



Papier- und Kartonfabrik

varel 

Sustainability Report 2024



The
SUSTAINABILITY
Code
Signatory 2024

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GOVERNANCE refers to the management and control of a company. This includes transparency, ethics, integrity and the structures that ensure that a company is managed effectively and responsibly, for the benefit of all stakeholders.



ENVIRONMENTAL

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ENVIRONMENTAL refers to the ecological aspects of sustainability. It includes measures to reduce environmental impacts such as energy efficiency, waste minimization and the protection of natural resources.

SOCIAL

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SOCIAL concerns the social impact of a company on society. This includes topics such as working conditions, diversity in the workplace, social responsibility towards communities and respect for human rights.



PKV WORKS AND TRADES ACCORDING TO ESG CRITERIA

Initiated by the United Nations, the international abbreviation ESG has stood for the terms Environmental, Social and Governance since 2006. As ESG criteria, they represent the three sustainability-related areas of responsibility for companies and act as a corporate tool to record, analyze, measure and evaluate sustainability efforts. Stakeholders are informed about these efforts in regular sustainability reports.



EDITORIAL

Our plan has been in place since the end of 2024: this is how PKV will become climate neutral! By 2031, we will reduce our CO₂ emissions by 42 per cent and by 2045 we will produce paper and cardboard from waste paper that is completely net greenhouse gas neutral – in a perfect sustainable cycle for packaging material.

The path to climate neutrality is prescribed by law. Economically, the price of CO₂ leaves little room for other options, and ethically, we see it as our responsibility to contribute to sustainable development. We must follow this path. But it also presents a great opportunity for energy-intensive companies like ours.

We have been using waste paper as a raw material since 1950. Recycling and sustainability are fundamental parts of our corporate identity. If we can economically manufacture CO₂-free products from waste paper, we will have the perfect ecological cycle for packaging! This goal is worth striving for, even though it poses major economic challenges.

To replace natural gas as an energy source, we will rely on a mix of different energy sources and efficiency measures. Green electricity will make up a large part of the future energy mix. We also plan to substantially reduce specific energy consumption per tonne – in other words, to save a huge amount of energy. Large industrial heat pumps could make a significant contribution to this.

In addition, PKV wants to use energy from waste. Every day, waste that cannot be processed into paper or cardboard arrives at the plant via waste paper. Even today, this waste is carefully sorted, processed into fuel and burned elsewhere to generate energy. We can and must use this energy ourselves in the future.

More detailed information on PKV's decarbonisation path is available on the website www.pkvarel.de/dekarb. Alongside other activities such as sustainable supplier management, innovative projects for resource efficiency and a wide range of measures in the area of human

resources development, this path is an example of our corporate responsibility towards the environment, people and society.

Will it succeed? We are facing the most complex task of the last decades – but we have a good plan. However, the framework conditions set by politicians must be right!

Will it be a lot of work? Oh yes. In total, the company will invest a three-digit million amount in this goal until climate neutrality is achieved.

And will it be worth it? Absolutely. Because this will enable us to secure the decades-long stability and competitiveness of PKV for the coming decades.

Kristian Evers
 Shareholder at Papier- und Kartonfabrik Varel GmbH & Co. KG

THE HEART OF YOUR PACKAGING

Papier- und Kartonfabrik Varel (PKV) is a German manufacturer of paper and cardboard made from waste paper for use in the packaging industry. The company is based in Varel, Lower Saxony. With an annual production capacity of 970,000 tonnes, we are one of the largest production sites in the German paper industry. We achieved turnover of €413 million in 2024 and employed more than 620 people.

We produce Fluting and linerboard (white/brown) from waste paper, as well as gray and brown board in pigmented, white coated and laminated grades.

Our company holds the following certificates:

- **FSC®-C074387**
(Forest Stewardship Council - Sustainable Management of Wood Fibres)
- **DIN EN ISO 9001**
(quality management)
- **DIN EN ISO 14001**
(environmental management)
- **DIN EN ISO 22000**
(food and product safety management)
- **DIN EN ISO 45001**
(occupational health and safety management)
- **DIN EN ISO 50001**
(energy management)
- **Specialist waste management company (according to Section 56 Circular Economy Act - KrWG)**

In the year under review, 60 % of our products were sold in Germany and 40 % abroad. Our customers from the German and international packaging industry use them to produce cardboard boxes made of corrugated board and cardboard, which can be used e.g. for food, consumer goods, industrial goods, pharmaceutical products or in online trade and then recycled again.



DNK criterion 01

STRATEGY

“We have been using waste paper as a raw material since 1950 and are deeply convinced that the sustainability of our products and processes, their convincing quality and our economic success are inextricably linked.”

DNK requirement: The company declares whether or not it pursues a sustainability strategy. It explains what concrete measures it is undertaking to operate in compliance with key recognised sector-specific, national and international standards.

Harnessing continuous improvement for the sustainable and competitive production of high-quality packaging papers and board grades is the most important goal of our company. We have been using waste paper as a raw material since 1950 and are deeply convinced that the sustainability of our products and processes, their convincing quality and our economic success are inextricably linked. We are part of a closed-loop recycling system that has been established worldwide for decades and thus make a valuable contribution to resource-efficient development. Our sustainability strategy has therefore always been part of our DNA and is also an integral element of our corporate strategy.

This strategy defines how our company contributes to sustainable development in several strategic fields of action. We will briefly outline these contributions at this point and go into more detail in the rest of the report.

We have been fulfilling our responsibility to contribute to sustainable development for many decades as a manufacturer of high-quality

packaging paper and cardboard made from recycled waste paper. It is our firm conviction that fibre-based, recyclable packaging delivers game-changing advantages in various areas of sustainability.

Building on this self-perception, we have always viewed sustainability aspects as vital to our investments, products and processes. Certification of all our products according to the relevant FSC® standards and our voluntary classification according to the EcoVadis standard underpin this approach even further. As a family business with strong roots in the region, we unfailingly embrace our responsibility for people and the environment.

Our vision is to maximise climate neutrality in the production of our papers and cardboards – and in doing so make a strong contribution to environmentally perfect packaging.

We believe that this vision is consistent with the goals of the Paris Climate Agreement of 2015 and the 17 Sustainable Development Goals (SDGs) of the United Nations.

Aside from recycling waste paper as the foundational aspect of our activities, we as a company are fully equipped to make other important contributions to sustainable development.

We can and intend to continue increasing our energy efficiency by means of process optimisation and technical innovation and in doing so will reduce energy input per tonne of finished product.

In view of the ambitious European climate targets, we are working hard to design potential transformation pathways and prioritised technological options to switch to alternative fuels on our road to climate neutrality. Supported by an external team of consultants with expertise in the energy market and technology, we launched a project to develop this pathway and an overarching decarbonisation strategy in December 2022. The project was successfully completed in October 2023 and presented to the company's shareholders, whereupon the preliminary plan was approved for further internal action by the decarbonisation team set up for this purpose. Since then, the internal decarbonisation team has been tasked with defining a concrete decarbonisation path to achieve short- and medium-term reduction targets by 2031, and further targets by 2045.

The decarbonisation pathway is specifically designed to achieve an absolute reduction in greenhouse gas emissions of -42 % by 2031 compared to the base year 2021.

Based on our location, our highly efficient water management system achieved a top position in the industry ranking. Nonetheless, we intend to harness technical innovation to continue reducing our consumption of fresh water and retain our excellent standing.

We always consider environmental impact and increased energy efficiency when making investments and procurements. Wherever possible, we give precedence to greener options that make a positive contribution to sustainable development. These principles apply equally to cooperation with suppliers and contractual partners. In 2024, we continued to focus intensively on the analysis and fulfilment of human rights and environmental due diligence obligations within our supply chains and hence in procurement processes as well. Even if we are not currently subject to the requirements of the German Supply Chain Act, we are gradually implementing the requirements according to our own chosen approach, as we expect positive developments within the supply chains and have identified relevant interfaces with other initiatives. We have always paid particular attention to environmental and other relevant criteria in our standardised management systems in our procurement processes. However, at the beginning of 2023, we set ourselves the goal of carrying out regular risk analyses and full due diligence checks on our direct business partners.

Healthy and motivated employees are the cornerstone of a successful company. This potential must be preserved. Among our top priorities is to avoid placing our employees, suppliers or visitors at risk.

We are committed to the continuous improvement of all processes, both to safeguard our company and out of responsibility for sustainable development. Employees from all levels are involved in our decision-making processes. The following management systems are implemented and maintained in order to ensure this practice:

- Occupational health and safety according to DIN EN ISO 45001
- Environmental management according to DIN EN ISO 14001
- Quality management according to DIN EN ISO 9001
- Energy management according to DIN EN ISO 50001
- Food and product safety according to DIN EN ISO 22000

In the pursuit of all these objectives, we remain aware that as a company within an energy-intensive industry we can control many – but not all – of the factors to fulfil our vision.

Our industry's path to climate neutrality will hinge to a large extent on policy frameworks and technical decisions, especially in regard to the purchase of renewable energies. In our view, the challenges are found less on the technical side and refer instead to the availability of 'green' energy, regulatory and infrastructural issues, as well as the general business environment.

These framework conditions must enable us to produce economically and market our products both nationally and internationally – also outside the EU – in order to secure the viability and continued development of our company. We cannot create these conditions on our own. It is therefore our firm belief that the opportunities and requirements for climate-neutral paper production must be communicated transparently at all societal and political levels.

DNK criterion 02

MATERIALITY

“However, the most important factor on the road to ecologically perfect packaging will be how [...] greenhouse gas emissions in paper production can be substantially reduced even further.”

DNK requirement: The company discloses the aspects of its business operations that have a significant impact on sustainability issues and what material impact sustainability issues have on its operations. It analyses the positive and negative effects and provides information as to how these insights are integrated into the company's processes.

Packaging made from recycled waste paper is a functionally persuasive and ecologically purposeful solution for a variety of industrial requirements or consumer wishes. Drawing on this conviction, Papier- und Kartonfabrik Varel has been producing paper and cardboard from waste paper since 1950. In doing so, PKV also attaches importance to fair partnership with its employees, which it achieves by paying salaries in line with or even above collective agreements, among other things.

In Germany, packaging paper and cardboard are now made almost exclusively from recycled waste paper. By using this valuable raw material, PKV also conserves significant quantities of natural resources. Recent studies indicate that recovered paper fibres can be reused in packaging materials 25 times or more without any significant loss in quality (Eckhart, Rene (2021): Über die Rezyklierbarkeit von Faltschachtelkarton. Wochenblatt für Papierfabrikation 11/2021).

In this environment, the PKV is influenced by key sustainability issues, and at the same time, key sustainability issues have an influence on its business activities. A company classifies an issue as material based on its strategic alignment as defined by management and with particular consideration of the opportunities and risks.

Opportunities and risks are regularly analysed at various levels. A spreadsheet tool is used to collect corporate opportunities and risks in the management review prepared by the Executive Board. The information is then visualised in an opportunity and risk matrix and reviewed regularly. The findings are then used to infer suitable actions. The process descriptions reflect their inherent opportunities and risks, while responsibility for their monitoring and control rests with the process owners.

Furthermore, stakeholder management – the consideration of what interested parties expect – is another key factor to enable appropriate responses to the business environment. A spreadsheet tool is used to analyse stakeholder groups as part of the annual management review and to infer (communication) measures.

The identification of environmental aspects belongs in the category of environmental planning and is a basic requirement for preparing relevant targets and programmes. Environmental aspects that can be influenced and the associated environmental impacts are regularly identified for the principal activities within paper and cardboard production and along the product life cycle. Unintended circumstances and unforeseeable emergencies are also considered in this context.

Papier- und Kartonfabrik Varel has adopted a systematic procedure to identify all relevant legal, regulatory and customer requirements pertaining to occupational health and safety, quality and product safety, environmental protection and energy (mandatory obligations) that apply to its activities and services. The currency of these obligations is regularly reviewed and any changes are assessed.

These analyses and the business model itself indicate how PKV's business operations positively impact material sustainability issues. Of particular note in this regard is the substantial contribution that PKV makes to a functioning circular economy and hence to

resource efficiency in the production of packaging materials. Nevertheless, even the production of packaging material from recycled waste paper is not without its challenges and risks in regard to material sustainability issues. The use of energy and water resources warrant particular mention in this regard. Despite a 43 % reduction in energy consumption per tonne of paper across the sector since 1980 (bifa Umweltinstitut (2020): Nachhaltiger Papierkreislauf – eine Faktenbasis), the paper industry remains energy-intensive, which is due in particular to the drying process during production. Natural gas is currently the main source of energy at PKV and is used in the company's own power plant, which generates greenhouse gas emissions (refer to → criterion 12). At the same time, water is a necessary part of the production process, where it is used as a solvent and transport medium. PKV's geographic location means that the extraction of fresh water from deep wells is the only way to accommodate these requirements in a process that is strictly monitored by the authorities. Technical tests on the use of additional alternatives such as purified wastewater have been completed successfully. This option will continue to be pursued going forward (refer to → criterion 12).

Material sustainability issues emanating from outside the company affect business operations at PKV as well. The analyses outlined above indicate that the huge rise in demand for PKV products over recent decades should be viewed as the most significant opportunity in this regard. This trend has been driven of late by the increasing consumer awareness for the ecological benefits of recyclable packaging compared to plastic solutions.

Representative surveys (e.g. Simon-Kucher & Partners, March 2021) show that more than two thirds of German consumers attach importance to sustainable packaging. 70 % of respondents state that they view paper and cardboard as the most sustainable materials. As described in the last paragraph, this perception is naturally associated with risks as well. We are convinced that our business model presents the opportunity to create products for environmentally perfect packaging. It is our belief that we are ideally prepared for this role thanks to our sustainable raw materials and the steadily evolving resource efficiency of our business cycles.

However, the most important factor on the road to ecologically perfect packaging will be how greenhouse gas emissions in paper production can be substantially reduced even further based on the threefold factors of in-house efficiency, technical innovation and government policy (especially in regard to energy sources).

Since our last report, new findings have emerged from the ongoing negotiations on the EU Packaging and Packaging Waste Regulation (PPWR), which, among other things, provided for reuse quotas for certain types of packaging. In our view, this poses the risk that established recycling loops may be placed at a disadvantage in favour of reuse loops, although in our opinion, these prescribed reuse loops would be associated with a clearly negative environmental impact due to plastic usage, transport, storage and cleaning. According to current assessments, the now adopted EU Packaging Waste Regulation (PPWR) poses a risk in the long term, but has been amended in some relevant areas in a pleasingly positive and practical manner for the recycling of fibre-based packaging. In principle, we believe that the growth scenarios for our fibre-based products managed in the recycling loop are intact; however, in addition to opportunities, there are other abstract risks due to the strategic objective of the EU Packaging Waste Regulation (PPWR).

The topics previously defined as material also remained in place for the 2024 financial year and continued to be monitored as part of our sustainability strategy and the definition of corresponding targets and measures. As part of a strategic objectives workshop in November 2024, some sustainability topics were further strengthened and anchored in concrete operational objectives and measures for achieving the objectives in 2025 (see Chapters 3, 12, 14-16).

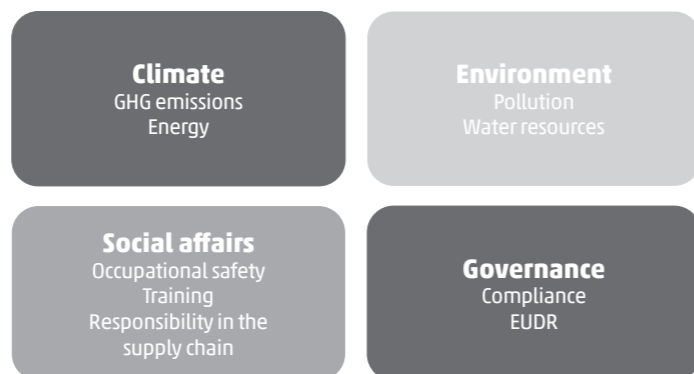
In particular, as part of the preparations for the upcoming Corporate Sustainability Reporting Directive (CSRD), an update of the materiality analysis in accordance with the CSRD was carried out for the entire HZI Group in the first and second quarters of 2024. We intend to use this report to provide a brief overview of the results of the materiality analysis, although we consider all of its topics to be covered within the structure and chapter criteria of this report.

Originally, the identification of material sustainability issues would have been taken as the basis for reporting in accordance with the European Sustainability Reporting Standards of the CSRD Directive in the non-financial information contained in the HZI Group's annual financial statements for 2026. However, at the time of publication of this report, a two-year deferral of the CSRD has been resolved for companies who become obliged to prepare reports in 2026, which means that the Group is no longer subject to the CSRD reporting obligation.

The conclusions we draw from these analyses for our sustainability management are described primarily in → criteria 01, 03 and 12.

Refer in this regard also to
 → **Criterion 01**
 → **Criterion 03**
 → **Criterion 12**

Material sustainability topics for the HZI Group



DNK criterion 03
OBJECTIVES

“[...], the objective to continue increasing our energy efficiency by means of process optimisation and technical innovation and in doing so to reduce energy input per tonne of finished product remains the top priority.”

DNK requirement: The company discloses what qualitative and/or quantitative as well as temporally defined sustainability goals have been set and operationalised and how their level of achievement is monitored.

Our vision is to maximise climate neutrality in the production of our recycled papers and cardboards – and in doing so make a strong contribution to environmentally perfect packaging. We believe that this vision, as reported in criterion 01, is consistent with the goals of the Paris Climate Agreement of 2015 and the 17 Sustainable Development Goals (SDGs) of the United Nations. Building on this long-term and most vital objective, we have derived a variety of medium-term goals as part of our strategic objectives. The Executive Board analyses their impact and level of fulfilment in the annual management review and evaluates the findings with senior managers. In addition, implementing and auditing our management systems are essential factors in the fulfilment of our sustainability goals. The Executive Board is responsible for the achievement of our strategic goals. Our operational targets for 2025 were also formulated in the strategic area of sustainability during a strategic targets workshop in September 2024.

The three highest-priority goals were:

- **Development and definition of prioritised targets and measures for the relevant CSRD reporting topics with the relevant departments**
- **Establishment of detailed monitoring and reporting of fresh water consumption at the plant to identify the main factors impacting fresh water consumption**
- **Feasibility assessment for increasing the energy efficiency of the power plant while simultaneously increasing energy efficiency in production**

For the sake of completeness, the first target must be abandoned or adjusted at the time of this report due to the most recent findings from the EU Omnibus procedure and the two-year deferral of the CSRD reporting obligation. Work is continuing on targets and measures for sustainability topics classified as material.



Given the energy intensity within our industry, the objective to continue increasing our energy efficiency by means of process optimisation and technical innovation – and in doing so to reduce energy input per tonne of finished product – remains the top priority. This high priority is also derived from the regular evaluation of opportunities and risks, which we describe in → criterion 02. The most notable approaches that warrant mention in this regard include

- Efficient power plant technology
- Increasing the availability of our production facilities
- Minimising rejects
- Optimised utilisation of raw materials
- Procurement and sales strategy that draws to the greatest possible extent on regional sources to keep energy input in the transport sector at the lowest level of economic viability, as well as
- Various energy saving and efficiency projects in all production facilities.

Our company has defined detailed short- and medium-term goals for all of these and other approaches. As described in criterion 1, we achieved our target of defining a concrete decarbonisation pathway in 2024 that extends beyond simply energy efficiency measures and previously set, specific reduction targets. This pathway is currently a viable plan from our point of view, which should help us to meet the European climate targets and the 1.5°C target.

With the definition of the decarbonisation pathway and corresponding measures, we are aiming to achieve a reduction of up to 42 % in our absolute greenhouse gas emissions by 2031 compared to the base year 2021. In order to meet this target, we are focusing on electrifying our production processes by increasingly using green electricity to operate our systems and machines and converting external electricity into heat/steam for our

drying processes with the help of Pth modules.

In connection with this scenario, the necessary expansion of the previously limited electricity grid connection and the possibility of using a large heat pump to achieve greater efficiency in the generation of steam are being examined. With the publication of this report we have already published the decarbonisation pathway with detailed information on our website. The objective for 2025 and 2026 is to launch the key preliminary projects, which primarily include the measures to introduce an RDF power plant and a 110-kv power connection.

As expected, our highly efficient water management system was able to maintain a top position in the industry ranking based on our location, using just 4.4 m³ of fresh water per tonne of finished product in 2024. We intend to harness technical innovation to continue reducing our consumption of fresh water where possible.

Moreover, we have defined targets for our purchasing department which will guide our actions in the attainment of our sustainability vision. We have always engaged in detailed dialogue with our strategic suppliers to guarantee sustainable procurement. We have launched collaborative projects for process optimisation, resource efficiency and innovation to trigger positive developments along the entire supply chain. As described in our last report, we began to introduce an even more comprehensive supplier assessment system in 2023 with the aim of ensuring sustainable and proper environmental and social procurement in the long term.

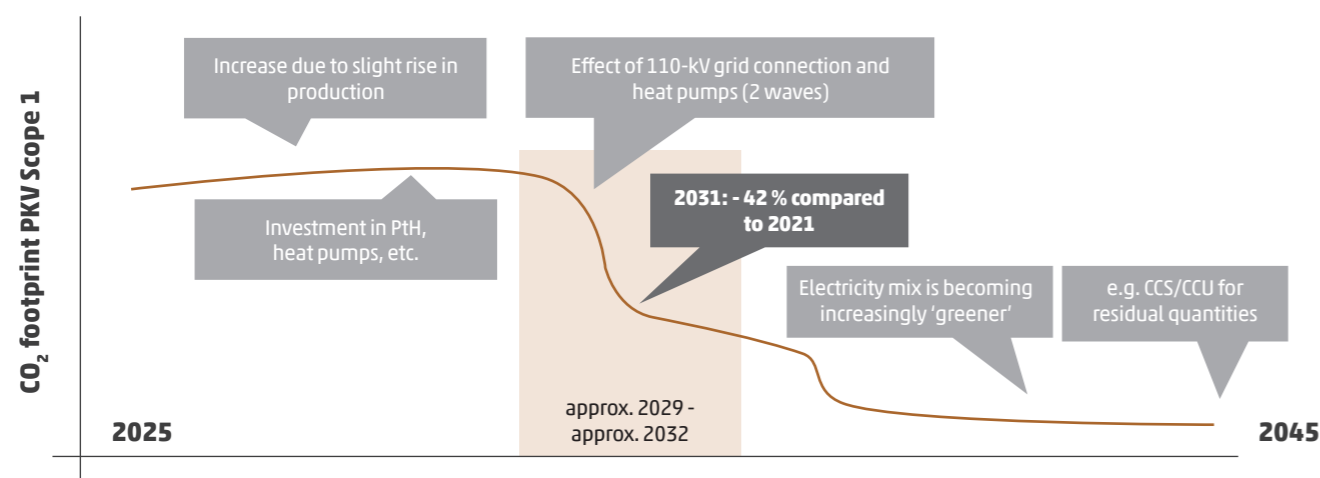
We used 2024 to build on the steps taken in 2023. The following chapters contain our report on these activities. We intend to continue our processes in 2025 and 2026, including the following targets:

- Continue to tracking assessment results as well as develop and communicate measures with suppliers → ongoing until Q4/25
- Perform an annual, abstract risk analysis for 100 % of new suppliers and prioritised invitation to assessments → Start in Q1/25 for 2024 suppliers and then annually on an ongoing basis
- Update supplier sales to invite other, strategically important suppliers with a yellow abstract risk status to undergo an assessment → Start Q3/25 and then annually on an ongoing basis
- Launch targeted supplier audits (prioritised selection according to various criteria, e.g. at least 10 % of the total number, 80 % of the order volume) with a focus on specific sustainability and supply chain topics → by Q4/25

Furthermore, our strategy includes documentation of our standards in all areas of occupational safety, which we uphold through implementation of our occupational health and safety management system in accordance with DIN EN ISO 45001 and seek to improve continuously going forward.

For 2025, we aim to reduce the number of accidents to fewer than 13 reportable accidents per 1,000 employees and hence remain below the level of BG RCI (in 2024: 16.92) and BG RCI Papier (in 2024: 26.48). We continuously implement appropriate measures.

HOW THE PKV IS BECOMING CLIMATE NEUTRAL



DNK criterion 04

DEPTH OF THE VALUE CHAIN

“We almost exclusively use recycled waste paper as raw material for the production of paper and cardboard at our plant.”

DNK requirement: The company states what significance aspects of sustainability have for added value and how deep in the value chain the sustainability criteria are verified.

We use almost exclusively recycled waste paper as raw material for the production of paper and cardboard at our plant. On average, we receive 3,300 tonnes of raw material every day from Monday to Friday, which comes in 13 different quality levels and which we source from 13 different countries worldwide (however, 90 % of the waste paper comes from within a radius of 500 kilometres). Naturally, we also receive numerous other deliveries with auxiliary materials, laminated paper, technical components and much more.

Even today, we are engaging in detailed dialogue with our strategic suppliers to guarantee sustainable procurement. In this context, we also keep an eye on potential risks to sustainable development in social, ecological and ethical dimensions, including

- Impact of logistics traffic (traffic emissions)
- Labour conditions upheld by suppliers (compliance with social and ethical standards), and
- Raw material quality criteria (ecological dimension of resource conservation).

We have introduced a variety of initiatives, rules and processes to address these potential risks. They are communicated to suppliers and business partners by our purchasing departments when the need arises in order to formulate joint solutions. At the time of this report,

- Many of our suppliers – as we do ourselves – have certified management systems that codify equitable environmental and social business practices.
- We only purchase FSC®-certified pulp for our paper and cardboard production.
- Our procurement of logistics services builds on compliance with EU standards in regard to cargo services. The use and combination of ship, road and rail carriers are considered from a strategic perspective in order to ensure the efficient transport of goods.
- Compliance with human rights and labour law standards in logistics procurement is viewed as an inalienable requirement.
- A large proportion of purchasers are receiving training in sustainable procurement.
- We are having our procurement policy reviewed as part of the EcoVadis rating.
- As described in the last chapter, we began introducing an even more comprehensive supplier assessment system in 2023 with the aim of ensuring sustainable and proper environmental and social procurement in the long term.

In 2024, we built on the steps taken in 2023:

- **With the introduction of a platform solution, we have subjected 100 % of our active suppliers (1,361) to an abstract industry and country risk analysis**
- **Suppliers with a high and medium risk who are also strategically important suppliers for us (136) was invited to complete various self-assessments/questionnaires as part of a specific risk analysis, in which they were required to comment on key sustainability and compliance issues.**
- **In Q2/Q3 2024, the analysis was continued by carrying out an impact analysis to examine individual prioritised suppliers and risk areas in detail in order to derive appropriate measures.**
- **In Q3 2024, all purchasers was trained in sustainable procurement and the practical implementation of supplier risk analysis and communication.**
- **In the second half of 2024, a policy statement and a supplier code of conduct was formulated to provide our suppliers with clear basic guidelines on what we expect from them in terms of compliance with human rights and environmental due diligence obligations.**

Our own production is the next key point in our value chain. We process our raw material into paper webs on rolls and cardboard on pallets or rolls at our plant. The sustainability aspects of this production are described in detail in → criterion 12 Resource Management.

Since 2010, PKV has been able to offer its customers Forest Stewardship Council (FSC®) chain of custody certification for all its products. Established 1993, FSC® has created an internationally recognised certification system to ensure sustainable forest management. PKV is able to sell its entire product portfolio with an FSC® mark thanks to the predominant use of recycled waste paper as a raw material and the purchase of FSC®-certified pulp, mechanical pulp and laminated paper for individual grades. We can offer our customers FSC® Recycled Credit, FSC® Recycled 85 %, FSC® Mix Credit and FSC® Mix 70 %, depending on the composition of the individual products. Naturally, the processes and policies at PKV themselves are also certified according to the FSC® standards. This certificate is regularly reviewed by external auditors and renewed.

Our customers then use our finished products in packaging solutions for the food and consumer goods sector, the pharmaceutical industry or mechanical engineering, to name just a few. After this application, our PKV products are 100 % recyclable in accordance with the EN 13430 standard.

Refer in this regard also to
→ **Criterion 12**



DNK criterion 05

RESPONSIBILITY

“[...] It goes without saying that sustainability is not just a matter for the boss. All of our employees are kept up to date with sustainability issues at the company [...] and encouraged to do their part.”

DNK requirement: Accountability within the company's management with regard to sustainability is disclosed.

In 2024, further steps were taken to optimise the holistic sustainability strategy. The topic of sustainability was defined more clearly as a focus and centralised topic at Executive Board and shareholder level.

The current sustainability manager has been received support from another colleague since April 2024. Due to the overarching sustainability requirements at Group level, the sustainability team has, since the beginning of 2024, accepted responsibility for organising sustainability activities for the entire Group, including all PKV sister companies.

In view of the large number of regulatory requirements identified, some topics and projects were prioritised by the sustainability manager together with the Executive Board. In November 2023, the multi-faceted topic of sustainability was included as a separate area in the strategic goals (5-year vision). The achievement of

the prioritised strategic sustainability targets for 2025 will continue to be ensured by the respective project managers with their working groups and monitored by the sustainability manager in regular status meetings. The sustainability manager reports on the status of all sustainability activities and the achievement of targets within the company at the quarterly management meeting.

As one of our most pressing issues for the future, sustainability continues to be a matter for senior management to address (as well). As a reflection of its importance, sustainability management also reports directly to commercial management and remains in regular dialogue with the heads of department, who carry operational responsibility for implementation and also report on target achievement. The internal officers for our management systems provide vital support within this oversight structure. Occupational health and safety management (ISO 45001), environmental management (ISO 14001), energy management (ISO 50001) and certification by the Forest Stewardship Council (FSC®) warrant particular mention in the area of sustainability.

All officers advise and support the company in complying with these strict voluntary standards. They also participate in regular internal and external audits (conducted by accredited certification bodies).

It goes without saying that sustainability is not just a matter for the boss. All of our employees are kept up to date on sustainability issues at the company via our social intranet and other channels – and encouraged to do their part. Consultation and participation procedures are organised to ensure that employee representatives remain involved. At the same time, each department has specific targets to make sure that all employees are closely involved in implementation of the sustainability strategy. Our suggestions scheme also encourages them to submit regular ideas to support the strategy, for instance in the area of energy efficiency. An additional channel for obtaining information and participation was also introduced at the start of 2024, with employees receiving insights into and information on various relevant sustainability topics and projects via a sustainability podcast hosted by the sustainability manager herself.

DNK criterion 06

RULES AND PROCESSES

“[...] there are management systems/standards in place at PKV to define or establish processes that are geared at implementing the sustainability strategy.”

DNK requirement: The company discloses how the sustainability strategy is implemented in the operational business by way of rules and processes.

PKV's sustainability goals (as an integral component of the strategic objectives) are a firm part of the internal rules, processes and standards – across all hierarchical levels, from the partners and Executive Board to the regular dialogue at the operational level and vice versa.

Aside from the sustainability strategy itself, the company has introduced a variety of policies to provide basic guidance in this process. They include a Code of Conduct, internal management principles, a policy statement on working conditions and human rights and a policy for sustainable and responsible procurement.

PKV draws on its established system of short, medium and long-term work and safety instructions, various regular reports, information on the "PULS" social intranet and other management and reporting formats to fulfil its goals.

At the same time, PKV controls its activities using management systems and standards in the following areas

- Quality (since 1994, certified according to ISO 9001)
- Environment (since 2009, certified according to ISO 14001)
- Forest Stewardship Council (FSC®), certified since 2010
- Occupational health and safety (certified according to BS OHSAS 18001 from 2012 to 2019 and according to ISO 45001 since 2019)
- Energy (since 2013, certified according to ISO 50001)
- Food safety (certified according to INREKA since 2008/switch in certification to ISO 22000 since 2021)

and regularly engages certified external auditors to review its procedures. These management systems/standards have defined or established processes at PKV that are geared towards implementing the sustainability strategy. The relevant sustainability aspects are incorporated into the processes and reporting of the management systems at regular intervals.



DNK criterion 07

CONTROL

“Much of this data is integral to reporting and auditing of our management systems and, for this reason alone, must fulfil the strictest requirements in regard to reliability, consistency and comparability.”

DNK requirement: The company states how and what performance indicators related to sustainability are integrated into its periodical internal planning and control processes. It discloses how suitable processes ensure reliability, comparability and consistency of the data used for internal management and external communication.

Like with all its strategic goals, PKV also logs and reports a large number of metrics and performance indicators concerning its sustainability goals. This data is used by managers, the Executive Board and shareholders for steering and control purposes. Much of this data is integral to reporting and auditing our management systems and, for this reason alone, must fulfil the strictest requirements in regard to reliability, consistency and comparability.

This applies equally to the metrics and performance indicators that relate to our energy input. We will now examine this issue in more detail, in line with the principle of materiality.

Among others, we use energy input per tonne of finished product as a performance indicator to measure our target achievement. This enables us to state, expressed in kilowatt hours, how much energy was needed to produce one tonne of marketable paper or cardboard. The indicator is based on measured energy input (according to our energy management system) and weight data for our finished products. It allows us to see the progress we have made towards our reduction target.

However, we still require significant amounts of additional data and various indicators to measure this progress. This is due to the large number of factors that impact our energy input. These influences include, among others, raw material utilisation, the power efficiency of our power plant and production facilities, the availability of these facilities (energy input increases if availability is higher) and the volume of waste (lower waste quantities result in less energy input per tonne of finished product).

Within this framework, we consider not only the pure energy input from our current energy sources of natural gas, biogas and electricity, but also their associated emissions. Accordingly, we calculate our corporate carbon footprint based on the principles enshrined in the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. For more information, refer to → criterion 13.

Refer in this regard also to
→ **Criterion 13**

Performance indicator EFFAS S06-01: Percentage of total suppliers and supply chain partners screened for compliance in accordance with ESG criteria

All of our 1,361 currently active suppliers were screened using an abstract risk analysis based on external database values and statistical surveys with regard to general country and industry risks. Based on this analysis, 223 suppliers (corresponding to 16 %) were subjected to a more detailed risk analysis by means of an online survey on relevant sustainability issues, including social and environmental aspects. Of these 223, 206 suppliers have already taken part in the survey and therefore have a defined overall ESG risk. Further suppliers will be invited to participate in surveys as part of ongoing campaigns.

Performance indicator EFFAS S06-02: Percentage of total suppliers and supply chain partners audited for compliance in accordance with ESG criteria

So far, no corresponding audits have been carried out by PKV. However, many of our suppliers and partners are already certified according to externally audited management systems. This was determined as part of the sustainability survey. However, since this survey does not yet cover 100 % of suppliers, the percentage of audited suppliers is not yet indicative. In connection with the ongoing risk analysis and the subsequent impact analysis, no further audits were carried out in 2024. At the end of 2024, however, the aim was defined to perform the first targeted audits of prioritised suppliers with regard to the implementation of sustainability factors in 2025.

DNK criterion 08

INCENTIVE SCHEMES

“In addition, management has decided to provide financial support for voluntary work by employees.”

DNK requirement: The company discloses how target agreements and remuneration schemes for executives and employees are also geared towards the achievement of sustainability goals and how they are aligned with long-term value creation. It discloses the extent to which the achievement of these goals forms part of the evaluation of the top managerial level (board/managing directors) conducted by the monitoring body (supervisory board/advisory board).

PKV’s sustainability goals (as described in → criterion 03) are firmly integrated into the strategic goals of the company and as such are also part of the regular management evaluations conducted by the shareholders. We report on the corresponding management review as a control instrument at management level in → criterion 02, and on more detailed control mechanisms at the level of individual performance indicators in → criterion 07.

PKV has established two monetary incentive schemes that relate to sustainability issues:

The management and works council established the company suggestion scheme as far back as 2001, and it remains in place today. Among others, the sustainability goals of occupational safety, health protection and environmental protection were part of this scheme from its inception. The energy efficiency goal was then added later on.



All PKV employees are invited to submit relevant suggestions, which are checked for feasibility and then classified by an evaluation committee (representatives from the management, works council and various departments). If a suggestion is adopted, bonuses are paid out that reflect the value of the suggested improvement.

In addition, management has decided to provide financial support for voluntary work by employees.

Our aim in this regard is to emphasise how much we value cohesion and commitment – in professional and personal life. PKV established the PKV Extra programme in 2020 to provide annual funding for donating to/sponsoring projects in which our employees are actively involved.

The third incentive system was adopted at the end of 2024 and communicated to employees in early 2025. This incentive system replaces the old PKV bonus system and sets out a direct system of profit-sharing for employees, which is even more closely

aligned with actual business success than before and also provides more opportunities for increases in good years. The new profit-sharing scheme consists of six components, which are weighted differently and influence the final payout depending on the result. The components are the strategically important performance indicators of volume, contribution margin 1, energy consumption, maintenance costs, occupational safety and complaints. The aim is to create even greater transparency, incentive and motivation in the daily work of employees by providing them with insight into the status of their forecast payment amount for the following year on the intranet.

Refer in this regard also to
→ **Criterion 02**
→ **Criterion 03**
→ **Criterion 07**

DNK criterion 09

STAKEHOLDER ENGAGEMENT

“PKV has appointed primary contacts and introduced communication channels for all these stakeholder groups [...]”

DNK requirement: The company discloses how the socially and economically relevant stakeholders are identified and integrated into the sustainability process. It states whether and how an ongoing dialogue takes place with them and how the results are integrated into the sustainability process.

A structured record detailing the most important stakeholder groups with whom PKV has always engaged was prepared during implementation of the PKV management systems in 2017. It was drafted during a management workshop under external leadership and also set out the interests these stakeholders have in the company and what demands they place in PKV.

The currency of this system is regularly reviewed during the annual management evaluation as well as internal and external audits, and any necessary changes are then made.

These main stakeholders are (in no particular order)

- shareholders
- employees/works council
- customers
- neighbours/residents
- applicants
- contractors (service providers, suppliers, utilities, certifiers)
- trade associations
- local media
- schools
- the interested public
- emergency services
- authorities
- legislative institutions
- chambers and associations
- insurance companies
- banks
- associations
- NGOs

PKV has appointed primary contacts and introduced communication channels for all these stakeholder groups. These communication channels can be extremely varied (face-to-face meetings, events, digital formats, press and public relations, other formats for internal and external corporate communication, company suggestion schemes, audits, inspections, reports...). PKV's system of occupational health and safety management also includes numerous opportunities to consult and involve employees.

Feedback from the various forms of dialogue with these stakeholders is also used in different ways for the ongoing development of sustainability management.

As part of the update of the materiality analysis described in → criterion

02, the main stakeholder groups at PKV were once again transparently involved in the process of identifying material sustainability issues on which PKV has an impact in the present and future and issues that have an equal impact on PKV by means of a stakeholder survey.

The complaints process in regard to aspects of the management systems and/or FSC®-certified products is an apt example. Each complaint that PKV receives is logged and forwarded to the competent office without delay. In addition, complaint management liaises with complainants during and after the processing of their concern. Complaints regarding FSC®-certified products are handled according to a process defined in the FSC® manual; this also applies to interim status reports and final feedback to the complainants.

In addition, a complaints system was set up at the beginning of 2023 allowing all external and internal stakeholder groups to submit anonymised reports on violations of public law and human rights and/or environmental obligations. We have added corresponding rules of procedure and a link to the reporting platform on our website.

The company suggestion scheme is another example of a process to manage feedback from our stakeholders. It is described in more detail in → criterion 08.

Refer in this regard also to
→ **Criterion 8**



DNK criterion 10

INNOVATION AND PRODUCT MANAGEMENT

“Harnessing the best available technology has always been integral to our corporate strategy. This has positive knock-on effects in regard to resource preservation. [...]”

DNK requirement: The company discloses how innovations in products and services are enhanced through suitable processes which improve sustainability with respect to the company's utilisation of resources and with regard to users. Likewise, a further statement is made with regard to if and how the current and future impact of the key products and services in the value chain and in the product life cycle are assessed.

Papier- und Kartonfabrik Varel makes an important contribution to sustainable development by means of its business model alone. Compared to other materials, packaging paper and cardboard made from recycled paper yield significant benefits in regard to ecological aspects of sustainability that extend from production and use to recycling. Processing waste paper as the raw material conserves natural resources, and the collection systems established in Germany and many other countries ensure that used products can be easily returned to the circular economy. Among other things, a carbon footprint is calculated for each of our products in order to assess their specific environmental impact. Moreover, our management systems regularly identify environmental aspects that can be influenced and the associated environmental impacts for the principal activities within paper and cardboard production and along the product life cycle. Unintended circumstances and unforeseeable emergencies are also considered in this context. We report on how other opportunities and risks are considered in → criterion 02.

Naturally, innovation processes along the value chain affecting established goods such as paper and cardboard play an important role, also with

regard to sustainable development. Broken down individually, these processes include, firstly, external technical innovations exploited by our company, and, secondly, proprietary product and process innovations as well as, thirdly, investments in industry-wide innovation processes.

Technical innovation has always played a central role at our company. Harnessing the best available technology has always been integral to our corporate strategy. This yields a steady stream of positive knock-on effects in the area of resource conservation –

for instance when innovative technology is used for machine conversions that increase dewatering of paper in the machine's press unit to save energy during steam drying. In addition, PKV is, broadly speaking, open to revolutionary methods of steam production and in 2019 commissioned a power-to-heat module that draws on wind energy (purchased from the market) to generate steam. Moreover, PKV commissioned the new photovoltaic system with a gross installed capacity of around 2.4 MWp in October 2024. Around 70 MWh of electricity has been generated since its commissioning in 2024, 100 % of which has been used for PKV's own consumption.

We are also strongly involved in the continuous improvement of our own products and processes, along with innovation and optimisation. Our integrated management systems (quality, environment, occupational health and safety, food and product safety, energy) provide a suitable framework for this purpose that is regularly assessed by external auditors. The company suggestion scheme is another example of an innovative process. It is described in more detail in criterion 08.

Furthermore, our internal product development department, for example, contributes to industry-wide research projects that aim to exploit previously unusable fibre material for recycling and integration in packaging materials.

PKV co-founded Modellfabrik Papier in Düren in 2019 to work on industry-wide solutions to reduce greenhouse gas emissions, improve resource conservation and increase energy efficiency going forward. Comprising a large number of partners from industry, universities and associations, this research network will use the coming years to conduct intensive basic research in the interests of sustainable, climate-neutral paper and cardboard production.

Refer in this regard also to
→ Criterion 02
→ Criterion 08

Performance indicator EFFAS E13-01: Improvement rate of product energy efficiency compared to previous year

Since our products themselves do not consume energy, we cannot report on this indicator. We report on the energy consumption and efficiency of our production under the corresponding criteria.

Performance indicator EFFAS V04-12: Total investment (CapEx) in research for ESG-relevant areas of the business model, e.g. ecological design, eco-efficient production processes, reducing the impact on biodiversity, improving health and safety conditions for employees and partners in the supply chain, developing ESG opportunities for products – also expressed in monetary units, e.g. as a percentage of sales

We are unable to report on this indicator because our data does not currently allow these investments to be clearly distinguished from each other. With the abolition of the CSRD reporting obligation, the specific requirements for an EU taxonomy report – which would have included the recording of these KPIs – also no longer apply. In this context, we are examining how and in which form it would make sense to record data in which areas of the business model going forward.

DNK criterion 11

USAGE OF NATURAL RESOURCES

“[...] PKV has been contributing for decades to a successful circular economy consisting of paper and cardboard production, the use of its products in industry and private holds and recycling and by doing so is conserving natural resources.”

DNK requirement: The company discloses the extent to which natural resources are used for the company's business activities. Possible options here are materials, the input and output of water, soil, waste, energy, land and biodiversity as well as emissions for the life cycles of products and services.

PKV has almost exclusively used waste paper as the raw material in the production of paper and cardboard since 1950. The only exceptions are small quantities of pulp from sustainable forestry, which are added to special grades for technical reasons, and virgin fibre-based laminating papers made of pulp from sustainable forestry, which we purchase from external sources. PKV was one of the first paper factories in Germany to rely exclusively on waste paper as a raw material.

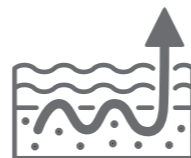
By doing so, PKV has been contributing for decades to a successful circular economy consisting of paper and cardboard production, the use of its products in industry and private households and recycling thereby conserving natural resources. Fibres used in the production of corrugated base paper and cardboard can be recycled to a high standard and reused more than 25 times. In Germany, on average, over 83 per cent of such packaging consists of recycled paper. The return rate for waste paper is similarly high: Around 75 per cent of paper, cardboard and carton products are disposed of properly. PKV purchased a total of 880,000 tonnes of waste paper in 2024.

At the same time, the recycling of waste paper also requires natural resources – mainly water and energy. However, these resources can be used more sparingly in the processing of waste paper compared to the production of virgin fibre products.

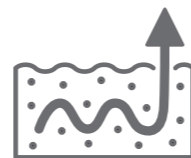
Water is the most important pulping, transport and sorting medium and is hence indispensable for paper and cardboard manufacturers. This applies from the preparation of raw materials to web creation and the finished web to comply with specific strength and appearance requirements. In 2024, PKV used 4.4 m³ of fresh water per tonne of finished product (3.6 million m³ in total) in multiple and cascade scenarios for its production processes. Our water management system is explained in more detail in criterion 12.

The production of paper and cardboard from waste paper also requires energy. This comes in particular in the form of steam to dry the paper and cardboard webs, but also in the form of electricity to operate the systems. PKV currently uses natural gas and the biogas produced in process water treatment as energy sources and generate process heat from this (in the form of steam) and electricity. For process-related reasons, we also purchase electricity externally, but also feed ourselves back into the public grid. We provide a detailed explanation of our energy management in criterion 12 (refer also to the table for performance indicator EFFAS E01-01).

ENERGY SOURCES 2023



**1,349,869,330 KWH
NATURAL GAS**



**52,453,000 KWH
BIOGAS**



**= PROCESS HEAT
AND ELECTRICITY**

**9,854,451 KWH
EXTERNAL ELECTRICITY**



**23,922,880 KWH
ELECTRICITY FED INTO
THE PUBLIC GRID**

Refer in this regard also to
→ **Criterion 12**

DNK criterion 12

RESOURCE MANAGEMENT

Building on our current investment programme, we aim to achieve an up to 10 % reduction in our carbon emissions per tonne of finished product by 2025 [...].”

DNK requirement: The company discloses what qualitative and quantitative goals it has set itself with regard to its resource efficiency, in particular its use of renewables, the increase in raw material productivity and the reduction in the usage of ecosystem services, which measures and strategies it is pursuing to this end, how these are or will be achieved, and where it sees there to be risks.

ENERGY

PKV has its own power plant and is almost entirely self-sufficient in regard to energy requirements. The power plant systems are rigorously designed for combined heat and power generation thus ensuring virtually complete exploitation of the energy source. Among other things, our ISO 50001-certified energy management system maximises efficiency in the use of resources.

Our four gas turbines, five high-pressure steam boilers and four steam turbines use a highly efficient combined heat and power (CHP) process to generate up to 200 tonnes of steam per hour and more than 50 MW of electricity, depending on the steam off-take. Natural gas is the principal energy source, along with biogas generated in our process water treatment system. It is primarily converted into electricity in two gas engines with a combined electrical output of almost 2 MW. The flue gas heat is used to generate steam and the engine heat to heat water fed into the boiler. Another quantity of biogas is used as a substitute for thermal purposes in a steam generator otherwise powered by natural gas. This enables a very high degree of natural gas and biogas energy utilisation.

By harnessing natural gas and biogas as energy sources, the power plant makes PKV largely self-sufficient. Only rarely is it necessary to purchase electricity from third parties.

Moreover, PKV commissioned the new photovoltaic system with a gross installed capacity of around 2.4 MWp in October 2024. Around 70 MWh of electricity has been generated since its commissioning in 2024, 100 % of which has been used for PKV's own consumption. Overall, the PV system with its net nominal output has the potential to save 4,057 MWh of gas and thus approx. 759 t CO₂.



POWER TO HEAT

In addition, the power-to-heat module (electricity to heat/steam) we tested is, in principle, technically capable of easing the strain on the public grid, especially in the event of increased wind power generation, which will, at the same time, save primary energy and therefore CO₂.

The energy performance indicators are recorded and evaluated monthly based on our energy management system. We then conduct an annual comparison with the matching energy baseline from 2012 to review the continuous improvement process.

As part of the paper industry, we belong to an energy-intensive sector. This comes with the risk of producing emissions that harm the climate and have a negative impact on sustainable development. This area has experienced considerable progress over recent years and decades – data released by Die Papierindustrie e.V. industry association indicates that the specific energy consumption per tonne of finished product in the paper industry fell from 3,413 kWh in 1990 to 2,724 kWh in 2024. At PKV, we can report a natural gas energy input of 1,548 kWh per tonne of finished product in 2024 (natural gas input Ho, upper calorific value, comparable with private billing value), the total energy input was 1,578 kWh per tonne. This places us well below the average. It is important to note nonetheless that this average also includes companies that, for technical reasons relating to the products they make, are compelled to use more energy, for instance in the processing of virgin fibres. Recycling of waste paper (like at PKV) is less energy-intensive by comparison. We have nevertheless set ourselves ambitious goals (see criterion 13) to progress from where we are now.

The following will outline some of our projects that aim to improve our energy efficiency.

We began trial operation of a new system in May 2024 that preheats cold process water by exchanging energy with warm wastewater from production. This means that preheating requires considerably less energy – and ultimately less natural gas. We organised the installation of 1,300 total metres of new piping, along with a 1,000 cubic meter storage tank made from 44 tonnes of stainless steel. The multi-million euro investment is worthwhile from two perspectives: This smart heat recovery system can save up to 16,500 megawatt hours of energy

per year – equivalent to as much as 825 average single-family homes consume per year (assuming 20,000 kWh per home). It follows, therefore, that less natural gas needs to be purchased and the new technology prevents the release of up to 3,300 tonnes of CO₂ per year. This efficiency project is funded by the Federal Office of Economics and Export Control (BAFA).

In September 2024, we converted one of our old refrigeration systems to a new system with two recirculating air cooling units without refrigerants, which reduced our own consumption from around 120 MWh to just under 21 MWh and CO₂ emissions from refrigerants and electricity generation from around 84 t CO₂/a to 9 t CO₂/a. This is equivalent to a reduction of almost 90 per cent. Furthermore, the main projects planned and approved for 2025 involve the development of cost-efficient load management at the power plant and optimisation of the steam system at KM2. For the following reasons, we anticipate that these two projects will make a significant contribution to the overall energy efficiency of production: Cost-efficient load management includes the implementation of a software-based energy management and optimisation system to continuously support the energy efficiency and energy costs of the generation plants. Our purpose in this regard is to use this to prompt our power plant control system to ensure even more efficient handling of the current energy flows. Optimisation of the steam system in KM2 is aimed at a more efficient use of the vapour steam to dry cardboard and hence to achieve a reduction in specific steam consumption of 5-10 percent at full production. Furthermore, we are reducing emissions by converting our vehicle fleet to electric drive, which has already been largely completed. We converted our last larger vehicles with combustion engines (e.g. special wheel loaders)

to synthetic fuel, HVO 100, made from recycled vegetable fats in August 2024. Compared to conventional diesel, HVO 100 reduces the usual emissions by up to 90 %.

WATER

We use water for a variety of purposes in the production of paper and cardboard from almost 100 % waste paper: for cooling, preparation, dilution, and cleaning, as a pulping, sorting and transport medium in raw material preparation and as a production medium for high-quality, homogeneous web formation. Exclusively groundwater has been available for these tasks at PKV's site in Varel since the plant was established. But this always comes with a risk of conflicted use. This fact alone encourages us to install a necessary water management system that ensures efficient use of this natural resource from the outset. At present, we are able to use just one litre of water up to thirty times in various stages and cascades before it is purified and returned to the ecosystem.

Based on our location, this highly efficient management system enabled us to achieve a top position in the industry ranking with a use of just 4.4 m³ of fresh water per tonne of finished product in 2024. The most recent data indicates that the German paper industry used an average of around 6.7 m³ of fresh water per tonne of fresh product. It is important to note, however, in regard to this comparison that, for technical reasons alone, our recycling processes will always require less water than other production processes in the paper industry (e.g. the processing of virgin fibres).

Although our current water management system operates at the lower level of what would be technically feasible, we remain tireless in our efforts to achieve continuous improvement.

Our aim is to harness technical and process solutions to keep fresh water consumption consistently below or at 4 m³ per tonne of finished product. Moreover, we are currently testing how a percentage of purified municipal wastewater could be added to the groundwater in order to preserve resources going forward. To this end, a technical pilot project has been brought to a successful conclusion with the Oldenburgisch-Ostfriesische Wasserverband (OOWV).

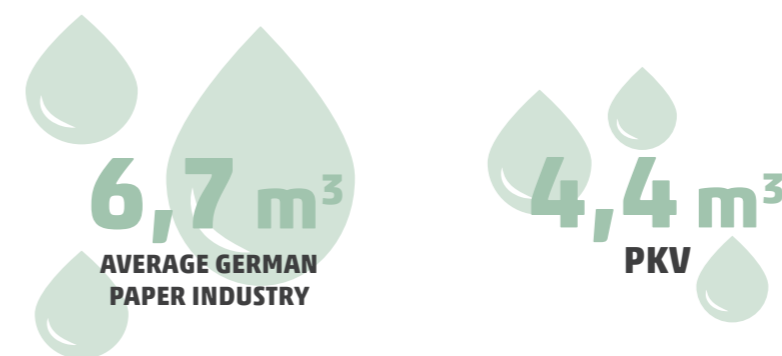
We obtain groundwater from 15 wells situated in a radius of up to 5 kilometres. In 2013, after extensive testing, we received a corresponding permit from the district of Friesland, which is valid for 30 years. It permits us to extract 4.5 million m³ per year. We utilised 3.61 million m³ of this quota in 2024, as our current production is still below the volume targets set out in our investment strategy.

Our permit also imposes regular and comprehensive reviews of various issues that may be associated with the extraction of groundwater (impact on agriculture and forestry, impact on soil settlement and impact on the saline/freshwater boundary etc.). This means that we are subject to extremely strict monitoring. Our more than 200 groundwater measuring points are inspected monthly. None of the inspections to date have returned anomalous measurement values.

How do we handle water at our plant? The groundwater comes in at a temperature of between seven and ten degrees Celsius and is used initially to cool the turbines in the power plant, the switch rooms, the control rooms and the hydraulic stations in multiple stages. Doing so eliminates the need for a large number of refrigeration machines or cooling circuits with evaporative coolers and hence reduces electricity, coolant and water consumption.

We aim to bring the water as close as possible to the ideal temperature for use in the wet section of the paper and cardboard machinery – also by harnessing additional heat from the recirculation condensate in the dryer section and waste heat from the exhaust air. This water temperature allows us to cut primary energy consumption in the form of steam (by a reduction in heating energy and through a higher dewatering speed and greater dry contents after the wire and press sections).

In the dryer section, some of the process water is discharged as steam through the exhaust vents in the hall roof during the production of our cardboard and paper. During the production process, the remaining process water acquires a greater carbon load (COD) in particular. After it is used around 30 times, this load must be removed by purification before the water is discharged into the North Sea or reused in parts of the production process. This task is performed by our process water treatment plant, which has a current daily capacity of 90 tonnes of COD. The system has an anaerobic and an aerobic part, which means that the carbon loads are eliminated by means of bacteria and sedimentation processes. We then reuse around 20 % of this water in production. Finally, we discharge purified water (2024: 3.1 m³ per tonne of finished product) into the North Sea via a seven-kilometre pressure pipeline. We measure wastewater values on a daily basis. They are also checked twelve times a year during unannounced inspections by the Lower Saxony Water Management, Coastal Defence and Nature Conservation Agency (NLWKN).



FRESH WATER INPUT PER METRIC TON OF FINISHED PRODUCT

¹ The reference value was adjusted in all reports and thus changed from Hu (energy without moisture in the gas – dry natural gas) lower heating value to the upper heating value (Ho), which is comparable to the private billing value.

MATERIALS

We implemented three additional projects in 2024 as part of continuous process optimisation, which will help to further reduce our use of materials. In the area of paper production, the new dosing technology will enable us to achieve annual reductions of around 114 tonnes of previous retention agents. We reduce consumption by an additional 60 tons per year by permanently dispensing with the dosing of hydrogen peroxide in the filter water channel of our PM4. In intralogistics, we can lower consumption by around 2,580 litres per year by converting from wet cleaning of the halls by an external service provider to dry cleaning using our own machinery.

WASTE MANAGEMENT

PKV operates facilities in accordance with the Federal Immission Control Act (BImSchG) with appropriate waste management. This guarantees lawful disposal at all times in cooperation with certified specialist waste management companies. PKV is also a certified specialist disposal company. The internal waste management officer advises management and other competent persons. The officer also prepares an annual report documenting waste pathways from generation to recycling or disposal, certificate review, waste performance indicator trends as well as compliance with legal requirements, mainly by conducting regular inspections of the company's own accumulation points, notifying the company of any deficiencies and suggesting ways for their elimination. Continuous improvement approaches are also an integral part of waste management.

Unfortunately, the non-recyclable fraction of waste paper in our raw material has risen in recent years. Included in this are, for example, plastic bags, films, stickers and much more. This waste now accounts for around three percent of the raw material.

We use various systems to sort this waste out of the recovered paper that is dissolved in water. These rejects consist of wet, shredded plastic waste mixed with paper fibres or even scrap metal and sand. This waste was disposed of directly in the past (the plastic was generally sent to waste incineration plants), which required a significant number of transports and incurred high costs.

We have decided to transform these rejects as far as possible into a useful product. The reject processing system we built in 2018 is able to break down, crush, sort, dry and compact those parts of the waste that are suitable for further processing. We use waste heat from paper and cardboard production for drying. Then we press the rejects into pellets. They have the capacity to replace fossil fuels, as they are used as fuel in the cement industry and elsewhere or in power stations that generate electricity and/or district heating.

NOISE

Our plant is an industrial facility that will inevitably generate noise, whatever we do. We have been issued an operating licence by the Trade Supervisory Office on the basis of the Federal Immission Control Act, which provides the legal framework to mitigate this potential risk. This licence sets out a variety of limit values for noise perception at different points outside the factory premises, all of which we comply with. Compliance must be checked every three years by a measuring centre notified in accordance with Section 29b BImSchG.

In addition, a noise specialist prepared a noise forecast model for our entire premises, which involved more than 300 individual measurements. The expert uses this forecast model to determine necessary noise protection measures in the case of modernisations or investments. This forecast model is updated regularly following changes. We take any reports from neighbours concerning disturbing noises seriously and eliminate the sources. At the same time, we are constantly reducing the noise emitted at our plant, for example by using electric stackers in the waste paper yards and new power plant technology.



ODOUR

PKV manufactures paper and cardboard almost exclusively from waste paper. Unfortunately, odours cannot be entirely excluded in this process. But we make regular investments in new technologies to reduce odour levels as far as possible. We are also subject to strict limit values, and our compliance with these requirements is checked by external experts according to the intervals stipulated by law.

Starchy waste paper as raw material, water and warm temperatures provide an ideal habitat for acidifying bacteria that produce naturally occurring organic acids. This cannot be eliminated entirely in the production of paper. Paper and cardboard machines use sieves, felts, rollers and drying cylinders to produce a homogeneous web from a liquid mixture (paper fibres and water). Most of the water is drained mechanically. The rest must evaporate during the drying process. Some of this water vapour passes through vents and escapes above our factory. People are able to smell even the slightest concentrations of the natural substances dissolved in this vapour. We are therefore unable to entirely prevent an odour of 'wet paper' emanating from our plant. But it does not present any health risk. Our company is required to comply with the Federal Immission Control Act. This means that a permit or notice must be obtained from the competent authorities for any change to the facilities, during which any possible environmental impact is always evaluated. This applies in particular if it potentially impacts noise, odour, soil protection, immissions/emissions of substances, wastewater discharge and groundwater extraction. These permits and notices include regular monitoring to ensure compliance with emission/immissions guide values, which are measured by officially

approved measuring stations and independent experts. We are therefore able to infer that we do not release any emissions in concentrations that may present a health risk.

There are a variety of ways in which we can counteract odour development. Some are mechanical, while others involve the addition of lime milk and soda lye to stabilise the pH value and hence worsen the conditions for the growth of acidifying bacteria. Broadly speaking, though, we encounter another dependency at this point: it is our aim to reduce the consumption of fresh water as far as possible at our plant – but reducing odour development requires the use of more fresh water (dilution effect).

A suitable additive to reduce microbiological activity is also added at key points in the production process. In doing so, we strictly adhere to the principle of 'as much as necessary, as little as possible' in order to ensure optimised operation of the downstream microbiological process water treatment system at our plant. The auxiliaries we use degrade completely in the water cycles, which prevents any impact on the environment.

As a final step, the previously unwanted process (acidification) is deliberately induced in the process water treatment system in order to break down the dissolved starch component in a controlled setting. Among other things, ongoing modernisation of the process water treatment system also involves the installation of cutting-edge technologies to replace older components. This contributes to minimising odours and enables the return of more biologically purified process water to the production process for dilution purposes.

The reduction of odour emissions continued to be a high-priority goal

in 2024. In this context, a preliminary project was launched to assess the technical and economic feasibility of the action plan. Based on this, an overall schedule will be agreed with the trade supervisory authority in summer 2025, from which an odour concept will then be derived that will be rolled out over several years. A cross-facility team of experts led by technology and plant development continuously monitors the status of targets and measures.

BIODIVERSITY

The slogan 'Blossoming Friesland' is the motto for several projects that are being organised in the district of Friesland with the aim of preserving and promoting biodiversity. PKV also participated in the 'Blossoming Trade' project in 2023. It encourages companies in the district of Friesland to sow a small area of flowering plants and to allow other areas to grow and develop naturally. The aim is to help counteract the alarming and progressive loss of native flora and fauna. This will create a very tight network of natural structures and biotopes that will allow native plants to flourish and hence ensure the development and sustainable survival of insects and animals that depend on them.

PKV has defined a variety of measures that are currently underway within the project:

- Flowering meadows, approx. 7,000 m²
- Flowering/natural meadow with two insect hotels, approx. 3,000 m²
- Natural meadows, approx. 16,800 m²
- Orchard meadow with eleven apple trees (old varieties)
- Fruit trees and natural tree population with natural meadow, approx. 4500 m²
- Beehives on the company premises in cooperation with a local beekeeper since 2018
- Kestrel box in collaboration with NABU since 2013
- Stork nest in collaboration with NABU since 2021

In addition to participating in this 'Blossoming Trade' campaign, PKV donated twelve fruit trees in 2024, which will be distributed to all six primary school locations in close coordination with the town of Varel as the school authority. Ten of them were planted in 2024, while two more will follow in 2025 due to a conversion project at the Langendam comprehensive school. PKV – as a waste paper recycling company – uses this and other campaigns to remind us of the importance of biodiversity for many natural cycles.

Performance indicator EFFAS E04-01: Total weight of waste: / Performance indicator EFFAS E05-01: Percentage of total waste recycled:

Waste type	Recyclable?	Weight in t	As % of total waste
Production waste	Recycling	43.313	67,99 %
Reject waste	Recycling	16.542	25,97 %
Other waste	Recycling	867	1,36 %
Total waste	Recycling	60.722	95,32 %
Special waste	Disposal	2.979	4,86 %
Total		63.701	100 %

Performance indicator EFFAS E01-01: Total energy consumption:

1,502,212,883 kWh

Other company-specific climate and environmental indicators

Data	2024	2023	2022
Total natural gas consumption (in kWh)	1.474.458.770	1.349.869.330	1.472.891.537
Total biogas consumption (in kWh)	57.248.002	52.453.000	57.469.000
Externally purchased electricity (in kWh)	2.504.262	9.854.451	9.816.241
Fed out electricity (in kWh)	32.070.097	23.922.880	23.799.667
Total energy consumption (in kWh per tonne of finished product)	1578	1570	1663
Natural gas energy consumption (in kWh per tonne of finished product)	1548	1545	1590
Total amount of renewable energy consumption (biogas) – electricity generation and feed-in to the public grid (in m ³)	4.949.988	5.119.846	/*
Total amount of renewable energy consumed (biogas) – thermal utilisation and substitution of natural gas (in m ³)	3.857.194	2.949.846	/*
Amount of recycled/reused water (= recirculation of biologically pure water, in m ³ /year)**	1.342.071	1.319.555	1.194.256
Total volume of fresh water consumption (in million m ³)	3,61	3,23	3,3
Fresh water consumption (in m ³ per tonne of finished product)	4,4	4,4	4,2
Total amount of treated and discharged wastewater (in m ³ per tonne of finished product)	3,1	2,8	2,73

* included for the first time in the 2023 Sustainability Report

** We are currently recording the water recycling cycle of biereinwasser, which is returned to the production processes for reuse after purification in the process water treatment plant (PBA), in full and with sufficient data quality. The water is already being used multiple times in the production process itself.

DNK criterion 13

CLIMATE-RELEVANT EMISSIONS

“[...] the objective to continue increasing energy efficiency at PKV by means of process optimisation and technical innovation and in doing so [...] to reduce the use of fossil energy sources per tonne of finished product remains the top priority.”

DNK requirement: The company discloses the GHG emissions in accordance with the Greenhouse Gas (GHG) Protocol or standards based on it and states the goals it has set itself to reduce emissions.

Our company mainly produces climate-relevant emissions through the use of natural gas. Its energy is converted in our power plant into electricity and process heat in the form of steam. The paper industry is an energy-intensive sector, in particular due to the process heat used to dry the paper and cardboard webs. The principal challenge in this regard is the need to use water to produce the paper, which then has to be removed from the product once a paper web has been formed. Mechanical and thermal methods are used in this context, all of which require substantial quantities of energy. As outlined in → criterion 03, PKV's top priority is therefore to further increase our energy efficiency through process optimisation and technical innovation, thereby reducing the use of fossil fuels per tonne of finished product on its path toward achieving an absolute reduction in greenhouse gas emissions and climate neutrality.

The most notable approaches that warrant mention in this regard include

- **Efficient power plant technology**
- **Increasing the availability of our production facilities**
- **Minimising rejects**
- **Optimised utilisation of raw materials**
- **Various energy saving and efficiency projects in all production facilities.**



As described in → criterion 1, in 2023 we worked on a decarbonisation pathway for our company that goes beyond mere energy efficiency measures and previously set specific reduction targets. This pathway is currently a viable plan from our point of view, which should help us to meet the European climate targets and the 1.5°C target.

With the definition of the decarbonisation pathway and corresponding measures, we are aiming to achieve a reduction of up to 42 % in our absolute greenhouse gas emissions by 2031 compared to the base year 2021. In order to meet this target, we are focusing on electrifying our production processes by increasingly using green electricity to operate our systems and machines and converting external electricity into heat/steam for our drying processes with the help of

PtH modules. In connection with this scenario, the necessary expansion of the previously limited electricity grid connection and the possibility of using a large heat pump to achieve greater efficiency in the generation of steam are being examined.

In order to capture an increasingly transparent picture of our greenhouse gas emissions, we once again calculated our corporate carbon footprint (CCF) in 2024 for Scopes 1-3 based on the guidelines set out in the Greenhouse Gas Protocol (GHG). Our calculated total greenhouse gas emissions for 2024 were 690,663 tonnes of CO₂ equivalents. Total emissions in 2024 are higher than in the previous years 2023 and 2022. This increase is not fundamentally due to an increase in GHG emissions.

We can attribute a percentage increase in absolute emissions of just under seven per cent in Scopes 1 and 2 to an increase in production volume.

However, the main reason for the increase lies in the details of the Scope 3 balance sheet. A number of factors play a role here, which on the one hand lead to an increased balance sheet, but on the other hand also represent the result of a higher level of detail in the calculation methodology and the fulfilment of additional standards and requirements (for more details see chart below). The main drivers here are adjustments that enable compliance with SBTi requirements:

- Updated emission factors (e.g. change from spend-based to material accounting in 3.1)
- Expansion of balance sheet items/addition of new categories (3.12), and
- Adjustments to emission factors (e.g. use of well-to-wheel emission factors in the transport sector (3.4, 3.9))

All relevant greenhouse gases according to the Kyoto Protocol were included in the calculated CCF. The emissions were obtained using consumption data and emission factors. Primary data was used as far as possible. Where no such primary data was available, we used secondary data from recognised sources. The emission factors were sourced from internationally recognised databases such as DEFRA, Gemis or the German Environment Agency (UBA).

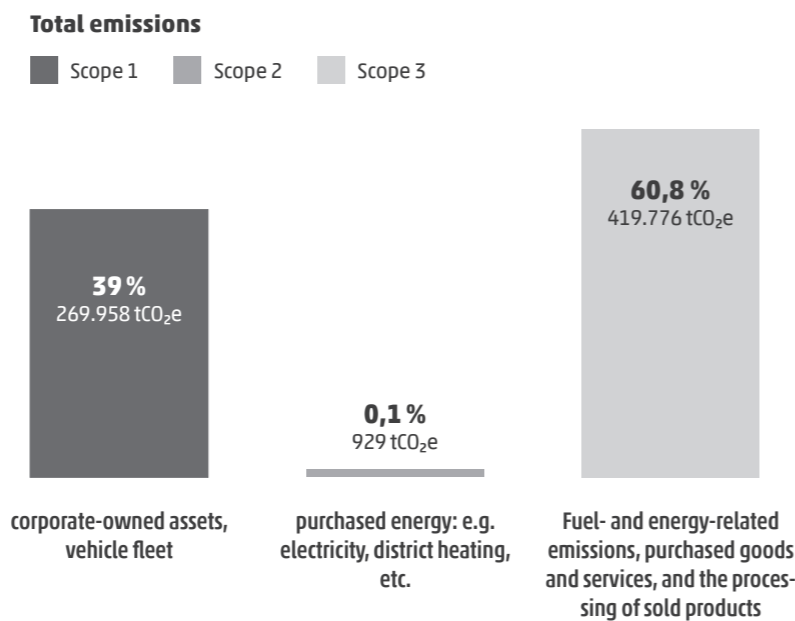
Refer in this regard also to → **Criterion 03**

Performance indicator EFFAS E02-01, total GHG emissions: (Scope 1, 2, 3): 690,663 metric tonnes of CO₂e

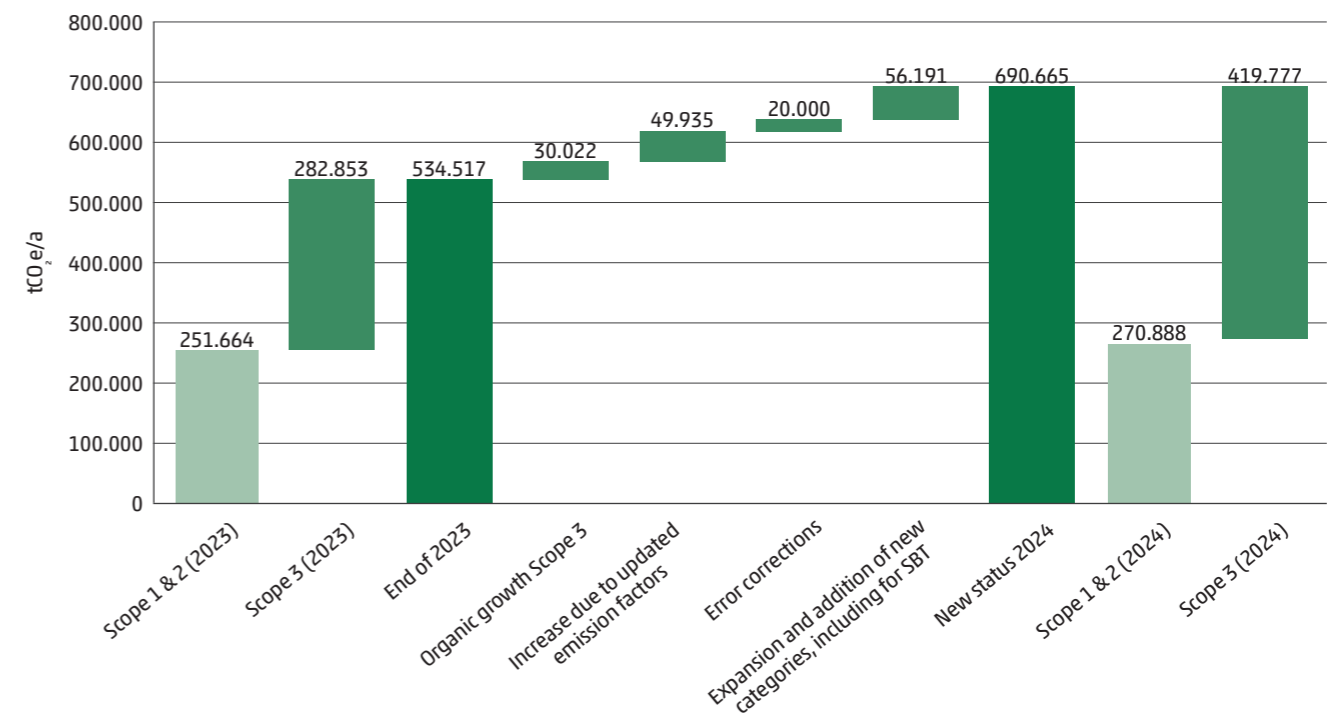


Total emissions were divided into three categories (Scopes):

- **Scope 1 contains all emissions directly generated by Papier u. Kartonfabrik Varel GmbH & Co. KG through, for example, company facilities or vehicle fleets (= 269,958 tCO₂e, = 39 % of emissions)**
- **Scope 2 lists emissions generated by purchased energy, for example electricity and district heating etc. (= 929 tCO₂e = 0.1 % of emissions)**
- **Scope 3 includes indirect emissions, such as fuel and energy-related emissions, purchased goods and services and the processing of products sold (= 419,776 tCO₂e, = 60.8 % of emissions)**



Waterfall chart showing the change in the balance sheet from 2023 to 2024*



* All information is market-based and rounded values are subject to change.

DNK criterion 14

EMPLOYEE RIGHTS

“We are committed to social responsibility and accountable corporate governance.”

DNK requirement: The company reports on how it complies with nationally and internationally recognised standards relating to employee rights as well as on how it fosters staff involvement in the company and in sustainability management, what goals it has set itself in this regard, what results it has achieved thus far and where it sees risks.

We are committed to social responsibility and accountable corporate governance. Compliance with applicable laws is the basis for our actions, which are shaped by the principles of integrity, fairness, sustainability and environmental protection.

Our sole company location is in Germany. However, our purchasing and sales departments operate internationally. We comply with all laws, standards and other legal provisions and also adhere to the relevant social rules that apply in the countries in which we are present. These principles are enshrined in our Code of Conduct (https://www.pkvarel.com/wp-content/uploads/2023/09/Code-of-Conduct_0523.pdf) and elsewhere. We are absolutely and irrevocably committed to respecting and guaranteeing human rights as the greatest asset of our legal system in everything that we do. We strictly reject any form of forced labour. We define forced labour as any type of work that is performed involuntarily or under threat of punishment. The work of any employee at our company is based on a contract of employment that is concluded voluntarily by the contrac-

ting parties. The employee's remit and their principal tasks are set out in the contract of employment and supplementary documents or explanations.

We strictly reject child labour in any form. We fully comply with the provisions of the Protection of Young People At Work Act (JArbSchG) and all associated regulations. Young persons only work the hours that are permitted by law.

We believe that sustainable management and sustainable corporate success are inextricably connected not only to productivity, quality and efficiency, but also to humanitarian standards. In our view, sustained business success is not possible without qualified and committed employees. The working conditions described in the following make a significant contribution to this and are firmly embedded in the corporate culture at PKV.

WAGES AND SOCIAL BENEFITS

PKV guarantees that all employees receive remuneration that is fully compliant with the applicable laws and collective agreements (in particular the general collective agreement for employees in the paper industry and the associated wage and salary agreements). The Minimum Wage Act (MiLoG) should be perceived as the absolute minimum standard and is exceeded by far in our various collective agreements. Included in this is a collectively agreed holiday entitlement of 30 days per year, special leave

for particular, collectively agreed occasions, a full monthly salary as a Christmas Monthly salary, a separate holiday allowance, a profit-sharing bonus and additional payments for night work, work on Sundays, public holidays and overtime. We also offer an additional 15 days' holiday per year for shift employees aged 55 and over as part of our semi-retirement plan.

The profit-sharing scheme was agreed between the management and the Works Council at the end of 2024 to replace the previous bonus system and then communicated to employees. Criterion 8 has already outlines how employees are therefore even more involved in the actual business success, as it is measured by several factors that everyone can influence at various points.

Employees have nothing to lose from the conversion, and there are even more opportunities for growth.



We have acknowledged the significance of a company pension scheme as another important building block in this regard. There are two company plans in place – either by employer contributions or deferred compensation – through which our employees can supplement their pension provisions.

We believe it is self-evident that each employee should receive a monthly payslip so that they can document and verify correct payment.

WORKING HOURS

We fully comply with the provisions of the Working Hours Act (ArbZG) and associated regulations. Our working week according to the relevant collective agreement is 38 hours, which is well below the limits of the Working Hours Act.

It will never be possible to eliminate overtime completely. But we do pay attention that it does not become routine at any workplace and always remains the exception. We have installed a company policy stipulating that specific justification must be provided if working hours exceed 10 hours in one day. This ensures that we proceed in accordance with the strict exceptions afforded under the Working Hours Act. We have a time clocking system to ensure transparent documentation of overtime and its settlement by means of free time or payment.

At PKV, we have concluded a company agreement on part-time work with various models that allow each employee to reduce their working hours by up to 50 %. This increases the compatibility of professional and family life and improves the work-life balance.

In addition to industry standards, we have part-time models for shift work that enable our employees to work fewer days per year and therefore reconcile their professional lives with personal needs.

OCCUPATIONAL SAFETY

We believe that occupational health and safety are extremely valuable assets that take precedence over production targets. We strictly adhere to the provisions of occupational health and safety legislation and all other regulations that are intended to protect the health of our employees. Our compliance is monitored regularly by the authorities, internal audits and external inspectors. Our occupational health and safety management system is certified according to DIN EN ISO 45001.

In order to adhere to our high standards and go beyond mandatory requirements, we use our own occupational safety officers, regular consultation hours as well as mandatory and optional examinations by our company medical service, a large number of safety officers and first aiders, fire protection assistants, regular meetings of the occupational safety committee and other committees on

occupational safety and an extensive system of authorised representatives (e.g. for fire protection, emission control and water protection). In addition, all persons employed in our production or related areas are given full, high quality professional apparel, subject to a very small co-pay.

Our company sport is another aspect that makes an important contribution to protecting health. We currently stay fit with six different sports/disciplines (football, volleyball, running, bowling, table tennis and sports badges) and have a good time together. In addition, PKV has offered its employees membership in the Hansefit company fitness network since May 2023 and covers the monthly costs except for a co-pay. The programme continues to be very well received, with around 297 employees, or around 46 % of the workforce, taking part. Water dispensers are installed throughout the company and are available to our staff at any time. What is more, employees are also entitled to lease up to two bicycles or e-bikes from our partner Jobrad. We also endorse accompanying campaigns such as 'Cycle to Work'.

One specific goal in occupational health and safety was to cut the number of work accidents to the level enshrined in the BG RCI paper (employer's liability association for the raw materials and chemical industries) by the end of 2022, a goal we achieved. In 2023, we also achieved our self-imposed goal of remaining below 20 reportable accidents per 1,000 employees. For 2024, we have set ourselves the goal of further reducing the number of accidents and

remaining below 15 accidents per 1,000 employees and are continuously implementing appropriate measures.

We fully respect the fundamental right to freedom of association. Every employee is at liberty to join a trade union and will not experience any disadvantages as a result. We maintain a cooperative and constructive relationship with our works council and – together with the employer representatives – with our collective bargaining partner, the IG BCE trade union for mining, chemicals and energy.

Several sections of this report outline the various ways in which our employees are involved in the company's processes, for example → criterion 05, and → criterion 08 in relation to sustainability management in particular. We report on our targets and processes in regard to occupational health and safety in → criterion 15.

Given that we strive consistently to put our principles for labour and human rights into practice, we have set ourselves further targets for 2024 in

addition to the measures taken so far. Here, one of the quantitative targets included the

- Creation of an employer branding concept to increase employer attractiveness and in response to changes in the labour market and the risks of a shortage of skilled workers.

In a labour market that is increasingly becoming an employee market and is "characterised" by a steadily growing shortage of skilled workers, it is less and less the case that employees are "looking" for potential employers for themselves, but rather that they often have a range of attractive employment opportunities open to them. In response to this change, we are working on strengthening our brand as an employer toward the outside world. Our employer branding is aimed both at the labour market and internally, as part of an attractive employer branding concept also involves convincing our own employees to continue working for PKV, thus retaining them. In this regard, we worked on initial measures in 2024 to support our internal and external image, both in terms of content and visual appearan-

ce. The concept has been prepared and presented to the management. Considerably more targeted and individualised recruiting measures have already been developed and implemented in advance. Included in the concept development is a regular process of updating the concept in response to the continuously evolving new requirements of the labour market. This extends also to the review and modification of individual measures based on their effectiveness.



The following additional targets have been defined for the year 2025 and beyond in the areas of HR and occupational safety:

- **Optimisation and standardisation of the survey on the reasons for fluctuation (Q2/2025)**
- **Reduction in the number of reportable accidents to fewer than 13 accidents per 1,000 employees**
- **Reduction in the proportion of behaviourally-related accidents in the total number of reportable accidents to < 70 %**

We have launched further projects in order to achieve our targets, which are now even stricter in a year-on-year comparison. These include, among others, campaigns to raise awareness, campaigns to address anomalies and strengthen role models, as well as updating our important basic rules for occupational safety – our 50 instructions.

Our risk analysis described in criterion 02 did not identify any material risks associated with our business operations, business relationships, products and services that are likely to negatively impact employee rights.

Refer in this regard also to
 → **Criterion 05**
 → **Criterion 08**
 → **Criterion 15**

Company-specific performance indicators for occupational health and safety

Data	2024	2023	2022
Occupational safety training (as a %)	100	100	100
Number of employees participating in company pension plans	602	597	596
Number of employees participating in company sports	131	128	109
Number of employees participating in Hansefit*	288	280	/
Proportion of trained first aiders in relation to total number of employees (as a %)	22,94	16,29	16,97
Trained active first aiders**	145	102	102
Sickness rate (absence as a %; with and without continued payment of salary)	8,12	7,90	7,90
Number of reportable accidents at work per 1 million working hours (LTIR)	16,18	13,83	9,31
Number of days lost due to accidents at work (LTI)	41,60	25,36	32,38
Days lost due to accidents at work (in hours/days)	2252/282	1569/196	2728/341

* not introduced until 2023

** Refresher every 2 years

DNK criterion 15

EQUAL OPPORTUNITIES

“We are explicitly committed to the principle of equal treatment at our company and to equal opportunities. In particular, no one [...] may experience discrimination or be placed at a disadvantage.”

DNK requirement: The company discloses in what way it has implemented national and international processes and what goals it has for the promotion of equal opportunities and diversity, occupational health and safety, participation rights, the integration of migrants and people with disabilities, fair pay as well as a work-life balance and how it will achieve these.

We do not tolerate any form of harassment or intimidation of employees, business partners, suppliers, service providers or other persons. Instead we are firmly committed to providing all employees with a working environment that is free of mental, physical or sexual harassment. We reserve the right to impose sanctions under labour law if we become aware of harassment in any form.

We are explicitly committed to the principle of equal treatment at our company and to equal opportunities. In particular, no person shall experience discrimination or be placed at a disadvantage due to their ethnic origin, gender, religion or ideology, disability, age or sexual identity. We therefore hold that equal opportunities and equal treatment are not tasks but a matter of course.

Recruiting, hiring and promotion procedures take place exclusively on the basis of professional qualifications and competences and do not include any other form of assessment. Wage and salary agreements apply equally to all genders in accordance with our collective agreement and do not include any wage differentials in relevant pay scale categories.

The high standards in this area are also reflected in the activities of our works council, which represents the interests of the company employees in a variety of ways. Among other things, the works council is involved in matters that relate to encouraging a work-life balance and the implementation of actual equal rights for women and men in recruitment, employment, training and continuing education. In regard to the establishment of representation for severely disabled employees, the works council actively promotes the employment and integration of severely disabled and sick employees and supports their concerns through integration agreements, preventative measures and company integration management, among other things.

Aside from a number of committees and working groups to discuss issues and reach joint agreements, the establishment of a representative body for severely disabled employees, young persons and trainees to act as

a mouthpiece between the works council and management plays a key role in safeguarding co-determination rights and empowering employees to express their interests.

At PKV, we have concluded a company agreement on part-time work with various models that allow each employee to reduce their working hours by up to 50 %. Furthermore, there is a simple process in place that enables employees to take family or parental leave for a certain period.

We have also set ourselves additional targets for 2024 in the areas of equal opportunities, diversity and inclusion, which extend over and above the measures taken so far:

- In 2023, an initial brainstorming session was launched between sustainability management and the HR department with the aim of working on a diversity concept in 2024 and beyond. Specifically, this involved formulating a vision, objectives and measures that could be integrated into the company's employer branding concept described in Chapter 16.

The target was achieved in that the concept was presented to the Chief Commercial Officer in early 2025 and the majority of the targets and measures for the target years of 2025–2026 have already been adopted.

DNK criterion 16

QUALIFICATIONS

“Qualified employees and lifelong learning are vital to success due to our complex processes and systems.”

DNK requirement: The company discloses what goals it has set and what measures it has taken to promote the employability of all employees, i.e. the ability of all employees to participate in the working and professional world, and in view of adapting to demographic change, and where risks are seen.

Qualified employees and lifelong learning are vital to success due to our complex processes and systems. This is why we offer a variety of in-service training courses, for example master courses for industrial supervisors specialising in paper production, further qualification as paper technicians or as industrial and business specialists (IHK). In 2023, we invested 708 euros per employee in training and development.

Our Studio e-learning platform has supported our internal training and education programmes since 2019.

We have achieved the following number of completed courses on this platform per year:

2019	464
2020	1096
2021	8786*
2022	2988
2023	4041
2024	3992

Apprenticeships are also very important at our company, and we provide training in six professions in total. Apprentices and persons completing retraining receive particular support from expert trainers and are given special protection. In doing so, we ensure full compliance with the provisions enshrined in the Vocational Training Act (BBlG). We believe that providing a wide variety of internal courses in many (particularly labour-intensive) areas of the company is a crucial response to demographic change.

Work experience for school students and other company internships represent a special form of training offered at PKV. Its main purpose is to offer career guidance and to foster the personal development of our interns. All requirements defined by the individual educational institutions are complied with in full during our internships.

In addition to apprenticeships, our company attaches immense significance to in-company and part-time further training. We believe it is self-evident that all employees must regularly receive the compulsory training they require for their work.

Moreover, a wide variety of other courses are organised to enable employees to acquire additional qualifications. Aside from regular, needs-based master courses – for which our employees are granted special leave with full pay – we also offer further training courses for technicians, business economists and business specialists, among others. Dual curriculum degree courses are frequently offered, depending on our needs. We offer employees without specific training in the paper industry, especially those working in production, the opportunity to complete a distance learning course to gain theoretical expertise and qualification as paper technicians. On average, this opportunity is given to two eligible employees from the various subunits within production each year. After earning this qualification, they can then progress to their next career stage in our production departments.

**unusually high number due to the launch of many one-time mandatory courses*

These varied training programmes enable us to fill many senior and managerial vacancies and new positions at our company with our own employees. We see this as another suitable response to demographic change.

We report on our strategies and measures in the area of health management in → criterion 15.

We also defined targets for 2024 in the area of training that exceed the scope of the measures taken thus far:

- Annual compliance with a long-term training quota of at least 5 % full-time equivalents (FTE)
- Intensification and increased needs-based organisation for the wide range of further training opportunities in 2025/26
- Preparation and roll-out of a concept for further training of (individual) leadership skills by the end of 2026

The target of maintaining a training quota of at least 5 % of full-time equivalents was achieved in 2024 with a quota of 5.2 % (as at the end of 2024). This target will remain in place for the years ahead.

The concept for further training of leadership skills has been prepared and communicated. In 2024, the Head of HR Development collaborated with an external training partner to organise various exercises to determine the status quo and hold workshops on a common understanding of leadership. The target for 2025 and 2026 is to complete various mandatory, voluntary and individual training modules, which will be attended by forepersons, plant managers, heads of department and team leaders to strengthen their own leadership skills and team development. initiate joint and individual workshops and modules at the department and team level.

Performance indicator EFFAS S03-01, Age structure/distribution (number of FTEs per age group):

Reported here is the data we have collected on the distribution of our employees as a whole (not FTE) by age group – the actual difference would be marginal, but it would require a considerably greater amount of time and effort to calculate.

Age group	No. of employees
20 years or less	29
21-30 years	100
31-40 years	159
41-50 years	144
51-60 years	150
Over 60 years	42

Average age: 42.6 years

Performance indicator EFFAS S10-01, Percentage of female employees in relation to total employees:

PKV: 11.7 %

Performance indicator EFFAS S10-02: Percentage of female FTEs in senior positions in relation to total FTEs in senior positions

Reported here is the proportion of female managers in comparison to the total number of managers: 10.5 %

Performance indicator EFFAS S02-02, Average expenses on training per FTE p.a.:

Reported here is the average expenditure on training per employee per year: 1125 EUR.

Other topics will also be addressed here gradually. In principle, a wide range of further training opportunities already exist, which can gradually be better structured and developed in a more central manner. The HR developer initially has a different focus (management and team development), and the plan is that, starting 2026, she will be able to turn her attention to talent management and, in connection with this, to establishing structures for further training measures.

In order to ideally reflect the immense importance we attach to in-house training, another target for 2025/26

- is to prepare and roll out a concept for strengthening support for trainees, especially paper technologists, by involving employees more closely and improving the exchange of information with the specialist trainers

Our risk analysis described in criterion 02 did not identify any material risks associated with our business operations, business relationships, products and services that are likely to negatively impact the qualification.

Refer in this regard also to **→ Criterion 14**

Other HR performance indicators with relevance to the company (reporting date 31 December)

Data	2024	2023	2022
Number of employees (headcount)	624	612	601
Number of FTEs	603,2	591,9	580,3
Full-time employees	426	432	443
Part-time employees	198	180	158
Employees on parental leave	2	2	3
Apprentices	33	34	33
Number of female employees	73	74	75
Number of male employees	551	538	526
Number of employees in management positions	65	58	56
Number of employees from minority or vulnerable groups ((severely) disabled)	24	23	20
Employees who have left the company	46	35	45
New employees	65	56	57
Fluctuation rate (unplanned fluctuation, as a %)	5,4	4,9	5,6
Average length of service (in years)	12,96	12,81	13,09
Highest length of service (in years)	43,32	40,60	41,90
Employees covered by collective agreements (as a %)	100	100	100
Number of hours worked	867.177	860.155	890.418

General training courses completed in private health insurance (figures as a %)

Angabe	2024	2023	2022
Occupational safety (SO instructions (department-specific))	100	100	100
Data protection	89	100	89
Cyber security awareness*	17	79	79
Information security	72	14	34
Compliance (antitrust law, anti-corruption)**	Not reported	Not reported	100
Sustainability (basic training)***	10	15	83**
Average training hours (h) per employee****	1,7	2	3

* low completion rate in 2024 due to new course roll-out

** carried out for the first time in 2022 for managers only

*** introduced in 2022, one-off basic training for every (new) employee

**** average calculated exclusively for the training courses listed in the table that were conducted via the e-learning platform; at present, all face-to-face training courses (outside the e-learning platform) are not yet recorded in a digital form

DNK criterion 17

HUMAN RIGHTS

“Sustainability and the protection of our environment are essential principles that guide all our actions.”

DNK requirement: The company discloses what measures it takes, strategies it pursues and targets it sets for itself and for the supply chain for ensuring that human rights are respected globally and that forced and child labour as well as all forms of exploitation are prevented. Information should also be provided on the results of the measures and on any relevant risks.

PKV is committed to social responsibility and good corporate governance. Our Code of Conduct, which is accessible to all interested persons, describes the principles that we believe should guide us and are essential to good corporate governance. As a rule, all of our actions in each area, in particular towards customers, suppliers, business partners and employees, should build on the principles of integrity and fairness. Sustainability and the protection of our environment are essential principles that guide all our actions. Compliance with applicable laws is the basis for our actions. In our Code of Conduct, among other things, we are absolutely and irrevocably committed to respecting and guaranteeing human rights as the greatest asset of our legal system in everything that we do. This Code of Conduct describes our underlying strategy in this area. Examples of relevant measures are described in → criteria 04, 14, 15 and 16.

In addition to this general commitment, we have also set ourselves the goal of establishing suitable ways of defining measurable targets. Implementation of this policy statement for labour and human rights in 2022 also involved the definition of quantifiable targets for the various issues in 2023. Taken together, their purpose is to contribute towards compliance with labour and human rights at PKV. We report on target achievement in 2023 and further targets for 2024 in → criteria 14, 15 and 16. Additional goals in the area of human rights, in particular with regard to sustainable and responsible purchasing (including the best possible coverage of any risks

in the supply chain), are described in → criterion 03. As set out there, we will continue to build on these goals as part of our compliance with due diligence obligations relating to human rights and the environment.

To date, our risk analysis described in → criterion 02 did not identify any such material risks associated with our business operations, business relationships, products and services that are likely to negatively impact human rights.

Overall, after carrying out the abstract and concrete risk analysis, a low to medium risk can be identified for our own business segment as a result of our business activities, the production of paper and cardboard, and the fact that our sole company location is in Germany. Due to strict national legislation in the area of labour and human rights, which we consistently implement, a low risk of human rights violations can be assumed. Nevertheless, because we are an industrial production company, a few risks need to be considered and regularly analysed. In our case, these include the areas of occupational safety and environmental protection, which are relevant pursuant to the German Supply Chain Act (LkSG). However, thanks to existing integrated guidelines, processes and measures, which we implement as part of the certified ISO 45001 and 14001 management systems, we are able to react appropriately to risks in these areas and minimise or prevent negative effects in the best possible way.

With regard to our business partners, we launched an abstract (= general risk trends in relation to the country in which the company is based and the industry to which the company belongs) and specific risk analysis (= invitation to complete dedicated questionnaires) on an external platform for the first time at the end of 2023. According to the abstract risk analysis carried out to date, a similar picture emerges, as the majority of our direct suppliers from the main purchasing categories of fibre and laminating papers, auxiliaries/chemicals, spare and wear parts, machinery and equipment, services and freight forwarders are based in Germany (approx. 1,146 of 1,361 suppliers) or come from nearby European countries. Even when adding additional suppliers, only a very small proportion are classed as high risk according to the abstract risk analysis (36), whereby the risk is primarily

found in the areas of responsibility in the supply chain and environmental protection. In the course of 2024, selected suppliers were asked to complete dedicated questionnaires in which they can correct their risk status and provide information on guidelines, measures and certifications. An impact analysis was then carried out in order to segment and prioritise the suppliers once again in regard to the probabilities of risk occurrence, influencing capacity and risk severity in order to then derive individual measures. The communication and tracking of measures will continue.

Refer in this regard also to
 → **Criterion 03**
 → **Criterion 14**
 → **Criterion 15**
 → **Criterion 16**

Performance indicator EFFAS S07-02 II, Percentage of total facilities certified according to SA 8000 standard

0 %.

All our facilities are certified according to the following management systems:

- Occupational health and safety according to DIN EN ISO 45001
- Environmental management according to DIN EN ISO 14001
- Quality management according to DIN EN ISO 9001
- Energy management according to DIN EN ISO 50001
- Food and product safety according to DIN EN ISO 22000

DNK criterion 18

CORPORATE CITIZENSHIP

“The Barthel Foundation has become a reliable supporter of many projects with a broad impact.”

DNK requirement: The company discloses how it contributes to corporate citizenship in the regions in which it conducts its core business activities.

Company founder Hellmut Barthel established the non-profit Gertrud and Hellmut Barthel Foundation in 1991. Its aim is to maintain a focused and expert shareholder structure within the PKV Group, while at the same time allowing the general public to share in the company's success. This foundation was endowed with adequate financial resources in the terms of his last will and testament from 1999. As chairs of the foundation at the time, Jürgen Evers and Günter Dieball accepted the challenge of establishing a network of support to ensure ideal use of the available funds in the spirit of the goals set out by the founder (heritage protection, scholarships, environmental protection, art/culture, education and teaching/research). Kristian Evers and Lutz Dieball now chair the foundation.

The Barthel Foundation has become a reliable supporter of many projects with a broad impact. Project funding is mainly focused on the Varel and Friesland regions, although support frequently extends beyond these areas as well. In 2023, the foundation distributed a funding volume of more than €1.6 million to support 78 projects and 30 scholars.

Furthermore, PKV itself supports charitable projects geared at safe, healthy and equitable cohesion at its location, primarily by making a donation each year. This is consistent with our self-perception as a family-owned, medium-sized company that adheres to the highest standards of occupational safety and environmental protection.

PKV sponsors projects in the vicinity of its location – even beyond the region in exceptional cases – that address a target audience that is or might be interested in career prospects in the paper industry. Moreover, we feel deeply committed to projects at our location that investigate the protection and efficient use of natural resources. Doing so reflects our self-image as a producer of sustainable raw materials for packaging that uses resources as sparingly as possible. We provide sponsorship funds for this kind of project as well. In 2024, the foundation distributed a funding volume of more than €2.3 million to support 67 projects and 33 scholars.

Barthel Stiftung

And last but not least, we have adopted a very positive approach to the personal commitment to good causes shown by many of our employees. We are happy to support persons who volunteer in the interests of others. Cohesion and commitment are important professional values in our view.

This is why we established the PKV Extra programme in 2020 to provide annual funding for donating to/sponsoring projects in which our employees are actively involved.

We outlined all of these activities in a company-wide donation and sponsorship policy, which we implemented in 2021 and which has been the subject of annual reports to the Executive Board since 2022.



DNK criterion 19

POLITICAL INFLUENCE

“Political engagement builds on our appreciation of opportunities and risks [...]. The shareholders decide on this form of commitment.”

DNK requirement: All significant input relating to legislative procedures, all entries in lobby lists, all significant payments of membership fees, all contributions to governments as well as all donations to political parties and politicians should be disclosed by country in a differentiated way.

National and EU legislative procedures are relevant for PKV, especially where they relate to any economic and legal frameworks in the industrial SME sector, climate protection and issues regarding packaging products. We hold talks on these and other topics at irregular intervals with local, regional and national politicians from democratic parties. Political engagement builds on our appreciation of opportunities and risks (cf. → criterion 02). The shareholders decide on this form of commitment.

In addition, our interests are primarily represented by business and industry

associations as well as sustainability initiatives. A prime example is DIE PAPIERINDUSTRIE e.V. The principal task of this association is to pool and represent the interests of member companies in the areas of energy and climate policy, environment and technology, research and research funding at universities and institutes, business and export trade, raw materials and law, social and collective bargaining policy, as well as media liaisons and public relations and recruitment of young talent.

Another apt example is the work of the KlimaWirtschaft Foundation, of which we are a member. The foundation supports projects in the area of climate policy within politics and administration and also calls for reliable political frameworks for companies that assume a pioneering role in the area of climate protection. The foundation acts as an intermediary between climate science and the business community and in doing so cultivates a spirit of mutual understanding. As a 'source of inspiration', the foundation provides best-practice examples and organises dialogue formats that help companies inside and outside the funding circle to develop innovative approaches to low-carbon business.

We are members of the following and other organisations:

- Oldenburg Chamber of Industry and Commerce
- KlimaWirtschaft Foundation
- Grüner Wirtschaftsdialog e.V.
- Bundesdeutscher Arbeitskreis für Umweltbewusstes Management (B.A.U.M.) e.V.
- Industry association DIE PAPIERINDUSTRIE e.V.
- Verband Nord- und Ostdeutscher Papierfabriken (VNOP) e.V.
- Fachverband Faltschachtel-Industrie (FFI) e.V.
- INGEDE e.V.
- Verband der Industriellen Energie- und Kraftwirtschaft e.V.
- Verband der Wellpappen-Industrie (VDW) e.V.
- Verband Vollpappe-Kartonagen (VVK) e.V.
- Verein der Zellstoff- und Papier-Chemiker und -Ingenieure (Verein ZELLCHEMING)
- Arbeitgeber- und Wirtschaftsverband Jade e.V.

Refer in this regard also to
→ **Criterion 02**

Performance indicator EFFAS G01-01:
Payments to political parties as a percentage of total revenue:

0 %

DNK criterion 20

CONDUCT THAT COMPLIES WITH THE LAW AND POLICY

“This corporate culture thrives on the principle of personal responsibility based on shared values.”

DNK requirement: The company discloses which measures, standards, systems and processes are in place to prevent unlawful conduct and, in particular, corruption, how they are verified, which results have been achieved to date and where it sees there to be risks. It depicts how corruption and other contraventions in the company are prevented and exposed and what sanctions are imposed.

We define compliance as adherence to all relevant laws, regulations, internal policies, contractual obligations and voluntary commitments which we or authorised third parties have entered into. This means far more than just lawful conduct. Instead, we also draw guidance from the ethical principles underpinning our corporate culture. This corporate culture thrives on the principle of personal responsibility based on shared values.

Our Code of Conduct, as approved by the Executive Board, sets out our commitment to comply with all laws, standards and other legal provisions and also adhere to the relevant social rules that apply in the countries in which we are present. We are fully committed to engaging exclusively in fair competition with other market players and our competitors. We comply with all applicable antitrust and competition laws in this area. Under no circumstances do we accept agreements on prices and conditions or arrangements aimed at inhibiting competition or dividing up markets and customer groups. Deliberate acts or omissions that cause fraud in relationships with partners are strictly prohibited.

The same applies to all forms of bribery and corruptions. Under no circumstances will PKV tolerate this conduct in any form. PKV employees must not offer, grant or accept any unauthorised benefits to or from business partners in the course of their work. The acceptance of gifts is prohibited. The only exceptions are customary hospitality or occasional low-value gratuities. Gifts in the form of money are prohibited in every case and in any amount.

Data protection is a high priority for our company. Training and audits are regularly performed to sensitize our employees in regard to the handling of personal data. Naturally, all of our actions are rooted in compliance with the relevant laws, in particular the General Data Protection Regulation (GDPR) and the Federal Data Protection Act (BDSG), is of course the basis of our actions.

We operate an information security management system based on the applicable ISO 27000 standard. Our aim is to safeguard the three pillars of information security – availability, confidentiality and integrity – throughout our value chain.

→ Criterion 04 describes how we work towards compliance with sustainability principles in our supply chain. Our business partners are also expected to comply with all principles and applicable laws and regulations when working with PKV. We advise our business partners to introduce comparable principles at their companies as well. Any identified violation of our principles will attract consequences.

A central office for compliance management was established at the holding company, Halbzellstoff-Industrie GmbH in 2024. It is in charge of organisation and implementation in the subsidiaries in order to ensure the ongoing development and support of the compliance management system. This includes the following tasks and functions:

- Monitoring legal compliance
- Risk assessment and management
- Development and implementation of compliance programmes
- Tracking of legal changes
- Training and sensitisation
- Consulting and reporting

A comprehensive compliance risk analysis was carried out in 2024. It produced a risk matrix, which will now be discussed once a year with the respective responsible persons, the competent management members and the Compliance Manager. The management and other departments were advised and informed about the status of the compliance management system at the company. To this end, a compliance report is prepared at the end of each quarter and communicated to the managing directors. A Supplier Code of Conduct was prepared and successfully rolled out in 2024. Other compliance management targets for 2025 and 2026 include

- sensitisation in the area of antitrust and anti-corruption law for 100 % of employees in the procurement and sales departments, among other things by completing training courses,

- the creation of a documented compliance management system and
- the expansion of current compliance guidelines, such as rules for hospitality and invitations.

Our whistleblower system that was introduced in early 2023 enables persons to submit complaints and report anomalies via the group-wide complaints system as part of an anonymous process. Internal and external whistleblowers can use this reporting system to make an anonymous report that is forwarded to an external ombudsman's office, treated confidentially and passed on to the internal compliance manager for further action. No reports were received on the whistleblower portal in 2024.

The Compliance Officer regularly took part in further training to expand his knowledge and skills. In 2024, the Compliance Officer took decisive steps to strengthen compliance within the company and promote a culture of legal compliance and ethical business practices.

The annual EcoVadis Rating ensures regular external review in the area of ethics and compliance. Compliance is further taken into account by carrying out risk analyses in our own business area and due diligence audits of business partners to fulfil our duty of care pursuant to the LkSG. Some compliance issues are investigated in other audits (e.g. product safety, data protection, information security).

Refer in this regard also to → **Criterion 04**

Performance indicator EFFAS V01-01, Expenses and fines on filings, law suits related to anti-competitive behavior, anti-trust and monopoly practices:

None.

Performance indicator EFFAS V02-01, Percentage of revenue in regions with a Transparency International Corruption Index below 60:

14.6 per cent – in Poland, Czechia, Romania, Spain, Italy, Slovakia, Hungary, Latvia and Greece (in the order of sales volume for direct sales in 2024).

Other company-relevant performance indicators from the area of ethics & compliance

Data	2024	2023	2022
Cases of discrimination	0	0	0
Cases of harassment	0	0	0
Cases of corruption or bribery	0	0	0
Reports on the complaints system	0	0	Not reported**
Percentage of data protection training courses completed (as a %)	89	100	89
Percentage of cyber security awareness training courses completed (as a %)	17	79	79
Percentage of compliance training courses completed (antitrust law, anti-corruption) (as a %)*	Not reported	Not reported	100

* carried out for the first time in 2022 for managers only, target for 2025

** not introduced until 2023

