Consumption in Extra-logistics 2019 - 2022

Energy Source	2019	2020	2021	2022
<b>Diesel</b>	2,477,000 kWh	2,458,000 kWh	2,390,000 kWh	2,513,000 kWh
Δ	100 %	99 %	96 %	101 %

### Comparative Energy Consumption Relative to the Applied Amount in Watt/m<sup>2</sup>

Energy Source	2019	2020	2021	2022
<b>Electrical Energy</b>	43.75	40.82	40.53	44.00
<b>Natural Gas</b>	81.39	73.89	76.95	85.24
<b>Liquid Gas (LPG)</b>	5.14	3.83	3.35	3.24
<b>Diesel</b>	13.53	12.51	11.73	11.23
<b>Gasoline Fuel</b>	0.58	0.62	0.71	0.66





## Water

We use water in the production of corrugated board and in the converting process, for example in the conditioning of the corrugated board base papers, where water vapor heats the preheater. This in turn raises the liner and flute to a common temperature level and re-moistens the paper. Some of the boiler water used migrates into the corrugated board and thus into the

product in this way, and the shrinkage is compensated for with fresh water. Another part of the water used is for mixing the starch paste and is also included in the product as an application. During processing we use water to print on the cardboard boxes. We also use fresh water to clean our piping systems and printing units.

### Water Consumption and Use

Type	2019	2020	2021	2022
<b>Fresh Water</b>	14,900 m <sup>3</sup>	14,200 m <sup>3</sup>	15,720 m <sup>3</sup>	19,900 m <sup>3</sup>
Δ	100 %	95 %	105 %	133 %
<b>Sewage</b>	11,200 m <sup>3</sup>	11,000 m <sup>3</sup>	8,800 m <sup>3</sup>	10,500 m <sup>2</sup>
Δ	100 %	98 %	79 %	93 %
<b>Industrial Water</b>	1,800 m <sup>3</sup>	3,200 m <sup>3</sup>	3,760 m <sup>3</sup>	4,100 m <sup>3</sup>
Δ	100 %	177 %	207 %	225 %

The purchase of fresh water increased, especially with the commissioning of the second corrugator.

#### Example: Glue Mixing Station

To prevent glue residues from settling unintentionally in the pipelines, they are flushed with cold water during a planned plant shutdown. The process water containing solid residues flows into a separate storage tank (right in the picture). After restarting the plant, we successively feed the process water back to the mixer (left in the picture). In this way, we not only save drinking water, but also avoid wastewater and reduce glue consumption.



## Biodiversity

Our operations at the Damme site have no impact on biodiversity, as our company is not located in a landscape protection area (LSG), nature conservation area (NSG) or water protection area (WSG). Irrespective of the restrictions that operating in such endangered areas entails and due to the spatial proximity to the Dammer Berge LSG, Dümmer LSG, Haverbecker Moor LSG, Dammer Bergsee NSG, Westliche Dümmer-

niederung NSG, Dümmer NSG and WSG Holdorf, we want to make an undue contribution to protecting our environment as best we can from the effects of our products and processes. Intact ecosystems and the preservation of our biodiversity are essential for all our lives. We do not designate any protected habitats ourselves, nor do we carry out any rehabilitation projects.

## Emissions

The production and transport of corrugated board produces greenhouse gases, including carbon dioxide, which is harmful to the climate. We calculate our CO<sub>2</sub> emissions on a recurring basis from the consumption of fossil fuels coal, crude oil and natural gas and publish our corporate carbon footprint.

According to our calculations, we emitted 5,275 t of CO<sub>2</sub> last year exclusively in scope 1. There were no emissions in scope 2. In scope 3, no emissions were recorded.

Among the CO<sub>2</sub> emissions generated in our company, the emissions generated in the generation of electricity accounted for the largest share up to 2021, with CO<sub>2</sub> emissions released during the combustion of natural gas at our company ranking almost equally. The CO<sub>2</sub> emissions attributable to our vehicle fleet contributed a smaller share of 8.4%.

On the way to global climate neutrality, it is crucial to continuously reduce the use of fossil fuels. The management of Zerhusen Kartonagen GmbH has therefore

decided to obtain the electrical energy required in 2022 exclusively from renewable sources (hydropower). This measure alone has enabled us to reduce our CO<sub>2</sub> emissions by around 37 % compared to 2021.

As described in the Energy section, we aim to further expand our own generation, relying on renewable, emission-free energy sources. On the other hand, we are striving to convert our energy consumption to low-emission or zero-emission systems. For example, five company cars currently run exclusively on electric power. Like energy, we relate our emissions to annual output and obtain comparable key figures.

We collect paper, cardboard, and cardboard die-cutting waste and return it to the materials cycle; as a result, it does not emit any harmful pollutants. Other emissions such as soot, heat, noise, radiation, vapors, sound, or light do not occur to any significant extent.



## Our Complete CO<sub>2</sub>-Emissions 2019 – 2022 Tons

Energy Source	2019	2020	2021	2022
Electrical Energy	3,234	3,859	3,640	0 <sup>1</sup>
Natural Gas	3,190	3,289	3,446	4,298
Liquid Gas (LPG)	238	199	197	194
Automotive Fuels	726	729	-	-
-Diesel	-	-	712	744
-Gasoline	-	-	38	39
<b>Total</b>	<b>7,388</b>	<b>8,076</b>	<b>7,836</b>	<b>5,275</b>

<sup>1</sup>From 2022 CO<sub>2</sub> free purchase of electricity

## Relative CO<sub>2</sub> emissions 2019 - 2022, based on the amount of corrugated board applied in kg per 1000 m<sup>2</sup>.

Energy Source	2019	2020	2021	2022
Electrical Energy	16.72	18.48	16.00	0.00
Natural Gas	16.49	15.75	16.78	17.18
Liquid Gas (LPG)	1.23	0.95	0.87	0.77
Automotive Fuels	3.75	3.49	-	-
-Diesel	-	-	3.13	2.98
-Gasoline	-	-	0.17	0.15

## Expansion of the Electric Vehicle Fleet

To meet special customer requirements and just-in-time deliveries, we have our own fleet of 18 trucks - from semi-trailers with tractor units to trailer trucks and medium-duty trucks. In addition, we commission third party service providers who drive exclusively for us. Since 2019, we have also been increasingly using electric vehicles in our car fleet including the versatile forklifts in the halls. As of 2022, five purely electric cars and nine hybrid vehicles are in use. We will acquire additional electric and hybrid vehicles in 2023. With regard to the future, we have installed 12 charging stations for e-vehicles.

In areas where long distances or large loads have to be handled (loading, shipping), we still rely on trucks powered by diesel fuel. The trucks outside the halls are powered by gas. The reasons for this are the greater level of durability and the ranges. We are continuously examining which alternative types of vehicles will become established in the medium to long term and how we can change over accordingly.

In view of the growth in our truck fleet, we have optimized our dispatching and introduced the YellowFox telematics system in 2019. With the help of the system, processes can be automated, occupancy planned, routes optimized and driving behavior improved. Driving style analysis and driver evaluation, which provide technical data such as braking behavior or fuel consumption, have the positive effect of reducing CO<sub>2</sub> emissions through lower fuel consumption. Part of our fleet is equipped with an active tire pressure monitoring system: It guarantees the optimal tire pressure in each case, prevents unnecessary tire wear (abrasion) and thus also helps to save fuel.

## Outbound Shipments Factory Transport:

Amount	2019	2020	2021	2022
Dispatch Units	13,023	13,462	13,759	13,399

## Sewage and Waste

We pre-treat the wastewater we produce. In our own separation plants, we separate mixtures of substances such as paint or glue from the water in a multi-stage process. We return part of the purified water (24%) to the water cycle, The greater part flows into the public sewer system as wastewater.

With the construction of a new system at the Damme location in 2022, we expect a further improvement in the recycling rate. We do not operate our own waste-

water treatment plant. Rainwater that comes into contact with sealed surfaces flows unused into the sewer system.

We deposit the separated, organic solids, mostly in the form of sludge, in a waste dump. From there, it is transported away and disposed of by a waste disposal company. Hazardous waste and waste containing wood, if it is not used as a load, is incinerated in a waste incineration plant with the regeneration of energy.



When dealing with waste, our basic motto is: Prevent, recycle, dispose. We have not yet provided a detailed breakdown of our waste by type and quantity. However, this is planned for the future as part of our waste management.

Here is an overview of our waste quantities, as they have been classified by type and whereabouts retrospectively from the accounts of the individual local waste disposal companies:

**Waste in kg**

Type	2019	2020	2021	2022
Nonhazardous	384,370	465,240	430,470	652,730
Hazardous	10,130	32,320	37,280	10,420
<b>Total</b>	<b>394,500</b>	<b>497,560</b>	<b>467,750</b>	<b>663,150</b>

No significant spills or leaks of harmful substances occurred during the reporting period.

**Reusable Drinking Bottle and Cardboard Coffee Cup**

In October 2022, we replaced the disposable plastic cups previously used at all coffee machines with sustainable, biodegradable paper cups. We also gave all employees a recyclable drinking bottle in 2022. It is suitable for all drinking water machines in production. New employees receive the free drinking bottle with the issue of their work uniform. In an effort to reduce the waste generated by the use of disposable bottles and conserve resources.



**Environmental Compliance and Environmental Assessment of the suppliers**

In the reporting period, we did not have to pay any fines or penalties for non-compliance with environmental regulations.

We expect our suppliers to comply with applicable environmental laws and regulations. An evaluation does not take place. However, we check whether there are alternatives before purchasing the required materials. We use queries to determine whether suppliers also offer sustainable products. Our Supplier Code of Conduct is both a guideline and an aid to orientation. A corresponding paragraph on the environmental assessment of our suppliers can also be found in the section "Social supplier management".

**Engagement**

A sustainable development is a steady process which never ends. Within the company, we have therefore formed four working groups in 2022 for the continuous improvement of our sustainability targets, which derive and implement targets and measures on the topics of energy, emissions, waste, digitalization, optimization, social issues, and more. At the regional level, we joined the Oldenburger Münsterland sustainability network, in which managing directors and senior employees have been regularly exchanging information on the topic of sustainability since 2022; it includes companies from a wide range of industries and sizes from the districts of Vechta and Cloppenburg. Rebecca Behrends and Heinrich Kruthaup represent our company in the steering group of the model network. Since 2018, we can be found globally on the sustainability platform EcoVadis.

**EcoVadis Sustainability Assessment**

In an attempt to provide our customers with the necessary security in their supply chain, we decided to participate in the EcoVadis sustainability assessment in 2018. EcoVadis is a leading platform in the assessment of environmental standards, ethical compliance, sustainable sourcing, and respect for labor and human rights. Each year, the platform reviews registered companies' compliance with the standards on a recurring basis and gives awards that are visible to third parties. We received the Silver Medal in 2021 and the Bronze Medal in 2022 for our sustainability efforts.



# “Saving Energy and Protecting the Climate Concerns Us All”

Interview with Heinrich Kruthaup, Energy Management Officer at Zerhusen Kartonagen GmbH

**Heinrich, you passed the exam to become an energy management officer in April 2021 at the TÜV Akademie Nord in Hanover. What exactly are your tasks in this role at Zerhusen?**

**Heinrich Kruthaup:** As the Energy Management Officer, I am responsible for the entire energy management at Zerhusen Kartonagen GmbH. The focus of my work

is the maintenance and further development of our energy management system according to the standard DIN EN ISO 50001:2018. I advise the management on energy-related issues, support energy purchasing, derive our energy policy from the management's specifications, and set our energy targets as a result. In addition, I plan the necessary actions and measures together with the energy

team, follow up on their implementation in the company, accompany internal and external audits, monitor compliance with legal requirements and regularly perform an energy assessment. My studies and the skills I have acquired in my professional life as an internal auditor, project manager and quality management representative help me to master my tasks.

**What are the big issues for Zerhusen Kartonagen with regard to ecological goals in the future, and how can these be achieved?**

**Heinrich Kruthaup:** We have set goals to reduce energy consumption, improve energy efficiency and examine the extent to which we can cover the remaining energy requirements from renewable sources. Our current energy sources are largely derived from fossil sources, and their combustion releases direct and indirect emissions. By reducing and substituting them, we not only want to make a contribution to environmental and climate protection, but also secure our energy supply in the long term and consolidate our self-sufficiency. In working groups, we defined the steps to be taken in this process by 2025, localized savings potential and defined efficiency measures. In 2023, we are launching in the renewable energy direction with the planning, construction, and operation of a photovoltaic system. Further steps, also concerning the use of fuel and natural gas in the plant, are in preparation.

Despite my rather stronger focus on energy, I keep a firm eye on natural resources such as water, starch, and paper. The drought of recent years has shown us time and again how important it is to use the precious resource of water sparingly and sustainably.

**How important is it to also involve employees in the topic of environmental and climate protection? What contribution can they make?**

**Heinrich Kruthaup:** Environmental and climate protection form a common control loop in which our employees are the key players. Their actions have a direct impact on the processes, i.e. they determine the use of energy and its effects. Even the most economical production plant is of no help if the willingness of the operators is missing and therefore, the control circuit is severed. It is important to convince employees of the need for environmental and climate protection beyond factory walls and working hours.

**What contributions can they make?**

**Heinrich Kruthaup:** Every contribution counts. Often, big things start in small: This can start with waste separation, go to the economical use of the compressed air gun and lead to a proactive approach to driving. Turning off the lights in unused rooms, turning down the heat, not printing out the email, turning off the engine when exiting, keeping hall doors closed, reporting leaks, turning off faucets tightly, or keeping refrigerator doors closed can be other small steps. In addition, every employee at Zerhusen Kartonagen GmbH has the opportunity to submit suggestions for improvement at anytime and anywhere via the company suggestion scheme. As a representative, I am also happy to provide advice and support. Saving energy and protecting the climate concerns us all!



Heinrich Kruthaup

Energy Management Officer

Apprenticeship as Electrical Engineer

Further training to become an energy management officer, a quality management officer project manager and internal auditor.





# Our Sustainability Targets by 2024

Sustainability Aspect	Target and Strategy	Parameter	Status 2022	Target 2024
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## Ecology: Energy and Emissions

<b>Energy</b>	Launch of own power generation by means of solar power	Amount of self-produced electricity as a % of total electricity	0 %	3 %
	Reduction of used electrical energy in relation to the square meter of corrugated board sold at the Damme location	Total relative electrical energy per square meter in kWh per 1000 m <sup>2</sup>	42.38 kWh/1000 m <sup>2</sup>	Reduce energy consumption by 1.5% to 41.74 kWh/1000 m <sup>2</sup>
	Reduction in natural gas used in relation to the square meter of corrugated board produced at the Damme location	Total relative gas power per square meter in kWh per 1000 m <sup>2</sup>	97.71 kWh/1000 m <sup>2</sup>	Reduction by 1.5% (to: 96.24 kWh/1000 m <sup>2</sup> )

## Ecology: Waste Management

<b>Waste (corrugated board)</b>	Reduction in waste volumes due to elimination of additional inlay production	Quantity of produced inlay in m <sup>2</sup> (as well as in relation to the total quantity).	185,987 m <sup>2</sup> (± 0.046 % total amount)	Reduction by 20 % ± 148,790 m <sup>2</sup>
	Reduction of waste quantities by minimizing margin trimming on the corrugator	Relative proportion of trimmings compared to produced amount	3.91 %	Decrease to 3.81%

Sustainability Aspect	Target and Strategy	Parameter	Status 2022	Target 2024
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## Economy: Process Optimization and Digitalization

<b>Digitization</b>	Improvement of digitalization through the introduction of a new ERP system: Accelerated, transparent processes	Implementation in the company	0 %	100 %
<b>Process Optimization</b>	Increasing the productivity of converting machines by reducing downtime and set-up times	Production of packaging material in m <sup>2</sup> / hour for all machines (base year 2022)	Flatbed die cutting: 3,010 m <sup>2</sup> /h; Rotary die cutters: 4,895 m <sup>2</sup> /h; Inline machines: 3,621 m <sup>2</sup> /h; Fold-glue machines: 1,787 m <sup>2</sup> /h	Increase in relative output by 1% per machine group
	Saving resources: Reducing paper consumption through digitization in administration	Printed and written paper in total number related to the quantity of processed m <sup>2</sup> of corrugated board	800,000 pages on 260 million m <sup>2</sup> of corrugated board processed	Reduction of 10% ± 720,000 pages to 260 million m <sup>2</sup> of corrugated board processed

## Social: Employee Satisfaction

<b>Employee Satisfaction</b>	Start measuring the satisfaction of all employees in all departments	Satisfaction rate (scale from 1 to 10)	No survey available in previous years	Determining employee satisfaction
<b>Health</b>	Expansion of the company's health program	(total) number of CHM offers	6 Offers: eGym Well-pass, bicycle leasing, EAP at the St. Marien/ St. Vitus specialist clinic, monthly fruit basket, water dispenser, ergonomic workstations	Expansion of the CHM with two additional offers: Health Day, anti-smoking courses

## Social: Apprenticeship

<b>Apprenticeship</b>	Filling of all jobs by qualified personnel thanks to increased on-the-job training	Relative training rate in % (in relation to the total number of employees)	5.3 % of apprentices in relation to the total number of employees	Increase the training quota to 6%
	Retention of qualified employees in the company	Quota of trainees remaining in the company (at least 3 years) after completing their training, in %.	77.14 %	Increase the retention quota to 80%



# GRI Index

GRI Universal Standards 2021

Zerhusen Kartonagen GmbH has reported the information provided in this GRI Index for the period from January 1, 2022 to December 31, 2022 with reference to the GRI Standards.

Nr.	Title	Disclosure	Specification	Reference / content
<b>2. General Disclosure</b>				
<b>1. The organization and its reporting practices</b>				
2-1	Organizational details			Zerhusen Kartonagen GmbH, Page 8, 9, 12, 13
2-2	Entities included in the organization's sustainability reporting			Zerhusen Kartonagen GmbH, Page 1
2-3	Reporting period, frequency and contact point			Page 1
2-4	Restatements of information			Page 1
2-5	External assurance			Page 1
<b>2. Activities and workers</b>				
2-6	Activities, value chain and other business relationships			Page 8, 9, 12, 13 und 30-34
2-7	Employees			Page 8, 16
<b>3. Governance</b>				
2-9	Governance structure and composition			Page 8
2-13	Delegation of responsibility for managing impacts			Page, 8, 9
2-14	Role of the highest governance body in sustainability reporting			Page 3, 9
2-16	Communication of critical concerns			Page 22, 23
2-19	Remuneration policies			Page 42
2-20	Process to determine remuneration			Page 42
<b>4. Strategy, policies and practices</b>				
2-22	Statement on sustainable development strategy			Page 4, 5
2-23	Policy commitments			Page 3, 4, 5, 22, 23
2-25	Processes to remediate negative impacts			Page 18, 22, 23
2-26	Mechanisms for seeking advice and raising concerns			Page 22, 23, 28, 29
2-28	Membership associations			Page 26
<b>5. Stakeholder engagement</b>				
2-29	Approach to stakeholder engagement			Page 26
2-30	Collective bargaining agreements			Page 42
<b>3. Essential Topics</b>				
2. Disclosures on material topics				
3-1	Process to determine material topics			Page 9
3-2	List of material topics			Page 9

Nr.	Title	Disclosure	Specification	Reference / content
		3-3	Management of material topics	Page 18, 19, 22, 23, 26, 31, 40, 50, 56, 62, 63
<b>201 Economic Performance</b>				
1. Topic Management Disclosures				
		201-1	Direct economic value generated and distributed	Page 8, 16
<b>205 Anti-corruption</b>				
1. Topic Management Disclosures				
				Page 24
2. Topic Disclosures				
		205-1	Operations assessed for risks related to corruption	Page 24
		205-2	Communication and training about anti-corruption policies and	Page 24
		205-3	Confirmed incidents of corruption and actions taken	Page 24
<b>301 Materials</b>				
1. Topic Management Disclosures				
				Page 31, 32
2. Topic Disclosures				
		301-1	Materials used by weight or volume	Page 31, 56, 57
		301-2	Recycled input materials used	Page 57
		301-3	Reclaimed products and their packaging materials	Page 33, 64
<b>302 Energy</b>				
1. Topic Management Disclosures				
				Page 65, 66
2. Topic Disclosures				
		302-1	Energy consumption within the organization	Page 68, 69
		302-2	Energy consumption outside of the organization	Page 68, 69
		302-3	Energy intensity	Page 69
		302-4	Reduction of energy consumption	Page 66, 67, 68, 69
		302-5	Reductions in energy requirements of products and services	Page 69
<b>303 Water and Effluents</b>				
1. Topic Management Disclosures				
		303-1	Disclosure 303-1 Interactions with water as a shared resource	Page 70, 73
2. Topic Disclosures				
		303-3	Water withdrawal	Page 70
		303-4	Water discharge	Page 70, 73
		303-5	Water consumption	Page 70
<b>304 Biodiversity</b>				
1. Topic Management Disclosures				
				Page 70
2. Topic Disclosures				
		304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Page 71
		304-2	Significant impacts of activities, products and services on biodiversity	Page 71
		304-3	Habitats protected or restored	Page 71
		304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Page 71





Nr.	Title	Disclosure	Specification	Reference / content
<b>305 Emissions</b>				
1.	Topic Management Disclosures			Page 71
2.	Topic Disclosures			
	305-1	Direct (Scope 1) GHG emissions		Page 71, 72
	305-2	Energy indirect (Scope 2) GHG emissions		Page 71, 72
	305-4	GHG emissions intensity		Page 71, 72
	305-5	Reduction of GHG emissions		Page 71, 72
<b>306 Waste</b>				
1.	Topic Management Disclosures			Page 73
2.	Topic Disclosures			
	306-1	Waste generated and significant waste-related impacts		Page 74, 75
	306-2	Management of significant waste-related impacts		Page 74, 75
	306-3	Generated waste		Page 74
	306-4	Waste diverted from disposal		Page 74
	306-5	Waste forwarded for disposal		Page 74
<b>307 Environmental compliance</b>				
1.	Topic Management Disclosures			Page 75
2.	Topic Disclosures			
	307-1	Failure to comply with environmental protection laws and regulations		Page 75
<b>308 Supplier Environmental Assessment</b>				
1.	Topic Management Disclosures			Page 75
2.	Topic Disclosures			
	308-1	New suppliers that were screened using environmental criteria		Page 75
	308-2	Negative environmental impacts in the supply chain and actions taken		Page 75
<b>401 Employment</b>				
1.	Topic Management Disclosures			Page 40, 41
2.	Topic Disclosures			
	401-1	New employee hires and employee turnover		Page 40, 41
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees		Page 42
	401-3	Parental leave		Page 42
<b>403 Occupational Health and Safety</b>				
1.	Angaben zum Managementansatz			Page 44
	403-1	Occupational health and safety management system		Page 44
	403-2	Hazard identification, risk assessment, and incident investigation		Page 44
	403-3	Occupational health services		Page 44
	403-4	Worker participation, consultation, and communication on occupational health and safety		Page 44
	403-5	Worker training on occupational health and safety		Page 44
	403-6	Promotion of worker health		Page 45

Nr.	Title	Disclosure	Specification	Reference / content
2.	Topic Disclosures			
	403-9	Work-related injuries		Page 47
	403-10	Work-related ill health		Page 47
<b>404 Training and Education</b>				
1.	Topic Management Disclosures			
2.	Topic Disclosures			
	404-2	Programs for upgrading employee skills and transition assistance programs		Page 50, 51
<b>405 Diversity and Equal Opportunity</b>				
1.	Topic Management Disclosures			Page 41
2.	Topic Disclosures			
	405-1	Diversity of governance bodies and employees		Page 41
<b>406 Non-discrimination</b>				
1.	Topic Management Disclosures			Page 41
2.	Topic Disclosures			
	406-1	Incidents of discrimination and corrective actions taken		Page 41
<b>408 Child Labor</b>				
1.	Topic Management Disclosures			Page 41
2.	Topic Disclosures			
	408-1	Operations and suppliers at significant risk for incidents of child		Page 41
<b>414 Supplier Social Assessment</b>				
1.	Topic Management Disclosures			Page 56
2.	Topic Disclosures			
	414-2	Negative social impacts in the supply chain and actions taken		Page 58
<b>416 Customer Health and Safety</b>				
1.	Topic Management Disclosures			Page 59
2.	Topic Disclosures			
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services		Page 59
<b>417 Marketing and Labeling</b>				
1.	Topic Management Disclosures			Page 59
2.	Topic Disclosures			
	417-2	Incidents of non-compliance concerning product and service information and labeling		Page 59
	417-3	Incidents of non-compliance concerning marketing communications		Page 59
<b>418 Customer Privacy</b>				
1.	Topic Management Disclosures			Page 59
2.	Topic Disclosures			
	418-1	Substantiated complaints concerning breaches of customer		Page 59

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## Photo Credits

### foto:hölzen GmbH

niedersachsenpark GmbH

[stock.adobe.com](http://stock.adobe.com)

Other

Gerald Lampe (Seite: 6, 9, 11, 15, 20, 35, 36, 59, 67, 70, 76)

Meyer (Seite: 11)

Cyrustr (Umschlag)

Bildarchiv Zerhusen Kartonagen GmbH



The report is available in German and English and can be downloaded at [www.zerhusen.de/nachhaltigkeit](http://www.zerhusen.de/nachhaltigkeit).





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