



Palm



**SUSTAINABILITY
REPORT 2023**

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PREFACE

Sustainable paper is our passion! We are taking great strides towards an even more sustainable and climate-neutral future. 2023 was characterised by a large number of measures and investments in sustainable production processes, high energy efficiency and the highest possible level of occupational health and safety for our employees.

We also achieved a number of milestones in 2023:

- We joined the SBTi initiative and are now SBTi-committed.
- We made good progress towards our set sustainability targets.
- We were one of the three finalists for the 2024 German Sustainability Award in the category of paper, cartons and cardboard, which was awarded in November 2023.
- We fully implemented the extensive requirements of the German Supply Chain Due Diligence Act, which we have been governed by since 1st January 2023.

In addition to these developments in our family business, our products themselves have always been intrinsically sustainable and 100 % recyclable. We produce our paper exclusively from 100 % waste paper that has been carefully selected. As an industry and as a company, we are therefore part of a perfectly

functioning cycle. The European Commission has also recognised the outstanding ecological profile of our corrugated base paper and corrugated cardboard packaging products within the framework of the new European Union Packaging and Packaging Waste Regulation (PPWR), and has fully exempted them from the planned reuse quotas for packaging.

In addition to modern production facilities, our five paper mills are equipped with highly efficient gas and steam power plants. At our site in Wörth, we also operate two residual material boilers that reduce our gas consumption and our CO₂ emissions, and ensure that our own residual materials generate clean energy through their thermal utilisation. The gas turbines in our German paper mills are also H₂-ready. For the green transformation, however, we need the infrastructure and competitive prices for green hydrogen – we believe the government has a duty to achieve this.

As a pioneer when it comes to sustainability, we will not rest on our laurels. We will continue to consistently pursue our ambitious sustainability strategy in the future by means of an extensive investment programme at our plants. This allows us to take the path towards climate neutrality together with our consumers, employees, suppliers and business partners.

Yours sincerely,
Dr Marina Palm and Dr Wolfgang Palm




WHO WE ARE

ONE FAMILY. ONE COMPANY. ONE VISION.

For over 150 years, PALM has stood for quality, sustainability and progress. These three characteristics can be found in every phase of the company's history, and have therefore been an essential part of the company's sustainable success for five generations.

Since the company was founded in 1872, PALM has been a family-owned and family-managed business which has produced paper using only recycled materials and environmentally friendly processes from the very beginning. As a medium-sized family business conscious of its traditions, well-grounded values of reliability, trust and judgement are firmly embedded in our DNA. PALM operates five paper mills in Germany, France and the

United Kingdom, where it produces corrugated base papers and graphic papers from 100 % waste paper. The waste paper required for this is procured by our Recycling division. The Packaging division produces customised corrugated cardboard packaging in 29 corrugated cardboard plants in Germany, France, Italy, the Netherlands and Switzerland.

Our three business operations



PALM AT A GLANCE

- Headquarters: Aalen
- Paper
- Packaging
- Recycling

4,200 Employees
2.0 b euros Turnover
670,000 tonnes Corrugated cardboard packaging

2.6 m
tonnes of paper production

HOW WE WORK

CLOSE TO THE CUSTOMER AND THE PRODUCT

Our work at PALM is characterised by trusting collaboration with our customers and business partners, in conjunction with ongoing new and sustainable developments and investments.

PALM has developed into one of the leading companies in the European paper and packaging industry. Our company is characterised here by high product quality, reliable support and innovative advances in sustainable production processes. Just as important is a principle that has been firmly embedded from the very beginning – customer focus that is practised on a daily basis.

Our dealings with our customers are characterised by trust, openness, honesty and fairness. This is not only a matter of course but a critical building block of our success. This approach leads to long-term partnerships that offer our customers added value in addition to product and service quality. Customers can be assured that, with PALM, they have a pioneer in ecologically sustainable paper and packaging by their side.

Our papers are intrinsically sustainable, as they are produced entirely from selected waste paper. Our business model is also

fundamentally sustainable, because our products – corrugated base papers, graphic papers and corrugated cardboard packaging – are 100 % recyclable. They are therefore part of a resource-friendly circular economy. All our papers are certified to the applicable FSC (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification Schemes) standards.

In 1984, we succeeded in becoming the first German paper mill to produce high-quality newsprint from 100 % waste paper. Our PALM newsprint was awarded the "Blue Angel" for this pioneering achievement. The "Blue Angel" is the first and best-known environmental seal in the world, and recognises companies for their commitment to environmental protection. Since 1978, an independent team of experts has been deciding on standards for environmentally friendly products and services according to defined criteria.

At our paper mills in Aalen (Germany), Wörth am Rhein (Germany) and Descartes (France), we produce corrugated base paper in the following grades: Wellenstoff, Testliner (1, 2 and 3), Palm Flute (HP 1, HP 2 and HP 3), Palm Topliner, Palm Twin and Palm Kraft. When using our corrugated base papers, lower basis weights can increasingly be relied upon thanks to the excellent paper qualities in terms of sustainability. Lower basis weights save resources in the subsequent production steps and during use. With our new paper machine, PM 5, PALM ranks as a pioneer in the production of corrugated base papers with low basis weights at the same time as high strength values. Thanks to the outstanding performance of our PM 5, PALM is able to produce corrugated base paper with a remarkably low basis weight of 60 g/m², which puts us in a unique position worldwide. This innovation marks a significant advance in the paper industry and underlines PALM's commitment to sustainability.

We produce graphic papers at our paper mills in Eltmann (Germany) and King's Lynn (UK). These include our proven Palm News standard newsprint quality as well as the improved paper qualities and magazine papers Palm Print, Palm Top and Palm Diamond. We manufacture our improved paper qualities on our PM 7 in King's Lynn. We invested in a new calender for this in 2020, in order to fulfil the special requirements in terms of gloss and smoothness. For PM 7 in King's Lynn, 2023 was a record year for improved paper qualities – never before has so much improved paper been produced in one year. The paper grades we are able to offer are of excellent quality, as an alternative to other high-quality magazine paper grades. For example, the Palm Diamond SC paper offers outstanding values, even though it is produced from 100 % waste paper.

Our graphic paper product portfolio has been supplemented with the Palm Cover speciality paper since 2023. Palm Cover is successfully used in the area of paper tablecloths and place mats, and is also made from 100 % waste paper. Palm Cover is particularly robust and water-resistant, and can withstand even heavy soiling. This allows us to reduce waste and protect the environment while offering our customers a high-quality product. Palm Cover is ideal for the flexographic printing process, and individual finishing requirements such as lamination and embossing can also be carried out. Palm Cover can also be used in other applications that require improved water resistance.



Our sustainable Palm Cover product is suitable for paper tablecloths, for example.



Our papers are certified according to various standards.



WHY WE TAKE RULES SERIOUSLY

COMPLIANCE AS THE BASIS OF OUR CORPORATE SUCCESS

As an international company, PALM is acutely aware of its responsibility and due diligence obligations with regard to people and nature. Human rights must be reinforced, and human rights violations and environmental offences must be prevented under all circumstances.

In order to satisfy this requirement, PALM aligns its corporate behaviour with the following overarching standards and guidelines:

- Principles of the UN Global Compact (UNGC)
- United Nations Universal Declaration of Human Rights
- Guidelines on children's rights and corporate behaviour (UN Convention on the Rights of the Child)
- Declaration of the International Labour Organization (ILO) on labour and social standards, including the non-discriminatory equal treatment of all employees and the commitment that the working conditions do not endanger occupational health and safety
- Use of mercury (in accordance with the Minamata Convention)
- Use of persistent organic pollutants (in accordance with the Convention on Persistent Organic Pollutants)
- Shipment of waste (in accordance with the Basel Convention)

PALM is also committed to the values of the FSC® and PEFC for the protection of forests. Today, all the paper used by our corrugated cardboard plants is already certified in accordance with the applicable FSC and PEFC standards, and therefore fulfils the criteria of sustainable forestry.

At the same time, a number of legal regulations apply to PALM. Whether occupational health and safety, data protection, the German General Act on Equal Treatment, immission control or hazardous goods – at all PALM sites, numerous expert company representatives ensure that legal requirements are complied with and consistently implemented. Each company representative is specially trained for this and receives access to the VISTRA legal database. VISTRA provides regular information about relevant changes in the current legal situation.

PALM also relies on the support of its management systems for quality, the environment, occupational safety, energy and food safety in order to implement legal requirements and voluntary provisions. Every management system sets clear requirements of the structures, processes and roles of an organisation, and thus systematically ensures its continuous further development and improvement.

"Regardless of whether it's a legal requirement or a voluntary commitment, PALM prioritises legal conformity and compliance."

Martin Fähnle
Data protection officer

There are also clear requirements for handling hazardous substances. All chemical additives needed for paper production go through a multi-stage approval and release process before being ordered. During the approval, they are checked for their environmental compatibility, food safety and possible hazards for the health of our employees.

Each management system therefore contributes to the safety of our products and the health and safety of our customers, employees and other business partners. The safety of our packaging papers for contact with food is also regularly checked and confirmed by the ISEGA declaration of clearance.



Renaturalised area and newly created wildflower meadow on the mill premises in Aalen.

In addition to the overarching standards and guidelines that we follow and the general legal requirements, we have also defined our own guidelines and principles of conduct, which form the basis of all our activities. It is important to us here that our employees know and respect the principles of ecological, social and ethical behaviour. We expect the same from our suppliers, service providers and other business partners. We have defined the following guidelines for working with each other:

- PALM Code of Conduct
- PALM policy statement (SCDDA)
- Data protection directive
- Information security directive
- General information sheet
German General Act on Equal Treatment
- Whistleblower protection directive
- Occupational health and safety directive

To ensure compliance with our guidelines and rules of conduct, PALM has taken measures including the setting up of a whistleblower portal. It enables people (employees and external third parties) to draw attention to human rights risks and environmental risks, and to report violations of human rights or environmental obligations as well as general unlawful behaviour. Information can be submitted both transparently and anonymously. The identity of the whistleblower is therefore protected at all times. The individuals appointed by PALM to process the information on an impartial basis are not bound by directives and are obliged to maintain confidentiality. In 2023, a total of seven reports were received in the five paper mills and 29 corrugated cardboard plants, four of which were classified as "general misconduct", but which proved to be

unfounded when followed up and could not be confirmed. Three cases led to an improvement in data protection. The data of our customers, employees, suppliers and other external parties was protected at all times. No breaches of environmental law, human rights violations, anti-competitive behaviour or corruption have been identified and reported since the whistleblower portal was introduced at PALM.

PALM counts on sustainable business relationships and supply chains

As a family business, our measures for ecologically and socially responsible corporate governance extend far beyond the company itself, and cover the entire supply chain. This is why we not only require all our suppliers to comply with the specifications and guidelines set by us, but also to regularly check their compliance. Since 2023, we have also been subject to the German Supply Chain Due Diligence Act (SCDDA), which requires compliance with human rights due diligence obligations in our own business operations and along the supply chain.

PALM has implemented a risk management system that is essentially based on the following pillars in order to comply with all legal requirements under the SCDDA:

- Regular and ad hoc risk analyses in our own business operations
- Regular and ad hoc risk analyses of direct suppliers
- Ad hoc risk analyses of indirect suppliers
- PALM complaints channel

PALM has formed a cross-functional team for the implementation and monitoring of PALM risk management. This team consists of the management board, the reporting office representatives, the PALM human rights officers and employees from the areas of sustainability, purchasing, logistics, human resources and data protection.

It is the duty of the PALM human rights officers to monitor the risk management system in place at PALM and, where necessary, to initiate improvements and remedial measures. The SCDDA status meetings, which take place once a quarter, are an important tool in this regard. They form the framework for regularly reviewing the effectiveness of PALM risk management. This brings together representatives from

all areas concerned. The results of the risk analyses as well as open issues, measures and complaints are reviewed, and they are discussed and evaluated in the presence of the management board. If necessary, further measures are also decided.

PALM relies on the support of a software solution for risk analyses in its own business operations and in the supply chain. Suppliers are categorised according to their level of risk. The abstract risk potential, i.e. the supplier's country- and sector-specific risk, is considered first, using indicators such as the Modern Slavery Index and the EPI Environmental Health Index.

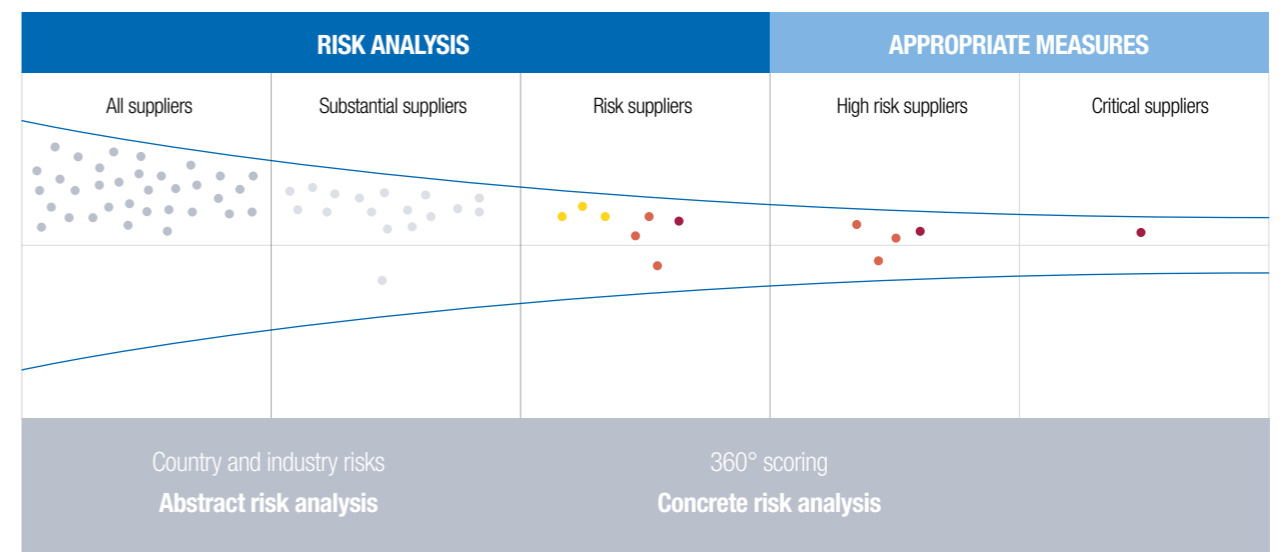
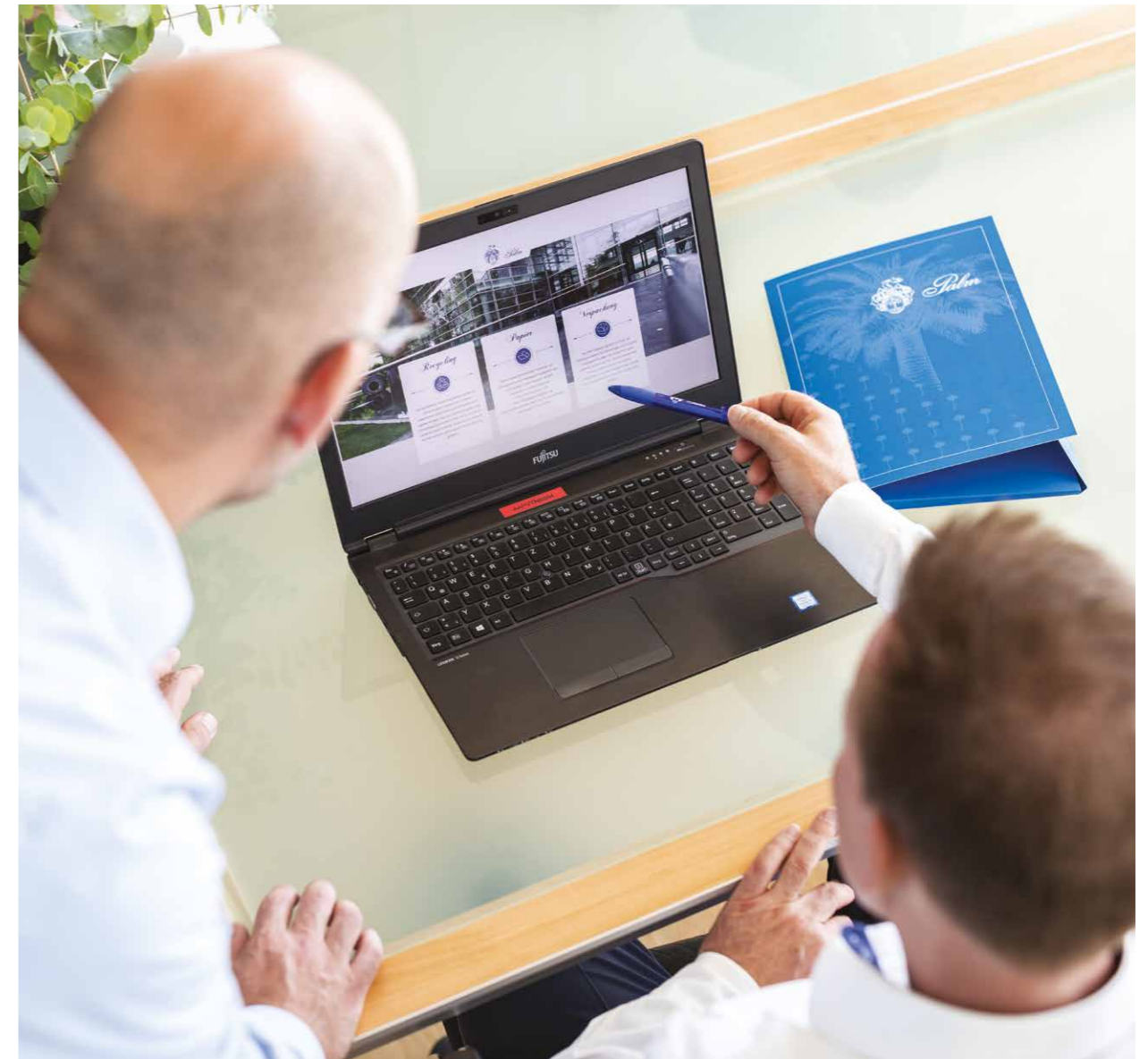
Suppliers for whom an increased potential risk is identified are then analysed in greater depth. An artificial intelligence program scans for anomalies in millions of online sources, in numerous languages. In total, the web screening identifies more than 140 environmental and human rights-related event types, including child labour, forced and compulsory labour, corruption, unethical behaviour, air, water and environmental pollution or the improper disposal of waste. In addition to web screening, sources such as supplier self-declarations and information provided via the PALM reporting portal are also taken into account in the risk assessment (360-degree score).

PALM uses the findings to determine specific priority risks and develop appropriate preventive or remedial measures. These are implemented and tracked by the respective specialist departments. The measures include, for example, reviewing the report in direct communication with the supplier, making suppliers aware of human rights risks and environmental risks, and ensuring that the supplier recognises the PALM Code of Conduct. In 2023, PALM devised and delivered measures in a total of over 30 cases.

The following applies to new suppliers: Before a new supplier is added to the PALM supplier pool, they first undergo an extensive software-supported onboarding process. In addition to general information on contact, payment and delivery conditions, specific sustainability aspects such as certifications in the areas of quality, the environment and occupational safety are also requested. Written acknowledgement of our PALM Code of Conduct is also mandatory.

"The PALM Code of Conduct regulates the non-negotiable minimum standards, guidelines and principles for sustainable procurement required by the PALM Group, taking into account social responsibility and comprehensive respect for human rights and, in particular, children's rights."

Markus Weinzierl
Purchasing Manager



● Medium Risk ● High Risk ● Red Flag Risk

PALM uses abstract and concrete risk analyses to identify the risk level of its suppliers and take appropriate measures.

PALM Certificates

The implementation of numerous regulations guarantees that we work according to the requirements of our customers, suppliers and legislation. The highest priority is given to compliance with valid legal and safety regulations and the avoidance of environmental impacts.



Quality Management
ISO 9001



Environmental Management
ISO 14001



Health and Safety Management
ISO 45001



FSC®



EU Ecolabel DE/011/114



PEFC



Blue Angel



Carbon Footprint
ISO 14064 and ISO 14067



Energy Management
ISO 50001



Food Safety System FSSC 22000



ISEGA Clearance Certificate



BRCGS



A list of all certificates granted for our plants can be found on our website:

Recycling division



www.palm.de/en/recycling/certifications

Paper division



www.palm.de/en/paper/certifications

Packaging division



www.palm.de/en/packaging/certifications

HOW WE WORK SUSTAINABLY TO ACHIEVE IMPROVEMENTS

PALM PRACTISES SUSTAINABILITY

PALM's corporate strategy has always been based on the principle of sustainability. Environmental awareness, social responsibility and good corporate governance (ESG) are the drivers of our actions and are taken into account in all our decisions. The PALM sustainability strategy forms the framework for this.

The basis of our sustainability strategy is the materiality analysis. With this, we want to ensure that we focus on the topics and fields of action that are most important for PALM. Most recently, in 2022, PALM defined the topics relevant to it in a team centred around the management board.

Prioritisation was based here on the 17 Sustainable Development Goals (SDG), which were passed in 2015 as part of the "2030 Agenda" of the United Nations. In our materiality analysis in 2022, we identified six out of the total of seventeen SDGs as particularly important for us, and

defined them as priority fields of action. We have set ourselves concrete, measurable targets for each field of action:



CO₂ reduction (SDG 13):

We want to reduce the emissions from our production and reduce our carbon footprint. We are therefore constantly working on making our processes more efficient, and consequently lower in emissions. At the same time, PALM is investing in new, environmentally friendly technologies and paving the way for a climate-neutral future with green hydrogen (see p. 27).



Water consumption (SDG 6):

Paper production is water-intensive. However, with the help of practically closed process water circuits, we have already been able to significantly reduce the need for fresh water. In addition, numerous projects ensure a further steady reduction in our water consumption (see pp. 32–33).



Reduction of basis weights (SDG 12):

PALM's ultralight packaging paper uCCM® (Ultralight Corrugated Case Material) opens up completely new fields of application for the use of corrugated cardboard packaging. This saves raw materials, energy and water (see pp. 25–26).



Occupational safety (SDG 3 and SDG 8):

"Safety first" – under this motto, numerous measures have been introduced to improve the occupational health and safety of our employees (see pp. 40–41).



Trainee rate (SDG 4):

Demographic change and a shortage of skilled workers are also increasingly shaping the paper and packaging sector. PALM offers its trainees, students and interns excellent development opportunities and benefits (see pp. 44–47).



The new paper mill at PALM's headquarters in Aalen.

In 2023, in order to further develop our PALM materiality analysis, we supplemented the project team from 2022 with additional experts from the areas of energy, human resources, finance, sustainability, communication and purchasing. This team is preparing for sustainability reporting in accordance with CSRD that will be legally binding from 2025, including the expansion of our approach to include the principle of double materiality. In doing so, we consider the impact of our business activities on sustainability issues from an inside-out perspective ("impact materiality") and the impact of sustainability issues on our business model and earnings situation from an outside-in perspective ("financial materiality").

The needs and interests of our internal and external stakeholders are an integral part of the double materiality analysis, which we will complete in 2024. Irrespective of this, we are sticking to our six priority fields of action defined in 2022, and consistently pursuing our targets as part of the PALM sustainability strategy. This requires the commitment of all employees. The PALM sustainability strategy is firmly embedded in all areas and levels of the PALM Group.

The department heads pass on the overarching objectives to the employees and ensure that they are implemented. The input of our employees, who are in direct communication with external stakeholders, contributes significantly to the ongoing further development of PALM's sustainability strategy.

Our representatives play an important role in the implementation of the PALM sustainability strategy. These include the management representatives of our ISO-certified management systems, the reporting office representatives of the PALM complaints channel and the PALM human rights officers. At the same time, our PALM IT provides the necessary IT infrastructure. Ultimately, all employees contribute to the success of the PALM sustainability strategy (see next page).



PALM is SBTi-committed

PALM has committed itself to the Science Based Target initiative (SBTi) for compliance with the 1.5 degree target in accordance with the Paris Agreement. Our SBTi commitment is a further step in our adopted sustainability strategy with the clear target of decarbonisation.



Embedding the PALM sustainability strategy in all areas of the PALM Group



Management

Conception and governance of the PALM sustainability strategy.



Finance

Direct contact for banks and financial service providers, and assessment of financial materiality in accordance with CSRD.



Department heads

Communication of the PALM sustainability strategy, targets and measures to employees in the respective departments.



IT

Securing all IT-supported sustainability management processes (incl. data protection).



Sustainability team

Coordinator and general contact for all sustainability issues.



Reporting office representatives

Processing of notifications in the PALM reporting office portal.



Sales

Direct contact for our customers in all matters, including with regard to PALM's sustainability activities.



Human rights officers

Monitoring of the PALM risk management system to ensure compliance with our due diligence obligations, and initiating of improvements and suggested corrections in our own business operations and in the supply chain.



Raw material procurement, purchasing and logistics

Monitoring of our sustainable supply chains and implementing of measures to continuously improve the sustainability of supply chains.



Management representatives

Advancing of continuous improvements and further development of all processes, including in the areas of the environment, occupational safety, energy, food safety and quality.



Marketing, communication and social media

Communicating our PALM sustainability activities internally and externally.



Other stakeholders

Valuable input for the further development of our sustainability strategy and our sustainability activities.



PALM's sustainability goals

All percentages represent the change compared to the base year 2022.

Key action area	Goal	Measured variable	Actual	Targets	
			2023	2035	2045
	Reduction of CO ₂ emissions (Scope 1 and 2)	Paper: CO ₂ emissions per tonne of paper generated	-2 %	-30 %	-90 %
		Packaging: CO ₂ emissions per 1,000 m ² of corrugated cardboard *	+2 %	-30 %	-90 %
	Reduction of water consumption	Amount of fresh water per tonne of paper generated	0 %	-15 %	-30 %
	Reduction of basis weight through optimised packaging solutions	Average basis weight in g/m ²	-0.1 %	-3 %	-6 %
 	Reduction of reportable workplace accidents	Reportable workplace accidents per year	-17 %	No workplace accidents	
	Trainee rate above industry level	Percentage of trainees in the overall workforce	Above industry level	Above industry level	

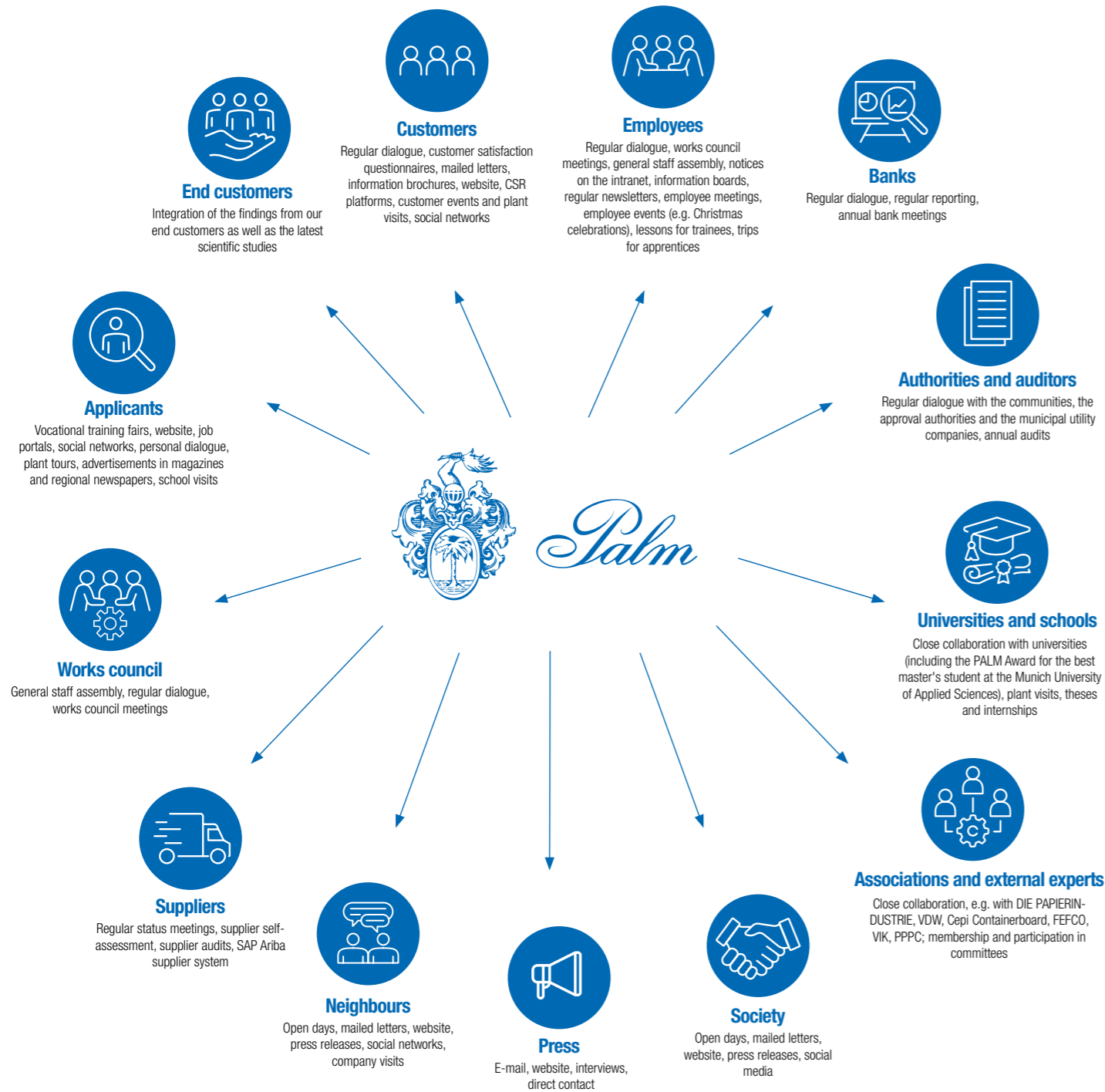
* Due to lower plant utilisation as a result of a sector-wide decline in the market for corrugated cardboard packaging, there was a slight increase in specific CO₂ emissions in the PALM Packaging division in 2023.

Sustainable dialogue with stakeholders: Working together for a future-oriented partnership

It is only natural for PALM to involve all interested parties in the further development and implementation of our sustainability strategy. Internal and external stakeholders have different interests and expectations, which we take very

seriously. We work here with a network of "interested parties", which we check every year and adapt if needed, working together across sites. During this process, the requirements and expectations of all our stakeholders – those

affected by our business activities and those with an interest in us – are recorded and assessed.



Students from the Munich University of Applied Sciences visit Papierfabrik Palm. The students are currently studying for a bachelor's or master's degree in "Biofibres and Paper" or "Paper Technology".

Through constant communication with our internal and external stakeholders, we maintain a consistent dialogue on current topics and we continuously assess, where applicable, whether adaptations to our sustainability strategy are necessary. For example, we hold regular discussions with municipal decision-makers at our sites as well as with representatives from the public and the political sphere. We also maintain

a lively dialogue on current requirements with our numerous suppliers via various integrated systems. Working with young talent is also very important to us. This is why we not only train around 170 trainees in the PALM Group but also present the PALM Award every year to the best master's student on the "Paper Technology" degree programme at the Munich University of Applied Sciences. We also continuously record a large

number of key figures and performance indicators. This comparable data is part of the reporting and auditing of our management systems and is used to steer the company. With this information, we are always up to date and can act proactively if necessary.



Waste paper delivered to the mill premises of Papierfabrik Palm in Eltmann.

HOW WE CARE FOR THE ENVIRONMENT

WE STAND FOR A CIRCULAR ECONOMY.

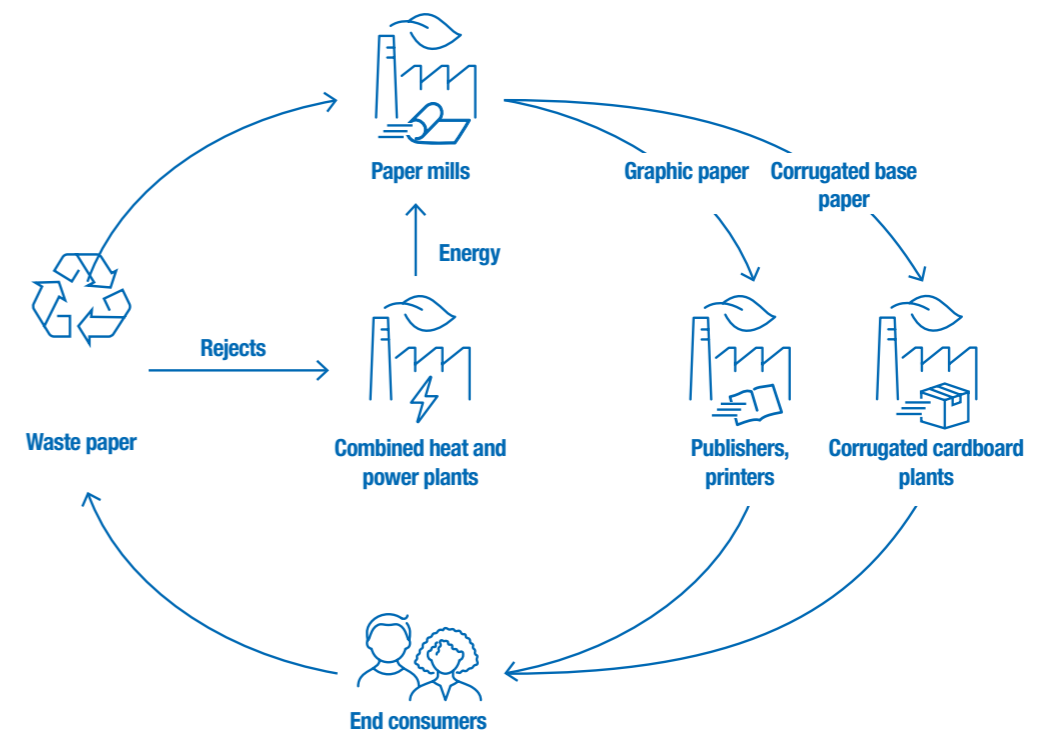
The protection of the environment, the efficient use of resources and the reduction of our carbon footprint along the entire value added chain are key targets of our sustainability strategy.

In view of the fact that the paper industry is comparatively one of the most energy-intensive and water-intensive sectors, we take our responsibility towards the environment particularly seriously. This is why we are continuously making pioneering investments and developing innovations that put us at the forefront of environmental and climate protection in our industry.

All PALM papers – corrugated base paper and graphic paper – are produced from **100 % waste paper**. PALM was one of the world's first manufacturers to make enormous development efforts in the 1980s to develop high-quality newsprint from 100 % waste paper. Naturally, all our products can also be completely recycled.

We are continuously further developing our product range, in order to be able to offer our customers even more sustainable paper. Three innovations are particularly worth mentioning here. With our **PALM Ultralight Corrugated Case Material (uICCM®)**, we are the only paper producer in Europe to manufacture particularly lightweight packaging papers with a basis weight of up to 60 g/m². Our new PM 5 paper machine in Aalen was specially designed for the production of these particularly lightweight papers.

We can also replace a conventional 100 g/m² corrugating medium with our newly developed **HighPerformance Fluting 85 g/m²**. This allows our customers to use 15 % less paper while fully maintaining the technological values of a conventional 100 g/m² corrugating medium, and leads to a CO₂ reduction of 15 %. Thanks to a special manufacturing process, our newly developed **PALM Kraft** made from 100 % waste paper is very strong, and can therefore be used as a substitute for kraft paper containing fresh fibres in a wide range of applications.



The PALM cycle ensures effective and resource-conserving utilisation of waste paper, energy and other valuable raw materials.

Material and CO₂ savings while maintaining technological values

PALM corrugated base papers with a particularly low basis weight and outstanding strength properties are produced in our new paper mill in Aalen, with its numerous global technological innovations. The newly developed "**Green Pulping**" waste paper pulping technology thus achieves a particularly high fibre yield with a 30 % reduction in fresh water and energy consumption. This reduces the amount of raw materials used and allows strong paper fibres in particular to remain in the process. The "**OptiDry**" drying technology, which is being used for the first time in the production of corrugated base papers, ensures optimised thermal drying of the paper web at PM 5 and increases process stability. Lightweight paper grades can thus be produced efficiently at high production speeds and with low specific energy requirements.

This also includes the PALM **HighPerformance Fluting 85 g/m²** corrugating medium. A combination of various technological factors is required to efficiently produce the HighPerformance Fluting 85 g/m² product. Only through the interaction of these factors can a paper of 85 g/m² be produced that has the strength of a standard market corrugating medium of 100 g/m². First of all, a fibre mat must be created in the optimum formation, and then it must be dried gently and without stress. This is made possible by the Sleeve Roll and OptiDry technological innovations. To further increase the strength, an innovative starch application process is then used on the hard nip sizer, in which the starch penetrates further into the paper web at a higher pressure than with conventional starch application systems. This not only means an above-

average increase in strength, but also allows the natural starch product to be applied more efficiently.

The combination of different technologies enables us to produce particularly lightweight corrugated base paper with excellent strength properties, which allows our customers to save on materials. This means savings in weight, energy and CO₂ along the entire logistics chain – from PM 5 to the corrugated cardboard plant and all the way to the packaging end consumer.

Stability without any fresh fibres

In the production of corrugated cardboard packaging, papers containing fresh fibres are used for certain areas of application in order to give the packaging the necessary stability and strength. With our **PALM Kraft**, we have developed a paper made from 100 % waste paper which, thanks to its high strength, is an ideal substitute for

paper containing fresh fibres. Our PALM Kraft was developed in our paper mills in Wörth and Descartes (France), where a special manufacturing process is used to produce PALM Kraft. PALM Kraft enables the production of particularly stable corrugated cardboard packaging based on waste paper. This means that even

heavy goods can be stacked up safely in packaging. In addition, packaging with PALM Kraft guarantees both an attractive appearance and high quality, providing reliable protection even in damp and wet conditions.

We make light work of packaging

The PALM corrugated base papers with low basis weights are very popular in our own corrugated cardboard plants, among other places.

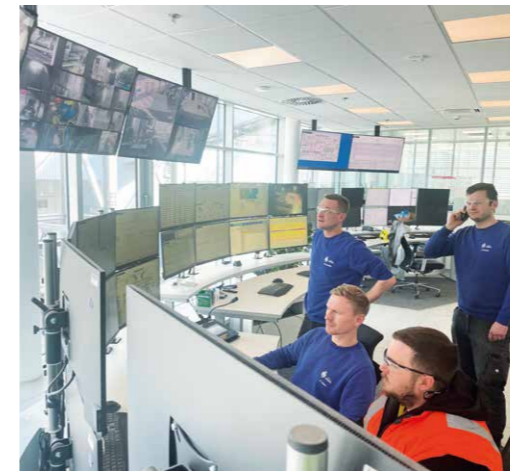
By focusing on technical values in the sale of corrugated cardboard, our Packwell Monheim plant, for example, was able to

switch from the standard 115 g/m² corrugating medium of all corrugated cardboard qualities to PALM HighPerformance Fluting 100 g/m². This means that Packwell will have saved over 300 tonnes of CO₂ in 2023, with the corrugated cardboard maintaining the same technical properties. Nestler Wellpappe in Lahr also achieved

remarkable savings in 2023 by switching from a corrugating medium with a weight of 100 g/m² to the innovative PALM HighPerformance Fluting 85 g/m². This saved a total of around 200 tonnes of CO₂.

When residual materials become valuable substances

Residual materials are valuable substances, and are avoided, reduced, reused or recycled as far as possible at PALM in accordance with the zero-waste principle.



The modernised power plant of Papierfabrik Palm in Wörth with a new control room.

During the treatment of waste paper, various residual materials are produced in the various cleaning stages. In the first step, non-soluble components such as parcel tape, plastic bags and other foreign components that are not waste paper are sorted out. This material, designated as 'rejects', has a very high energy content and is thermally utilised in our waste-to-energy power plant in Wörth. Paper fibres that have already been recycled so many times that they have become too short to be reprocessed (> 25 times) are also sorted out and thermally utilised in Wörth. A third residual material fraction is produced during the manufacture of graphic papers. Here, printing ink and fillers (calcium carbonate and kaolin) are removed from the waste paper in the deinking process. While this material is waste for us, these fillers are an important raw material for the brick industry. The starch-containing process effluents produced from waste paper during paper production can in turn be used to generate energy. These are easily degradable organic

substances that we convert into biogas in the biogas treatment plants at our paper mill sites (see p. 33).

In addition to recycling, PALM also focuses on waste avoidance. For example, transport containers for additives are reprocessed. Irrefutably, this has allowed PALM to save 62 tonnes of steel, 24 tonnes of plastic and 171 tonnes of CO₂ emissions at the Aalen, Eitmann and Wörth sites alone compared to the production of new transport containers.

We dispose of waste without alternative recycling options exclusively via certified specialised waste management companies, which – just like PALM – meet the high quality, transparency and documentation requirements of the German Ordinance on Specialised Waste Management Companies.

Using resources sustainably

Handling waste responsibly saves resources and protects the environment. This also applies to our own products. The **RESY symbol** on transport packaging and outer packaging confirms that our products are 100 % recyclable and are guaranteed to find their way to being reused. Nevertheless, we are constantly working to reduce the use of resources in all areas.

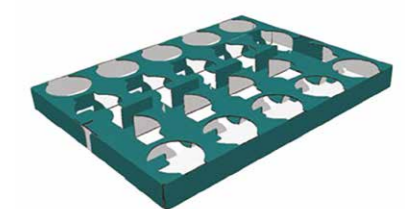
In our corrugated cardboard plants, for example, we are continuously working on reducing cut-off by optimising the trim and working widths of the corrugators. Adaptation at the level of individual items improves the overall performance and allows the existing working widths to be better utilised. For example, it was possible to generate a material saving of 38,000 m² of double-fluted corrugated cardboard per year at the Monheim site by reducing

the format of just one item by 6 mm. The function and size of the packaging remain completely unaffected by this.

Conserving resources starts with packaging development at our corrugated cardboard plants. This is exemplified by the Packwell Schwepnitz '**eco tray**'. A concept was developed in the form of the 'eco tray' which saves around 27 % of the material, and consequently also reduces the carbon footprint of these container trays.

The '**eco tray**' is particularly popular with food producers whose goods are in containers. To process the new design variant, the customer requires a different tray former, which was developed by PALM together with a mechanical engineer. In addition to material savings, there is also a significant cost effect due to more effective

utilisation based on size and savings in the area of logistics, against the background of better pallet layout.



The 'eco tray': Packwell Schwepnitz saves resources and CO₂ by modifying the design of container trays.

In-house energy management for effective climate protection

In recent years, PALM has made very significant investments in the power plants of the five paper mills. The extensively modernised industrial power plants at both the Eltmann and Wörth sites were inaugurated in 2023. A total of approx. EUR 150 million was invested in the modernisation and expansion of the two power plants. In addition to the installation of a completely new generation of both gas and steam turbines, a second residual material boiler was also installed in Wörth. This enables PALM to thermally utilise the residual materials produced in the three German PALM paper mills (see p. 27) to their full extent. With the two residual material boilers, the steam requirements of the PM 6 paper machine in Wörth can be almost completely covered for some grades. This saves large quantities of natural gas.

Like all other PALM industrial power plants, the modernised power plants in Eltmann and Wörth are also characterised by the highest standards of

energy efficiency and exhaust gas purification technology. The investments in the SGT 800 gas turbine type newly developed by Siemens are particularly groundbreaking. As a result, the power plants have an energy efficiency of over 90%. The new gas turbines can also be operated with green hydrogen and are therefore H2-ready. These gas turbines are already being used today in all our German paper mills. **This makes us a pioneer on the path to carbon-neutral paper production.**

In addition, the industrial power plants meet the need of power plant flexibility, i.e. they can react flexibly to fluctuations in the power grid and can be fully ramped up and down within a few minutes. This flexible mode of operation makes our power plants an ideal supplement to renewable electricity generation that fluctuates depending on the weather. Our gas turbines run whenever there is, for example, too little electricity from wind and photovoltaics available to the power grid. The

power plants help balance the load on the national grid and are therefore an important component within the energy transition – they are system-relevant.

We are proud to offer our customers products that have been produced in an environmentally friendly way, thanks to our extensive investments in state-of-the-art power plant technology. This demonstrates our commitment to a sustainable future and encourages us to consistently take further measures to protect our environment. It is already clear today that we will also continue to invest in state-of-the-art technologies, and continue on our path as a pioneer for sustainable and CO₂-optimised production processes.

Sustainable production processes

In addition to our investments in state-of-the-art power plant technology, our paper mills and corrugated cardboard plants also took further important steps towards even more sustainable paper and corrugated cardboard production in 2023 through innovative approaches. We are also breaking new ground here and

investing in more sustainable alternatives to conventional technology.

Our Palm Paper mill in King's Lynn, for example, is now using the first **"SolarFlow Green"** suction press roll cover from Voith, which is equipped with a bio-based functional layer. The bio-based

functional layer contains 20 % polymers from renewable raw materials, and is certified in accordance with DIN CERTCO for bio-based products. "SolarFlow Green" combines all the advantages of Voith's proven SolarFlow technology with environmental and climate protection.

"Achieving a high dry content is extremely important to us. With SolarFlow Green, we were able to implement our customised surface design, which allows us to create maximum drainage in the press section – and to do so with resource-conserving, sustainable materials. A combination that really impresses us."

Robin Linney

Managing Director Production at Palm Paper, King's Lynn



SolarFlow Green in use at Palm Paper in King's Lynn.

Another world first can be found in our paper mill in Wörth – a **cleaner system** for cleaning the fibre in the stock preparation, newly developed in cooperation with Voith. Significantly less energy is consumed in the stock preparation due to the improved fibre yield as a result of the innovation. Overall, this technology can reduce energy requirements by 775 kWh. Only around a third of the normal number of cleaners are used for this, and around 30 % fewer rejects are produced. PALM thereby saves up to 1,700 tonnes of CO₂ a year. An all-round successful project that serves as an example, and which was realised smoothly and successfully thanks to the tireless efforts of our employees.

A project to **build a steam pipeline** from our power plant at the Wörth site was also launched in 2023. This leads to our Eurowell corrugated cardboard plant, which – together with its sister plant Europack – forms the corrugated cardboard centre in Wörth. The construction of the steam pipeline will replace the previous steam

generation from natural gas at Eurowell. In future, the corrugator can be supplied with previously unused steam from the incineration of residual materials with a high biogenic content from paper production. The seven-figure investment costs illustrate how PALM proactively approaches and quickly implements various concepts for sustainable energy supply. Overall, the new steam pipeline will be able to reduce annual CO₂ emissions by 3,200 tonnes.

The implementation of numerous investment measures at our other corrugated cardboard plants is also leading to energy and CO₂ savings. For example, a **new steam boiler** was put into operation at our Monowell corrugated cardboard plant in Sinsheim in May 2023. This investment can achieve gas savings of approx. 16 % compared to the old boiler. Electricity consumption is reduced by over 7,000 kWh.



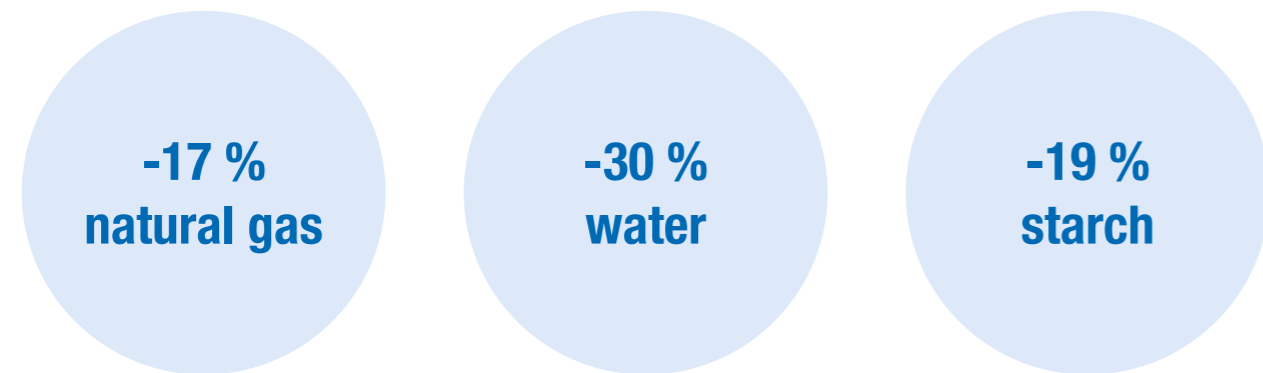
The newly developed cleaner system at Papierfabrik Palm in Wörth.



The newly installed corrugator at Seyfert Forez.

Our Seyfert Forez corrugated cardboard plant in France also underwent significant further development with the installation of a **new corrugator** in 2023. It was replaced in two sections – first the wet part and then the dry end. With the new corrugator, Seyfert Forez can produce sheets of corrugated cardboard even more efficiently and precisely than before, while at the same time using less glue and less energy. In total, Seyfert Forez saves

over 140 tonnes of starch per year with the new system, and requires almost 1.6 million kWh less energy. This corresponds to the energy consumption of around 400 households per year. This investment has also reduced water requirements by over 2,000 m³ per year.



Energy and resource savings at Seyfert Forez thanks to the installation of a new corrugator.

Wellpappe Forchheim can achieve a significant increase in productivity and energy efficiency by installing a **new flatbed die-cutter**. In September 2023, the order for a new flatbed die-cutter from Göpfert was placed. The new system's more efficient dust extraction halves the energy consumption of the six installed fans. This corresponds to a CO₂ saving of

around -17.5 tonnes per year. Overall, the total electricity consumption is reduced by approx. 35 % compared to the old system. Four new printing units with an automatic plate washing system will also reduce the fresh water consumption and the wastewater volume by around 25 %.



The new flatbed die-cutter ordered by Wellpappe Forchheim.

In 2023, the Nestler and PilloPak corrugated cardboard plants optimised their electrical **power supply** by filtering the harmonic waves in the power grid. This efficiency improvement can reduce the total electricity demand by around 3 %.

Our Packwell Monheim plant in Andernach also saves some of its energy by investing in fans. The fresh air that is drawn in is preheated by the **waste heat from the machine**. Packwell saves heating energy by preheating the fresh air that is drawn in, leading to more resources being conserved in production. In

addition, energy consumption at Packwell is documented using an energy monitoring system. This system will be gradually rolled out to all of PALM's corrugated cardboard plants.

In addition to these listed measures, we invested in numerous other systems and further optimised production processes in 2023 in order to achieve our ambitious sustainability targets.

Active nature protection and biodiversity

Following the construction of the new paper mill, all empty areas on our premises in Aalen were successfully renaturalised. By planting a wildflower meadow and setting up beehives, we have now become home to numerous plant and animal species right in the centre of our mill premises. Under the care of an employee and passionate beekeeper, several beehives have found a new home in our PALM biotope. The bees contribute to the pollination of the flower meadow and enable the production of our own honey.

At our UK site in King's Lynn, we support a local farmer by making our green spaces available to him as grazing land for his flock of over 50 sheep. This provides our 'animal employees' with a tasty meal, and we benefit from environmentally friendly grass maintenance. In addition, our employees and visitors of the King's Lynn paper mill enjoy a wonderful view of the sheep, especially in spring when the newborn lambs can be seen.



Sheep grazing on the mill premises of Palm Paper.

Innovative approaches for efficient water management

Water plays a significant part in paper production, as it is needed along the entire production process. In contrast to paper production based on fresh fibres, only a fraction of the water volume is needed to produce paper from recycled fibres; Palm produces papers exclusively from recycled fibres.

PALM has always endeavoured to keep its fresh water consumption as low as possible and to constantly further develop internal water management. A project at PM 5 in Aalen to reduce the amount of water used to clean the wet screens on the paper machine shows that the use of fresh water can be even further optimised. Conventionally, high-pressure spray pipes with a large number of nozzles are used on the paper machine, with which the wet screens are continuously cleaned across the width of the machine.

Mechanical engineering and automation technology have developed in this area to the extent that traversing cleaning heads are now available, which can be used to clean the screens in a targeted manner with significantly less water. Using these traversing cleaning heads saves over 90 % of the original water volume in this area. Based on this considerable saving, this technology is also intended to be used on other PALM paper machines in the near future.

We also utilise our water multiple times wherever technically possible. This means that part of the wastewater cleaned in the company's own treatment plants is reused at various points in the production process.

In addition to our great efforts to consistently reduce our fresh water consumption, we are also investing in energy efficiency measures at our own

treatment plants. At our paper mill in Eltmann, for example, we have adapted our water cycle cleaning processes so that significantly less energy is required in the form of compressed air. Instead of blowing air into the feed flow using compressors, the water to be treated is channelled via what are known as injectors. The flow of the stream of water draws in outside air, creating small air bubbles that clean just as effectively as small air bubbles generated by compressed air. This efficiency-enhancing measure is now used in all our paper mills.

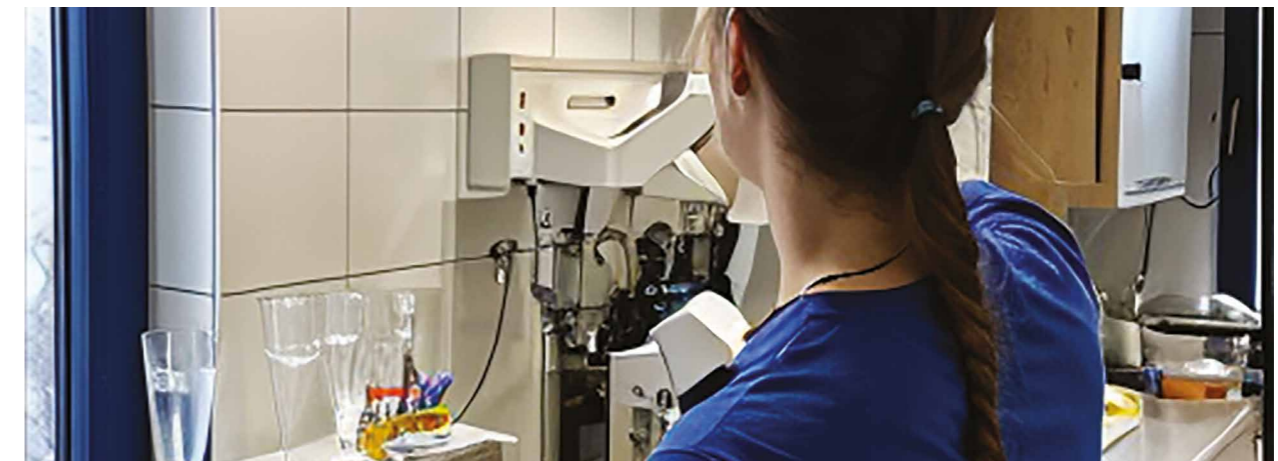


Treatment plant of Papierfabrik Palm in Eltmann.

The performance of our water treatment plants is also extremely important, so that we can clean our wastewater as energy-efficiently as we possibly can. Annika Thomas, who successfully completed her [master's thesis at Papierfabrik Palm in Würth](#) in 2023 and now works for us as a process engineer, also conducted research into this. The focus of the

master's thesis was to identify factors that can influence the performance of our anaerobic reactors in water management. Anaerobic reactors work without oxygen, so they require less energy than aerobic systems, i.e. less ventilation and pump energy. An anaerobic pilot reactor was set up in Würth for Ms Thomas' tests and integrated into the plant's process

water circuit. The findings from the tests have now been transferred to the existing anaerobic reactors, which means that we are now recording a higher degradation capacity and therefore require less energy per cleaned wastewater unit.



Measurement of the sedimentable substances of a wastewater sample in an Imhoff hopper.

Our biomethane plants – energy is also available in wastewater

The production of paper from waste paper produces organically loaded wastewater. The main load here consists of organic substances in the paper that are released when the waste paper is broken down. Unlike paper fibres, these cannot be recycled. However, as the organic substances consist of easily degradable biomass, they can be used for biomethane production. This requires two-stage purification of process water. In the first treatment stage, i.e. the anaerobic stage, a large proportion of the organic load of the wastewater is converted into high-quality biomethane. In the second stage, the aerobic stage, the organic load that still remains at that point is broken down. The excellent quality of the water allows it to then be returned to the production process or discharged into a body of water.

Biogas consists mainly of methane and carbon dioxide. Separating the carbon dioxide produces biomethane, which can be used as a substitute for natural gas. This biomethane is particularly sustainable, as it is obtained exclusively from industrial residual materials. Unlike with agricultural biogas, no land is required for the cultivation of energy crops. This means that the biogas produced by PALM avoids any 'food vs fuel' debate.

PALM operates biomethane plants at both the Aalen and Würth sites, as well as the French plant in Descartes. Around 60 GWh of biomethane is produced annually at the two German sites alone, which can supply 5,000 households with sustainable heating energy every year.

Until now, the concept of two-stage process water purification at PALM has only been used in plants with machines for the production of corrugated base paper. The reason for this is the higher content of organic substances in the grades of waste paper used there. The use of a biomethane reactor in the production of graphic papers has now also been investigated for the first time at our Eltmann site. A trial reactor was specifically installed over a ten-month period for testing. The results were consistently positive. The cleaning performance and the biomethane production output have met our expectations. At the same time, it has been possible to significantly reduce the energy requirements of our water treatment plant in Eltmann. Following the very successful trial, we are currently working very intensively on a concept for the installation of such a solution.



The two new electric trucks from Wellpappe Alzenau can be charged at a newly installed charging station directly on the premises in Alzenau.

CO₂-optimised transport logistics

A sustainable company includes not only sustainable production processes, but also sustainable transport logistics. We are therefore endeavouring to further reduce the CO₂ emissions caused along the logistics chain, for example by making use of electric vehicles in our own fleet of trucks at our corrugated cardboard plants. In 2023, Wellpappe Alzenau expanded its truck fleet with two fully electric trucks. The two electric trucks, which are in

regular use, have an impressive range of around 300 kilometres. This range enables Wellpappe Alzenau to supply its customers within a radius of 100–150 kilometres around Alzenau, efficiently and without intermediate charging. The electric trucks can be charged at the mill premises of Wellpappe Alzenau using a newly installed charging station. *

"The introduction of these two electric trucks is an important milestone for us. We are proud to be a pioneer in the use of environmentally friendly transport solutions, and will also continue to invest in technologies that help to minimise our ecological footprint. The sustainable and recyclable packaging made of corrugated cardboard that we manufacture contributes to this."

Jens Schuhmacher
Managing Director of Wellpappe Alzenau

* This project by Wellpappe Alzenau is funded by the German Federal Ministry for Digital and Transport, within the framework of the guideline on the promotion of lightweight and heavy-duty commercial vehicles with alternative, climate-friendly drives and the associated refuelling and charging infrastructure ('Climate-friendly commercial vehicles and infrastructure' (KsNI) guideline). The funding guideline is coordinated by NOW GmbH, and applications are approved by the German Federal Logistics and Mobility Office.

To transport our paper rolls in a way that is carbon-free, we use rail wherever possible in order to avoid transport by road. Anti-slip mats made of plastic or foam are often used to prevent the rolls from slipping during transport and to prevent the goods from being damaged. However, as this does not comply with our sus-

tainability concept, PALM has developed and introduced anti-slip mats made of corrugated cardboard. Furthermore, when transporting paper rolls horizontally, the paper rolls are secured using the corrugated cardboard 'reel docks' that we produce in-house.



Sustainable load-securing device made of corrugated cardboard for transporting our paper rolls by rail.

PALM on the podium for the 2024 German Sustainability Award

PALM has been recognised as one of the three finalists in the paper, cartons and cardboard category of the German Sustainability Award. In collaboration with the German Chamber of Commerce and Industry, the German Federal Ministry for the Environment and other partners, the German Sustainability Award recognises companies from 100 sectors every year. PALM has been named as one of the TOP THREE companies in its sector. The prize was awarded at the end of November 2023 in Düsseldorf.

"We are part of a perfect circular economy."

Lukas Steffel
Project Engineer for Energy Management

Thanks to new ideas and numerous investments in state-of-the-art technology, PALM conserves resources sustainably over the entire material cycle – in the utilisation of 100 % waste paper for paper production, in paper production, e.g. with the ultra-modern new PM 5 at the headquarters in Aalen, and in the further processing of the paper to make recyclable packaging.

By using particularly lightweight corrugated base papers, which we produce on the new PM 5, we can effectively reduce CO₂ emissions along the entire value added chain thanks to savings in terms of raw materials and packaging weight. We also produce our paper and packaging using state-of-the-art technologies to save energy and minimise emissions as much as possible. These as well as other factors led the panel of judges to select PALM as one of the three finalists for the German Sustainability Award in the area of paper, cartons and cardboard.



PALM SUSTAINABILITY AWARDS



Thanks to its new PM 5 at the Aalen mill, PALM was included – by the tenth KONGRESS BW for resource efficiency and the circular economy – in the "100 companies for resource efficiency" initiative in Baden-Württemberg in 2021, as one of the best examples of this.



In the "Best environmental protection" category, PALM was pleased to be nominated for the German environmental management prize for outstanding achievements in climate and environmental protection, for the construction of the ultra-modern PM 5 in Aalen in 2021.

The East Württemberg Innovation Prize awarded PALM the title of "Top performer in the region" in 2022, for the "PALM Ultra-light Corrugated Case Material" (ulCCM®) produced on the PM 5 in Aalen and the associated reduction of the carbon footprint along the entire value added chain, from paper and packaging through to recycling.



The lightweight corrugated base paper produced in Aalen, with a basis weight as low as 60 g/m² (ulCCM®), was given third place at the Baden-Württemberg Environmental Technology Award in the category of "Material efficiency" in 2021.

HOW WE LOOK AFTER OUR EMPLOYEES AND SOCIETY

EMPLOYEE COMMITMENT AS A SUCCESS FACTOR

PALM is not just an employer – rather, we see our employees as integral members of our company family, in which each individual employee plays an important role. Their commitment and motivation are the decisive factors behind PALM's success.

For this reason, we continuously invest in the safety, satisfaction and personal further development of our employees. These investments are also the basis for an exceptionally high level of loyalty to the company and above-average employee satisfaction.

Occupational safety and the health of our employees are our top priority, and are ensured by a large number of individual measures (see pp. 40–41). These also include voluntary health benefits, through which we aim to be an attractive employer for our employees. For example, PALM offers bicycles to employees at its German sites as part of a 'cycle to work' scheme. This encourages employees to cycle to and from work as well as in their free time. Employees can lease up to two bicycles or e-bikes via deferred compensation, which can also be used by adult family members. This initiative is proving very popular, as

shown by the fact that over 400 bicycles are already being used through the 'cycle to work' scheme. At the same time, our plants also offer bicycle safety training for their employees.

PALM also offers various running and mountain biking events under the "Palm goes Sport" initiative, and employees take part in various regional sporting events in teams. In Aalen, for example, employees can go running and mountain biking together in various groups on Thursdays. Two highlights of the "Palm goes Sport" initiative were participation in the city run and in the company run in Aalen in 2023, each with a large team. In addition to Aalen, many other plants also took part in regional running competitions, such as Nestler Wellpappe, Wellpappe Alzenau and Brenner Verpackung. Doing sport together as a team keeps you fit and tremendously increases unity and team spirit.



Participation of the PALM TEAM in the Schwäbische Post/AOK company run in Aalen in September 2023.



PALM offers its employees the option of leasing bicycles as part of a 'cycle to work' scheme.

As a responsible employer, we offer our employees a range of other health-supporting benefits in addition to these selected measures, from medical check-ups and water dispensers to numerous sports opportunities. This also includes 'health days' at our plants, which allow our employees to obtain comprehensive information about various offers and healthy everyday routines.

Since 2023, PALM has also been offering its employees corporate benefits at all sites where this is legally possible. This means that all employees can benefit from attractive offers from prestigious brands. Within a very short time, 1,000 PALM employees had registered on the portal in order to take advantage of the numerous benefits. We also support the use of electric vehicles. To this end, we have built e-charging stations for cars at our main plant in Aalen for use by our employees. Further e-charging stations are already being planned.

PALM also fulfils its responsibility towards its employees and society when it comes to recruitment and personnel development. We are clearly committed to the equal treatment of all employees, regardless of gender, age, sexual orientation, religion or origin. Our principles of conduct commit us to ensuring equal employment opportunities and treatment for all employees. Our corrugated cardboard plants also demonstrate numerous examples of diversity and equal opportunities. For example, work contracts are awarded to people with disabilities or to prison workshops, and, in some plants, we employ workers who would hardly have a chance elsewhere because of their distance from the labour market.

We place great value on always being ready to listen to the concerns of our employees. Our works councils provide us with significant support in this regard, and we maintain trusting and constructive collaboration with the works councils in our plants. Employees can also raise their concerns anonymously at any time through our whistleblower protection system and special grievance mailboxes.

Safety first

PALM complies with European occupational health and safety standards in order to offer its own employees, visitors and external workers the highest possible level of protection.

Occupational safety is our top priority. This claim is also defined by things such as our guiding principle: "To us, occupational safety is a driving force behind a company's success."

Ralf Alex Bopp

Senior Management Representative for Palm Packaging

Furthermore, we also have a moral obligation to our employees to provide them with a safe workplace. The ISO 45001-certified occupational safety management systems in our PALM paper mills and corrugated cardboard plants support us in this. Our occupational safety specialists play a central role, together with the numerous safety officers, fire protection assistants, first aiders and company doctors at our plants. Thanks to the efficient interaction of these experts together with our employees on site, we make every effort to continuously further develop our occupational safety culture. In addition to regular safety instructions, this also includes noise protection measures and the provision of state-of-the-art protective equipment. All representatives take on tasks that go beyond their actual field of activity and function within the company. This additional commitment cannot be taken for granted and deserves to be recognised.

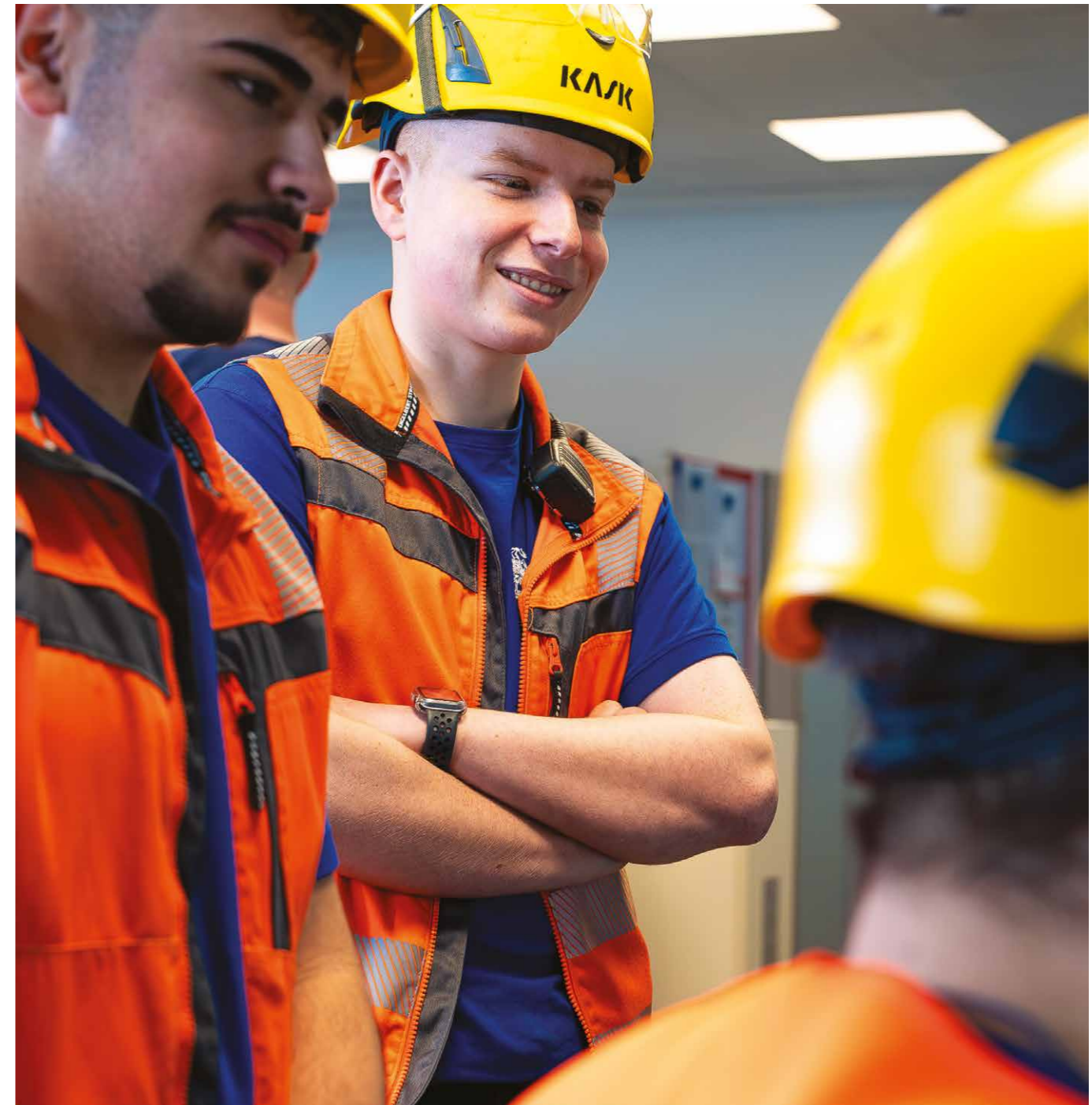
In 2023, by actively involving our employees, we were able to initiate numerous measures, particularly in the area of prevention, in order to implement further effective and sustainable occupational safety processes. 2023 at the Aalen plant was all about the motto of "Hand and skin protection". Hand injuries are the most common occupational injuries. They can be significantly reduced by wearing suitable

safety gloves. The Aalen plant has therefore defined suitable types of protective gloves for all areas of activity in the plant as part of a large-scale campaign. Other successfully implemented measures include:

- Extension of the paper mills' digital first aid book to the corrugated cardboard plants, for the documentation and evaluation of incidents related to occupational safety
- Intensification of safety tours (management and blue-collar workers) to identify potential sources of danger
- Consistent documentation of 'near misses' on the central intranet in addition to actual accidents
- Introduction of the obligation to wear ankle-high safety shoes in our corrugated cardboard plants to prevent twisting or spraining of ankles; these are already standard in our paper mills
- Implementation of an occupational safety management system target dashboard to consistently track our targets as part of our occupational management system
- Monthly ASiST newsletter (7-Minute Safety Trainer) and short safety briefings so that our employees are always aware of occupational safety issues
- Introduction of a company suggestion system in our German paper mills and financial recognition of implemented suggestions

PALM's management board counts on a safe working environment by setting clear targets and providing the necessary resources for this. The success of our huge efforts in the area of occupational safety is reflected in the level of target achievement at our plants. The figures are reported via a central dashboard within and across plants. We were able to achieve the following successes in 2023:

- The number of reportable accidents was significantly reduced; the target of zero reportable accidents was achieved in 11 of our plants in 2023.
- The Accident Incidence Rate (relative frequency of accidents per 1,000 employees) was reduced by over -17 % in 2023 (-20 % in the corrugated cardboard plants, -11 % in our paper mills).



Certified systems and dedicated specialists promote a strong safety culture.

At PALM, we place great value on the exchange of experience between all plants. To this end, we utilise best practice solutions, input from external and internal audits and quarterly meetings of occupational safety specialists across sites. This results in specific measures whose effectiveness we continuously

measure and track using clearly defined KPIs. We take measures in accordance with the 'TOP principle' hierarchy, i.e. we prioritise the implementation of personal protection measures over the implementation of technical measures, and thus pursue a systematic approach to continuously reducing and avoiding hazards.



"The aim is for us to live and act today in such a way that future generations are not disadvantaged as a result."

Teresa Schön is the Sustainability Manager at PALM. She acquired the necessary specialised knowledge for her role through a part-time degree financed by PALM, which she completed whilst working. As the Certified CSR and Sustainability Manager, her tasks include the establishment and further development of the PALM Group's sustainability management as well as sustainability reporting.

What does paper mean to you as the Sustainability Manager?

Before I started working at PALM, I would probably have given a different answer. Now, paper is not just paper to me, but a versatile product that has a sustainable, economic future. To me, paper at PALM is graphic paper and corrugated base paper made from 100 % waste paper. What is exciting for me as Sustainability Manager is that wood, as a renewable raw material, is only used in our PALM papers via our waste paper.

How did you get to this position at PALM and what does your day-to-day work look like?

As Quality Management Representative at PALM, I was responsible for setting up and continuously further developing our Integrated Management System (IMS) at the Aalen site with ISO-certified management systems for the environment, quality, occupational safety, energy and food safety. From there, it wasn't such a great leap to sustainability. Sustainability unites three key pillars – economic, ecological and social. Sustainable development is only possible if we focus on all three areas at the same time. This holistic approach and the associated wide range of opportunities to initiate improvements are the things that I particularly enjoy.

At PALM, the area of sustainability is the direct responsibility of the management board. Together, we continue to develop the PALM sustainability strategy and monitor its implementation. I also coordinate requests from internal and external stakeholders, I implement legal requirements such as the German Supply Chain Due Diligence Act, and I am the point of contact for all sustainability issues at our plants.

How would you describe sustainability at PALM?

To me, sustainability at PALM means that we firmly embed the concept of sustainability in all our processes. Sustainability affects everyone, from the management board to working students – that's why I am committed to ensuring that every employee at PALM knows what sustainability means to us and that we work together to achieve our targets. For example, our Palm Performance Programme in 2023 for the development of future managers also comes under the motto of "Sustainability". The participants work on various sustainability issues in small project groups, and then ensure their implementation in their respective plants. This has enabled us to communicate the importance of sustainability even more effectively from the main plant to the individual plants.

What are the central aspects of the holistic sustainability concept at PALM?

We are constantly working to reduce the use of resources as well as water and energy consumption in our production. At the same time, we are continuously investing in new technologies.

Social sustainability at PALM includes measures in the area of health protection and occupational safety, as well as offers that are not directly related to daily work. PALM's commitment to society and as a training organisation should also not be forgotten. In 2023, 22 school classes visited us in Aalen to see the new plant centred around the ultra-modern PM 5 and find out about training opportunities at PALM. Bachelor's and master's students can find exciting topics for their theses in numerous areas at PALM, while interns and working students can work

with us in a very practical and hands-on way, and thus gain valuable insights into our day-to-day work. In the area of sustainability, for example, we have our working student Jan, who is familiarising himself with the issue of carbon footprint assessments as well as EcoVadis and other sustainability ratings, alongside his master's degree in bioeconomy.

How do you measure sustainability at PALM?

Every year, PALM compares its sustainability targets with the values achieved in the previous year. To this end, we collect key figures in all areas, for example for energy use, resource use, water consumption and occupational safety.

We have invested in a new software solution to ensure consistent tracking of our targets. This is sustainability software that also provides project management in addition to simply data management, and thus supports us in all our sustainability activities, particularly in carbon footprint assessments and reporting in accordance with CSRD.



Training and development

Training, further training and advanced training are decisive success factors for PALM, especially in a time of rapid technological and societal change. The success of our company is not based on strategy plans alone, but on the daily performance of each of our 4,200 employees. We the-

refore place great value on ensuring that our employees are well-trained and receive continuous further training. To counteract the often lamented shortage of skilled workers, we rely on the most effective method, i.e. the training of our own skilled workers. In our paper mills,

the corrugated cardboard plants and the administration offices, training courses and degree programmes for numerous job profiles are on offer. We provide financial support for further training to become a master craftsperson and for degree programmes.

Paper

Apprenticeships

Electronics technician
Industrial mechanic
Industrial clerk
Paper technologist
Environmental technologist for wastewater management

Master craftsperson training

Master electrician
Master mechanic
Master papermaker

Degree programmes

Business management studies alongside vocational training
Business informatics dual study course
Paper engineer

Packaging

Apprenticeships

Electronics technician for operating technology
Specialist in warehouse logistics
Warehouse specialist
Industrial clerk
Industrial mechanic
Freight forwarding and logistics manager
Machine and plant operator
Mechatronics technician
Print media technologist
Packing technologist/packaging mechanic

Degree programmes

Bachelor of Engineering/Sustainable science and technology
Operational resource management
Business engineering
Business informatics



Participants of the Palm Performance Programme 2023–2025.

Careers at PALM

A total of approx. 170 young people are currently undertaking vocational training at PALM. They benefit from dedicated support from experienced trainers, and have a good chance of being offered a permanent position after completing their training. As we prefer to fill vacancies with our own employees, attractive development and career opportunities are opened up to former trainees. After recruiting new talent, we attach great importance to the onboarding process and excellent day-to-day collaboration. Trans-

under the social aspect of PALM's sustainability strategy. At the Palm Academy, PALM offers further training to its employees through various programmes and seminars, and promotes their strengths and skills. For example, the Palm Career Booster Programme has been in place since 2017, allowing graduates to embark on a two-year cross-plant and cross-site advanced training programme after completing their studies. The programme comprises of three theoretical training modules and two projects,

talent within the company. The modules enable participants to learn the basics of employee management and develop their management skills. The seminars are structured in such a way that they integrate both theoretical knowledge and practical applications. The seminars also provide a platform for exchanging experiences and networking. The Palm Performance Programme is offered for both the Paper and the Packaging divisions. By participating in this programme, dialogue between the plants is heightened, knowledge is shared and employees benefit from mutual networking. In addition to professional development, our seminars also set a clear focus on strengthening the character of each participant. The two-year Palm Performance Programme at Papierfabrik Palm began in 2023 for what was already the third time. In addition to our Sustainability Manager Teresa Schön, Sonja Grässle, our Head of Communications for PALM, will also be there. She started her career at PALM as Assistant to the Management Board and Social Media Manager, and then underwent further development both professionally and personally.

"The Palm Performance Programme offers all participants a great opportunity to get to know their own capabilities better. In addition to leadership qualities and teamwork, self-reflection was a major topic in the first module of the seminar series. 'Only those who can command themselves can command others' – this sentence has remained in everyone's memory."

Sonja Grässle
Head of Communications

parent communication of tasks and of what the job entails in advance and a plant tour on the first day of work make new employees feel immediately welcome at our company. Further training programmes such as those offered within our Palm Academy come

each lasting six months – one at a German mill and one at a PALM mill abroad. Another important component of our Palm Academy is the Palm Performance Programme, which has been specially developed to promote the management skills of our young

A future with corrugated cardboard

It is very important to us to inspire pupils at a very early stage to pursue a career in our sustainable industry. That's why we regularly organise company visits for school classes, offer work placements for pupils and take part in vocational training fairs and school events in order to provide information about our sustainable products and training opportunities. Our plants are represented at vocational training fairs with impressive trade fair stands. We are able to cite Packwell Monheim's

stand at the careers orientation event (BOB) in Langenfeld in 2023 as an example of this. When it comes to recruiting young talent, Packwell impressed visitors with its corrugated cardboard 'beach chairs' for mobile phones. The next generation of folding professionals were also able to prove themselves at the innovative and sustainable stand. This won the BOB Award for the best trade fair stand out of 100 participating companies.

Wellpappe Alzenau also stood out again this year with a superlative trade fair stand – a trade fair stand that was really from another world. Well, perhaps not quite! But the skyline of New York and the Statue of Liberty really impressed visitors to the trade fair stand of Wellpappe Alzenau at the 'Berufswegekompas' vocational training fair in Aschaffenburg. Every year, our trainees work together as a team to plan, design and construct a unique trade fair stand made of corrugated cardboard.



The BOB Award for the best trade fair stand went to Packwell Monheim in 2023.



Five trainees from Wellpappe Alzenau built this New York scene in just five weeks.

Successful integration of international specialists

Our Packwell Schwepnitz corrugated cardboard plant has taken a particularly good approach as part of its social commitment to recruiting specialists. During a one-year corporate work placement, international specialists acquire some initial German language skills and operational knowledge. This is achieved via intensive language tuition and integration support from a

plant employee and mentors in the company. The 2023 project can be described as thoroughly positive and successful. Within a short space of time, all seven interns were taken on as machine and plant operators and maintenance staff. The first training programme was also a complete success, with some of the best results in the year. New learning formats were

developed and tested during this process at Packwell Schwepnitz. The supervising plant employees and mentors were also able to develop further. The interns quickly became permanent members of the Packwell team, and also notably improved their German language skills.

100 years of Nestler Wellpappe

Nestler Wellpappe celebrated its 100th anniversary in 2023. Tradition, innovation and sustainability are united at Nestler.

Nestler Wellpappe in Lahr was founded in 1923 by Robert Nestler as "Robert Nestler Wellpappen-Fabrik". Initially, corrugated cardboard was produced in sheets and rolls, but this was soon followed by the manufacture of cartons made of all kinds of corrugated cardboard. Over the decades, Nestler has kept to its roots while, at the same time, constantly expanding the business. In the 1970s, the company moved to an industrial estate and changed its name to Nestler Wellpappe GmbH & Co. KG. Thanks

to its direct connection to the motorway, the site is still ideally situated even today. Nestler Wellpappe has been part of the Palm Group since 1999. The final stage of the plant expansion in the industrial estate took place in 2002, and, at the same time, the earlier premises close to

"Sustainability is not a trend but an obligation for us."

Andreas Jung
Managing Director of Nestler Wellpappe

the city centre were completely decommissioned. This led to a significant easing up of the city centre, and enabled residential development of a very high quality close to the centre.

At Nestler Wellpappe, all employees are aware of their responsibility towards the environment. Nestler is actively committed to using environmentally friendly materials and processes to ensure that the packaging solutions it produces meet the highest sustainability standards. Nestler is also investing in new electric trucks to reduce its ecological footprint when it comes to logistics.



Exhibition on Nestler's history and sustainable products.

Why we give something back

For PALM, social commitment is an expression of our responsibility towards society and in the regions in which we operate. PALM is committed to the common good and is a reliable partner, particularly in the areas of culture, education, sport and social projects. PALM endeavours to promote sustainable development in various areas here.

In August 2023, the new **bike park** was officially opened in the immediate vicinity of Papierfabrik Palm in Aalen. This project was financed by the 'Dr. Wilfried Palm Foundation', which is where our charitable work in Aalen and the surrounding area is combined. Now that the bike park for the whole family has been created, we would like to thank the city of Aalen and the local population for their special solidarity and support. The bike park, named 'Christophorus Family Campus', is an asset for all cyclists – for young and old, for families and for both recreational cyclists and professional athletes. The core element of the park is a skill trail – an exercise and training route – for mountain bikers. There, they practise their sport at different levels of difficulty without harming the forests or any sensitive natural surroundings.

In spring, dedicated groups of helpers set out every day to save fawns from the threat of death by mowing. Using drones and thermal imaging cameras, they scour the fields early in the morning. If they discover a fawn or other wild animal, they catch it carefully using a landing net and gloves. The rescued

fawns find temporary refuge in the cartons provided free of charge by Nestler, which are carefully lined with grass. This shelter provides the animals with a safe refuge until the farmer has mown the fields. The **fawn cartons** were developed in 2023 by the Packaging Development department at Nestler. The result was an appropriate carton that can be closed quickly without adhesive tape and that allows the fawns to still get plenty of air. Nestler and other corrugated cardboard plants will continue to actively support fawn rescue in the years to come.

In spring 2023, the Sapperlot children's theatre in Einsiedeln, Switzerland, staged the play 'Fründä oder nüd?', which explored the meaning of friendship. The **backdrops**, made entirely from corrugated cardboard, were sponsored by our Wellpack corrugated cardboard plant, which is also based in Einsiedeln. The bookshelves, walls and room dividers made of heavy-duty corrugated cardboard formed an impressive backdrop.



01 Inauguration of the bike park in Aalen.

02 Nestler Wellpappe develops cartons specially for fawn rescue.

03 Wellpack supports the Sapperlot children's theatre with corrugated cardboard backdrops.

GRI Index

PALM has reported the information cited in this GRI Index for the period from 1st January 2023 to 31st December 2023 with reference to the GRI Standards.

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Note To improve readability, plural pronouns are used here
to refer to a singular subject of any gender.





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