

Panther Group

*Sustainability
Report 2020*



**STARK UND
ELASTISCH**

About the Panther Group

Company profile

The Panther Group has held a firm place in the European packaging industry since 1902. With a range of products and services ranging from corrugated board, packaging and displays and printed products to tailor-made services, the family-owned company generated a total turnover of around 370 million euros in 2020. Panther has strategic locations throughout Germany and is therefore able to fulfil customer requirements in a smooth and timely manner with low freight costs.

In addition to the parent company, Panther Packaging GmbH & Co. KG, which is headquartered in Tornesch (near Hamburg), the Panther Group comprises ten stand-alone companies. In the plants, which make full use of the advantages of a decentralised organisation, a wide variety of products are manufactured under the Panther umbrella brand: corrugated board folding boxes, rotary or flatbed die-cut packaging, specially coated packaging as well as secondary placements, be they counter displays or pedestal display units. The products are printed in flexo direct print/preprint, offset printing process or digital print in multiple colours.

Our growth-oriented nature and innovative spirit have ensured our success to this day, and Panther's slogan has always been STARK UND ELASTISCH. Qualities that the company possesses and that are symbolised by the

panther. The independence of the plants, each with their own specialisations and services, contributes to the fact that the entire Group always flexibly adjusts to changing market conditions and new customer requirements.

Yet it is qualified employees that are crucial to the expansion and performance of a business. The Panther Group currently employs around 1,300 people. At an early stage, Panther recognised the need to get involved in the training of young people. Promoting training and professional development in Germany is an important objective of ours. Both commercial and industrial apprenticeships are offered, such as packaging technologists, industrial management assistants and warehouse specialists. In total, around 120 apprentices are trained in 15 different professions.

Since the mid-1970s, the Panther Group has supported the Fritz Landmann Foundation, set up by the son of the company's founder, Fritz Landmann. It supports institutions in the training and professional development in the paper processing and packaging professions. Since its establishment, the foundation has been able to provide projects throughout Germany with more than 11 million euros. This benefits the entire paper and packaging industry.



Since 1902

**11 companies in
6 locations**

405,000 t total corrugated capacity

200 million m² preprint capacity

370 million euros in turnover

**20 million euros of investment
for machinery and plants**

**1,300 employees of which
120 are apprentices**

15 apprenticeship professions

Locations of the Panther Group

All Panther plants are strategically distributed with a view to infrastructural conditions, so that the company can deliver efficiently and quickly throughout Germany and to neighboring countries. In addition, they offer their respective focuses and services.



Tornesch



The headquarters of the Panther Group are located in Tornesch, to the north of Hamburg. This is where the parent company Panther Packaging GmbH & Co. KG is based, which mainly operates across corporate divisions.

Also, the Altonaer Wellpappenfabrik GmbH & Co. KG is located here, which was founded in Hamburg-Altona in 1902. Its production range includes the manufacture and processing of corrugated board into a wide variety of packaging solutions (die-cut packaging, folding boxes) as well as finishing with flexo-preprint and flexo-direct printing at the highest technical level. Packaging development, system and process consulting in partnership with customers are the hallmarks of Altonaer Wellpappenfabrik. Their customers are mostly located in Northern Germany and Scandinavia.

Panther Cargo GmbH is the company responsible for logistics and organises the Europe-wide distribution for the entire Group.

Stuhr



The PaKa Packaging-Service GmbH is located in Stuhr, near Bremen. Everything that is part of a comprehensive service programme for Panther customers is amalgamated here. Customers have access to capacity to offload or outsource through PaKa's service offering. The vast spectrum of services ranges from consulting and co-packing to repackaging.

Bottrop



Bottrop is home to the RRK Wellpappenfabrik GmbH & Co. KG. It produces a variety of high-quality packaging (die-cut packaging, folding boxes) – especially in the preprint process – for customers in densely populated North Rhine-Westphalia with its diverse industrial structure. Various large central warehouses of major retail chains are located in the vicinity, which they also supply, as well as customers in Belgium and the Netherlands.

Wustermark



A trio of the Panther Group are located in Wustermark (Brandenburg) – Wepoba Wellpappenfabrik GmbH & Co. KG, Panther Display GmbH & Co. KG and Panther Print GmbH. Wepoba Wellpappenfabrik has been part of the Panther Group since 1967 and has been based in Wustermark since 2004. Here, corrugated board packaging of all kinds is produced for customers, an example of which is packaging for hazardous goods, as are preprint standard displays.

Panther Display's new production plant, built in 2008, meets all the requirements for the manufacture of state-of-the-art display systems – from individual, creative custom-made products to the constantly expanding range of standard displays. In addition, Panther Display has specialised in the pharmaceutical industry with a wide range of services. For this purpose, they possess the GMP manufacturing authorisation according to § 13 of the German Medicinal Products Act (AMG) and comply

with the guidelines for quality assurance of the production processes and environment in the manufacture of medicinal products and active substances.

Panther Print GmbH opened in Wustermark in 2011, completing the Panther trio. There, paper rolls up to a width of 2.80 m are printed with up to eight colours plus varnish in a high-quality flexo preprint process.

Coswig



The WS Coswiger Wellpappe- und Papierverarbeitung GmbH plant is located in Saxony-Anhalt. The speciality and focus of this Panther plant is the production of glued packaging, large-capacity packaging and small batches.

Illingen



The southern most plant in the Panther Group is located near Stuttgart, in Illingen, Baden-Württemberg. At Südwestkarton GmbH & Co. KG, packaging is produced for different industrial sectors, hazardous material packaging as well as elaborate, multi-part special packaging, including for highly sensitive technical parts. In addition, this plant produces flexo-preprint and post-print finished packaging.

Print-Pack GmbH is based at the same location and supplies customers with packaging printing and offset packaging which are finished to a high standard.

Corporate policy

The Panther Group supplies the European market with corrugated board, packaging, displays, printed products and various services, such as assembly, for example. A decentralised organisation, flat hierarchies, short communication channels and fast decision-making procedures ensure efficient processes. Thanks to the organisational structure, we are dynamically positioned with all subsidiaries and the wide range of services.

We pursue a strategy of developing innovations, bringing them onto the market and utilising synergy effects. We are aware that we are the link between manufacturers and consumers and we make the packaged goods transportable with our packaging so that they reach the customer undamaged.

The Panther Group already pays attention to comprehensive solutions when it comes to the development of packaging and displays. Packaging materials are developed and optimised taking into consideration ecology, economy and the entire value chain. This includes an economical use of the material through power-efficient packaging in the plant right through to the reduction of transport and waste disposal volumes.

Throughout the entire Group, greatest importance is attached to the safety of the products as well as that of our employees. Our products and services are continuously improved through constantly optimised processes to minimise the risks of product contamination from a hygiene perspective. Safety and the preservation of health and resources are the guiding principles for our daily actions and thoughts. The requirement for continuous improvement of the effectiveness of the integrated management system and risk minimisation are the impetus for new corporate goals and programmes in all areas, combined with the requirements of a HACCP system (Hazard Analysis and Critical Control Points) and „Good Manufacturing Practice“. As an integral part of the supply chain of the pharmaceutical and food industries, we are aware of the great responsibility for food and pharmaceutical product safety. Therefore, in the event of a pandemic, we have also defined measures to ensure the supply of our products in the event of a crisis.

The Panther Group strives for the highest level of quality, which is reflected in its corporate actions. All measures for organising, establishing, maintaining and expanding the management system serve to consolidate existing and develop new long-term customer relationships and

are an existential part of our corporate strategy alongside environmental, energy, safety and market aspects. Our common objective is to fulfil customer expectations and thus to secure the performance of our Panther plants in the long term. This is, for example, one of the reasons why we operate the Panther Innovations Programme as an active suggestion scheme.

The concept of the integrated management system has been developed with a focus on error prevention. To achieve these objectives, specific processes and ways of working have been defined which are successfully implemented in the common work of all employees of the company and our customers. Management is committed to consultation and the participation of workers. If, despite this, deviations occur, for example from specifications, each and every employee is obliged to ensure that the defect is rectified. Every employee is expected to take personal responsibility for the accuracy and safety of our products, services, processes and working methods.

The organisational guidelines laid down in the management handbook oblige the management and all employees to carry out their respective activities accordingly, thus ensuring the quality and safety of our products, the safety of each employee and the protection of the environment. Our integrated management system leads to significant improvements in processes and helps to minimise the environmental impacts with the highest possible energy efficiency of our machinery and equipment. Protection of the environment starts with the efficiency of the raw materials we use. Management representatives for the areas of quality, energy, environment and waste, GMP/hygiene, water protection, hazardous goods, FSC® and occupational safety are responsible on behalf of the management for all measures within the scope of the management system and also for the checking of their compliance as well as continuous optimisation. For us, sustainable management includes regular checks on the use of regenerative energies and the expansion of corporate considerations through life cycle costing.

Compliance with laws and regulations, alignment with the Ethical Trading Initiative Base Code (ETI Base Code) which is based on the conventions of the International Labour Organisation (ILO) and is an internationally recognised code of labour practices), as well as requirements from other areas of the individual sites are both ensured and further developed through the Panther-Philosophy, the integrated management system and the linking of processes. Environmental impacts related to our business activities are transparently disclosed in public dialogue, reflecting, among other things, our corporate culture.

We also ensure compliance with the General Data Protection Regulation (GDPR), a European Union regulation that governs the processing of personal data. This applies to our customers' data as well as that of our employees and business partners and is the guarantee of data security regarding technologies, patents, new developments, strategies and goals, both internally and externally.

We respect, protect and promote universal human rights and consider it our responsibility to comply with them by being cooperative and fair with each other. We treat each other with tolerance, acceptance and respect and leave no room for discrimination. In addition, we ensure that everyone avoids dangers and risks. We are committed to this and also expect compliance with international human rights standards from all our partners throughout the entire supply chain.

Investments in and the procurement of technical goods always include an assessment of energy efficiency, which is one of the decision-making criteria we use when awarding contracts. Our suppliers are considered and assessed as partners in the value chain. At the same time, we have committed ourselves to actively contributing to achieving the climate targets of the German government (Climate Protection Plan 2050) by reducing specific CO₂ emissions.

The Panther Group strives to draw the attention of its employees to quality and environment-related problem areas, compliance with hygiene guidelines, as well as guidelines on occupational safety and health protection through continuous training and information in order to increase awareness and promote active cooperation. If, despite all documented procedures, quality, environment, hygiene or occupational safety-relevant failures or even accidents occur, effective countermeasures are put into place and immediate steps are taken to prevent them occurring in the future. We support our employees through education and training and ensure a working atmosphere with working conditions that are conducive to this.

In addition, the three pillars of sustainability, ecology, economy and social issues are firmly anchored in our Panther philosophy. They form the foundation for the long-term success of our entire Group and are an integral part of our corporate strategy. In addition to sustainable management, attention must therefore be paid to the careful and conscious use of resources, including energy consumption.





The Panther-Philosophy: For shared success

The Panther philosophy has been the basis of our daily thoughts and actions for decades.

Mission

Our products enable human beings to receive all types of goods all over the world.

Vision

In the eyes of our customers we wish with our sustainable products to be the best company in the packaging industry.

Fundamental Values

We always give of our best. In our company we work honestly, loyally and reliably with each other. Our cooperation within the Panther Group is characterized by a sense of responsibility, fairness and discipline.

In the Panther Group, nobody is disadvantaged on account of his or her age, sex, origin, nationality or world view. We respect general human rights.

Objectives

We want to grow regardless of general economic developments. We want to make profits, because only a successful company remains sustainable and is a competent partner for our customers.

Even in the face of strong competition, we will prevail – no matter what difficulties stand in our way.

Guiding Principles

Customer requirements determine our thoughts and actions.

We put the very highest premium on skill, performance and cooperation, which go beyond the individual company. We respect individual initiative and continued personal education.

Members of staff who live the Panther-Philosophy are our strength, because they are not only our capital and shape our reputation and our performance.

Our constant striving for improvement determines our mutual success.

We want to be a source of innovations in order to remain fit for the future.

In order to achieve a price level, which is right for the market, we are continuously optimizing our costs.

Quality and the safety of our employees are our first priority. The skills of our staff are reflected in the quality of our products and services. That quality creates the highest satisfaction among our customers and binds them in the long term to our company group.

The environment is an asset which is worthy of protection. Our products can be recycled and are an important part of the material cycle.





Code of Conduct for employees, suppliers and business partners

In addition to our Panther-Philosophy, we have drafted a Code of Conduct for employees as well as for our suppliers and business partners. This is subject to regular reviews and updates and is published on our website, among other places. In addition, these documents are

used in purchasing or procurement management to ensure responsible behaviour right from the beginning of the supply chain.

<https://www.panther-packaging.com/Downloads>



Composition and manufacture of our products and services

The packaging material corrugated board is environmentally friendly and is mainly manufactured from the raw material paper. We use paper containing waste paper (>90%) and virgin fibre paper (<10%). It is therefore a natural and renewable raw material, which is why corrugated board is considered to be an ecologically particularly favourable packaging material.

Biodegradable substances such as corn, wheat or potato starch are used for gluing the paper webs. Furthermore, primarily water-based printing inks are used, with the aim of conserving resources as a matter of principle. As such, unused inks are stored and reused. The reuse of residual flexo inks is made possible by state-of-the-art ink mixing equipment.

Furthermore, corrugated board is a circular product, since it can be recycled. In countries such as Germany, the recycling rate is extremely high and this is a suitable indicator for comparison with other packaging materials. The environmental compatibility of corrugated board is demonstrated by the use of approximately 80% recycled paper as the most important raw material source (<https://www.wellpappen-industrie.de/nachhaltigkeit/recycling.html>).

In the incineration of waste, corrugated and solid board serve as an energy source, otherwise they facilitate the rotting of waste in landfills when exposed to moisture. Printed corrugated and solid board can also be disposed of in compliance with the official regulations on the recycling of waste paper. Our corrugated board packaging therefore also meets the requirements of EN 13427 to 13432 for reducing packaging, reusing, material and energy recycling as well as composting.

Transportable, shelf-ready and sales packaging made from corrugated board contribute to the conservation of resources on the one hand by offering optimum protection for all types of packaged goods and ensuring they reach consumers in perfect condition. On the other hand, products and packaged goods are protected from external damaging factors, as is the environment from undesirable contact with the goods. Food can also be protected from premature spoilage.





HSEQ Management (Health, Safety, Environment, Quality): Certifications

The four areas of HSEQ Management (Health, Safety, Environment, Quality) are crucial focuses within the framework of the Panther Group's corporate governance. Panther Packaging as a parent company manages and controls the management system for all subsidiaries. All sites operate according to an integrated management system that includes the following standards:

- ISO 22000:2018 (Hygiene)
- ISO 45001:2018 (Occupational safety)
- ISO 14001:2015 (Environment)
- ISO 50001:2018 (Energy)
- ISO 9001:2015 (Quality)





The Panther Group is certified according to the standards listed above. Furthermore, Panther has been FSC®-certified (Forest Stewardship Council) since 2010 and enables ecologically responsible action to be documented with the use of FSC® certified material.

www.fsc-deutschland.de

We also take our social responsibility seriously and have this verified and documented through the Sedex Audit (according to SMETA Sedex Members Ethical Trade Audit). In this way, we also show that ethical aspects are given equal consideration.

www.sedex.com

In order to complete the overall picture of our strong concept of sustainability, we work with EcoVadis, a ratings platform for assessing corporate social responsibility and sustainable procurement.

www.ecovadis.com

Sustainability

Panther pro nature

Panther pro nature has been an integral part of our corporate strategy for sustainable development for decades and specifies the Group's focus. We have clear targets for the protection and preservation of the environment in order to align our daily actions with them. As a company that acts responsibly, we define our targets with foresight and we take into account possible conflicts of interest between environmentally conscious actions and the quality of our products and services. In doing so, we always pursue a holistic approach.

As a part of our corporate strategy, **Panther pro nature** is firmly anchored in our integrated management system. Contained therein is our certified environmental management system as well as our binding commitment to continuous improvement and adjustment of our entire business activities. In our considerations, we include environmental impacts, such as the economical use of natural raw materials or the CO₂ emissions of the entire processes.



**Panther
pro nature**





Pillars of sustainability: Ecology, economy and social affairs

We have been taking responsibility as a family-run business since 1902 and placing a constant focus on sustainability for generations now.

Sustainability to us means simultaneously implementing both ecological, economic and social goals in equal parts in mutually dependability. On top of this, we continuously enhance the three pillars of sustainability in order to ensure improvements to them in the long-term.

As part of the Panther-Philosophy, the Panther Group has constantly strived to internalise and, above all, embrace the three pillars of sustainability.

With his sense of commitment, even the son of our company founder, Fritz Landmann, set up a foundation dedicated to training and further training from which we as a Group and the entire industry still benefit today and will continue to do so in the future. Our aim as well is to actively help shape and promote a sustainable future.

Ecology

Conscious use and protection of resources

- Conservation of natural resources and the conscious use of water, energy and limited raw materials to protect people and the environment.
- Improvement in the ecological footprint (CO₂-reduction)

Economy

Sustainable Management

- Increasing efficiency and effectiveness
- Achieving profits
- Safeguarding our company in the long term
- Creation of permanent jobs and general prosperity

Social Affairs

Fair Action

- Fostering of social commitment
- Training and further training for the freedom to enhance careers
- Sense of responsibility towards people and the environment



Pillars of sustainability: Ecology, economy and social affairs

Environmental Sustainability

As a matter of principle, the Panther Group safeguards the conscious, efficient and effective use of natural resources in order to protect and preserve the environment.

Our environmental strategy, Panther pro nature, continuously guides us on the right path, on which basis we invest in all measures for sustainability. With every investment we make we set new standards, be it in terms of efficiency, effectiveness, environmental protection or safety. Our strategy is geared towards conserving resources and, above all, preserving the environment in the long-term, and, as a result, lowering specific levels of energy consumption, reducing the consumption of raw materials and lowering CO₂ emissions, coupled with better performance.

In the future, we will continue to extend our cost leadership by making targeted investments in efficient production facilities in order to be able to operate successfully and sustainably in the market with our customers.

At Panther Packaging, we attach great importance to innovation management. To illustrate this, we already use recycled corrugated base papers with a low gram weight to guarantee the optimum performance of our corrugated packaging and displays with the minimum use of material, and by doing so keep our carbon footprint as small as possible.

We want to continue to reduce our CO₂ emissions in the coming years with the products in our circular economy. We are also striving to increase the use of lightweight papers and, last but not least, also reduce our energy consumption.

Economic Sustainability

The foundations of our company are based on a long-term and strategic business model which we aim to use to generate profits within the social market economy to secure our existence and growth.

The fact that our company has a stable financial structure means that we can continuously make sustainable investments. Furthermore, the taxes we pay to the state also provide support. They also help to create jobs, which in turn lead to general prosperity within the system, especially for future generations.

We take a comprehensive approach to all our business and economic decisions and incorporate aspects of all three pillars of sustainability.

Social Sustainability

For the Panther Group, taking a social approach is a matter of course and indispensable for a mutual coexistence. We augment our Panther philosophy with this decades-long approach by the corporate group supported by the three pillars of sustainability.

Our employees interact with each other in a helpful and respectful manner which reflects our corporate culture. We involve the entire Panther team in all areas in an active way. This also promotes a feeling of togetherness. In addition, our philosophy is fully internalised and embraced.

With our environmentally friendly and recyclable products, we make a contribution to environmental protection and as a result to society as well. Not only is corrugated board able to replace plastic in many cases, it can also be recycled, which helps us protect our environment. We also cultivate a conscious approach at all times to the use of resources.



Key figures

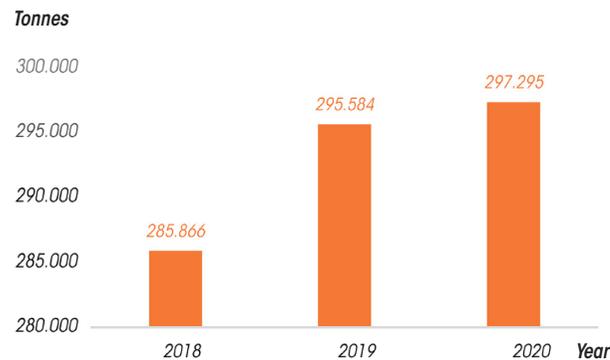
Raw materials and auxiliary materials

At 95 %, paper is the most important raw material for the manufacture of our products. We use recycled and virgin fibre paper.

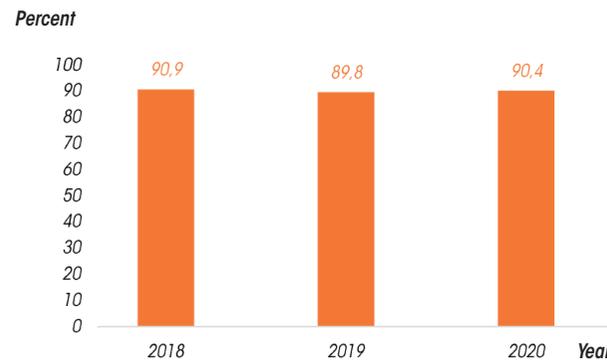
The paper used at our corrugated board plants which is then further processed into corrugated board is procured entirely from suppliers who are certified according to the FSC® standard or comparable standards. As an FSC® certified company, we ensure that the associated requirements are met, each relating to the entire product chain. We use around 90 % recycled paper.

Additives, modified starch adhesives and paints and varnishes are also used. In all Panther plants, mainly water-based flexographic printing inks are used.

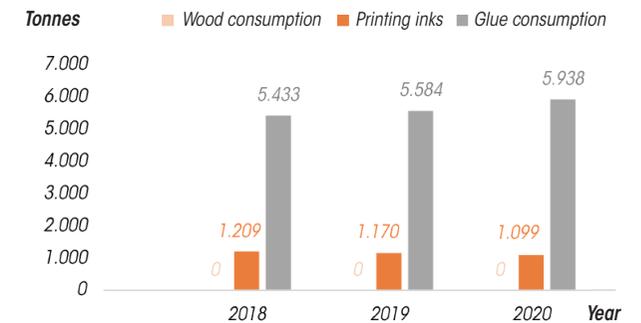
Containerboard in tonnes:



Amount of recycled paper in percent:



Consumption of wood and glue and use of printing inks:



Glue types (%)	2018	2019	2020
Starch glue	93	93	93
Dispersion glue	6	6	6
Hot glue	1	1	1

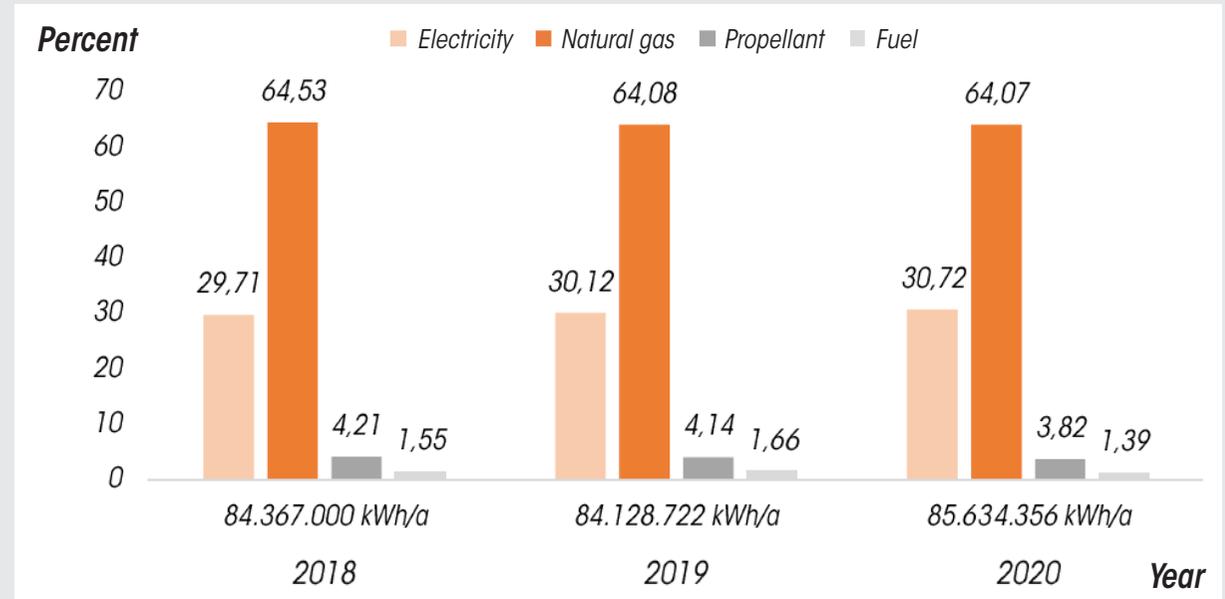
Energy

In terms of the energy consumption of the entire Panther Group, particularly, we look at the energy sources of electricity, natural gas/propellant and fuel. The values vary depending on the plant and its specialisations, as well as services and the conditions associated with them, since, for example, a corrugated board plant with a corrugator requires more power than a pure further processing operation. However, the waste heat from a corrugator and the corrugated board produced can be used specifically in these plants in order to save energy costs for building heating.

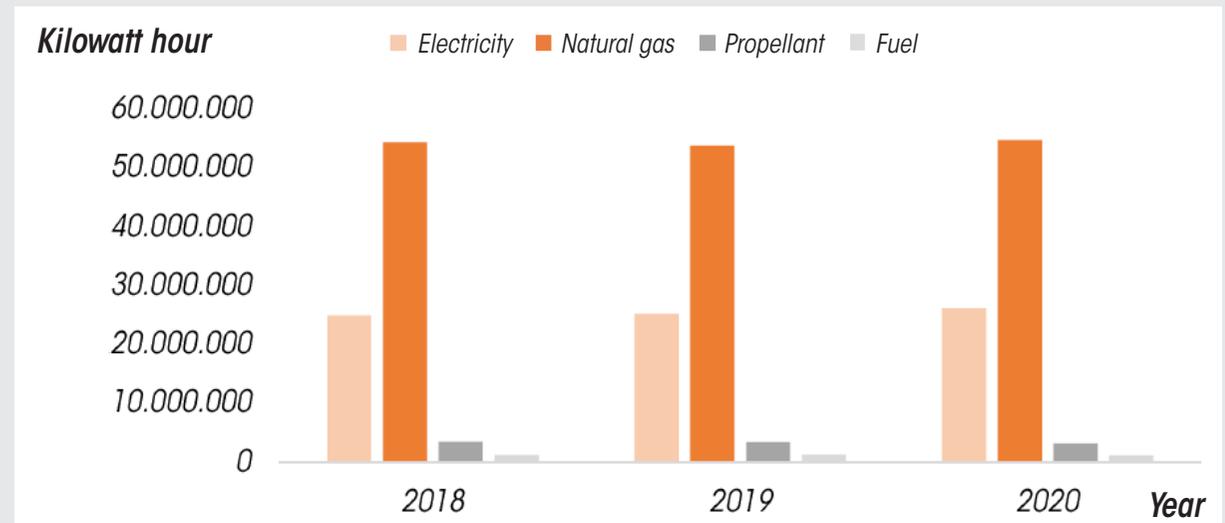
Within our certified energy management system, we continuously measure and monitor our energy consumption. Using these results, we assess our energy efficiency and consistently transform our findings into measures. We plan strategically and operationally, set ourselves targets and monitor their achievement. We act in case of deviations and identify potential for improvement.

The entire energy consumption is optimised by continuous and consistent analysis and evaluation.

Energy consumption (kWh/a) and the respective amounts of energy sources in percent:



Actual consumption in kilowatt hours:



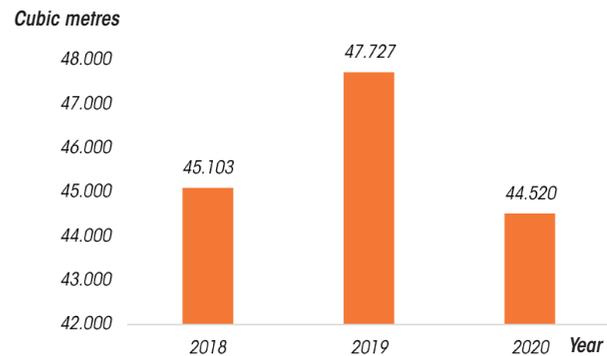
We do not use heating oil or coal at any of our sites.



Water

As a matter of principle, we differentiate between fresh water, process water and waste water. Approximately 35% of the total water consumption is used for glue production, another 35% for cleaning inking units and printing plates and the rest is sanitary waste water.

Water consumption in cubic metres per year:



Waste

A breakdown into hazardous and non-hazardous waste is carried out, with hazardous waste accounting for less than 2% of total waste generation.

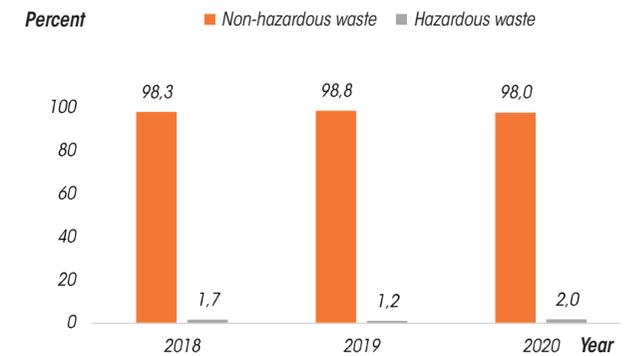
Hazardous waste is disposed of exclusively by specialist waste disposal companies and includes, for example:

- Waste from oil and water separators
- Machine, gear and lubricating oils
- Lighting
- Empty spray cans
- Glue waste

Technology-induced paper residues from the production of corrugated board are pressed into bales and completely reused in paper mills for the production of new containerboard. As a result, our corrugated board product returns to circulation after use and is once again an essential raw material for paper production. Our machines are state-of-the-art and ensure that as little paper residue as possible is produced and that it finds its way straight back into recycling. From an economic point of view, trimming must also be kept to a minimum.

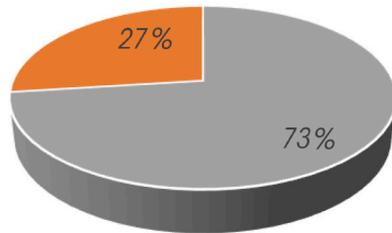
Other wastes, such as wood or metal (paint cans etc.), are separated and disposed of in accordance with legal requirements.

Non-hazardous and hazardous waste in percent:



Social issues

Based on our continuous growth strategy, the number of employees in the Group is increasing, so that in 2020, including all employments, around 1,300 employees work at Panther, of which 67% are employed in industrial roles and 33% in commercial roles. The ratio of males and females employed is as follows:



■ Male ♂: ■ Female ♀:

Health is paramount to us and we always want to provide a safe and health-promoting environment for our employees. In 2020, we only had eight commuting-related accidents and 40 accidents and thus only a total of 48 reportable accidents. In this context, mention should also be made of the 44 safety officers and 171 first responders.

In this reporting year, the number of apprentices lies at a total of 126. The total expenditure for training and further education is 3.2 million euros.

The son of the company's founder, Fritz Landmann, set up the Fritz Landmann Foundation in Hamburg at the beginning of the 1970s. Since then, the foundation has supported training and professional development in the paper processing and paper production industry. To this day, various institutions throughout Germany are supported with more than 11 million euros.

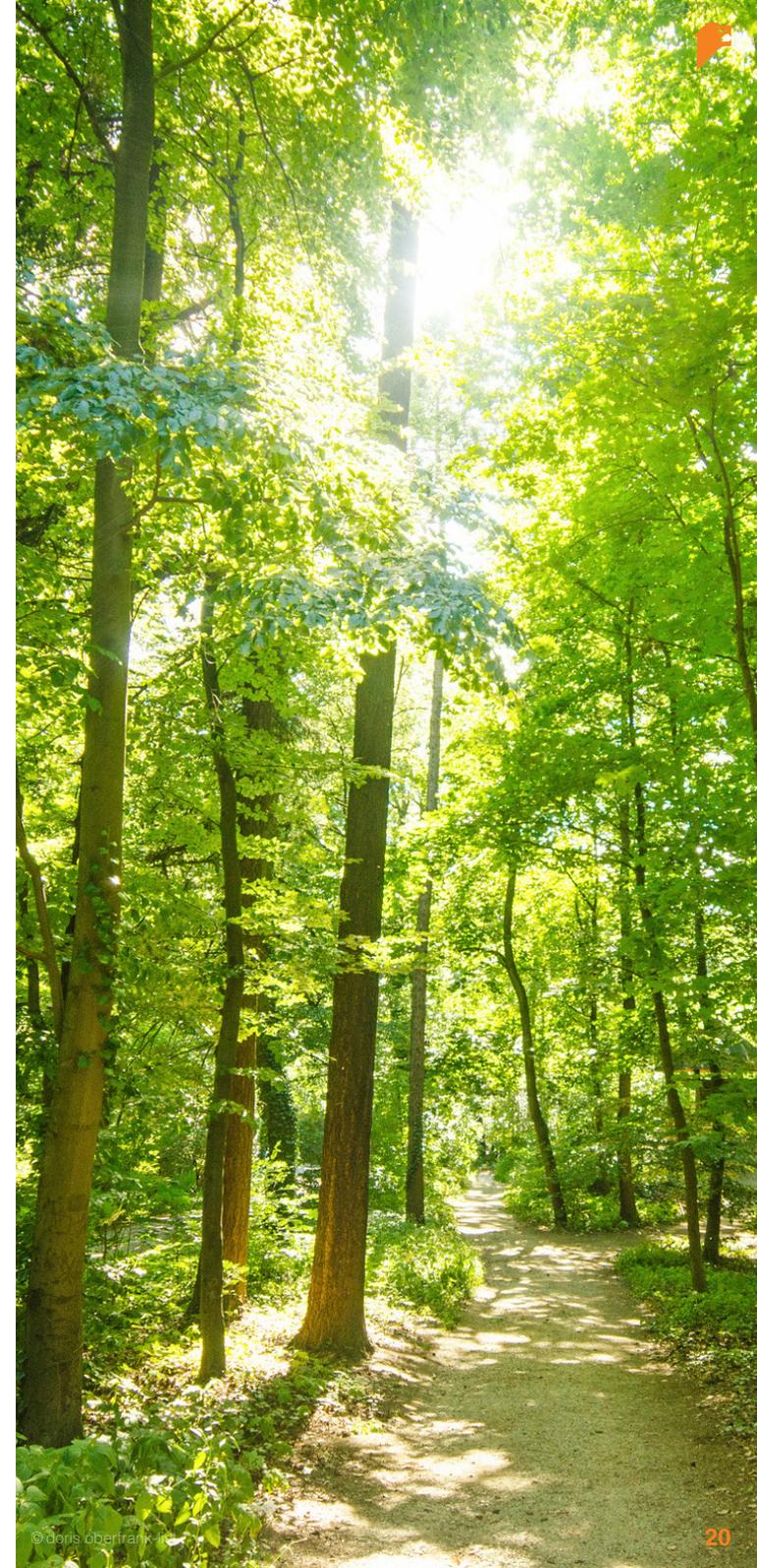


Carbon footprint

CO₂ emissions are greenhouse gas emissions, mainly carbon dioxide (CO₂), methane (CH₄) and water vapour (H₂O). These emissions make an additional contribution to the natural greenhouse gas effect and contribute to global warming. For the Panther Group, this means that the impact of corrugated board packaging on the entire production chain, i.e. from raw material production, corrugated board production and processing, right through to delivery to our customers takes into account emissions of fossil fuels (oil, gas, wood or coal) and biogenic greenhouse gases (for example the incineration of biomass) and their degradation, must be considered. What is ecologically positive is that corrugated board is based on the renewable raw material wood, from which paper is made. This means that our industry is taking advantage of the forests' ability to store CO₂ in large quantities. The recycling of used packaging and displays to produce new paper and board further delays the return of CO₂ to the atmosphere.

At the Panther Group the following main relevant drivers have been identified:

- Raw materials and auxiliary materials: mainly paper (produced from pulp, primarily waste paper and wood pulp)
- Energy: Gas and electricity
- Waste: Production waste/other waste
- Transport & Logistics: Road (freight)



The term „carbon footprint“, which has become established in recent years, can theoretically be calculated using a certain methodology based on a number of factors. For this purpose, the operational system limits of the emission sources, which are differentiated into three scopes, are to be used:

Scope 1

(Direct allocation: controllable)

- Heat (gas, vapour, propellants)
- Vehicle fleet (company cars)
- Refrigerants/cooling agents (air conditioning systems)

Scope 2

(Direct allocation: controllable: energy supply)

- Electricity
- District heating/cooling

Scope 3

(indirect allocation: non-controllable)

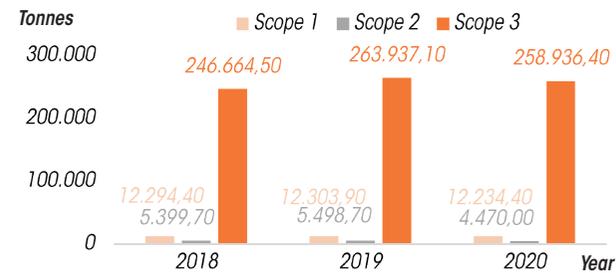
- Upstream chain (direct and indirect emissions from upstream process chains) heating/cooling
- Employees journeys
- Upstream chain (direct and indirect emissions from upstream process chains) electricity
- Upstream chain (direct and indirect emissions from upstream process chains) motor fuels
- Flights
- Stationery
- Rental and private cars
- Train journeys

With regard to these scopes, the requirements of the GHG (Greenhouse Gas) Protocol developed and recognised by the World Resource Institute in Geneva must be observed. Accordingly, the reporting of CO₂ emissions is mandatory in Scope 1 and 2, but voluntary in Scope 3. The consequence of this is that different factors can be used for the calculation.

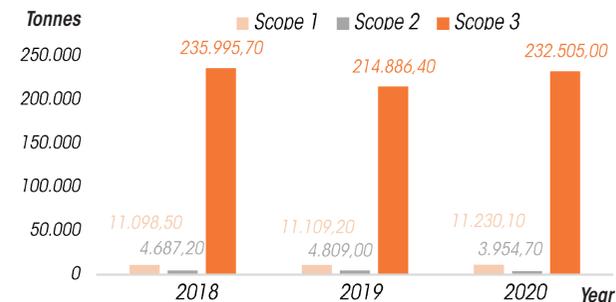
Panther analyses the emission sources and always checks for substitution and reduction and makes a targeted effort to utilise the reduction potential along the entire value chain. For Scope 1 and 2, the entire group of companies was able to reduce CO₂ emissions by 28% in the period under review 2018-2020.

The exact CO₂ consumption of the entire Panther Group, as well as the individual business areas, shows that the share of Scope 3 in the total CO₂ emissions is between 83% and 95% and thus shows the highest value in each case.

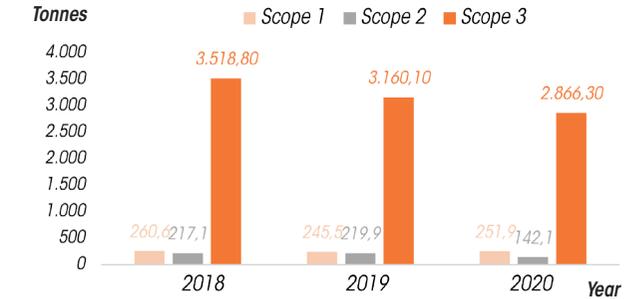
CO₂-causation of the Panther Group in tonnes:



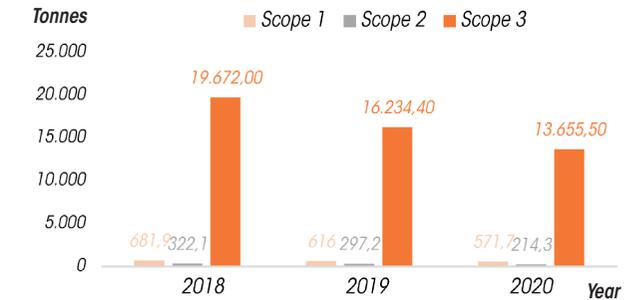
CO₂-causation for corrugated board in tonnes per year:



CO₂-causation for displays in tonnes per year:



CO₂-consumption for printing in tonnes per year:



Targets and measures – Climate-neutral company

Taking the respective circumstances of individual locations into account, measures and targets have been defined for the year 2030. These are in line with German and European climate and environmental policy.

We have defined relevant fields of action for the Panther Group based on our business activities, including following the 17 Sustainable Development Goals for a sustainable development of all sustainability pillars, ecology, economy and social issues, as well as at national, regional and local level (<https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>). The focus is on the identification, reduction, avoidance and substitution of emissions-intensive drivers, materials, or the like, whereby all upstream and downstream activities and processes along the value chain are considered.



Consequently, overall targets and sub-goals have been defined that point us in the right direction to make further progress as well as to recognise development potential. Our overall targets include a responsible approach to our business activities, active climate protection and improvement of the carbon footprint (formed from the sum of the sub-goals and their interactions), comprehensive raw material management and targeted substitution of plastic packaging with corrugated board packaging.

Our sub-goals are divided into components such as the selection of raw, auxiliary and operating materials with regard to environmentally conscious criteria, reductions in weight per unit area for minimum material use with maximum performance, the purchase of CO₂-neutral electricity, the reduction of specific fresh water and waste water requirements as well as the reduction of fuel consumption (vehicle fleet, company cars).

Measures

Based on the overall targets and sub-goals, specific quantifiable and verifiable measures will be derived and will ultimately be evaluated with the achieved degree of target attainment. The main focus is on measures in production's core processes. In principle, it is important for all areas to design supply chains in a sustainable manner, i.e. to control supplier management whilst also taking into account aspects relevant to environmental protection.

Raw materials

1. Minimal material use through the precise design of sustainable packaging solutions
2. Optimisation of the types of corrugated board
3. Use of lightweight papers
4. Use of grass paper

Energy

5. Reduction of the specific energy requirements through investments in new, cutting-edge machines with energy-efficient features or modernisation of the subcomponents
6. Use of CO₂-neutral power
7. Substitution/reduction of fluorinated gases (F-gases) for refrigerants/cooling agents (air conditioning systems), which are differentiated into partially fluorinated hydrocarbons, fully fluorinated and perfluorinated hydrocarbons as well as sulphur hexafluoride and only decompose slowly in the atmosphere
8. Heat recovery in production

Water

9. Optimisation of printing ink sequences
10. Continuous monitoring of water consumption

Transport & Logistics

11. Gradual conversion of vehicle fleet (company cars, forklifts) to hybrid/electromobility
12. Optimal utilisation of loading capacities and capacity usage through efficient packaging and displays
13. Intelligent distribution/transport networks and route planning

Waste

14. Complete return of production residues into the cycle: Adjustment the machine settings for as little paper waste as possible, i.e. optimising the technologically defined trim in corrugated board production and further processing by using different paper standard widths, nesting of the sheets using the maximum possible working widths of the further processing machines
15. Compliance with legal requirements (applicable in Germany) for other waste: Proper separation and disposal



Climate-neutral company

We are aware that in order to carry out our business activities, we cannot completely prevent the generation of greenhouse gas emissions during the production of corrugated packaging, displays or printed products. Therefore, as an emitter of CO₂, we use the widespread term „climate neutrality“ as a guiding principle. We always ensure that our actions are carried out in a way that conserves resources and put our focus primarily on the targeted reduction and substitution of CO₂ emissions.

We go one step further and also offset the CO₂ emissions we generate. For this purpose, we have calculated the CO₂ emissions caused by our production activities for the year 2020 in order to compensate for them in a targeted manner. We are doing this with Climate Partner, a well-known provider of climate protection projects certified to the highest international standard. We support a recognised climate protection project in the field of wind energy, as evidenced by the document below.

As the Panther Group is a climate-neutral company, we indicate this on customer request.



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