

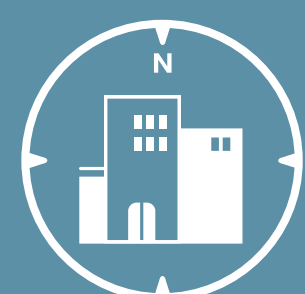


# Sustainability Report 2024

KOSTAL

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# Message from the Board

Dear Reader,

Our commitment to environmental, social, and governance (ESG) principles is at the heart of our vision to create a positive impact, both present and for future generations. We remain dedicated to continuously improving our performance to achieve our sustainability goals, with the ultimate aim of becoming a carbon-neutral company across our entire value chain by 2045.

In 2024, the European automotive industry faced significant challenges. Economic pressures, declining demand—especially in China—and intense competition from China-based EV manufacturers, put European automakers under considerable pressure. While the transition to electric mobility continued, high production costs and limited charging infrastructure slowed the adoption. Looking ahead, 2025 will bring additional regulatory and trade pressures, but also opportunities for market stabilisation and renewed electrification efforts.

Global climate disasters, from Canadian wildfires to Southeast Asian floods or North American hurricanes, reinforced, that we must stay committed in executing our sustainability strategies.

Additionally, recently adopted EU regulations—such as the Carbon Border Adjustment Mechanism, the Corporate Sustainability Reporting Directive (CSRD), and the Corporate Sustainability Due Diligence Directive—pose significant bureaucratic challenges. While we strongly support the objectives of these regulations, they place considerable pressure on global organisations and may impact the competitiveness of the entire European economy. We take a proactive and pragmatic approach



*KOSTAL Group, Management Board:  
Andreas Kostal (left),  
Dr. Gregor Mark Schmeken (middle),  
and Kai Knickmann (right).*



regarding the implementation of these regulatory requirements, which is essential to mitigating complexity while ensuring compliance and supporting our global operations.

Despite these challenges, KOSTAL Group made progress with the implementation of our Sustainability Strategy. While the annual progress of some key intensity metrics, mainly due to business challenges, did not meet our expectations, we maintained meaningful progress toward our ESG commitments relative to our 2022 baseline.

In our efforts to reduce carbon emissions, we achieved a 11% reduction in carbon intensity compared to 2022. This reduction was driven by strategic power purchase agreements for renewable electricity in key regions like China, and a substantial expansion of on-site renewable energy generation, which has doubled since 2022. As a result, the share of renewable electricity across our global manufacturing sites reached 42% in 2024.

Knowing that the sustainability impact of our supply chain far exceeds the impact of our direct operations, in 2024 we further excelled in our engagement with suppliers. We enhanced

due diligence efforts and clearly communicated our ESG expectations, embedding sustainability principles throughout our entire value chain.

Ensuring data transparency and credibility remained a key focus. With our external partner, we conducted a comprehensive gap assessment of our ESG data collection processes to align with CSRD requirements. Additionally, we implemented Enablon, a centralised ESG data management platform, to streamline data collection, enhance traceability, and improve compliance and audit readiness across the KOSTAL Group. A key milestone was our formal commitment to the Science-Based Targets initiative (SBTi), with plans to submit our targets for validation by the end of 2026.

We believe that sustainability is a collective effort, and we are committed to actively engaging our employees. In 2024, we launched a global sustainability video campaign featuring leaders and colleagues sharing their perspectives. To deepen engagement, we introduced a sustainability on-boarding e-learning programme outlining our ESG ambitions, and developed a dedicated training programme for our Sustainability Champions Community.

Our sustainability efforts were recognised: KOSTAL China received the Volvo Car APAC Energy Action Award, while KOSTAL India earned the ECO EDGE Progressive Certificate from ŠKODA Auto Volkswagen India. Furthermore, we were honoured with the ESG Transparency Award from EUPD Research for the second time in 2024 and we won a CSR Award for our Global Sustainability Strategy implementation.

While we take pride in our achievements, we recognise that the journey ahead remains long and challenging. Achieving our sustainability ambitions is crucial for KOSTAL Group's long-term success. Even in a complex business environment, we remain committed to our ESG objectives.

**Our strategic approach to sustainability enables us to benefit from the advancement of our sustainability performance, identify and seize market opportunities, and drive long-term value.**
















To all our colleagues, suppliers, and business partners—thank you for your dedication and hard work. Your commitment is instrumental in driving our sustainability agenda forward. We look forward to your continued support on OUR WAY to a sustainable future.



**OUR WAY**  
to a sustainable future



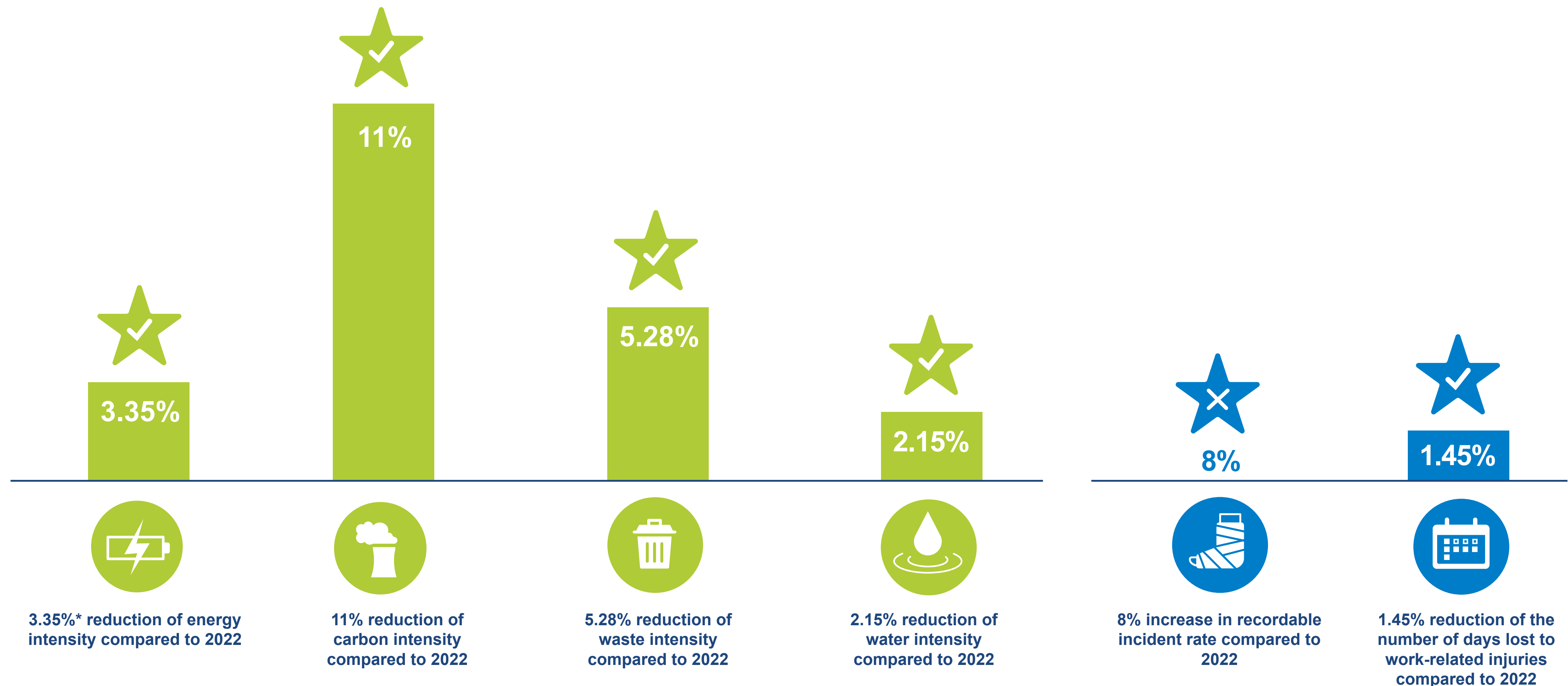
# ESG highlights 2024

GOVERNANCE		ENVIRONMENT				SOCIAL
<b>5</b> business divisions	<b>3.54</b> billion EUR turnover in 2024	<b>73%</b> recycling rate	<b>57,072</b> tonnes of CO <sub>2</sub> eq emission (SC 1,2)	<b>41.8%</b> renewable electricity share	<b>86%</b> waste diversion rate	<b>20,105</b> employees worldwide
						
4 business divisions in 2022	3.3 billion EUR turnover in 2022	71.2% recycling rate in 2022	59,217* tonnes of CO <sub>2</sub> eq emission (SC 1,2) in 2022	40.7%* renewable electricity share in 2022	87%* waste diversion rate in 2022	19,123 employees worldwide in 2022
 Family owned since 1912						
<b>6%</b> share of R&D investment	<b>64</b> locations in 24 countries	<b>174,811</b> MWh electricity used	<b>366,013</b> m <sup>3</sup> water withdrawal	<b>10,564</b> tonnes of waste	<b>C</b> CDP rating	<b>44 / 56%</b> female to male ratio
						
9% share of R&D investment in 2022	53 locations in 20 countries in 2022	167,688* MWh electricity used in 2022	345,508 m <sup>3</sup> water withdrawal in 2022	10,301 tonnes of waste in 2022	D CDP rating in 2022	45 / 55% female to male ratio in 2022

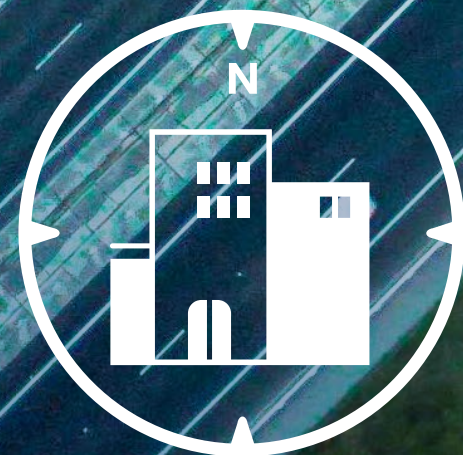
\*Changes have been made to the baseline (2022) data due to internal data verification carried out in 2023 and 2024. More information is available on page [108](#)



# 2024 ESG achievements compared to baseline

**304%****increase of self-generated non-fuel renewable energy**

\*Changes have been made to the baseline (2022) data due to internal data verification carried out in 2023 and 2024. More information is available on page [108](#).



# Governance



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# Sustainability governance

We believe corporate sustainability governance requires holistic, integrated leadership, effective management, and diligent oversight. It serves people, respects the environment, and ensures our company remains productive to make a meaningful impact on present and future generations.

Our governance model guides our Group in developing and implementing sustainability strategies and operating models, which strengthens management accountability, enabling everyone to get involved, and ensures that our strategic priorities remain aligned with our values and materiality issues.

A strong governance foundation helps KOSTAL Group stay committed to sustainability: to understand our impact, manage activities at the highest level of decision-making, set clear mid- and long-term goals, and stay focused on our targets. Leadership engagement and accountability make it possible to include sustainability principles in our strategy, culture, and everyday operations.

The KOSTAL Group Management Board plays a central role in driving the company's business success, fuelled by its diverse expertise and competence. Comprising senior leaders from key divisions—including the Group CEO, CFO and the CEO of KOSTAL Automobil Electric—the Board brings diverse proficiency to the table. Their collective experience spans various fields including finance, corporate management, engineering and technology. With this skill set, the Board is equipped to make informed decisions and lead the company toward long-term growth and innovation.





The Board regularly reviews the company's performance, approves key initiatives, and oversees the internal policies. They also focus on long-term business growth, such as addressing climate-related challenges. The Global Head of Sustainability, appointed in 2022, works closely with the CFO and Executive Leadership Board to implement sustainability strategies and review sustainability governance structure.

## Sustainability Steering Committee

Ultimate responsibility for climate-related issues resides in the Sustainability Steering Committee of KOSTAL Group. The Sustainability Steering Committee is the highest-level body to lead Sustainability Strategy and oversight within KOSTAL Group. The committee members consist of the senior members of the management board of KOSTAL Group, including the Group CEO, the CEO of KOSTAL Automobil Electric division, and the CEO of the KOSTAL Industrie division. The Sustainability Steering Committee is responsible for shaping and overseeing the application of the Group's environmental, social, and corporate governance policies, procedures, and programmes.

The Group Sustainability Steering Committee, with the Global Head of Sustainability, conducts quarterly strategic sustainability reviews in which KOSTAL Group's sustainability initiatives, targets, and investments are approved, and the sustainability performance of the organisation is reviewed.

## Group Sustainability Office

Recognising the increasing complexity and stakeholder interest in sustainability, KOSTAL Group established a central sustainability unit in 2022. This central team leads ESG strategies and initiatives across our organisation, coordinating both internal and external sustainability communications. It also manages sustainability-related disclosures on a regular basis, ensuring alignment with globally recognised frameworks and customer expectations.

The Group Sustainability Office is the primary point of contact for all sustainability-related matters for all stakeholders. Within the Group, it defines the introduction and implementation of sustainability metrics and KPIs, monitors progress on Sustainability Strategy, and reports to various external and internal stakeholders, like the Sustainability Steering Committee.

The Global Head of Sustainability reports to the Sustainability Steering Committee on a quarterly basis during meetings, where the committee reviews and revises KOSTAL Group's corporate governance procedures and policies; sustainability policies and programmes; current and emerging environmental, social, and corporate governance issues and trends, regulatory developments; and the sustainability performance of the organisation.

This unit also assesses external sustainability requirements and prompts the development of suitable implementation concepts by the Group's specialist departments, business areas, and regions.





**“Outstanding environmental performance and tangible positive social impact.**

**This is our daily mission, motivation, and a truly exciting professional field in today’s world.”**



*József Böhm, Global Head of Sustainability at KOSTAL Group*

## Group Sustainability Board

The Group Sustainability Board, with its operational focus, keeps the implementation of the sustainability commitments in focus with its quarterly alignment reviews.

Its members consist of the leaders of the Divisional Sustainability Boards and senior functional leaders from Human Resources, Supply Chain, Legal, and Finance departments. This level oversees all business divisions and ensures that values and principles are aligned on the KOSTAL Group level.

## Divisional Sustainability Boards

At the different business divisions of KOSTAL Group, Divisional Sustainability Boards are established to drive the development and execution of divisional sustainability strategies, review the sustainability performance of the respective division, and support KOSTAL Group in meeting its sustainability ambitions.

With this approach, we ensure alignment from Leadership Board level to the Site Sustainability Teams, integrating sustainability into our everyday operations.

## Site Sustainability Teams

Successfully implementing our ESG strategy requires full organisational engagement. Therefore, we prioritise cross-divisional collaboration on sustainability and cultivate a global network of dedicated colleagues.

On all major KOSTAL locations, a sustainability representative (Sustainability Champion) has been appointed to coordinate and drive sustainability-related activities at their site. Site Sustainability Champions report on progress to the central and divisional sustainability teams, promote sustainability, and coordinate site-level sustainability actions.

We introduced a two-step validation process for sustainability data reporting by assigning sustainability data contributors and validators to track progress and report to the central and divisional sustainability teams. Read more on the validation process on [page 11](#).



## Management systems

The key principles of our ESG management system are integrated into and reinforced by our global policies, procedures, programmes, communications, training, and culture. Some of these policies include:

- [Our Values](#),
- [Code of Conduct](#),
- [Supply Chain Code of Conduct](#)
- [Environmental Policy](#),
- [Health and Safety Policy](#),
- [Human Rights Policy](#),
- [Responsible Minerals Policy](#).

The KOSTAL Process Systems (KOPS) enable us to put all external and internal requirements into practice systematically, efficiently, and effectively. It is one of our key ambitions to make sustainability an integral component of all our business processes.

To further demonstrate our commitment to meeting the highest standards, our operations are built on global certifications, such as ISO 9001, IATF 16949, ISO 26262 for Quality, and ISO 14001 for Environmental management.

## Sustainability governance achievement in 2024

In 2024, we introduced the **Enablon software** to enhance our sustainability data management and reporting processes. Enablon is a data management software that we use to manage sustainability performance and improve data quality. The software streamlines our processes by centralising sustainability data, automating workflows, and providing quicker insights. This improves efficiency in tracking and managing climate-related risks, compliance, and performance, ultimately simplifying decision-making and enhancing our ability to meet sustainability targets.

Enablon includes a two-step validation process for sustainability data reporting by assigning sustainability data contributors and validators to track progress and report to the central and divisional sustainability teams. Contributors are responsible for gathering and inputting data related to sustainability initiatives, while validators play a crucial role in reviewing and verifying this data. This validation process helps us track progress more effectively, ensuring that all sustainability data reported to the central and divisional sustainability teams is accurate and reliable.

## Sustainability Champions

The Sustainability Champions Community, founded in 2023, is a pivotal team dedicated to advancing the KOSTAL Group's Sustainability Strategy at the site level. This community has proven to be a valuable resource, facilitating regular knowledge exchange and best practice sharing among its members.

In 2024, the community continued to serve as an active platform for sharing insights. Members shared effective ESG practices from various sites and communicated important updates on sustainability developments. This forum helps sites stay informed about regulatory changes, leadership directions, encourages initiatives, and provides a unified platform for sustainability teams to collaborate effectively.

Given that the Sustainability Champions are the primary users of the Enablon system, training opportunities were provided. The training sessions have equipped them with the necessary knowledge and skills to manage sustainability data efficiently. Thanks to this effort, the software was actively used for the data collections for the 2024 Sustainability Report.





# Materiality and stakeholder engagement

At KOSTAL, we recognise that our commitment to sustainability is not just an internal directive but a shared journey with our stakeholders, who are integral to our business success. Our goal is to engage in continuous and direct feedback with our stakeholders, ensuring that we move forward together on our sustainability journey.

As sustainability becomes a priority for our stakeholders—customers, employees, suppliers, and communities—we must align our strategies to meet these evolving expectations. This alignment helps us build trust, drive innovation, and enhance our competitiveness in the global market.

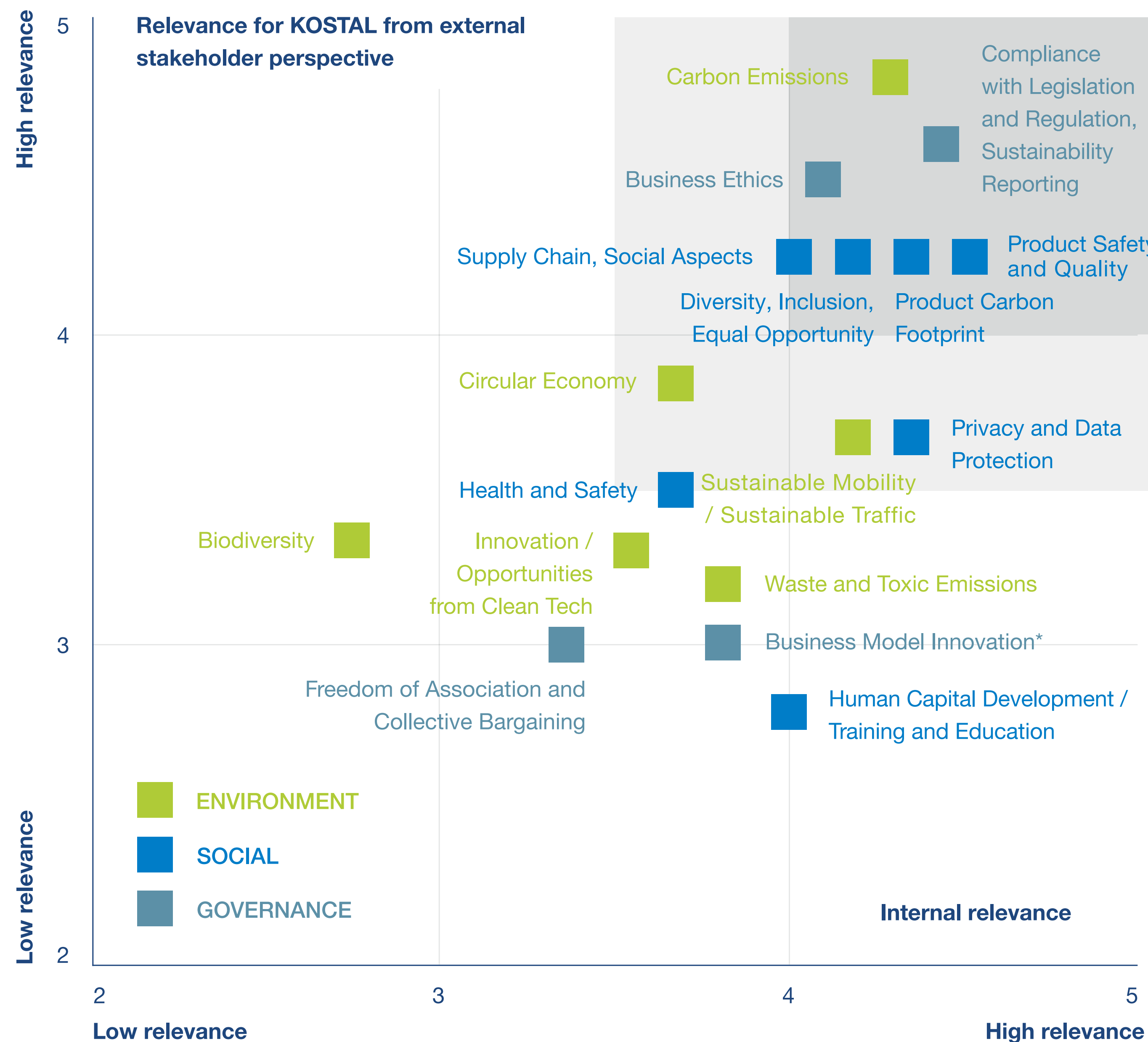
Our Sustainability Strategy at KOSTAL is built on understanding what truly matters to us and our stakeholders. The materiality assessment helps us pinpoint key topics that impact both the Group and our stakeholders. In 2022, our latest assessment highlighted the most important environmental, social, and governmental

areas in relation to stakeholder interests.

In 2024, we enhanced our materiality assessment by conducting more stakeholder interviews and refining our processes. This allowed us to understand our impact better and integrate our findings into risk management.

In response to evolving regulations and changes in stakeholder expectations, we are establishing a process to update our materiality assessment meeting the requirements of the double materiality assessments outlined in the harmonised ESRS standards of the CSRD directive.





## Our materiality assessment

Our materiality assessment, carried out in 2022, includes the following considerations.

### ■ Identifying key topics

We began by gathering a list of important topics based on international standards like GRI and input from competitor benchmarks. Our Group Sustainability Board refined this list to focus on what matters most to KOSTAL.

### ■ Creating the materiality matrix

We engaged with various stakeholders, including partners and customers, to rank these topics. The resulting materiality matrix maps out the priorities of both internal and external stakeholders.

### ■ Setting strategies

From this assessment, six main topics emerged, guiding our Sustainability Strategy:

- 1 Carbon Emissions (including Product Carbon Footprint)
- 2 Compliance with Legislation and Regulation
- 3 Product Safety and Quality
- 4 Business Ethics
- 5 Sustainable Supply Chains
- 6 Diversity, Inclusion and Equal Opportunity

These topics form a strong foundation for our ESG goals and reflect our commitment to the United Nations Sustainable Development Goals (SDGs).



## What we do to enhance stakeholder engagement

### Stakeholder dialogue

At KOSTAL, we recognise the importance of maintaining an ongoing dialogue with our stakeholders. We are committed to integrating stakeholder feedback loops into sustainability-related decisions and processes to enhance our engagement and ensure that we are addressing the most material issues. By incorporating stakeholder input into our strategy, we will strengthen our commitment to sustainability and build lasting, collaborative relationships moving forward.

Complying with the Corporate Sustainability Reporting Directive (CSRD) underscores our commitment to transparency and accountability. The CSRD is a significant step towards standardised, credible, and comparable sustainability reporting across Europe. By adhering to these requirements, KOSTAL not only fulfils regulatory obligations but also reinforces our dedication to responsible business practices and long-term environmental, social, and economic impacts.

### Understanding the CSRD

The CSRD is an EU regulation requiring companies to provide detailed sustainability disclosures, improving the transparency and reliability of non-financial information. Its goal is to enable stakeholders to accurately evaluate corporate sustainability performance, with a stronger focus on ESG factors. Companies must prepare for CSRD compliance within specified deadlines, ensuring timely adoption and strategic integration of these new reporting standards.

## What we do for CSRD Compliance

In preparation for the CSRD requirements, KOSTAL has launched a series of initiatives to ensure compliance and seamless integration into our sustainability reporting framework.

### Gap assessment

In 2024, we carried out a comprehensive gap assessment of our ESG data collection processes to ensure alignment with the Corporate CSRD requirements. In collaboration with an external partner, we reviewed eight key ESG performance indicators through detailed site-level interviews. This evaluation assessed the data-collection methodology, the reliability and credibility of data sources, and the effectiveness of our centralised data management system. The assessment also verified the consistency of reported data with CSRD standards.

The findings offered critical insights into our current practices and identified key areas for enhancement to meet regulatory requirements and strengthen our ESG data management framework.

### Understanding customers' expectations

We have conducted a thorough analysis of sustainability-related customer requirements and established a centralised database to systematically capture and manage these expectations. This enables us to integrate them into our strategic planning and ensure alignment with evolving customer demands.

### Transparent data collection

We have deployed Enablon, a centralised ESG data management platform, to efficiently collect and manage all ESG-related data and metrics across the KOSTAL Group. This system ensures data transparency, traceability, and compliance with audit requirements, supporting our commitment to robust ESG governance.



### Enhancing competence and awareness for CSRD compliance

We strengthen expertise and awareness across the organisation to ensure full compliance with the CSRD.

### Preparing for CSRD compliance by strengthening reporting processes

We are proactively preparing to meet the requirements of the CSRD. To build internal capability and ensure a consistent understanding of these regulations, our Global ESG Community—key drivers of sustainability initiatives within the KOSTAL Group—has undergone targeted training on the topic of CSRD.

In 2025, we are committed to initiating our **double materiality assessment**, an important framework that leading companies use to evaluate and report on their ESG impacts and risks. This assessment will go beyond traditional practices, considering both the external effects of our operations on the environment, society, and economy, as well as internal sustainability risks and business opportunities. Through this initiative, we will gain valuable insights into the sustainability landscape, enhancing transparency, accountability, and long-term value creation for both the Group and our stakeholders. It will help us prioritise key areas that strengthen our value proposition and demonstrate our ongoing commitment to sustainable growth. As stakeholder expectations evolve, continually aligning our business performance with them is essential for success.

The assessment will form the basis for refining our existing ESG priorities, offering a clear understanding of the most important ESG issues for our key stakeholders. This data-driven approach will guide our decision-making and shape our future strategic planning.





# Sustainability Strategy

Our commitment to environmental, social, and governance principles is fundamental in achieving our shared vision of making a positive impact present and for future generations.

With a foundation built on traditions of an over hundred-year-old family-owned company, responsibility and sustainability remain central to our corporate strategy. This heritage enables us to lead by example in tackling the broader environmental and social challenges of our planet and society.

Through innovations in the field of electric vehicle charging technology, solar inverters, and frequency converters, KOSTAL Group and its business divisions support the global society to decarbonise transportation and electricity generation and to improve energy efficiency.

To achieve our ambitions, our corporate ESG governance drives sustainability strategy across the organisation, ensuring a strong top-down and bottom-up approach. By uniting various initiatives, we embed sustainability into our company culture and daily decision-making. Our commitment is reflected in our focused policies and management practices.

Since 2024, we have completely integrated **Compleo**, which we acquired in 2023, into the environmental and social data collection process. Compleo will also be an integral part of our ESG report, external disclosures, and ratings. A dedicated data provider and validator from the Compleo team is now part of our Sustainability Champions Community and actively use the Enablon software. While Compleo's primary focus is on economic stability, we collaborate closely on their sustainability roadmap to ensure alignment and continuous progress towards shared goals.





Our strategic directions focus on the areas, where we can make the biggest positive impact.

### Decarbonisation

Operating our business in an environmentally responsible manner with a constant focus on reducing our CO<sub>2</sub>eq footprint in the entire value chain.

### Resource efficiency

Using the limited resources of our nature in a responsible way creating more value with less.

### Sustainable product

Developing innovative products using sustainable materials and manufacturing processes, and optimising the use of resources. Our social strategic initiatives put people at the forefront by, considering their health and well-being in all our decisions.

### Health and safety

Protecting the health of our employees, preventing accidents, and maintaining physical and mental health.

### Diversity

Promoting diversity in the organisation to ensure equal opportunities for all.

### Labour and human rights

Taking responsibility for human rights and working conditions within our operation and supply chain. Our strategy related to corporate governance is about creating and maintaining transparency. This is the way we conduct business every day.

### Compliance

We uphold a robust Compliance and Business Ethics Programme to ensure integrity and accountability across our operations.

### Governance

We have a structured approach to drive sustainability strategy across the organisation.

### Communication and reporting

Implementing programmes to engage employees in our day-to-day sustainability efforts. Transparent reporting regarding the implementation and progress of our sustainability activities.





Aligned with our strategic framework, KOSTAL Group's 2030 sustainability ambitions reflect our commitment to a purpose-driven journey towards a sustainable future. We focus on driving sustainability activities across the Group and making measurable progress towards these specific goals.

#### 90% renewable electricity at all factories

KOSTAL aims to source 90% of the electricity used in its factories from renewable sources, reducing reliance on fossil fuels and lowering carbon emissions by 2030.

#### 100% ISO 14001 compliant factories

The Group plans to ensure all factories comply with ISO 14001 (environmental management) standards for sustainable and safe operations by 2030.

#### 100% of target suppliers use renewable electricity

KOSTAL aims for all suppliers of strategic goods and services to use renewable electricity, reinforcing our commitment to significantly reducing supply chain carbon emissions by 2030.

#### 90% waste diversion rate in production

The ambition is to divert 90% of production waste from landfills by recycling thus minimizing environmental impact by 2030.

#### 40% reduction in greenhouse gas emissions in value chain

KOSTAL targets an ambitious 40% reduction in greenhouse gas emissions within our whole value chain to enhance environmental sustainability by 2030. We track the following greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and hydrofluorocarbons (HFCs).

#### 25% reduction in electricity consumption in production

The Group aims to reduce electricity consumption in production processes by 25%, improving energy efficiency and reducing costs by 2030.

#### 100% and ISO 45001 compliant factories

The Group plans to ensure all factories comply with ISO 45001 (occupational health and safety) standards for sustainable and safe operations by 2030.

#### 30% reduction of recordable incident rate at all KOSTAL sites

KOSTAL's ambition is to achieve a 30% reduction in recordable incident rate, demonstrating our commitment to fostering a safe, healthy work environment and continuously improving the well-being of our employees.

#### 100% of target suppliers reporting ESG data

Aiming for all suppliers, who provide strategic goods or services to report on ESG data to ensure transparency and sustainability across the supply chain by 2030.

**By 2045, KOSTAL aims to be carbon neutral, balancing emitted and absorbed carbon to achieve net-zero carbon emissions.**





## Reporting on sustainability progress

Transparency forms the backbone of our sustainability journey—it is incorporated into the key principles of our Sustainability Strategy. We consistently align our sustainability disclosures with external standards, demonstrating our commitment to transparency and accountability.

We have established harmonised sustainability reporting at regular intervals, ensuring alignment with globally recognised frameworks and customer expectations. Our annual sustainability report is aligned with the GRI and ESRS Standards. We are working towards compliance with CSRD regulation. Find more information on this topic on [page 14](#).

We submit the Carbon Disclosure Project (CDP) Climate Change questionnaire annually. CDP is a global non-profit that runs the world's leading environmental disclosure platform. Moreover, we participate in the EcoVadis rating every year to demonstrate our performance in the four themes: environment, labour and human rights, ethics, and sustainable procurement.

KOSTAL Group has been a member of the United Nations Global Compact (UNGC) since 2022 and is committed to upholding the Ten Principles, encompassing human rights, labour standards, environmental stewardship, and anti-corruption measures. Our commitment extends to aligning our efforts with the United Nations Sustainable Development Goals (SDGs), focusing on areas where we can have significant positive impacts on our employees, the communities and the environment we operate. Each year, we submit KOSTAL Group's Communication on Progress.

In 2024 we started the process to set and submit science-based net-zero targets for validation through the independent Science Based Targets initiative (SBTi), aligning with the global effort to limit a temperature increase below 1.5°C. More information on SBTi on [page 49](#).



## ESG risk management

As a corporate planning practice, we assess environment-related risks focusing on physical risks such as floods, droughts, and water scarcity, which may impact our operations and also on our supply chains. We are committed to assessing climate-related risks. By aligning with the recommendations of global frameworks, we will integrate all relevant environmental risks into our governance and strategy, ensuring we are prepared for future challenges. Addressing these risks is crucial for securing the long-term resilience of our business.

We are committed to expanding our focus on non-climate-related ESG risks, with particular attention to social and governance issues within our supply chain. Our aim is to enhance supply chain transparency and ensure responsible sourcing. We will continue to work towards fair trade and sustainable employment, helping drive positive social impact while fostering long-term value for our stakeholders.



**“Despite all the turbulence in the global political situation, we are taking the necessary measures step by step to achieve our goals in terms of conserving resources, reducing CO2 emissions and fulfilling our social responsibility.”**

*Dr. Sebastian Pollmanns,  
Global Director Quality Laboratories,  
Member of the KOSTAL Group Sustainability Board*



## Sustainability ambitions by 2030

**90%**

renewable electricity at  
all KOSTAL  
factories

**100%**

ISO 14001 compliant  
factories

**100%**

of target suppliers  
are reporting  
ESG data

**100%**

of target suppliers  
use renewable  
electricity

**90%**

waste diversion rate  
in production

**25%**

electricity  
consumption  
reduction  
in production

**40%**

GHG Emission reduction  
in value chain

**100%**

ISO 45001 compliant  
factories

**30%**

reduction of record-  
able incident rate at  
all KOSTAL sites

## Final ambition by 2045

**CARBON NEUTRAL**



## Our environmental sustainability ambitions and KPIs

FOCUS AREA	TARGET DESCRIPTION	KPIs FOR THE TARGETS AND STATUS 2024		ACTIONS AND STATUS 2024	
2030 targets					
Decarbonisation	40% reduction in carbon emissions in our entire value chain.	GHG emission intensity (Scope 1, Scope 2) Direct and indirect GHG emission in tons of CO <sub>2</sub> equivalent per million EUR revenue.	Compared to baseline -11% <div><div></div></div>	■ Submitting SBTi targets	Submitting our SBTi targets for validation by the end of 2026 step 1 <div><div></div><div></div><div></div><div></div></div>
		Self generated non-fuel renewable energy The percentage of self generated renewable electricity (like on site solar power generation) from the total electricity consumed during the reporting period.	Compared to baseline 304% <div><div></div></div>	■ Signing the UN pledge ‘Business Ambition for 1.5°C’	
		Scope 3 GHG emission intensity Scope 3 GHG emission in tons of CO <sub>2</sub> equivalent per million EUR revenue.	Under calculation	■ Switching to renewable energy sources	Transparency and commitment supporting the UN pledge step 2 <div><div></div><div></div><div></div><div></div></div>
	90% renewable electricity at all KOSTAL factories.	Percentage of renewable electricity The percentage of the renewable electricity from the total electricity consumed during the reporting period.	41.8% <div><div></div></div>	■ Generating on-site renewable electricity	
				■ Setting site renewable electricity targets	
Resource efficiency	25% energy consumption reduction in production.	Energy intensity All energy consumed in MWh per million EUR revenue.	Compared to baseline -3.35% <div><div></div></div>	■ Promoting renewable energy	Site-level energy targets and action step 2 <div><div></div><div></div><div></div><div></div></div>
				■ Purchasing green electricity, RECs	
	Continuously improve water efficiency on all other sites by a water withdrawal rate reduction.	Water intensity All water consumed during the reporting period in m <sup>3</sup> per million EUR revenue (reduction should focus on water scarce areas).	Compared to baseline -2.15% <div><div></div></div>	■ Identifying opportunities to reduce Scope 3 category GHG emissions	Circularity in production step 1 <div><div></div><div></div><div></div><div></div></div>
				■ Fixing site environmental targets and assessments	
	90% waste diversion rate in production.	Waste diversion rate The percentage of total waste diverted from incineration or landfill.	86% <div><div></div></div>	■ Rationalise and minimise energy use, and incorporate modern technologies to reduce and monitor energy consumption.	
				■ Tracking site water quantity	
	25% reduction of waste intensity.	Waste intensity All waste generated in tons during the reporting period per million EUR revenue.	5.28% <div><div></div></div>	■ Optimising water-use especially at factories that are located in water-scarce areas.	
■ Setting waste targets					
100% ISO 14001 compliant factories.	ISO 14001 is an international standard for environmental management systems. We monitor the status of each our factories for our annual Sustainability Report.	100% <div><div></div></div>	■ Applying circular principles in product design, sourcing, manufacturing and packaging.		
			Monitor and encourage ISO 14001 compliance.		

Indicator statuses and action statuses are showing 2024 results. Intensities and fluctuations are compared to the baseline (2022) where indicated.



FOCUS AREA	TARGET DESCRIPTION	KPIS FOR THE TARGETS AND STATUS 2024		ACTIONS AND STATUS 2024	
Sustainable product	Continuously reduce the emissions of products.	<b>GHG emissions reduction from products</b> The estimated total avoided GHG emissions from products in metric tons of CO <sub>2</sub> equivalent.		<ul style="list-style-type: none"><li>Promoting energy efficiency</li><li>6% R&amp;D investment</li></ul>	
		<b>Percentage of reused / recycled raw materials</b> The percentage of reused or recycled raw materials from the total raw materials used during the reporting period.	Under calculation	<ul style="list-style-type: none"><li>Sustainable product design (reduce complexity, increase reparability, increase recyclability)</li><li>Reduce hazardous material use and other product safety measures</li><li>Operational excellence with RACE programme</li></ul>	Product carbon footprint calculation step 1 <div><div></div><div></div><div></div><div></div></div>
	100% of target suppliers use renewable electricity.	<b>Suppliers use renewable electricity</b> Percentage of target suppliers committed for green electricity.	Under calculation	Supplier dialogue and engagement	
	100% of target suppliers report ESG data.	<b>Supplier ESG data reporting</b> Percentage of target suppliers reporting ESG data during the reporting year.	15% <div><div></div><div></div><div></div><div></div><div></div></div>	<ul style="list-style-type: none"><li>EcoVadis Ratings + Carbon module</li><li>Identify opportunities to educe Scope 3 emissions.</li></ul>	Conflict minerals response rate step 4 <div><div></div><div></div><div></div><div></div><div></div></div>
Supply chain	Continuously improve responsible sourcing.			<ul style="list-style-type: none"><li>Management of conflict minerals</li><li>Supply chain risk analysis and supplier sustainability assesment</li><li>Compliance Hotline</li><li>Labour and human rights on the supply chain</li></ul>	Supplier dialogue step 2 <div><div></div><div></div><div></div><div></div><div></div></div>
2045 target					

Carbon neutrality in our entire value chain (Scope 1, 2,3) by 2045.

Indicator statuses and action statuses are showing 2024 results. Intensities and fluctuations are compared to the baseline (2022) where indicated.



Our social sustainability ambitions and KPIs

FOCUS AREA	TARGET DESCRIPTION	KPIs FOR THE TARGETS AND STATUS 2024		ACTIONS AND STATUS 2024	
2030 targets					
Health and safety	Reduce the <b>recordable incident rate</b> by 30%.	<b>Recordable incident rate</b> Total number of recordable incidents divided by 100 employees.	Compared to baseline 8% 	■ Centralise health and safety measures across all facilities	
	Continuously reduce <b>number of days lost</b> to work-related injuries.	<b>Number of days lost to work-related injuries</b> The number of days lost due to work-related injuries and work-related ill health during the reporting period. The number of days is a count of calendar days, not just scheduled work days.	Compared to baseline -1.45% 	■ Standardise definitions for health and safety  ■ We monitor the status of ISO 45001 compliance for the annual Sustainability Report	Standardising health and safety step 1 
	100% <b>ISO 45001</b> compliant factories.	<b>ISO 45001 compliance</b> ISO 45001 is an international standard for occupational health and safety management systems.	24.3% 		
Diversity	Continuously monitor <b>female to male ratio</b> .	<b>Female to male ratio</b> Female to male ratio refers to the proportion of female employees compared to male.	44 / 56%	We are committed to integrate diversity, inclusion and equity into our corporate culture.	Integrating DEI into our culture step 1 
Labour and human rights	Monitor the <b>compliance and ethics concerns</b> .	<b>Reported compliance and ethics concerns</b> Number of compliance and ethics cases in the reporting year.	48 cases	■ Internal audit  ■ Internal learning platform	Global learning platform step 3 
	Continuously improve <b>employee development</b> .	<b>Training hours per employee</b> Training material consumption in the learning platform is the amount of training material accessed or consumed by users.	8 hours	■ Employee development plans	
Compliance	Improve <b>compliance training rate</b> .	<b>Compliance training rate</b> Percentage of employees completing the global compliance training.	75% 		

Indicator statuses and action statuses are showing 2024 results. Intensities and fluctuations are compared to the baseline (2022) where indicated.



# KOSTAL Group receives ESG Transparency Award for the second time

On 11 December 2024, EUPD Research, with more than twenty years of expertise in research and analysis, honoured KOSTAL Group with the ESG Transparency Award for excellence in sustainability reporting for the second time. The awarding ceremony was held in Bonn, Germany.

KOSTAL Group has received this prestigious award for the professional and transparent reporting on the Group's ESG performance.

Receiving the ESG Transparency Award twice highlights our commitment to accountability and sustainable practices, demonstrating our dedication to building trust and creating a positive impact.

This achievement is a result of the continuous commitment and effort of our KOSTAL colleagues, suppliers, and partners, who have joined us on our shared journey, OUR WAY to a sustainable future.



*On the left: József Böhm – Global Head of Sustainability, KOSTAL Group*



FROM **AMBITION**  
TO **ACTION**



# Compliance and ethics

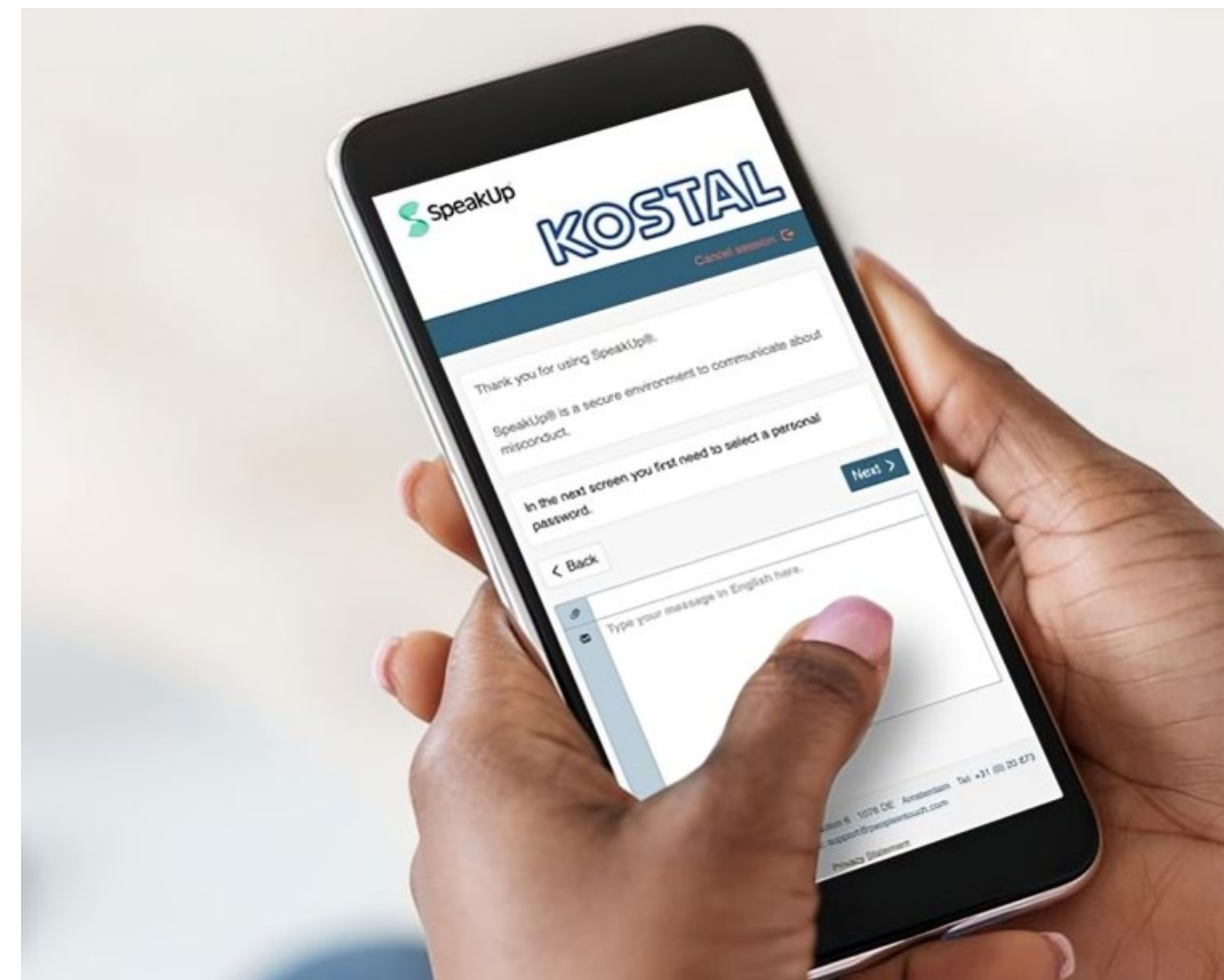
Our success, built over a hundred-year history, rests on a fundamental principle: abiding by the law and acting with integrity. As a family-run business, we understand the importance of preserving, developing, and passing on a legacy to future generations.

Our values guide everything we do, forming the foundation on which all other guidelines are based. Acting ethically and with integrity enables KOSTAL to continue building and maintaining its excellent reputation in the industry, attracting and retaining outstanding colleagues, and meeting the high expectations placed on us by our customers, suppliers, partners, and society.

Sustainable business practices that protect the environment and resources while putting people first are essential to preserving our legacy, perhaps even more so today than in the past.

Guided by our corporate values, our Ethics and Compliance Programme drives results through integrity, mutual respect, and accountability, making KOSTAL Group a trusted partner for stakeholders.

We hold ourselves to the highest ethical standards and expect the same from each of our valued stakeholders. To ensure that everyone understands the importance of doing what is right and performing in line with our standards, we have established robust training, education, and communication programmes. Our commitment to compliance defines the way we think and act at KOSTAL Group, shaping our approach to business and reinforcing our dedication to ethical conduct.





## What we do for compliance and ethics

### Leading by example

Our managers are responsible for preventing violations of legal provisions, adhering to our values within their areas of responsibility, and regularly monitoring compliance. They must ensure that employees are aware of these principles, that the rules are observed, and that any violations are subject to disciplinary action, regardless of the employee's hierarchical position within the Group.

As role models, our leaders inform employees about the regulations outlined in the [Code of Conduct](#), discuss its principles with them, and, together with the Legal and Compliance Department, serve as key points of contact. They also maintain regular dialogue with their teams to reinforce compliance.

We know it is important for all employees to feel empowered to raise issues and concerns in their workplace. Therefore we put special emphasis on communications, promoting compliance services and trainings.

### Cooperating with the authorities

We maintain a cooperative relationship with authorities and fully comply with lawful investigations conducted by both KOSTAL Group and external regulatory bodies. The legal rights of individuals, such as the right to testify or refuse to testify and other procedural rights, remain unaffected.

In 2023, BAFA (the German governmental agency overseeing the implementation of the German Supply Chain Due Diligence Act [LkSG]) contacted KOSTAL Group regarding the reporting mechanism following the enactment of the LkSG. KOSTAL successfully provided BAFA with the required detailed information on our reporting mechanism under this regulation.



### Business conduct policies

To ensure the highest standards of business conduct, we have implemented several group-wide policies that address the identification, assessment, management, and remediation of material impacts related to business ethics.

Every KOSTAL employee is required to report potential or actual violations of the Code of Conduct, company guidelines, or applicable laws through the appropriate channels. Employees can do this by informing their supervisor, reaching out to the Legal and Compliance Department, or using the KOSTAL Compliance Hotline, which is operated by an independent external company.

All reports are treated with strict confidentiality, and any form of retaliation or discrimination against employees who report concerns in good faith (and not abusively) is strictly prohibited, even if the report later proves to be unfounded. Every question or concern submitted to the KOSTAL Compliance Hotline is carefully reviewed and directed to the appropriate team for handling, investigation, and response. Serious and significant violations are immediately escalated to the Compliance Steering Committee.

Our Employee Code of Conduct and Supplier Code of Conduct outline clear expectations for our employees and establish specific requirements for our suppliers. The Compliance Hotline is publicly accessible via internal channels, our website, the Compliance platform, and the Compliance app, which are available worldwide.



## Prevention and detection of corruption and bribery

As a global company, we acknowledge that corruption is a risk across our operations. KOSTAL Group's Anticorruption and Antibribery Policy and Global Compliance programme enable our Group to manage corruption and bribery risks.

These programmes are updated annually to reinstate our governance structure, update it if necessary, and establish a work plan to actively work with compliance year-round in line with the principles set out in the UK Bribery Act.

## Dealing with public officials

Dealing with public officials poses a particularly high risk in terms of bribery due to the strict rules and regulations in many countries.

Public officials include employees of government agencies, but also employees of business enterprises owned or controlled by the government, international organisations, political parties and political candidates.

Our Anticorruption and Antibribery Policy outlines specific provisions regarding dealing and communicating with public officials. The provision of money or anything of value, no matter how small, to a public official for the purpose of influencing them in their official capacity is strictly prohibited.

## Data protection and information security

We recognise that data protection and cybersecurity is a key responsibility of our teams at KOSTAL Group and that our success in this area is crucial to prevent negative impacts to our customers, partners, and employees.

Our information security programme and policies are being effectively implemented through procedures and actions across our global operations to provide appropriate protection against modern threats, comply with customer requirements and preserve the safety and integrity of all sensitive data.

Our robust organisational, contractual, and technical measures ensure the privacy and security of all personal data collected, stored, and processed.

The protection of privacy, the protection of personal data and the security of all business information are carried out in compliance with legal requirements. Data is protected against unauthorised access and loss, whereby a risk-appropriate standard is maintained that is technically and organisationally oriented to the relevant state of the art.

Compliance with data protection and information security requirements is always ensured in all business processes.



## A framework for human rights

The Human Rights Policy, developed in 2023, outlines our commitment to respecting human rights wherever we operate. This includes respecting the labour rights of our own workers and employees in our supply chain and acknowledging important human rights issues, including the rights of Indigenous Peoples, and community engagement.

Our policy has been built on the foundations of several internationally recognised standards and conventions. It supports the following international instruments:

- United Nations Universal Declaration of Human Rights,
- International Covenant on Civil and Political Rights,
- International Covenant on Economic, Social and Cultural Rights,
- UN Convention on the Rights of the Child,

- UN Convention on the Elimination of All Discrimination against Women,
- ILO core labour standards,
- United Nations Guiding Principles on Business and Human Rights (UNGPs),
- OECD Guidelines for Multinational Enterprises,
- UN Women's Empowerment Principles.

Where local laws and regulations set lower standards but do not prohibit applying international standards, we abide by the latter. The policy applies globally, and we expect our business relations, both upstream and downstream, to respect human rights within their scope. Our Human Rights Policy is publicly available on the KOSTAL Group webpage and via internal channels.



**“By acting ethically and with integrity, KOSTAL has built and maintained trusted relationships with stakeholders for decades.”**

*Carolin Schulte-Kunze,  
Legal Counsel, Data Protection Officer, KOSTAL Group*



## Regulatory changes and compliance developments in 2024

In 2024, several new regulations and requirements introduced additional compliance obligations for KOSTAL in the areas of environmental, human rights, and social compliance. Key EU regulations that must now be adhered to include:

- EU Deforestation Regulation (EUDR) — EU 2023/1115,
- Corporate Sustainability Reporting Directive (CSRD) — EU 2022/2464,
- EU Taxonomy Regulation ((EU) 2020/852),
- Carbon Border Adjustment Mechanism (CBAM) — EU Directive 2023/1773.

KOSTAL is also subject to the German Supply Chain Due Diligence Act (LKSG), which mandates companies to observe human rights and environmental due diligence obligations across their supply chains.

Compliance with the LKSG requires:

- establishing a risk management system and conducting a risk analysis,
- adopting a corporate human rights strategy,
- implementing preventive measures,
- taking immediate remedial action when violations occur,
- establishing a whistleblowing mechanism,
- documenting and reporting due diligence measures.

Additionally, new data processing regulations came into effect in 2024, including Regulation EU 2033/2854, which harmonises fair access and use of data, and Regulation EU 2024/1689, which establishes artificial intelligence governance rules. KOSTAL is set to implement the necessary compliance measures in 2025.

To meet these new legal obligations, KOSTAL has updated existing compliance policies, introduced new ones (e.g., a Whistleblowing Policy), and strengthened internal compliance training. In 2024, comprehensive online training courses on compliance-related topics were conducted, with 75% of participants completing them on time—a strong result given the varied risk exposure of employees worldwide.

## MEMBERSHIPS AND ASSOCIATIONS





## Advancing our compliance journey

Looking ahead to 2025, KOSTAL will focus on expanding awareness of compliance and ESG-related topics, enhancing training programmes, and ensuring that corporate policies remain aligned with emerging regulatory requirements. Strengthening the risk management system will be a key priority to ensure continued compliance with legal, ethical, and ESG standards.

# 2,500

employees trained on  
compliance programmes

# 48

reported compliance concerns in 2024

We are committed to continuously evaluating and enhancing our Compliance and Ethics Programme to guarantee that it remains effective and aligned with evolving global standards. As part of our ongoing commitment to sustainability, we are dedicated to implementing an ESG internal audit process that will provide independent and objective assurance of the accuracy of our ESG data and compliance with relevant standards. Additionally, we will define and implement processes to evaluate ESG-related legal and regulatory requirements, ensuring full compliance with both current and future obligations.

# 1

verified compliance concern in 2024





# Sustainability on our supply chain

KOSTAL has a long history of acting responsibly, and we recognise that our suppliers and business partners are integral to our success in this regard.

We are committed to continuing this successful cooperation and are determined to take important steps to achieve carbon neutrality in the entire value chain by 2045.

With over 1,500 direct and 9,000 indirect supplier partners, we prioritise selecting and supporting suppliers to drive positive environmental and social impact. We aim to lead the way to a sustainable future by establishing clear requirements and offering support to our suppliers.

We communicate clear expectations to our suppliers through the [Supply Chain Code of Conduct](#) (SCoC), where we detail our aspirations in the most important sustainability areas. In addition to SCoC requirements, we expect our suppliers to comply with the applicable national and international laws in their activities and to observe the internationally recognised environmental, social, and compliance standards.

Our values of fairness, integrity, and respect are integral to our organisational culture and extend to our supplier relationships. We integrate these principles into our supplier development strategies, ensuring that our partners uphold the same high standards of ethical conduct.

We collaborate closely with our key partners to support their sustainability-driven initiatives, aligning these efforts with our own ambitions. In addition to process-related, economic, and technical criteria, our procurement practices prioritise social and environmental aspects, such as human rights, working conditions, anti-corruption measures, legal compliance, and environmental protection.





## What we do for supply chain sustainability

### Responsible sourcing

Sustainability-related expectations are integrated and form an essential part of the internal procurement process, which is crucial in enforcing our sustainability requirements to achieve the Group's sustainability ambitions.

Our internal procurement processes have been enhanced to incorporate sustainability considerations in our daily operations and procurement decisions. This includes onboarding new suppliers for KOSTAL, awarding new business to suppliers, and regular supplier evaluations. The "sustainability score" of potential suppliers is considered as an important criterion in every award decision.

### Feedback and complaints on the supply chain

The KOSTAL Compliance Hotline also serves as a communication channel for feedback and complaints from the supply chain workforce, as detailed in the SCoC and contractual agreements.

### Sustainability supply chain risk management

We identify our high-risk partners to prioritise and address the key areas for improvement regarding their sustainability performance. For this purpose, we use EcoVadis, a leading platform that evaluates and rates the sustainability performance of companies across key ESG criteria. EcoVadis ratings serve as a critical prerequisite and input for the KOSTAL supplier risk management process.

Since 2023, over 7,400 partners have been registered in the system. By analysing factors such as country, industry, and procurement risks, along with 360° watch results, high-risk suppliers have been identified and subjected to in-depth risk analysis.

Our supply chain risk management team monitors environmental events such as floods, droughts, and water scarcity. These events can have a substantial impact on our business, potentially resulting in financial losses, strategic challenges across different stages of the value chain. By adopting a proactive approach, we aim to mitigate disruptions and safeguard the long-term resilience and sustainability of our operations.

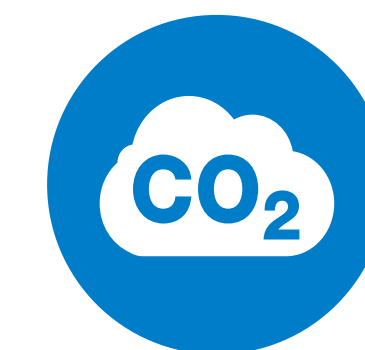
### Supply chain ambitions by 2030



**100%**  
of target suppliers are  
reporting ESG data



**100%**  
of target suppliers use  
renewable electricity



**40%**  
GHG emission reduction  
in value chain



## Management of conflict minerals

KOSTAL is committed to ethical mineral sourcing, outlined in the [Responsible Minerals Policy](#), ensuring our supply chain avoids human rights violations, conflict financing, and environmental harm. We follow international standards, the OECD Due Diligence Guidance and the EU Conflict Minerals Regulation, and extend due diligence to 3TG (tin, tantalum, tungsten, and gold) and minerals like cobalt and mica. We are using the Conflict Minerals Reporting Template (CMRT) and Extended Minerals Reporting Template (EMRT). We assess smelters against responsible sourcing standards and take action if suppliers are linked to high-risk sources.

## Key principles of the Supply Chain Code of Conduct

KOSTAL is committed to the Paris Agreement and aims to be carbon neutral by 2045. To fulfil our commitments, we outline the following requirements for our suppliers to minimise greenhouse gas emissions, improve air quality, promote the adoption of renewable energy, and uphold social justice within our supply chain.

### Greenhouse gas (GHG) emission reduction

#### ■ Emission monitoring and control

Suppliers must implement robust measures to monitor, control, and minimise emissions of air pollutants and energy consumption associated with their operations.

#### ■ Prioritising renewable energy:

Suppliers are encouraged to transition towards renewable energy sources to reduce environmental impact.

#### ■ Addressing carbon neutrality:

To meet our carbon neutrality goal, we must collaborate with our suppliers and consider favouring products that have the lowest environmental impact considering the whole product life-cycle.





### Environmental responsibility

We require proactive strategies and actions from our suppliers to minimise their environmental footprint supported by environmental management systems.

#### ■ Resource efficiency:

Suppliers must develop and implement strategies to minimise resource consumption and increase resource efficiency throughout their operations, with a special focus on raw materials. This includes efficient use of energy, water, and other natural resources.

#### ■ Waste management:

Waste disposal practices must adhere to appropriate waste management systems, focusing on promoting a circular economy. Suppliers are advised to prioritise waste reduction, reuse, recycling, and ensure responsible disposal.

#### ■ Hazardous substances:

Suppliers must ensure the safe handling, storage, and use of hazardous materials in compliance with relevant regulations and industry best practices. It is required to avoid using chemical substances that pose a risk to human health or the environment whenever possible.

### Social responsibility

In alignment with our core values and commitment to social sustainability, we require our suppliers to adhere to stringent standards regarding corruption, fair competition, human rights and labour practices.

#### ■ Working conditions:

Supplier partners must have clear policies in place regarding working conditions and human rights. These policies should be monitored and enforced to ensure compliance with national and international regulations, including health and safety standards, working hours, wage standards, and prohibition of child labour.

#### ■ Anti-bribery and corruption:

Suppliers must maintain a “zero-tolerance” policy towards bribery, corruption, extortion, fraud, and embezzlement. Any form of unethical conduct in business dealings is strictly prohibited.

#### ■ Fair business:

Suppliers are expected to uphold fair conduct towards competitors, customers, and other stakeholders in all business activities. Due diligence, transparency, integrity, and honesty must be paramount in all interactions.

#### ■ Diversity, equity, and inclusion:

Suppliers are encouraged to embrace diversity, equity, and inclusion within their organisational culture. Suppliers are encouraged to foster a culture of mutual respect and equal opportunities without discrimination.

#### ■ Animal welfare:

Suppliers must consider animal welfare in their corporate activities.





## Supply Chain sustainability achievements in 2024

### ■ Improved conflict minerals management response rate

Achieved a 95% supplier response rate in 2024 through the use of CMRT and EMRT templates

### ■ Scope 3 calculation

Calculating Scope 3 emissions is crucial for understanding the full environmental impact of our supply chain as it includes all indirect emissions that occur on our value chain. It allows us to identify key areas for improvement, and engage with suppliers on sustainability efforts.

In 2024, we finalised the calculation of our Scope 3 emissions, with results expected to be available in Q1 2025. This step is a critical milestone in our strategy to reduce value chain emissions by 40% by 2030 and achieve carbon neutrality by 2045. Scope 3 emissions account for approximately 90% of our total emissions. Our top 100 suppliers for GHG emissions represent approximately 64% of our total Scope 3.1 emissions and will be pivotal in helping us achieve our targets.

### ■ Commitment to SBTi

We are in the process of calculating our Scope 3 emissions across all 15 GHG Protocol categories to develop and submit a science-based target to SBTi. Read more on SBTi on [page 49](#).

“In procurement processes, we are strongly committed to sourcing ethically, reducing environmental impact, and fostering long-term partnerships with suppliers who share our values of responsibility and innovation.”

*Thomas Friedel,*

*Head of Global Supply Chain Sustainability, KOSTAL Group*



In 2024, we have conducted global **water risk assessments** to identify risks in our supply chain, particularly for those operating in water-stressed regions. As a result, we are committed to establishing measures to minimise adverse impacts by 2025.

Effective collaboration with business partners is crucial for promoting sustainability across the value chain. In 2024, KOSTAL launched a series of **supplier webinars** as part of its communication programme with business partners. These seminars are designed to reinforce the company's expectations and requirements, encourage collaboration, and outline the steps needed to achieve KOSTAL's sustainability goals.

A modern **supplier portal** is under development to strengthen our connection with suppliers and facilitate webinars, training sessions, and other forms of knowledge sharing and support.

In conclusion, by working closely with our suppliers, we can drive meaningful progress in sustainability, ensuring compliance with our ethical standards, reducing environmental impact, and fostering long-term value across the supply chain. Together, we are committed to achieving our sustainability goals and contributing to a more resilient and responsible future.



# Increase in target suppliers reporting ESG data

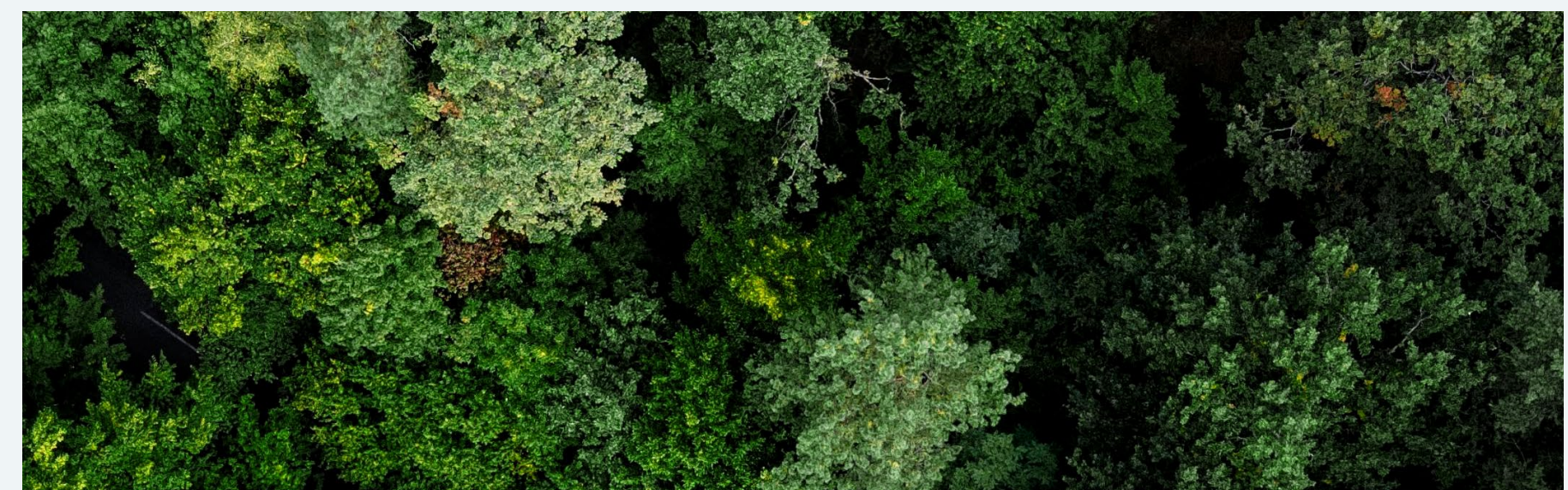
**In 2024, KOSTAL established a comprehensive roadmap to increase ESG data reporting amongst our key suppliers and plan collaborations for increasing sustainability performance. We use the EcoVadis Rating Platform to assess our suppliers, supported by a strategically focused management process.**

The EcoVadis methodology assesses 21 ESG criteria, based on internationally recognised standards such as the United Nations Global Compact (UNGC) principles, International Labour Organization (ILO) conventions, Global Reporting Initiative (GRI) standards, and ISO 26000, among others.

We have established clear internal management processes and ESG criteria to guide this initiative. We focus on strengthening supplier engagement and promoting responsible sourcing practices. The roadmap for supplier engagement is being rolled out progressively, with ongoing monitoring to ensure alignment with our sustainability ambitions. These requirements have also been incorporated into our contractual agreements with suppliers, formalising our commitment to sustainable procurement.

We also implemented a communication plan to enhance collaboration with suppliers, which included hosting webinar sessions throughout the past year and is also planned for 2025. These efforts are designed to foster understanding and support suppliers in meeting our sustainability expectations.

As a result of the project, EcoVadis Rating Platform enabled 15% of our target suppliers to report ESG data within the first year of implementation. This initiative is an important milestone to enhance transparency and sustainability across our supply chain, contributing to KOSTAL's ambition to achieving 100% ESG data reporting from our target suppliers by 2030.



FROM AMBITION  
TO ACTION



# Honours and awards in 2024

## KOSTAL China receives Energy Action Award from Volvo for outstanding sustainability efforts

On 11 September 2024, KOSTAL China was honoured by Volvo Car Asia Pacific with the prestigious “Volvo Car APAC Energy Action Award” at the Volvo Car Asia Pacific Headquarters in China. This recognition celebrates KOSTAL’s significant contributions to the Energy Action 100 programme, which drives sustainable transformation in the automotive industry. KOSTAL’s collaboration with Volvo supports their ambitious goal to achieve carbon neutrality by 2040. The award is a testament to KOSTAL’s dedication to creating positive change and supporting a sustainable future.

## KOSTAL India receives Eco Certificate by ŠKODA Auto Volkswagen India

At the 19th Sustainability Summit in India, ŠKODA Auto Volkswagen India awarded KOSTAL India the “ECO EDGE Progressive Certificate” for its exceptional efforts in integrating sustainability into operations during 2023 and 2024. KOSTAL was honoured in the “Progressive” category, recognising the company’s dedication to decarbonisation, circularity, health and safety, and human rights. This award highlights KOSTAL’s group-level initiatives and the tangible results achieved, reaffirming the company’s commitment to environmental and social responsibility.

## KOSTAL joins Sustainability Competence Programme

KOSTAL’s automotive division, KAE, continued to be a member of the econsense Sustainability Competence Programme, a German industry forum focused on actively shaping the transition to a more sustainable economy. This membership underscores KOSTAL’s ongoing commitment to fostering sustainability within the automotive sector.

## PLENTICORE awards in 2024

PLENTICORE inverter series has been awarded the Energy Transition Award for its exceptional performance in driving the energy transition. Rated by over 6,000 customers and 1,000 installers in the EUPD survey, PLENTICORE stands out for its flexibility, high-quality standards, and compatibility with products like battery storage and heat pumps.

The PLENTICORE G3 inverter has been recognised with the pv magazine Award for its innovation and sustainability. Competing against over 300 submissions, the inverter stood out for its versatility, efficiency in solar energy use, and advanced safety features.

These awards acknowledge KOSTAL’s role in contributing to sustainable energy solutions.

## Stellantis recognises KOSTAL as Most Improved Supplier of the Year

At Stellantis’ annual Supplier Award Ceremony on 12 September 2024, KOSTAL was named Most Improved Supplier of the Year in recognition of its outstanding contributions and performance in the North American region. This accolade highlights KOSTAL’s dedication to excellence and continuous improvement. Additionally, KOSTAL Automobil Elektrik was nominated for the Stellantis Global Supplier Award 2024, further acknowledging its innovations and competitiveness, particularly in switches and switch panels.

*Volvo Car APAC Energy Action Award (left);  
Supplier Award from Stellantis (right)*





### KOSTAL Brazil achieves Q1 Quality Certification from Ford

KOSTAL Brazil has once again received the esteemed Q1 quality certification from Ford for its outstanding performance. This recognition, awarded for the second time, underscores the team's commitment to exceeding Ford's high standards and reinforces KOSTAL's reputation as a reliable and trusted supplier in the automotive industry.

### KOSTAL receives World Market Leader in South Westphalia seal

KOSTAL has been honoured with the "World Market Leader in South Westphalia" seal by the regional Chamber of Commerce and Industry (DIHK). This prestigious award, recognising KOSTAL's outstanding global market achievements, highlights the company's innovative products and technological excellence.

### KOSTAL Global Business Services Centre receives 'Reliable Employer 2024/26' award

KOSTAL's Global Business Services Centre (KBS) has been awarded the "Reliable Employer 2024/26" title by the German-Hungarian Chamber of Industry and Commerce. This recognition affirms KOSTAL's commitment to providing exemplary working conditions and supporting the well-being of its employees. The award underscores KOSTAL's focus on maintaining a healthy work-life balance and creating a supportive environment for its team.

### KOSTAL completes first vehicle cybersecurity audit with ENX VCS Certification

KOSTAL Automobil Elektrik has become the first company to complete the Vehicle Cybersecurity Audit in accordance with the ENX VCS certification process. This certification demonstrates KOSTAL's commitment to robust cybersecurity practices in the automotive industry. By implementing a comprehensive Vehicle Cybersecurity Management System, KOSTAL is setting industry standards for managing the digital risks associated with modern vehicle technologies.

ŠKODA ECO EDGE Progressive Certificate



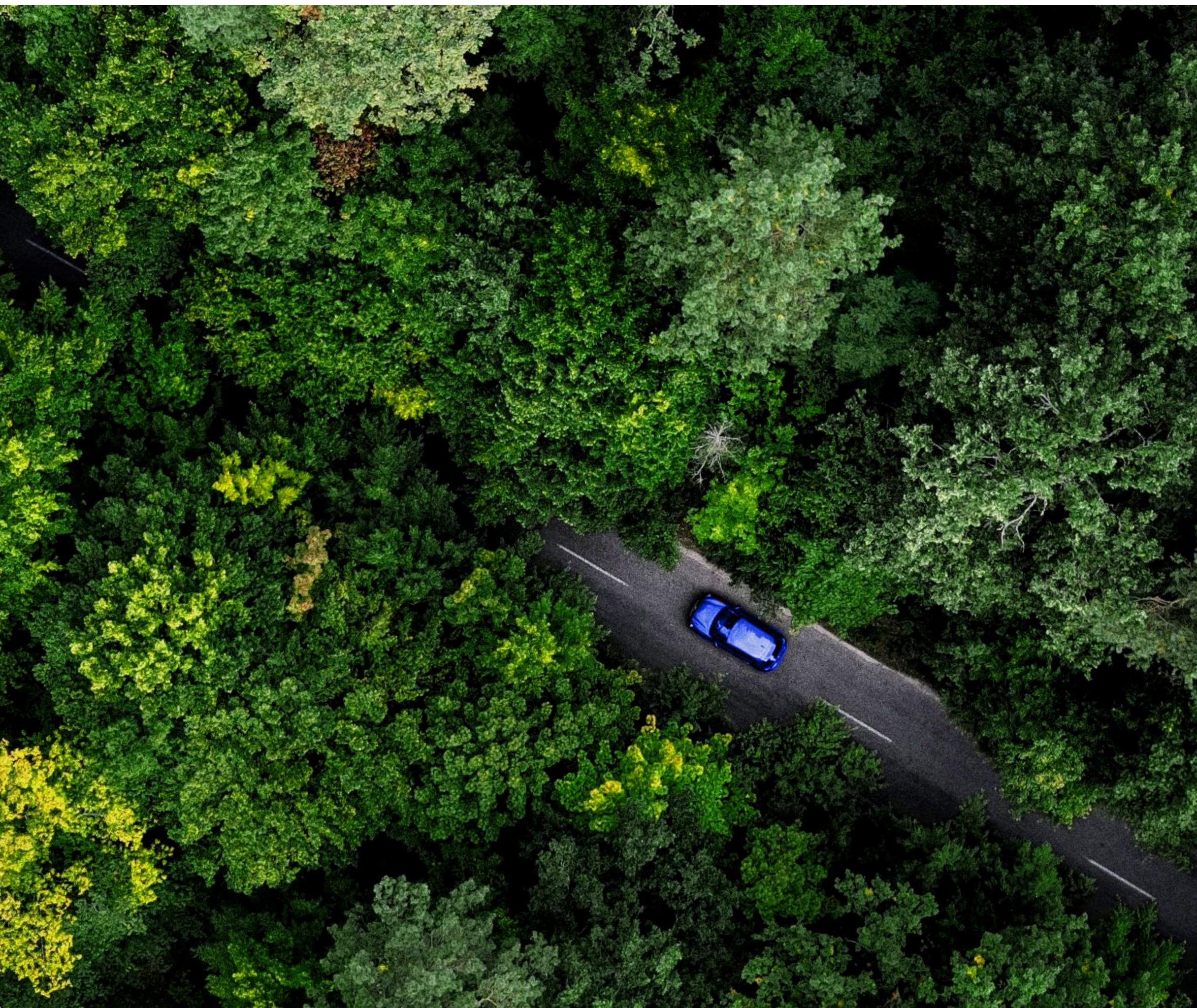


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# Environmental sustainability



Given the scale and urgency of climate change, it is crucial to implement large-scale environmental measures. Climate change has severe consequences for society as a whole and the quality of human life. As a global manufacturing company with a substantial supplier base and millions of customers using our products, we have a significant impact on the environment.

We are taking strategic steps to protect life on Earth by minimising our emissions and improving our resource efficiency, and we expect our suppliers to share the same vision. We prioritise sustainability at every stage of the product lifecycle: from design and manufacturing to resource and energy selection, waste and emissions management, and supplier partnerships.

Furthermore, we support local initiatives aimed at restoring or enhancing the surrounding environment. We join global initiatives in environmental protection to be part of the progressive and innovative professional communities. Looking at global sustainable development, being a leading supplier of automotive battery chargers, solar inverters, and frequency converters, our company plays a key role in the transition to electromobility and renewable energy.





## What we do for environmental sustainability

### Advancing product sustainability

Develop innovative products with sustainability at the core, prioritising the use of sustainable materials and manufacturing processes to minimise environmental impact. Read more on product sustainability on [page 68](#).

### Implementing significant measures to reduce our emissions

- Work towards carbon emission reduction with the goal of becoming a Carbon Neutral company by 2045.
- Reduce our energy consumption and fossil fuel intake.
- Increase the use of renewable electricity at our operations and in our supply chain.
- Continuously improve our resource efficiency.
- Work towards a circular economy by minimising waste and closing the loop.

### Forming partnerships with communities to enhance sustainability efforts

- We leverage site-level networks, called the Sustainability Champions Community, and functional teams, to collect environmental data to monitor our ESG performance. Furthermore, by sharing expertise and best practices, initiate collaborative actions to drive tangible sustainability results. Local environmental projects are driven collaboratively by Sustainability Champions, combining both bottom-up and top-down approaches.
- We partner with our suppliers on our sustainability ambitions. Read more on [page 32](#).

Our environmental strategy, aligned with the results of the materiality assessment, focuses on decarbonisation, resource efficiency, and sustainability in product design.

We have established Key Performance Indicators (KPIs) to effectively manage our sustainability performance and disclose relevant metrics, including energy consumption, CO<sub>2</sub>eq emissions, water usage, total waste generation, and waste disposal performance. In alignment with the ESRS requirements, we have conducted a thorough analysis and are actively addressing any gaps. To further enhance data quality, decision-making, and overall efficiency, we have implemented an ESG data management tool, enabling more precise tracking and reporting of our sustainability efforts. Read more on [page 11](#).





## What we do for environmental compliance



**11%** reduction in GHG emission intensity (Scope 1, 2) compared to 2022, which supports our ambition of Carbon Neutrality by 2045.



**3.35%** reduction in energy intensity compared to 2022.



**5.28%** reduction in waste intensity compared to 2022.



**2.15%** reduction in water intensity compared to 2022.

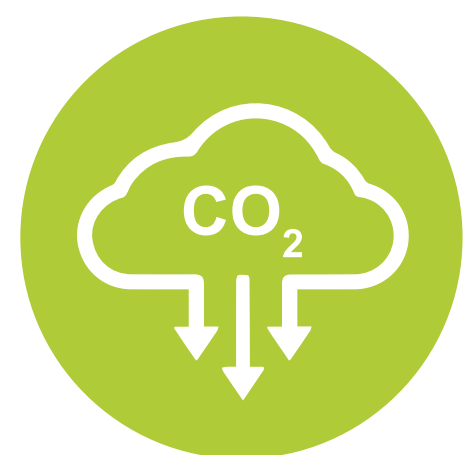
- Operating our business in compliance with all applicable laws and regulations. Read more on [page 26](#).
- Our [Environmental Policy](#) guides our commitment to sustainability and responsible environmental practices.
- We follow key guidelines for environmental reporting, including the Defra Environmental Reporting Guidelines (2019), IEA CO<sub>2</sub> Emissions from Fuel Combustion, and the Greenhouse Gas Protocol standards. We are actively preparing to ensure compliance with the CSRD directive.
- Implementing processes to assess our environmental impacts across our value chain, define clear targets, strategies and initiatives to achieve our ambitions.
- Integrating environmental aspects and risks in our supplier management processes and supplier qualification strategies.
- Implementing internationally recognised environmental management systems and certify our manufacturing operations.
- We collect and report internally about ESG data to monitor our performance.





## Environmental performance achievements in 2024

- 11% reduction in GHG emission intensity (Scope 1 and 2) compared to 2022, which supports our ambition of Carbon Neutrality by 2045.
- 3.35% reduction in energy intensity and a 5% decrease in energy consumption compared to 2022.
- 5.28% lower waste intensity compared to 2022.
- 2.15% reduction in water intensity compared to 2022.
- All our production locations within KAE, KKS, KI, and Compleo are 100% certified according to ISO 14001.
- We continuously focus on innovation for more environmentally efficient products. Read the 2024 results on [page 68](#).



# 11%

reduction in GHG emission intensity in 2024 compared to baseline

We continued the cooperation with the site-level resource group, the **Sustainability Champions**, to collect data, share good practices, and foster a diverse, inclusive working environment. We expanded local responsibilities by implementing a two-step validation process for sustainability data reporting, assigning dedicated contributors and validators to track progress and ensure accurate reporting.

In 2024, we continued to enhance our transparency and accountability and established a clearer sustainability metrics reporting and data collection process within our organisation. We implemented an ESG data management system powered by **Enablon software** that ensures data transparency, traceability, and compliance with audit requirements, supporting our quarterly and annual data collection processes. Read more about the software on [page 11](#).

KOSTAL is committed to upholding a high standard of environmental transparency, which is why we are disclosing our environmental impact through **CDP**. In 2024, KOSTAL Group completed CDP's Climate Change and Water Security questionnaires among over 22,000 companies.

The disclosure helps to identify and manage environmental risks, so there are clear targets to better our performance.

We are in the process of developing a collaborative approach with our **suppliers**, with the aim of setting out expectations and supporting opportunities in an adequate and effective way. Our goal is to meet our ambitions: all our supplier partners report on sustainability-related data, and use renewable energy. In 2024, we updated the [Supply Chain Code of Conduct \(SCoC\)](#) with accurate environmental and social responsibilities.

The **product carbon footprint** calculation promotes transparency and helps customers manage carbon emissions. KOSTAL is committed to this practice and, in 2024, explored options for acquiring LCA software to calculate product carbon footprints. Read about PCF on [page 68](#).



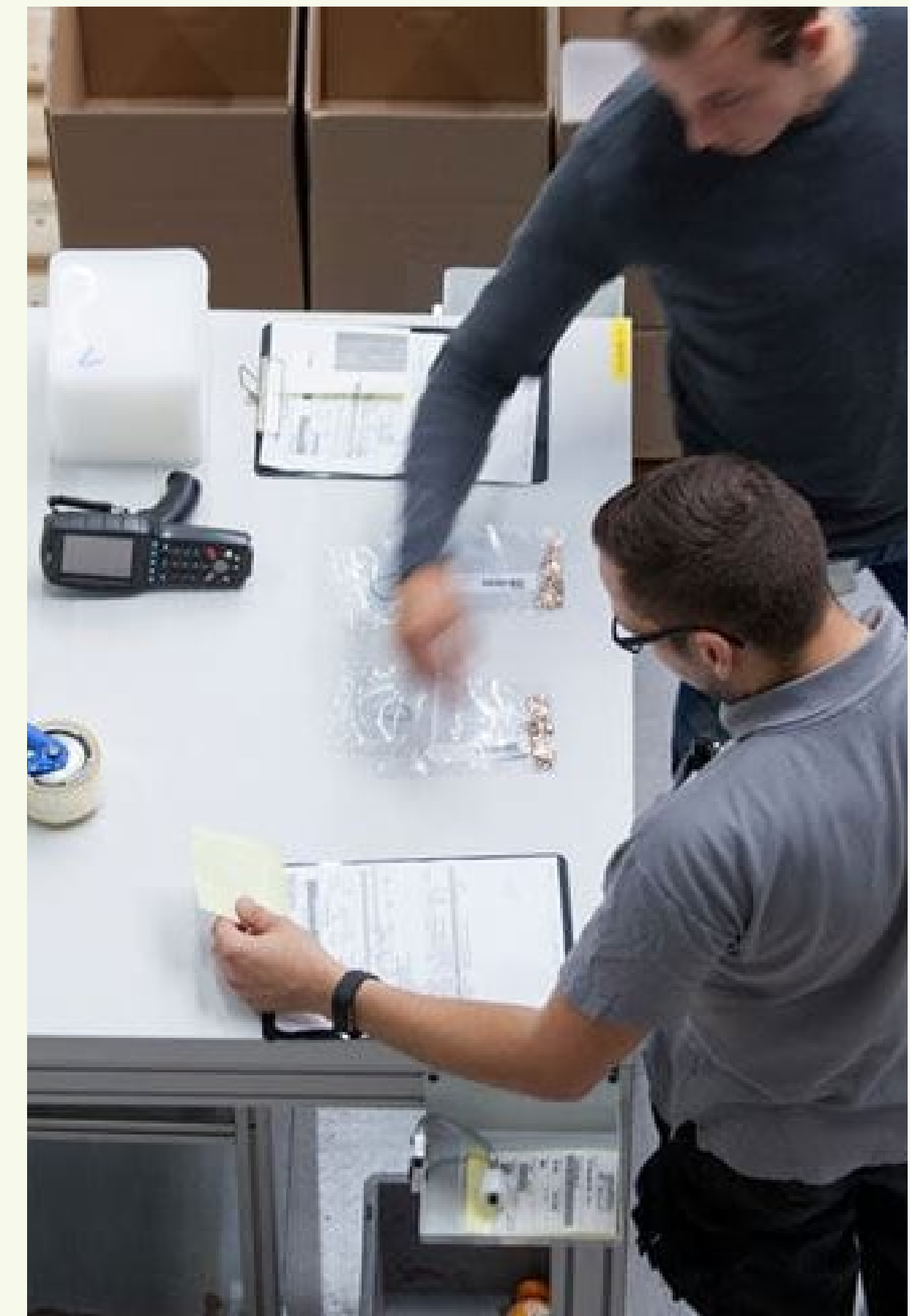
# Enhancing environmental risk management

The KOSTAL Group developed and launched a new Global Risk Management Tool to monitor and mitigate global influences affecting the organisation. The new tool empowers KOSTAL to efficiently identify, analyse, and respond to risks and opportunities, ensuring a proactive approach to safeguarding our operations worldwide.

A PESTEL framework is used to examine the Political, Economic, Social, Technological, Environmental, and Legal aspects that can influence an organisation's strategies and operations, providing a comprehensive understanding of the external macro-environmental factors.

In our commitment to environmental sustainability, the tool allows us to deepen our understanding and improve our responsiveness to environmental risks demonstrating our proactive approach to managing ecological challenges. A user-friendly dashboard provides a clear overview of potential risks, both for the entire Group and individual entities. By integrating the tool into our operations, we can effectively monitor and mitigate the impact of environmental conditions such as the climate change, possibly resulting in supply chain disruptions or other operational challenges. This approach not only strengthens our resilience against global challenges but also supports our efforts in environmental protection, natural resource management, emission reduction, and the adoption of renewable energy.

Through these measures, we ensure the sustainability of our operations while contributing to the overarching ecological balance needed for future generations.



FROM AMBITION  
TO ACTION

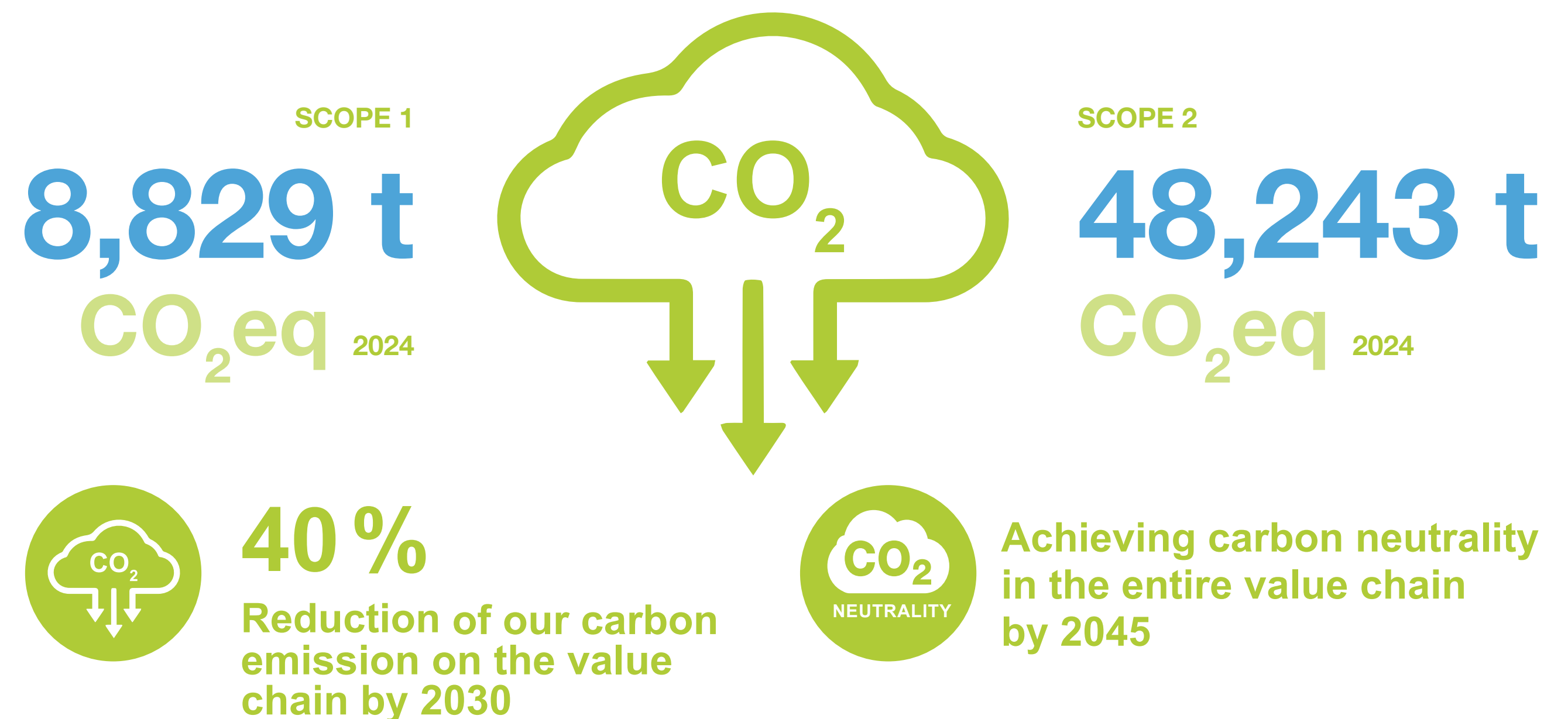
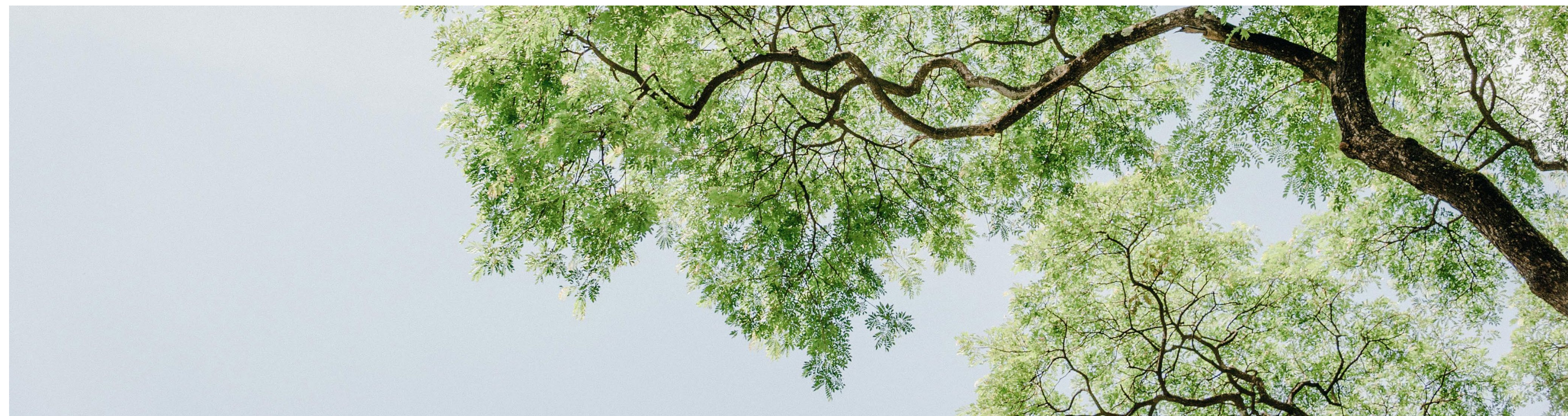


# Decarbonisation

For most manufacturing companies in the industry, decarbonisation stands on the top of environmental ambitions, because greenhouse gas emissions, especially the element CO<sub>2</sub> are most closely linked to causing the shocking acceleration of climate change.

Our Group operates globally, and our primary focus is on reducing the carbon footprint of our products, factories, offices and partnering with suppliers who make strategic steps to reduce their carbon emissions. The ultimate goal for KOSTAL is to become carbon neutral by 2045. We have established robust and credible net-zero targets according to the methodologies based on the latest climate science.

The key to addressing decarbonisation is to measure our impact: set KPIs to identify the composition of our carbon footprint and the areas of major emissions. In 2022, with the assistance of an external consultancy, we have identified our Scope 1 and Scope 2 GHG emissions, in line with the requirements of the Greenhouse Gas Emission Protocol, which will henceforth be referred to as the base year.





## What we do to reduce our carbon emissions

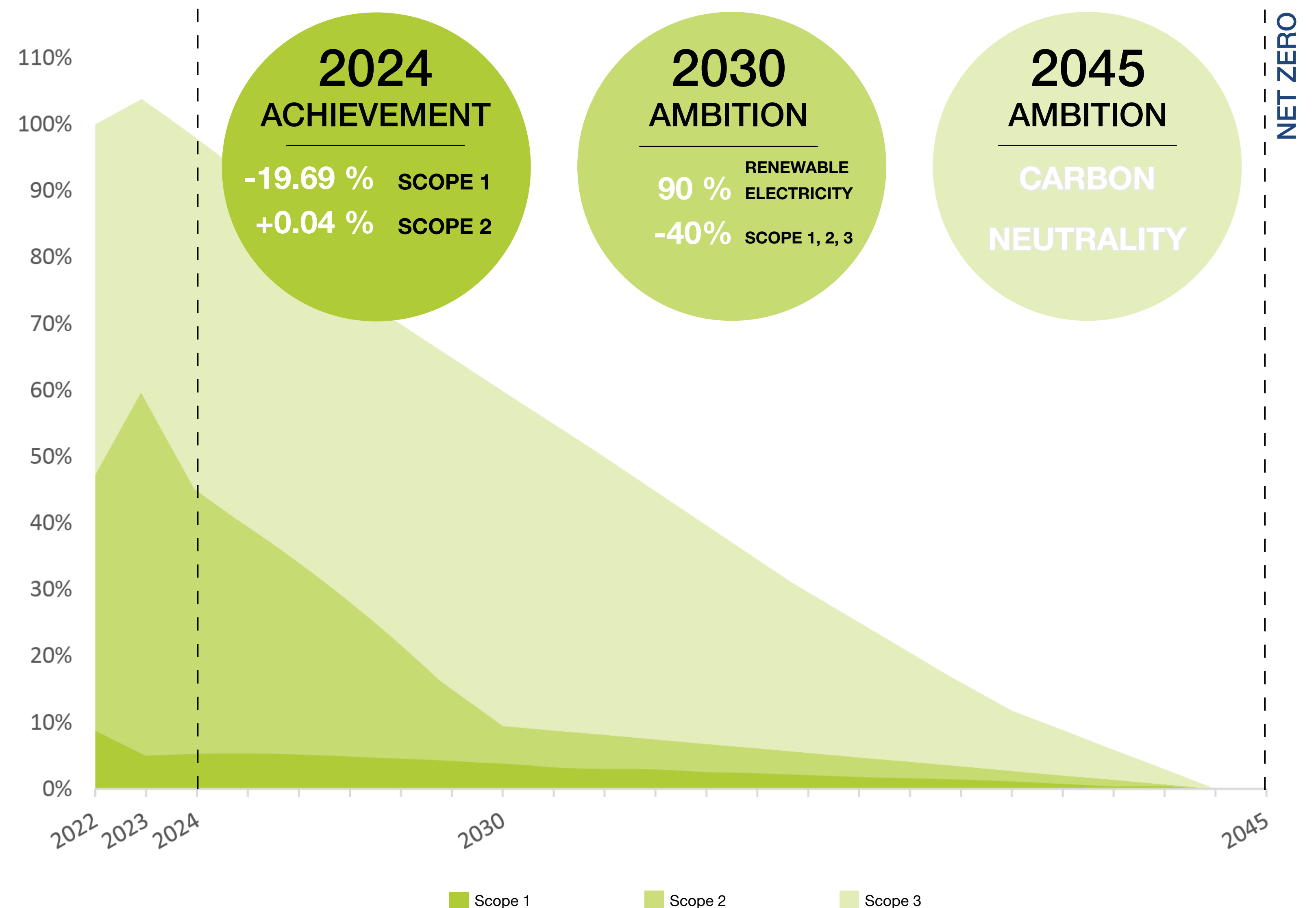
### Optimising energy consumption for sustainable manufacturing

Based on our Scope 1 and Scope 2 GHG emissions calculations, we have identified that optimised energy consumption—particularly electricity usage at our manufacturing sites—is a key factor in sustainable manufacturing. With this insight, we prioritise efforts to generate and source renewable energy, which not only helps us reduce emissions but also lowers our reliance on fossil-based energy, thereby strengthening resilience across our operations.

### Driving the adoption of renewable energy across our sites

We effectively incorporate renewable energy into our operations, making significant strides in decarbonisation. We evaluate on-site power generation possibilities, define substitution strategies to reduce fossil fuel intake, and analyse financial feasibility.

## Our carbon reduction journey





We facilitate our factories in adopting different renewable electricity options to enhance their sustainable practices. On-site generation allows us to directly install and operate renewable production facilities, while on-site Power Purchase Agreements (PPAs) let us partner with energy operators to manage these installations for us and our tenants. For factories where on-site solutions are not feasible, off-site PPAs allow us to purchase green energy produced at external facilities. Additionally, green tariffs enable us to subscribe to renewable electricity without being tied to a specific location. Lastly, purchasing Renewable Energy Certificates (RECs) is a viable decarbonisation option when other methods are not possible.

#### **Changing our fleet to emission-free**

Transitioning our fleet to emission-free vehicles will propel KOSTAL towards its goal of carbon neutrality. Our objective is to ensure that all newly acquired company vehicles are emission-free by 2030.

#### **Partnering with our suppliers for GHG reduction**

In 2025, we will move forward with understanding our supply chain impacts, and supporting and encouraging existing and new supplier partners to take huge leaps on their sustainability journey with calculating our Scope 3 emissions, evaluating our target suppliers via EcoVadis IQ, and integrating sustainability into our procurement process.

We deliver supplier dialogues and actively share our ESG targets and ambitions with our key suppliers to ensure that they are reporting KOSTAL specific GHG emission and ESG performance and to engage our target suppliers in using green electricity for products they deliver for KOSTAL.

Read about supply chain sustainability on [page 32](#).

**“Scope 3 greenhouse gas emissions represent a significant portion of a company’s total footprint. Addressing emission hotspots and working collaboratively across the entire supply chain—from procurement to product end-of-life—is crucial for driving meaningful decarbonisation.”**



*Daniela Veronezi,  
Supply Chain Sustainability Specialist, KOSTAL Group*



## Decarbonisation performance achievements in 2024

■ 11% reduction in GHG emission intensity (Scope 1 and 2) compared to 2022, which supports our ambition of carbon neutrality by 2045. The annual reduction plan for 2024 was 2%.

■ 41.8% renewable electricity share, supporting our ambition to reach 90% renewable electricity by 2030.

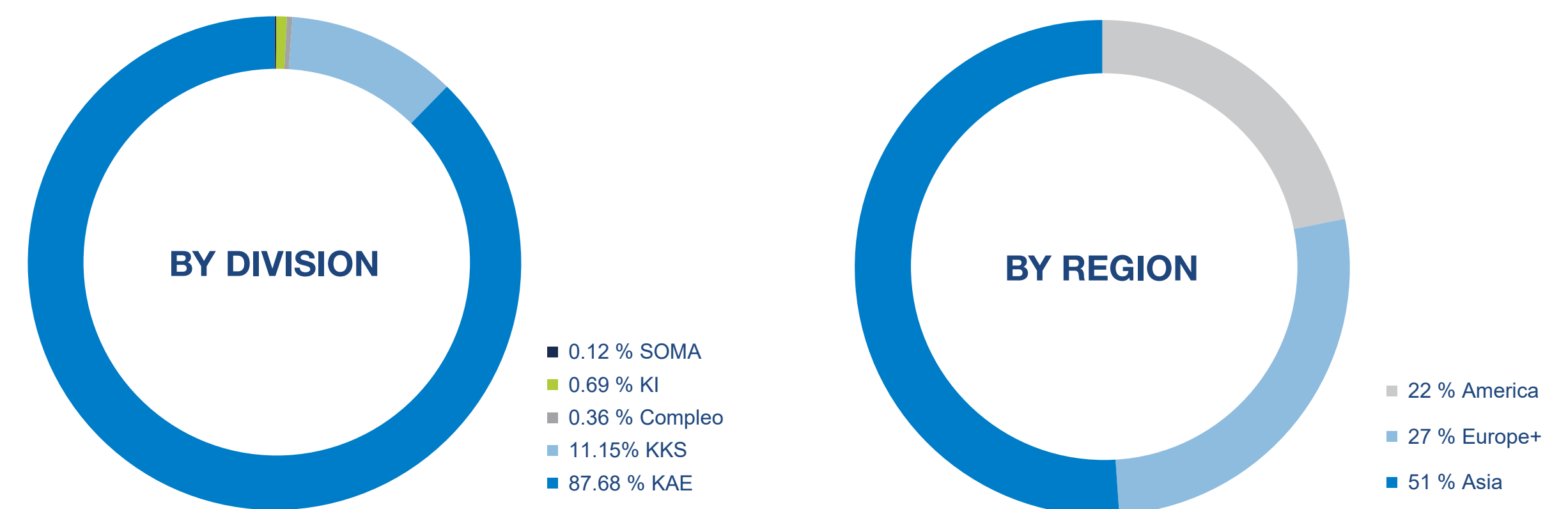
■ Investigating opportunities for renewable electricity sourcing within the geographic market boundaries where our sites are operating. While we have made significant strides, the urgency of the climate crisis compels us to move faster. In 2024, the goal is to continue the progress in reducing our carbon emissions.

In 2024, an external provider conducted the calculations of our Scope 3 emission using secondary data on emission factors for various material groups, resulting in an estimate that offers valuable insight into our indirect environmental and social impacts. This analysis helped us identify key materials and suppliers, develop a detailed roadmap for emissions reductions, and improve data accuracy.

We started the process to set and submit our corporate science-based net-zero targets for validation through the independent **Science Based Targets Initiative (SBTi)**, aligning our corporate emissions reduction targets with the goal of the Paris Agreement to limit global warming rise to 1.5°C above pre-industrial levels. By submitting this commitment letter, we pledge to submit our net-zero targets to the SBTi for validation within 24 months.

While we have made significant strides, the urgency of the climate crisis pushes us to accelerate our efforts. In 2025, the goal is to continue the progress in reducing our carbon emissions, also focusing on customers' specific needs.

### TOTAL SCOPE 1 AND 2 EMISSIONS 2024





## Our views on carbon offsetting

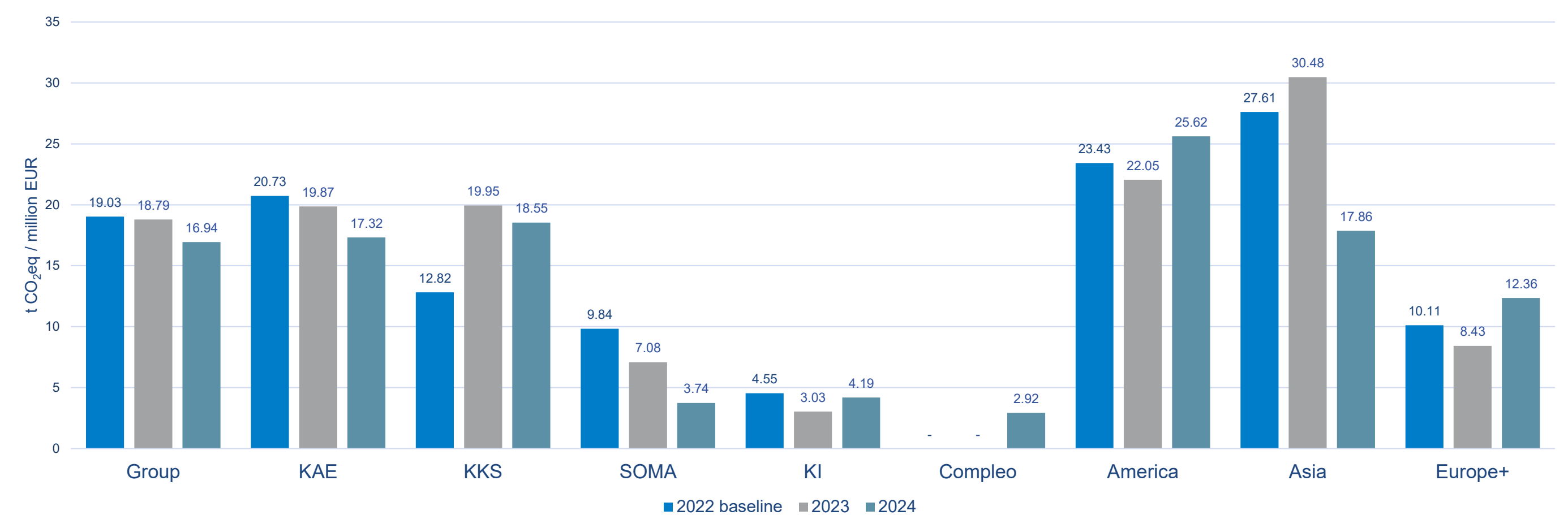
Carbon offsets, which offer companies the means to counterbalance their own carbon emissions by supporting projects that reduce or prevent emissions elsewhere, are experiencing rapid advancements in both technology and regulation. Several companies have already been actively using carbon offsetting to achieve their carbon emission reduction targets.

Our climate strategy prioritises the reduction of emissions in line with the SBTi requirements, while we consider carbon offsetting as a measure of last resort in our journey towards climate neutrality.

Initially, we prioritise enhancing the efficiency of our processes and technologies to reduce energy consumption. Subsequently, we strive to meet our energy requirements through renewable sources.

## CARBON INTENSITY BY DIVISION AND REGION

[t CO<sub>2</sub>eq/million EUR]





# Reforeesting Lüdenscheid - a step towards decarbonisation



*Reforeesting Lüdenscheid initiative*

Reforeesting Lüdenscheid represents a significant step toward decarbonisation, reinforcing the critical role of forests in carbon absorption and biodiversity preservation.

To support reforestation efforts, KOSTAL partnered with the non-profit foundation PLANT-MY-TREE to restore forested areas in Lüdenscheid, Germany. With an ambitious target of planting 400,000 new trees in 2024, PLANT-MY-TREE is dedicating a significant portion of these efforts to the Lüdenscheid region.

KOSTAL contributed directly to this initiative by planting 250 new oak and spruce trees on cleared slopes. The KOSTAL team, working alongside forestry professionals, achieved a planting rate of 15 trees per hour. This project not only supports carbon uptake but also improves soil stability and enhances local biodiversity.

Reforestation initiatives like these strengthen KOSTAL's commitment to reducing its environmental footprint and contribute to climate change mitigation through tree planting initiatives.



FROM **AMBITION**  
TO **ACTION**



# Resource efficiency

The expanding global population places an increasing demand on the planet's natural resources at an unsustainable pace, leading to resource scarcities, climate change, and environmental degradation. Achieving a balance between resource use and economic growth is a key challenge for business, politics, and society. Therefore, resource efficiency is a cornerstone of our Sustainability Strategy.

We promote resource efficiency throughout the entire value chain of our operation. Resource efficiency for us, means using the limited resources of our nature in a responsible manner while minimising our impact on the environment. Using the resources wisely will enable us to create more value with less input.

At KOSTAL Group, we have implemented a strategy to achieve resource-efficient production processes across all our manufacturing locations, focusing on energy efficiency, water reduction, and material optimisation in both our operations and supply chain as part of our broader sustainability and operational efficiency efforts.

KOSTAL Group expects financial benefits from resource efficiency improvements, impacting performance in both the short and mid-term. In the short term, optimising energy, water, and material use will reduce costs, stabilise expenses, and improve cash flow. In the mid-term, continued efficiencies will drive savings, enhance profitability, and boost competitiveness by meeting customer sustainability demands. These efforts may also open opportunities for green financing, further strengthening KOSTAL's financial position and growth.





# Enhancing resource efficiency across KOSTAL sites

At KOSTAL, optimising energy usage and minimising resource waste are key pillars of our Sustainability Strategy. Several of our sites have implemented innovative projects in 2024 to improve resource efficiency and reduce environmental impact.

At KOSTAL Brazil, the Air Leak Hunting project was introduced to detect and repair compressed air leaks within factory facilities. Compressed air is a vital but often overlooked energy source, and undetected leaks can lead to significant inefficiencies. By proactively identifying and maintaining leak points, the site has optimised energy consumption and minimised waste.

Meanwhile, at our site in Hagen, the team has taken a major step toward sustainability by producing its own nitrogen using green electricity from on-site photovoltaic (PV) systems. This shift has completely eliminated the need for liquid nitrogen transport, reducing associated CO<sub>2</sub> emissions.

As part of broader renovation efforts, energy-efficient air compressors were installed, replacing outdated systems, and their waste heat is now repurposed to heat the building—further reducing reliance on heating oil and lowering CO<sub>2</sub> emissions.

In 2024, KOSTAL Mexico implemented a highly effective practice in sprue utilisation and material reprocessing, driving significant progress in sustainability across all our sites in the country. This robust infrastructure was designed to enhance resource efficiency and environmental performance by reducing raw material consumption and significantly lowering land-fill waste. By the end of 2024, the facility processed six tons of material every month.

These initiatives not only drive operational cost savings but also align with KOSTAL's long-term resource efficiency goals.



FROM AMBITION  
TO ACTION



# Energy consumption

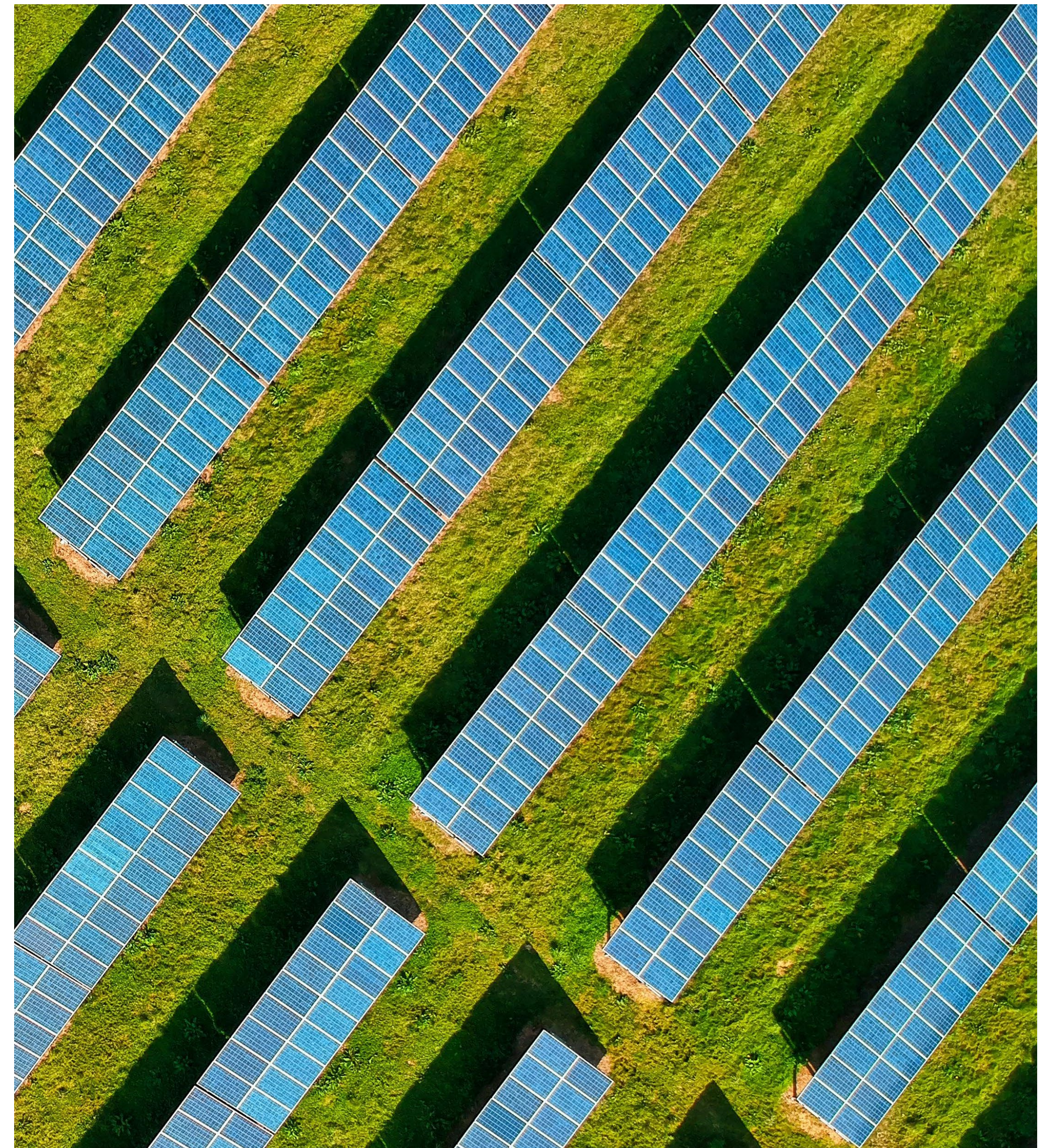
As we strive for carbon neutrality, we acknowledge the environmental impact of our operations, particularly the greenhouse gas emissions generated by the energy required to run our facilities.

Although our business operations are not necessarily energy intensive, we understand the role we play in utilising finite resources, which are essential to our operations and recognise our responsibility of limiting the environmental impact of our activities.

Energy consumption refers to the total amount of energy used across our operations, including electricity, heat, and fuel, to power our production processes, facilities, and other business activities. We actively monitor and manage our energy usage to optimise efficiency and reduce our environmental impact.

To reduce our impact on climate change, we focus on optimising the energy use of our operational activities, which will improve our energy efficiency and may result in savings in overall energy costs. While we focus our operation efforts, we continue to see growth in production volumes.

To improve energy efficiency throughout the organisation, we set interim goals to reduce energy consumption. Our objective is to decrease the amount of energy used relative to our revenue by 25% by 2030. To achieve this ambitious target, we need to improve in reducing our energy intensity by 3% year on year by 2030.





## What we do to reduce our energy consumption

### Setting energy consumption targets

Developed interim energy consumption reduction targets aiming to reduce our energy intensity. Our objective is to decrease the amount of energy used relative to our revenue by 25% by 2030. To achieve this ambitious target, we need to improve in reducing our energy intensity by 3% year on year by 2030.

### System efficiency enhancement, requirements

Enhancing system efficiency by identifying and implementing opportunities to reduce energy consumption. For example investing in advanced manufacturing technologies and energy-efficient machinery. To accelerate the reduction of energy consumption, we are identifying and implementing energy efficiency requirements and performance criteria for production technology or machinery and buildings.

### Energy monitoring and automation

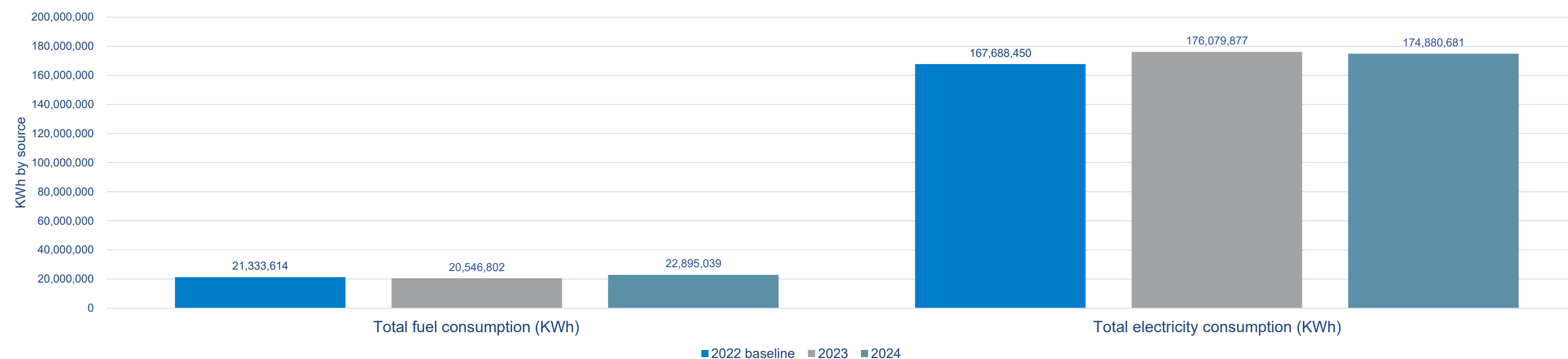
Implementing energy consumption monitoring and building automation systems at our manufacturing sites.

### Energy efficiency knowledge sharing

Benefiting from synergies by sharing and implementing energy efficiency best business practices within the organisation. The global Energy Community was founded in 2024 led by the facility sustainability responsible of KOSTAL Automobil Elektrik (KAE) and the sustainability representative of our Chinese sites. The aim of the community is to share knowledge and collaborate on energy reduction projects.



## TOTAL ENERGY CONSUMPTION BY SOURCE [KWh]



# 3.35%

energy intensity reduction in 2024 compared to baseline



## Energy efficiency achievements in 2024

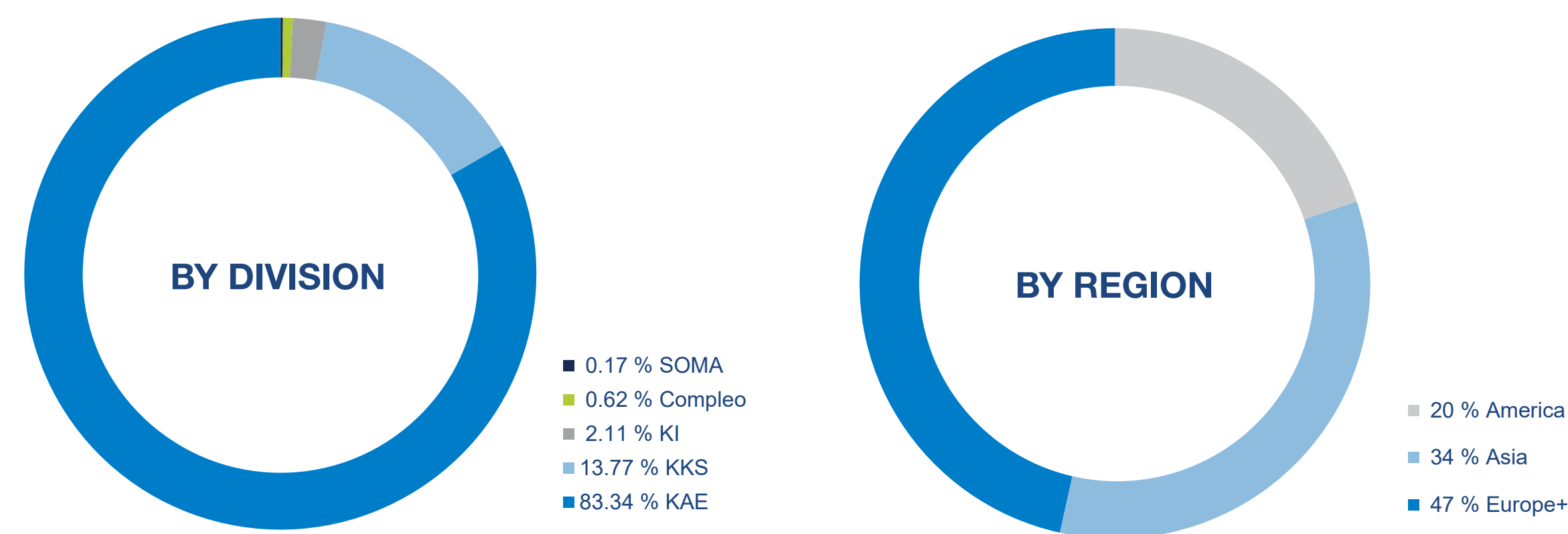
- By leveraging standardised sustainability metrics through Enablon software, we ensure a streamlined reporting and data collection process, allowing us to stay aligned with our goals, effectively measure energy efficiency, and monitor progress regularly.
- In 2024, we reduced our energy intensity by 3.35%, lowering it to 58.7 MWh/million EUR revenue from 60.74 MWh/million EUR in 2022.
- By mobilising our operational energy management and reduction strategy, various energy reduction projects have been implemented globally.

To ensure that we take a systematic approach to energy management, all global KOSTAL manufacturing locations should establish facility-specific energy management programmes and metrics. A supporting tool, Econ Solutions, is available for all sites to monitor real-time energy consumption of utilities allowing operations to identify possible energy-saving activities with qualitative data.

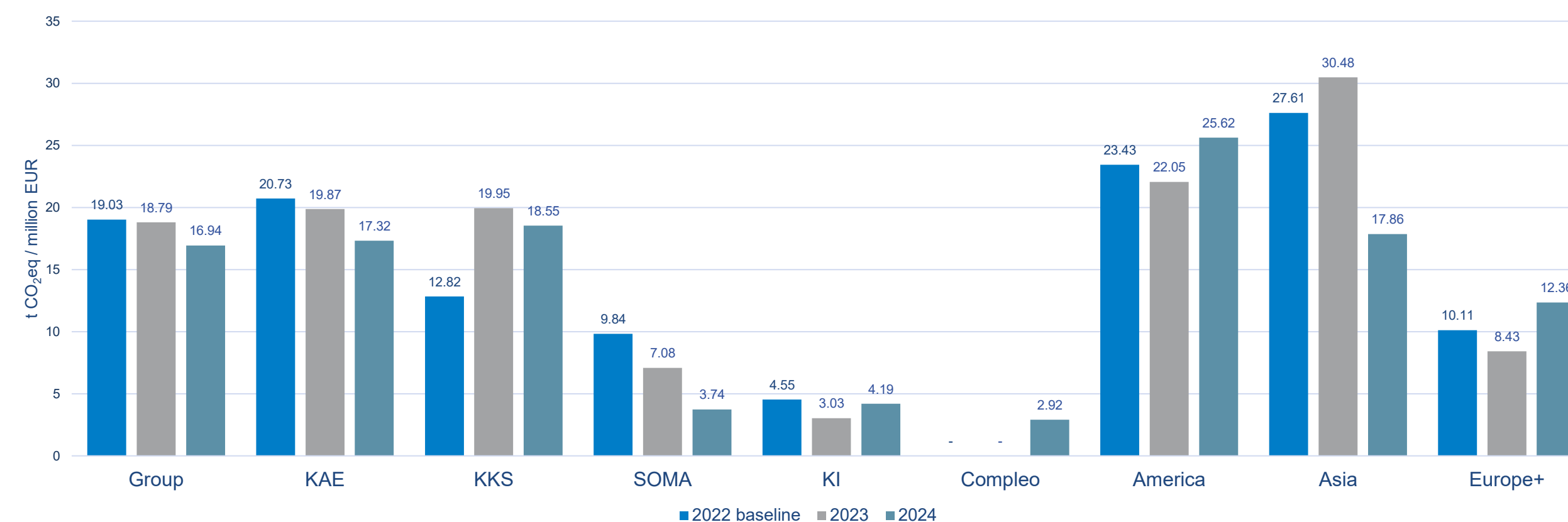




## TOTAL ENERGY CONSUMPTION 2024



## ENERGY INTENSITY BY DIVISION AND REGION [MWh/million EUR]



“In manufacturing, energy consumption intersects efficiency and environmental responsibility—a challenge turned opportunity. KOSTAL China integrates PPA contracts, IREC certifications, solar PV systems, and EMS platforms to advance sustainable energy practices, supporting the Group’s goals while driving measurable environmental progress.”



Guo Ruisi,  
Operational Excellence Team, KOSTAL China



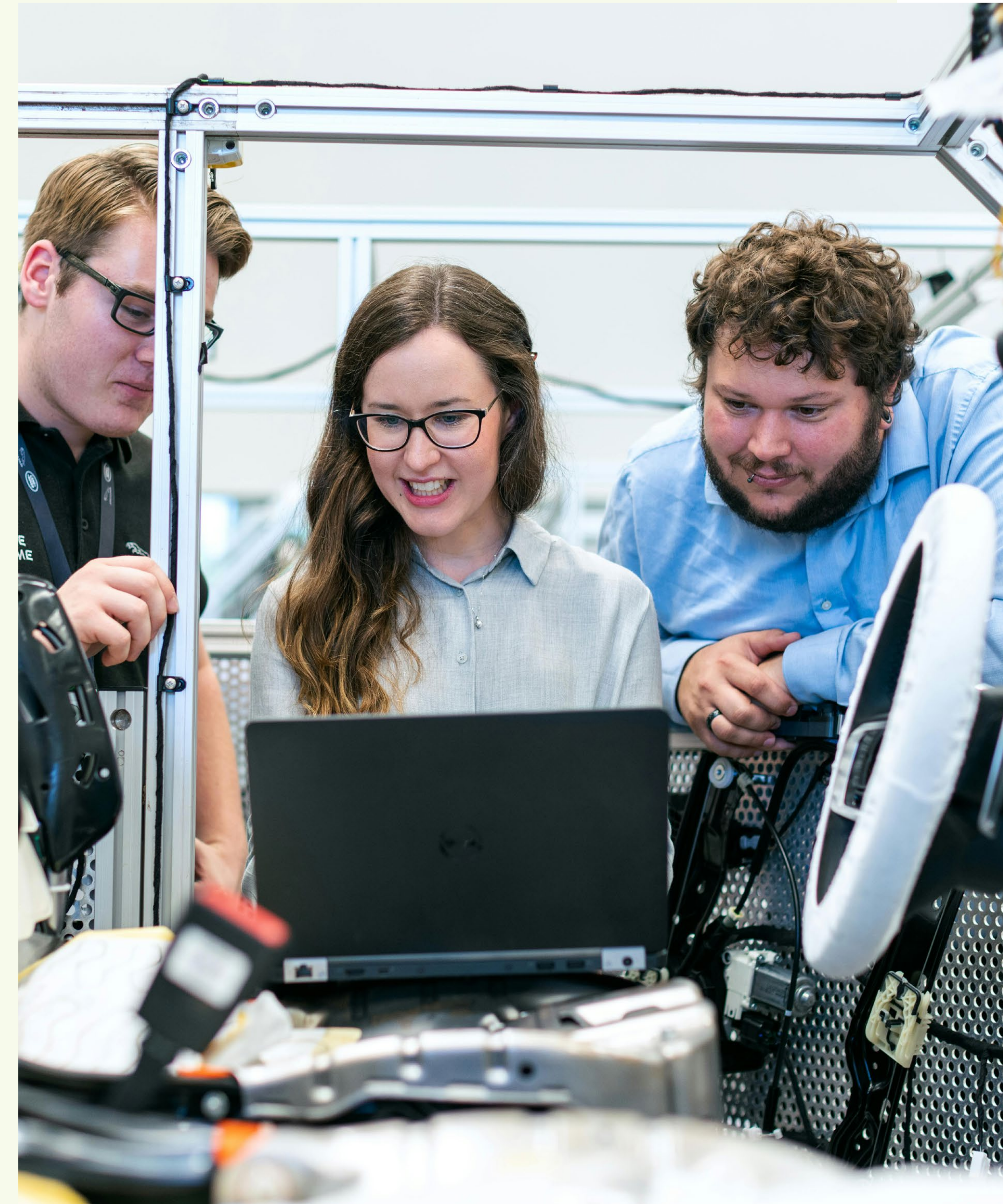
# Powering progress: Energy projects and the creation of the Energy Community

In 2024, the Energy Community was formed, where global teams collaborate to enhance energy efficiency, reduce costs, and drive sustainability across all sites. By sharing best practices and implementing innovative solutions, the Energy Community continuously works toward optimising energy consumption.

At KOSTAL China, an advanced energy management system and intelligent energy platform was introduced to optimise the operation of HVAC (heating, ventilation, and air conditioning) systems. By integrating smart control devices and connecting them to a PLC interface, the site achieved real-time monitoring and control of air condition, heating and ventilation system. This system has not only generated significant energy savings but also reduced manual efforts through automation and is expected to qualify for a government subsidy in 2025.

In Bulgaria, the site implemented a Power Monitoring System, enabling real-time data collection on energy consumption, detecting compressed air leaks, and improving overall plant efficiency. The initiative has enhanced energy efficiency compliance and reduced compressed air consumption through immediate leak detection. Additionally, automated alerts for abnormal flow and power usage now ensure proactive energy management.

At KOSTAL Morocco, a strategic reduction in subscribed electrical capacity significantly lowered environmental impact and operational costs. This initiative reduced annual energy fees substantially, contributing to long-term financial savings and sustainability goals.



FROM AMBITION  
TO ACTION



# Waste

Proper waste management measures not only create value by providing new materials for production through reusing or recycling, but reduces carbon emissions and toxic pollutants, contributing to cleaner air and groundwater.

We define waste as materials and by-products, including packaging generated our upstream activities that are not intended for further use. At KOSTAL, waste is measured by total generated waste and waste intensity, reflecting the amount of waste produced per unit of revenue.

When it comes to waste management, the goal of KOSTAL is to apply the concept of circularity. We primarily focus on eliminating the generation of waste from our operations as much as possible. While we acknowledge that it is impossible to entirely avoid the production of waste, we are working on closing the loop.

This approach requires careful planning in production, starting from the product design phase. We are actively seeking materials that can be reused or efficiently recycled and utilising manufacturing processes which limits the amount of waste generated.





## What we do to improve our waste management practices

Critical to achieving our waste generation-related goals is minimising the amount of waste generated throughout our operations and continuing responsible practices that increase our waste diversion rate.

### Our waste reduction strategy

- Developing products while keeping sustainability in mind.
- Reviewing processes resulting in the highest waste generation at our manufacturing sites to identify opportunities for reduction.
- Continuously seeking to implement new and efficient solutions to recapture and repurpose waste from our operations.
- Reviewing our packaging requirements for incoming materials, focusing on the sustainability aspect of packaging materials, and following the hierarchy: eliminate, reuse, and recycle.



# 86%

waste diversion rate in manufacturing in 2024  
compared to baseline



### Waste reduction and diversion targets

Our target is to reduce waste intensity by 3.5% annually and achieve a 90% waste diversion rate across all manufacturing sites globally by 2030.

### Waste-related performance indicators and review

We defined waste-related performance indicators to understand our progress in minimising waste and regularly review the amount of generated waste, as well as the amount diverted from landfills for reuse and recycling.

### Dealing with hazardous substances

The use of hazardous materials in production and operations is subject to strict legal and industry regulations. Under the umbrella of our ISO 14001 Environmental Management System, we perform regular audits of our chemical management processes to verify our compliance with the external and internal requirements.

### Commitment to circularity

We are committed to circularity and strive to integrate this mindset into all of our production processes, ensuring that resources are continuously reused, recycled, and repurposed throughout our operations.

Wherever feasible, we prioritise the use of recycled materials in production. Additionally, we design products with a focus on waste reduction and continuously optimise manufacturing processes to minimise waste generation.

Most importantly, we focus on preventing waste generation by actively practising waste diversion. We are dedicated to diverting waste from landfills to reduce atmospheric and groundwater pollution, while also minimising emissions associated with waste transportation. While total waste elimination is not always feasible, we ensure compliance with all relevant local and global regulations and industry best practices.

### Waste mitigation across the value chain

Recognising that our impact extends beyond our operations, we implement waste mitigation efforts throughout the entire value chain, including raw material management. Waste-related requirements are outlined for our suppliers in the [Supply Chain Code of Conduct \(SCoC\)](#). Read more on this topic on [page 32](#).



**“Avoiding waste, conserving resources: efficiency is our priority. Sustainable cycles are the key to future-proof production.”**

*Martin Brinkmeyer,  
Director Global Quality Methods and System,  
Member of the KAE Sustainability Board*



## Waste-related achievements 2024

- We regularly monitor our main waste-related performance indicators to understand our progress in minimising waste.
- As a result of our global waste reduction efforts, our waste intensity has been reduced by 5.28%.
- By focusing on circular economy practices our waste diversion rate was 86%.

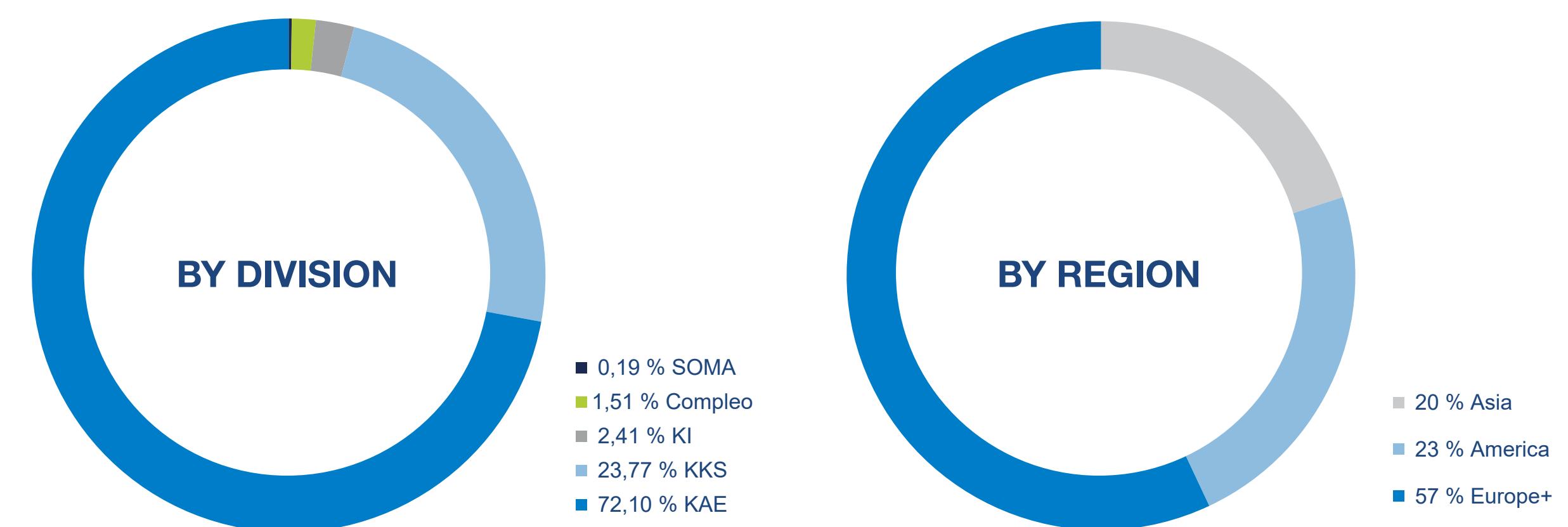
As we advance, we are adopting a comprehensive approach to reducing waste globally, focusing on international collaboration, sharing best practices, education, improved resource management, and developing more sustainable disposal methods.



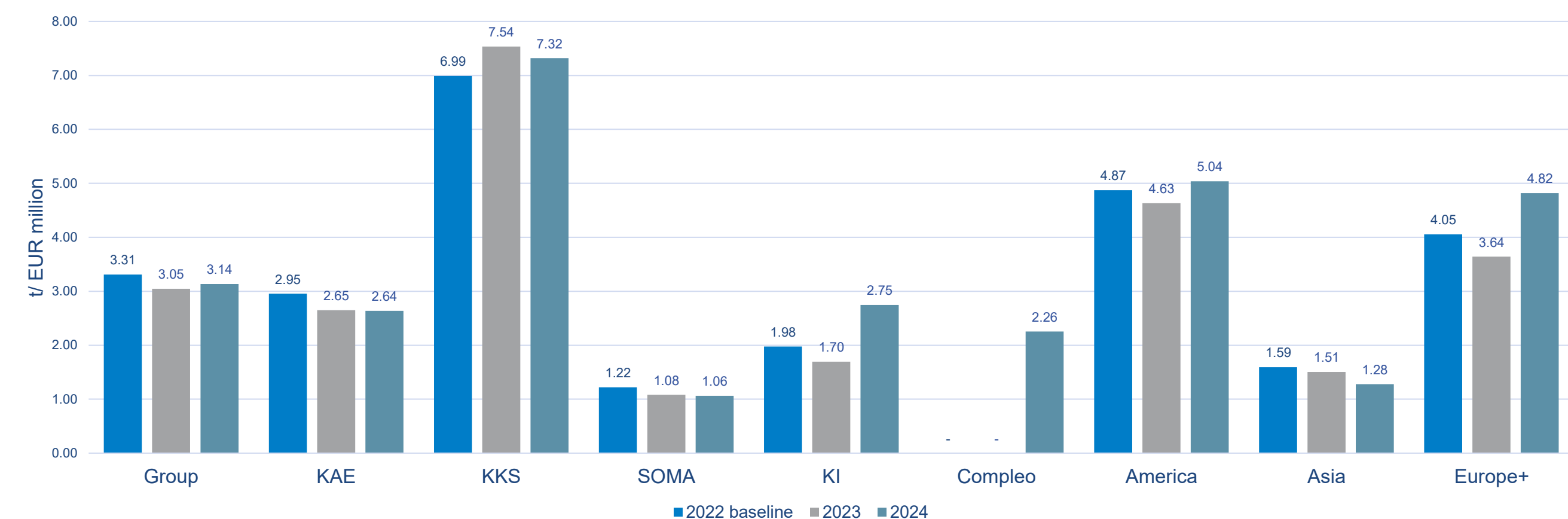
# 5.28%

reduction in waste intensity in 2024 compared to baseline

## TOTAL WASTE GENERATED 2024



## WASTE INTENSITY BY DIVISION AND REGION [t/EUR million]





# Continued tradition: The E-Waste Weeks global initiative

KOSTAL's commitment to responsible waste management is evident through a series of impactful e-waste collection initiatives across its global sites. These efforts prevent electronic waste from ending up in landfills and promote a circular economy through community engagement and responsible recycling.

In Brazil, the Ecopoint Project, launched in partnership with the Municipal Government of Cravinhos, provider of a city-wide solution for e-waste disposal. The initiative offers a free collection of various electronic items, including computers, televisions, mobile phones, and remote controls. Twelve ecological collectors, made entirely from recycled materials, have been placed in high-traffic areas to ensure accessibility. Partnering with a specialised recycling company, KOSTAL Brazil ensures the safe and environmentally friendly disposal of collected e-waste, reinforcing ESG commitments while fostering environmental stewardship at a local level.

At KOSTAL Hungary, the E-Waste Weeks campaign continued to be a successful initiative where employees take action to increase recycling of valuable electronic waste. Collection points were set up across the site, making responsible e-waste disposal easy and accessible. The campaign led to the collecting of 230 kg of e-waste, with top contributors receiving an E-Waste Saver Award. A workshop on vintage electronics further engaged employees, raising awareness about the importance of proper e-waste management.

Germany's E-Waste Action 2024 engaged 224 employees, collecting 531 kg of e-waste and filling seven large containers. Strategic placement of collection boxes, creative marketing efforts such as flyers, stickers, and pop-up messages, and an incentive-based reward maximised participation. Following this success, financial proceeds from recycling will be allocated to a local sustainability project to ensure a lasting impact.

In Morocco, one of our sites celebrated Environmental Day with a creative initiative building an international map using recycled electronic boards and cardboard. This artistic project raised awareness about the importance of e-waste recycling while symbolising a shared global responsibility toward sustainability. Through local city projects, employee-driven campaigns, and creative awareness efforts, KOSTAL's commitment to waste reduction and responsible recycling continues to grow, reinforcing the company's broader ESG goals and fostering a strong culture of sustainability across its global sites.



*Environmental Day at KOSTAL Morocco*



FROM AMBITION  
TO ACTION



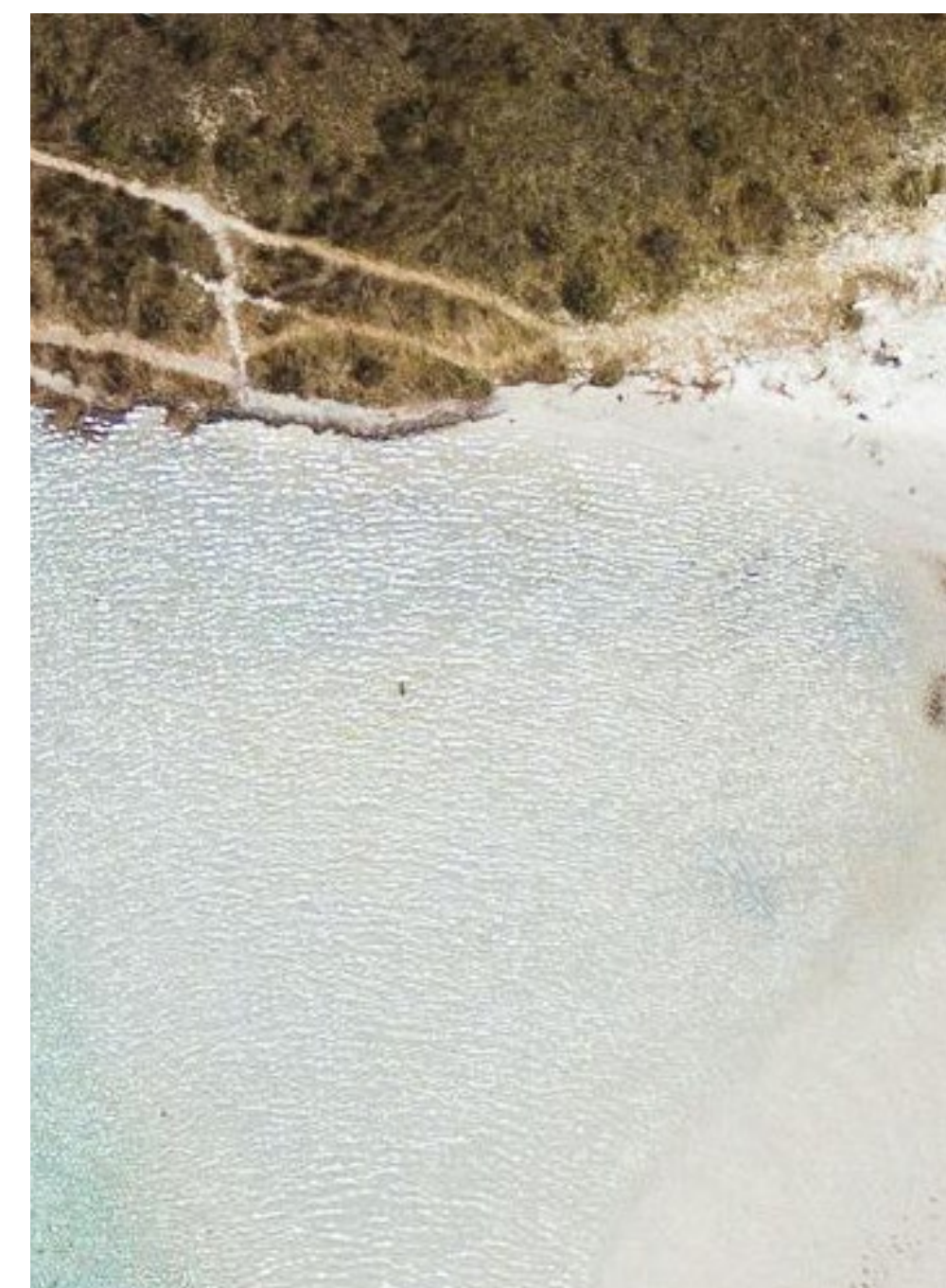
# Water

Fresh water is a finite and vulnerable resource that sustains life. Its delicate balance requires careful stewardship, strategic, effective management, and joint efforts by all global stakeholders.

Although access to water has been recognised by the United Nations as a human right, water scarcity is an increasing problem on every continent, with poorer communities being the most severely affected. The global consequences of changing climate and growing population are making water scarcity worse and are making water more unpredictable.

At KOSTAL, we define water withdrawal as the total volume of water extracted from natural sources, mostly municipal supply, for use in our operations. Water discharge, on the other hand, refers to the total volume of water released or returned to the environment after being used in our operations to public treatment systems.

The manufacturing operations of KOSTAL do not require a significant amount of water input as our primary water usage is mainly related to domestic purposes in our buildings. Given the negligible amount of water consumption in our production processes, we adopt a water management approach where consumption is estimated at 3% of total water withdrawal, with the remaining 97% considered as water discharge.



As an important element of our environmental Sustainability Strategy, we are committed to using water responsibly. To achieve our ambitions, we review the water scarcity at each of our facilities, regularly assess the water consumption of our locations, and implement water reduction activities, especially in facilities located in high-risk areas. According to WRI Aqueduct analysis, we have identified that our facilities in Mexico, Morocco, China and in India are located in regions experiencing water stress.





## What we do to reduce our water withdrawal

### Focusing on water scarcity

Analyse issues of water scarcity and risks at each of our facilities, focusing on our sites located in water-scarce areas.

In Mexico, Morocco, China, and India, we further explore approaches to improve current water performance.

### Monitoring and improving water efficiency

Analyse water withdrawal, and water intensity results and benchmark these within KOSTAL facilities and with industry benchmarks to identify opportunities for improvement.

To advance our water conservation efforts, we are committed to reducing water intensity annually, investing in water-saving technologies.

### Managing water risks in the supply chain

Water risks may exist in our value chain, particularly in raw material extraction and production processes. KOSTAL Group actively collaborates with suppliers to monitor and address these risks.

## Water-related achievements in 2024

- Improved water intensity by 2.15% through ongoing efforts to reduce water withdrawal.
- Submitted the water security questionnaire to CDP in 2024, demonstrating our proactive approach to water management and transparency.
- Began analysing our upstream value chain to identify water-related risks and opportunities.
- Identified 102 suppliers facing significant water-related risks using our Sustainability Risk Intelligence (EcoVadis IQ) for Global Supply Chains software.

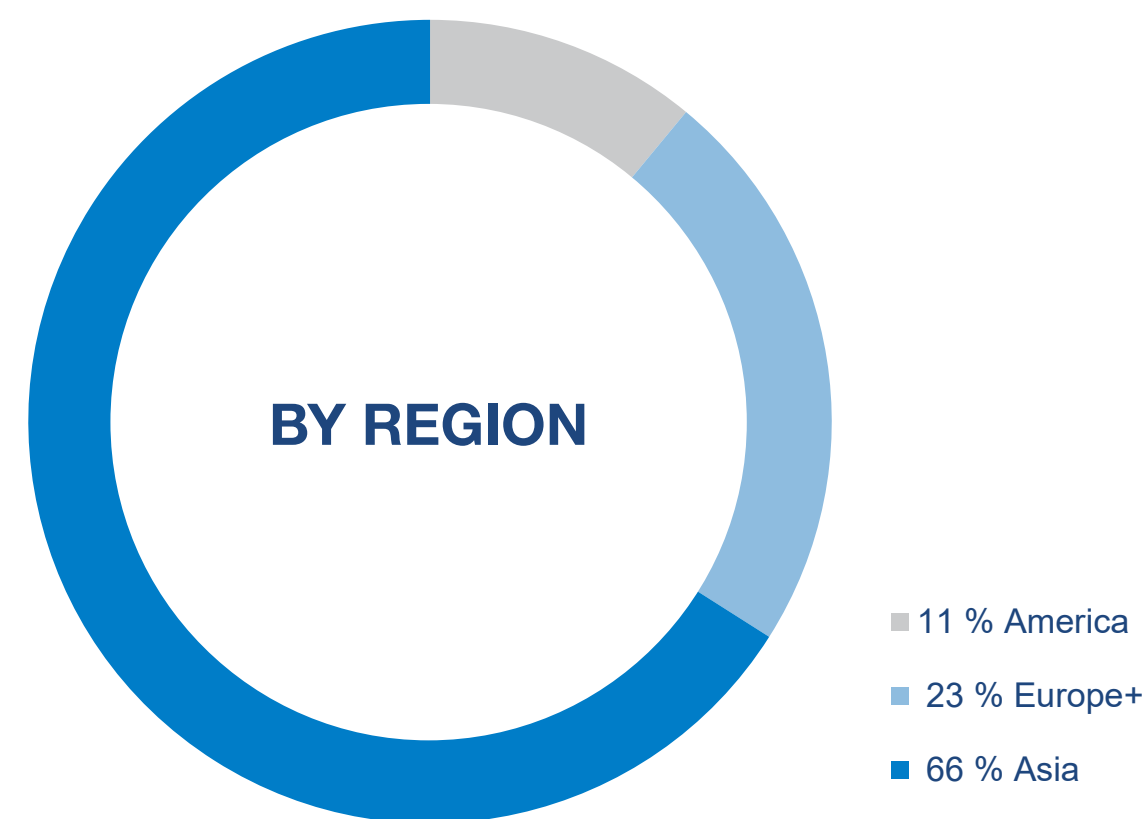
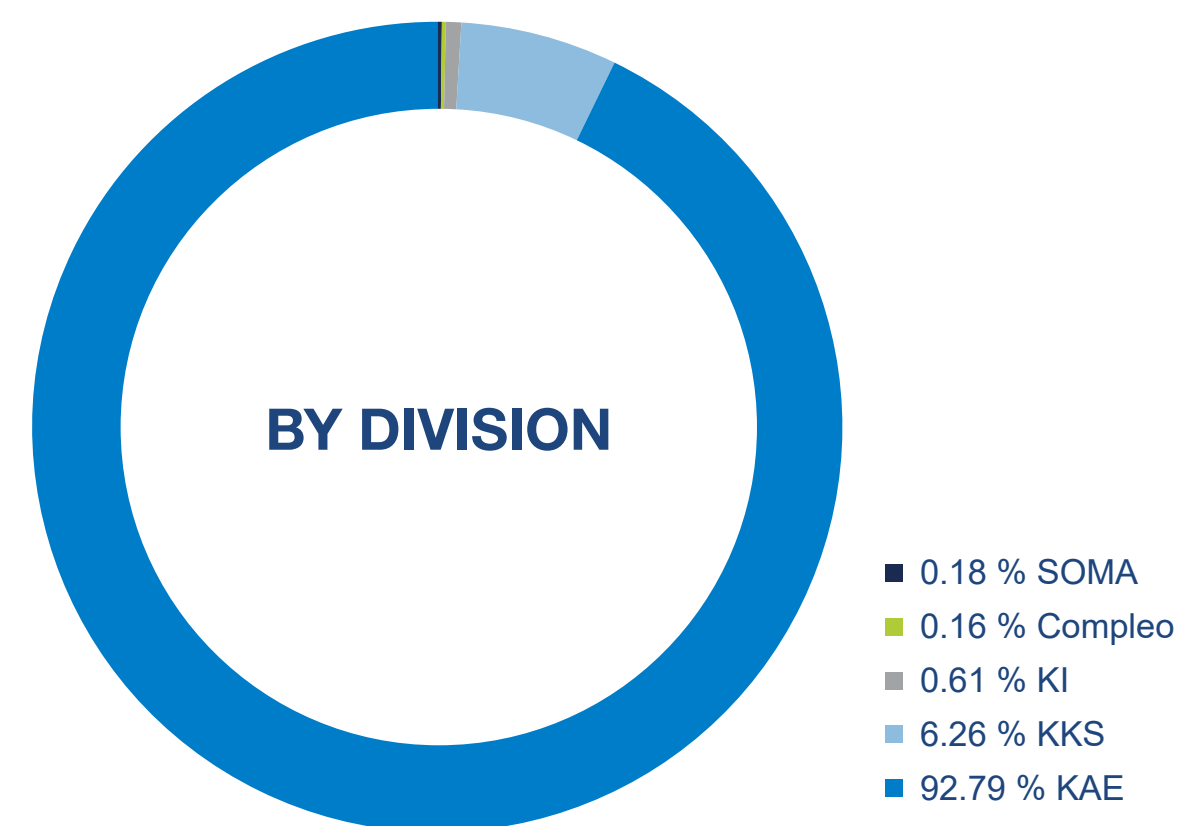


# 2.15%

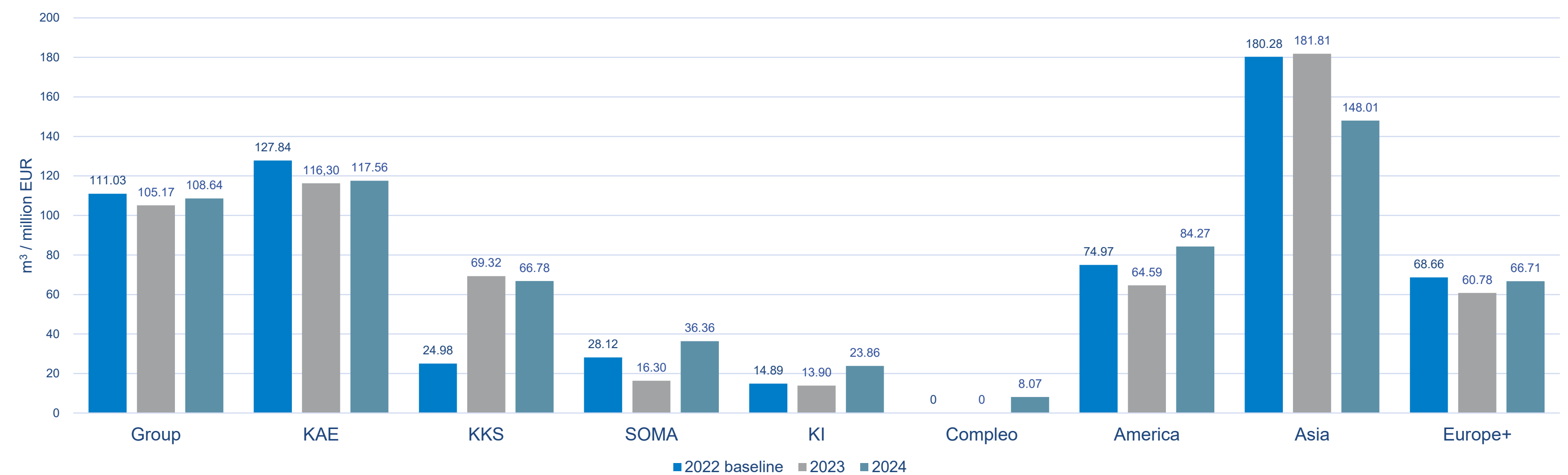
reduction in water intensity in 2024  
compared to baseline



## TOTAL WATER WITHDRAWAL 2024



## WATER INTENSITY BY DIVISION AND REGION [m³/million EUR]





# Water optimising projects at our factories

**In 2024, we implemented various water conservation and reuse initiatives across our global operations.**

In India, KOSTAL has introduced several water-saving measures, including a sewage treatment plant with a 60 Kiloliters per Day capacity that recycles water, reducing overall consumption. Additionally, rejection water from reverse osmosis and softener systems is repurposed for irrigation using a drip system, while 500 litres of air handling unit drain water are redirected daily for reuse.

In Mexico, KOSTAL operates a biological wastewater treatment plant that has been treating 10,000 m<sup>3</sup> of water annually since 2022. Nearly half of this treated water (49%) is reused in restrooms, significantly cutting freshwater consumption.

In Morocco, water consumption is closely monitored and integrated into annual targets for continuous improvement. A proactive maintenance strategy ensures that water leaks are quickly identified and fixed, as demonstrated by the prompt repair of a leak in the sprinkler system manhole, which helped reduce water loss.

These efforts highlight KOSTAL's commitment to sustainable water management and resource efficiency.



FROM **AMBITION**  
TO **ACTION**



# Sustainable product design

Our product range blends tradition and innovation, with environmental efficiency and reliability at its core. We recognise that the design and manufacturing processes, which define the entire product lifecycle, are central to our impact on climate change.

Climate change is one of the most pressing challenges of our time, with far-reaching consequences for the environment, society, and economy. Significant reductions in greenhouse gas emissions from transport and electricity generation are crucial to achieving the ambitious targets set by the Paris Agreement.

Our innovative products play a key role in mitigating the impacts of climate change. Through innovations in electric vehicle charging technology, solar inverters, and frequency converters, KOSTAL Group with its cutting-edge technologies is at the forefront of facilitating the global transition to decarbonized transportation, electricity generation, and enhanced energy efficiency in the global economy.

Our commitment to sustainability is ingrained in our research and development (R&D) activities, which provide a solid foundation for the sustainable growth of KOSTAL Group.

Our ambition is to design and manufacture sustainable products focusing on the following directions of development:

- sustainable materials,
- recycled content,
- reduced complexity,
- reparability, recyclability.





## What we do for sustainable products

### Sustainable design and materials

We are focusing on innovating and designing resource-efficient and low carbon-intensive products, which are also safe to use.

- High-level sustainability-related requirements are integrated into the Manual for Technology Development and Qualification. According to its guideline, we conduct detailed analyses of the sustainability impact for all new projects and programmes.
- We look for ways to use innovative materials, such as bio-based or recycled materials.
- We aim to reduce complexity, improve the reparability and recyclability of our products.
- We evaluate the sustainability impact across the entire product lifecycle.



### RACE Production System

The “RACE Production System” at KOSTAL serves as a fundamental pillar of operational excellence, playing a vital role in production, enhancing our value streams and plants worldwide. It outlines a clear development trajectory and provides specific tools to achieve these improvements both in the performance and maturity dimension. A critical focus is on eliminating waste in all areas. For this, the Environmental Management principle represents environmental sustainability in our production system, making it a crucial factor in the ongoing development of our facilities. An additional facet of our commitment to social sustainability is reflected in several key principles: the “Zero Accidents” principle, dedicated to ensuring the safety and protection of our employees; the “Empowered Teams” principle, focused on fostering the empowerment of our workforce; and the “Learning Organisation” principle, aimed at facilitating the continuous development and growth of our employees. Together, these complementing building blocks significantly contribute to KOSTAL’s overarching sustainability goals.

### Product safety and hazardous substances

- Our company is committed to ensure the safety and quality of all products we offer. We prioritise health and safety through stringent measures at every stage of the product lifecycle.
  - We have established a KPI for our manufacturing facilities to reduce chemical usage by 3% year over year. Reducing the use of chemical substances at our manufacturing sites not only mitigates the impact of these materials but also supports our goal of decreasing the generation of hazardous waste.
- KOSTAL is aware of the importance of the impending ban on PFAS-containing substances (Per- and polyfluoroalkyl substances) and is working intensively to monitor the current developments on the part of the legislator and to define appropriate measures to ensure the continued supply capability and quality of our products. This includes the ongoing search for and qualification of alternative, PFAS-free materials.



### Monitoring and continuous improvement

We continuously improve our products by considering stakeholder feedback, particularly when it comes to sustainability-related changes.

- We work closely with our customers to fully understand their sustainability needs, ensuring our products help them meet their carbon emission reduction targets.
- We actively monitor regional and global environmental legislation and regulations that could impact our products.
- We collaborate with our suppliers, prioritising those who report on their sustainability performance, have a lower sustainability risk and market sustainable products.



## Product sustainability achievements in 2024

### 6% R&D share for product sustainability

We invest 6% of annual revenue into product development, with 50% focused on electromobility, renewable energy, and electric vehicle charging.

### Product carbon footprint (PCF) calculation

PCF calculation enhances transparency and supports our customers in managing carbon emissions. KOSTAL is committed to adopting this practice, and in 2024, explored opportunities to acquire lifecycle analysis (LCA) software for calculating product carbon footprints.

We are in the process of establishing carbon footprint calculations for our main product groups across all business divisions. The most carbon-intensive component identified is the plastic raw materials used in our injection moulding processes. We have explored bio-based and recycled material alternatives available in the market, which have been tested in our processes, to offer customers a sustainable replacement for virgin plastic materials.

### Alternative Plastic Materials

In 2024, KOSTAL introduced a total of eight additional plastic materials that either contain a high recycled content or are produced using renewable raw materials. This brings the total number of alternative materials available to our product developers to over 150, all of which offer an improved environmental footprint.

The total amount of alternative plastic granulates purchased by KOSTAL in 2024 was 2,357 tonnes, which represents an approximate 30% increase compared to the previous year. As a result, more than 10% of the plastic granulate purchased by KOSTAL is now optimised to reduce its environmental impact.

**“It is fascinating to see how much influence you can have on the sustainability of a product during its development, because the choice of materials and technologies for a new product is key to how sustainable the product will be during its lifetime.”**

*Dr. Marcus Eickhoff, Head of Basic Technology and Analytics  
KOSTAL Automobil Elektrik*





## Electric vehicle on-board chargers

KOSTAL is a leading supplier of automotive battery chargers. KOSTAL chargers have been installed as standard in major vehicle platforms and are now in their fourth generation. The ability to charge an electric vehicle anywhere—using a socket, wall box, or charging station—is crucial to the success of electric mobility.

The onboard charger converts alternating current (AC) into the direct current (DC) required by the vehicle's battery. The flexible design takes into account the different grid connection conditions in relevant markets worldwide (for example, single or multi-phase grids). The development of efficient, dynamic converter algorithms and EMC-compatible design are core competencies of KOSTAL.



## Compleo innovation: High-power charger eTower 200

High power, greater flexibility. The eTower 200 sets new standards in high-power charger (HPC) technology thanks to its maximum efficiency, grid-friendliness, compactness, highest usability, and modular structure, delivering exceptional performance.

The eTower is equipped with numerous innovative features to make it compact, efficient and user friendly. The product was launched in 2023 and is developed and manufactured in Germany. Enabling ultra-fast charging (with a peak output of 200 kW and an efficiency of more than 96%) and intuitive operation, this technology is truly future-ready.

By the end of 2025, Compleo will have calculated the CO<sub>2</sub> footprint of its major products, DUO and eTower. This initiative shows Compleo's commitment to sustainability and its ongoing efforts to reduce environmental impact.





## The third generation: PLENTICORE G3

PLENTICORE is one of the leading products of KOSTAL Industrie Elektrik. Generating and storing solar energy independently of electricity suppliers and in an environmentally friendly way – this is how we respond to the requirements of our customers.

The new generation offers both innovation and proven performance with additional features.

- Versatility: can be used as a solar, hybrid, or battery inverter.
- Flexibility: offers the ability to upgrade performance and functions.
- Scalability: available in a broader range of power classes to suit various applications.
- Greater safety: manufactured in Germany with high safety and quality standards.
- Useful functions: includes DC surge protection and the KOSTAL BackUp Switch for back-up power operation. Furthermore, at-a-glance monitoring and intelligent shadow management to get the best possible solar yields.



## INVEOR frequency inverter: The building block for sustainability

For effective energy transition, it is imperative to prioritise renewable energy generation and the most efficient and cost-effective utilisation of energy. Our INVEOR frequency inverters serve as a fundamental building block in this process, ensuring that industrial electric drives are controlled more efficiently worldwide and consume less energy.

An uncontrolled motor always operates at 100% capacity, even when only 50% is needed. By using our INVEOR, this savings potential can be realised, significantly reducing energy consumption. The KOSTAL frequency inverters can control all drives with maximum efficiency, regardless of the manufacturer or motor technology.

Thanks to its universal adaptation concept, the INVEOR can be easily integrated into both new and existing systems, immediately contributing to noticeable energy savings.



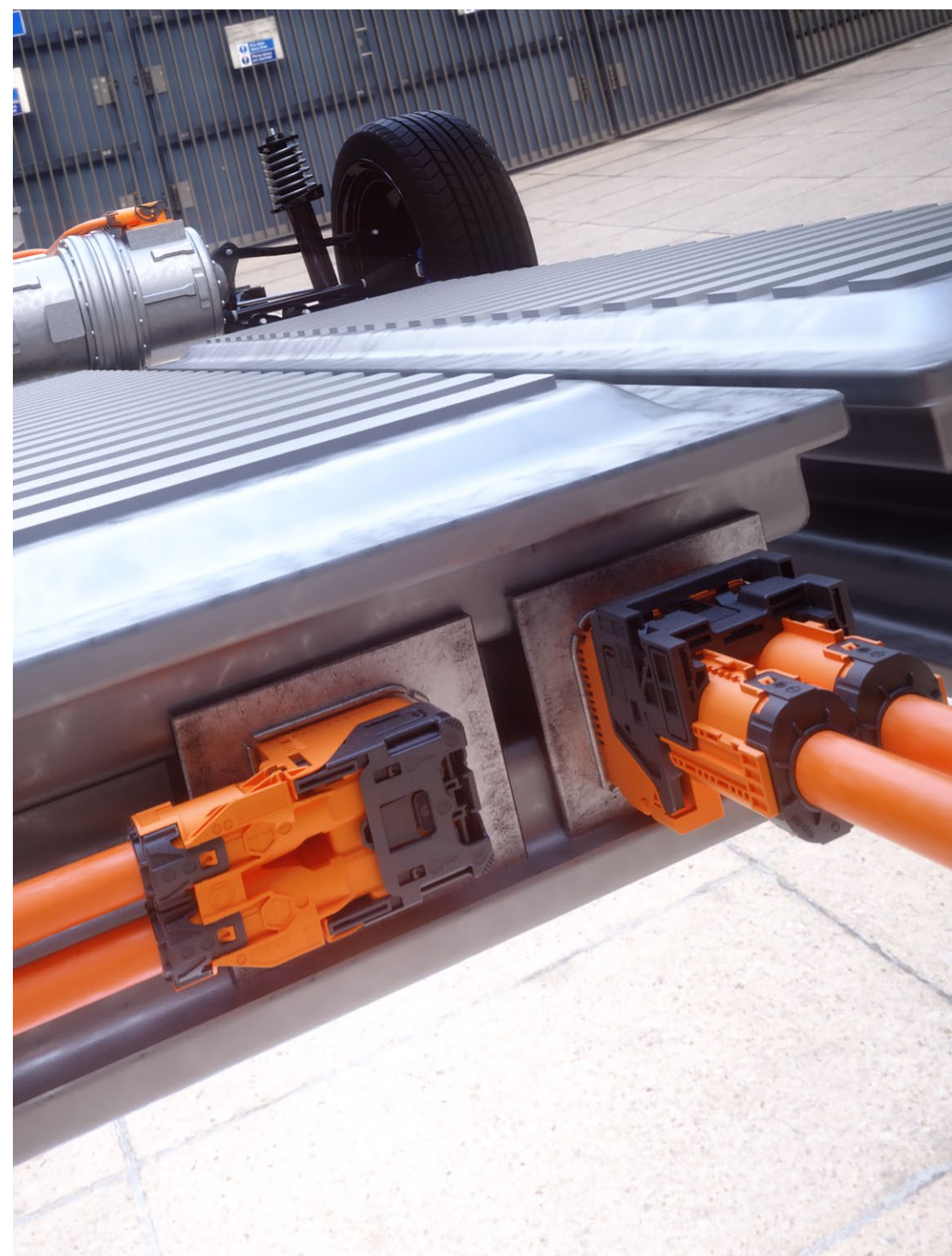


## High-voltage connector modules

KOSTAL provides safe, simple, and modular high-voltage (HV) connectors for electric vehicle batteries.

While safety requirements for HV applications are critical, flexibility in space utilisation and ease of installation when connecting storage modules have often been overlooked in the past. KOSTAL's HV battery module connectors address this gap.

For this product line, two connection versions have been developed to optimise space utilisation for electric vehicle battery modules. Additionally, the KOSTAL battery module connectors for HV applications are extremely easy to install without the need for assembly removal tools.



**“Continuous and sustainable improvement of our value streams and plants is a key objective that is anchored in our production system. The aspect of sustainability, integrated as a distinct element, occupies a central position.”**



*Maximilian Faoro,  
Senior Manager, Value Stream Excellence, KOSTAL Group*



# KOSTAL embraces the future of manufacturing with 3D printing

In 2024, KOSTAL has successfully leveraged the potential of 3D printing (additive manufacturing, AM) within a customer project, to advance its manufacturing capabilities.

As a generative manufacturing process, 3D printing allows for the creation of three-dimensional components from materials such as plastic, synthetic resin, ceramic, metal, or composites. With methods like Selective Area Fusion (SAF) and Multi-Jet Fusion (MJF), KOSTAL has introduced innovative approaches to manufacturing plastic components that traditionally would have been produced through injection moulding.

The integration of 3D printing into KOSTAL's operations brings several key advantages, enhancing both production efficiency and sustainability:

## ■ Decentralised production

By using 3D printing, KOSTAL can ensure delivery capability and reduce the need for long-distance transport. This not only speeds up the manufacturing process but also improves logistical flexibility.

## ■ Cost-effectiveness

For spare parts or optional equipment with low delivery quantities, additive manufacturing provides a highly cost-effective solution. Injection moulding often requires significant setup costs, while 3D printing overcomes this barrier, offering efficient solutions for low-volume needs.

## ■ Shorter response times

Additive manufacturing allows for rapid production, which is particularly beneficial in just-in-time delivery systems.

## ■ Unique technical features

3D printing enables the realisation of complex and unique technical features that would be challenging to achieve through traditional manufacturing methods.



## ■ Digitalisation of process chains

The potential for 3D printing in the digitalisation of manufacturing processes is promising: shorter workflows, reduced manual intervention, and enhanced overall efficiency of production operations.

## ■ Environmental sustainability

Compared to traditional injection moulding, 3D printing significantly lowers the CO2 footprint. The reduction in transport, material waste and energy consumption during production translates into a more sustainable manufacturing process, supporting KOSTAL's sustainability ambitions.



FROM AMBITION  
TO ACTION



# People

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# Social sustainability

Sustainability puts people's well-being at the heart of its efforts, aiming to protect human life now and in the future. This includes preserving the environment, safe guarding human rights, supporting physical and mental health, and fostering a secure, inclusive environment for growth.

Social sustainability is difficult to measure with KPIs due to its inherent nature, but enhancing social processes has a significant positive impact on communities and the economy. Health and well-being, injustice, hunger, and poverty are critical societal issues emphasised by the UN Global Compact in ten out of seventeen sustainable development goals.

KOSTAL is determined to drive positive change in social issues both inside and outside the organisation. We prioritise the well-being of our colleagues, customers, people on our supply chain, the communities in which we operate. Our goal is to integrate best practices, develop a comprehensive social Sustainability Strategy, and implement its components across all KOSTAL locations.

Our social sustainability practices vary in different markets in alignment with the respective local industry needs, the development of our business, and the size of our organisation at the given location. As KOSTAL is a global organisation, we see the need for aligning these different practices. We support bottom-up initiatives and share knowledge related to social sustainability in the dedicated site-level sustainability team, the Sustainability Champions Community.

Our social sustainability efforts are closely aligned with both global and local HR goals, prioritising employees' rights, health, and well-being. Ensuring the health and safety of our employees and safeguarding human rights are our highest priority.





**“At KOSTAL, teamwork and innovation are at the heart of what we do. In my role supporting the Americas, I see firsthand how collaboration and a shared commitment to growth create an inspiring work environment. Sustainability is not just a goal—it is part of how we work every day, from the way we support each other to the solutions we develop for the future.”**

*Alineane Martins,  
Vice President Human Resources, KOSTAL North America*

We also place great emphasis on employee engagement and development as key components of our strategy. Additionally, we take pride in the diversity of our workforce and actively promote this through both internal and external communication.

As defined in our [Code of Conduct](#), all KOSTAL employees have a right to freedom of association and to have their interests represented by their elected representatives.

We are committed to advocating for our employees' best interests and have achieved great success through global collaboration. We also fully respect our employees' right to freedom of association, including the right to form and join trade unions or other worker organisations.

As part of our strategic realignment, KOSTAL has implemented a workforce reduction in Germany, aimed at improving operational efficiency and aligning with changing market conditions. This decision affected several business units, regions, and sites, and we focus on managing this transition with care and support for our employees. We have taken steps to assist those impacted by the changes, including providing severance packages, retraining opportunities, and redeployment efforts where possible. We also prioritised the well-being of our employees during this period, offering support through mental health programs and consultations. Throughout the process, we have worked closely with unions, local communities, and government authorities to ensure open and transparent communication. While the restructuring is ongoing, there have been positive outcomes, with some employees successfully transitioning to other roles within KOSTAL or finding new opportunities elsewhere.



## What we do for social sustainability

### Our people-centred approach

We are committed to creating a safe and supportive workplace where employees feel valued, empowered, and engaged. Along with offering fair compensation and comprehensive social benefits, we ensure that our workforce is actively involved in our sustainability initiatives through various programs and events.

### Focusing on employee development

We support employees' individual growth by providing global training opportunities, including structured programs on KOSTAL's Sustainability Strategy and compliance. These resources empower employees to develop professionally and contribute to our sustainability goals while ensuring adherence to ethical and regulatory standards.

### Culture of diversity, equity, and inclusion (DEI)

We aim to make DEI core values at KOSTAL, a culture that promotes equality, and respects the rights of all peoples and communities. We ensure their participation in decisions that affect their land and resources. DEI are integral to our local initiatives, engaging employees through various events. In addition, we are dedicated to positively impacting the communities where we operate by supporting key initiatives in education, healthcare, and infrastructure.

### Partnering with suppliers on social sustainability

In collaboration with our suppliers, we work toward achieving our sustainability goals, ensuring that social responsibility is integrated into every aspect of our supply chain.





## What we do for social compliance

- We operate our business in compliance with all applicable laws and regulations.
- We implement internationally recognised health and safety systems and independently certify our manufacturing operations. Our ambition is to achieve ISO 45001 certification for all our factories.
- We take responsibility for human rights and working conditions across our operations and supply chain, guided by our [Human Rights Policy](#). This includes conducting internal audits, following ethical recruitment practices, and adhering to standards such as the UNGC. We also apply UN ILO principles to ensure fair labor practices and protect workers' rights.
- We uphold social responsibility throughout our value chain, in alignment with KOSTAL's [Supplier Code of Conduct](#).
- Social aspects are integral in our supplier risk assessment and supplier qualification strategies.

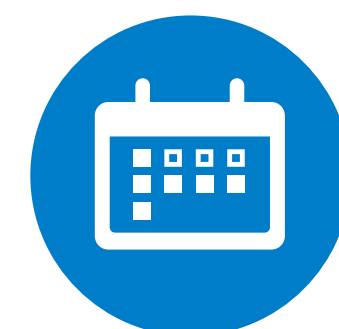


# 44 / 56%

female to male ratio in 2024  
compared to baseline

## Social performance achievements in 2024

- 44% to 56% female to male ratio supports diversity in our culture.
- Over 20,000 employees located at 22 countries.
- 1.45% reduction of the number of days lost to work-related injuries.
- All of our factories comply with ISO 45001 where legally required. In 2024, 24.3% of our factories are certified to this standard, underscoring our strong commitment to ensuring a safe and healthy working environment for our employees.
- We have reviewed and implemented new key performance indicators for social sustainability. Read more on [page 109](#).
- We have implemented a centralised platform called DATA-CUBE to collect key ESG metrics related to our workforce.



# 1.45%

reduction of the number of days  
lost to work-related injuries in 2024  
compared to baseline

*Employee engagement programmes at KOSTAL Germany (top), KOSTAL Morocco (middle), and KOSTAL China (bottom)*





In 2024, KOSTAL established a comprehensive strategy to structure human resources, addressing key aspects of social sustainability. The **KOSTAL People Strategy 2030** outlines priorities to enhance human resources (HR) capabilities and future readiness, focusing on attracting and retaining top talent, improving recruitment through technology, and enhancing the employee experience with digital HR services. The strategy also focuses on learning, compliance, risk management, and labor relations to meet current and future challenges in a competitive global market.

We emphasise employee development with a strong commitment to sustainability education. In 2024, we introduced the **Sustainability Onboarding Training** that covers sustainability fundamentals as well as KOSTAL's strategy and initiatives. This training equips our employees with the knowledge and tools to actively engage in sustainability efforts and apply our sustainability vision in their daily work. We plan to make this training mandatory for specific functions within the company and recommend that HR departments incorporate it into the onboarding process for new employees.

We gather best practices and organise **global campaigns** to engage employees in sustainability efforts. A successful example of this is our E-Waste Weeks campaign, which highlights the importance of recycling in the electronics industry and everyday life. The success of this campaign is reflected in its continuation for a second year across multiple locations. Additionally, we coordinate local social projects with the support of Sustainability Champions, using both bottom-up and top-down approaches. Read more on [page 62](#).

We will continuously protect the human rights, health, and safety of our colleagues and people working in our supply chain. In the near future, we aim to form a centralised team for health and safety to add a more comprehensive approach to reducing accidents.

In 2025, we will collaborate closely with our targeted suppliers to ensure the upholding of human rights and social justice throughout our supply chain. By fostering strong partnerships, we aim to promote ethical practices and contribute to positive social impact.





## Fair leadership training at KOSTAL Brazil

At KOSTAL Brazil, fostering an ethical and transparent work environment is essential to strengthening social sustainability. To reinforce its commitment to integrity and fair leadership, the site conducted the Compliance—Fair Leadership training programme, designed to empower leaders with the knowledge and tools to uphold ethical standards while ensuring compliance with legal requirements.

This training focused on conducting disciplinary measures ethically, emphasising the principles of proportionality and equal treatment. Through real-life scenarios and practical guidance, leaders were equipped to handle workplace situations with fairness and transparency, reinforcing KOSTAL's culture of integrity and respect.

By investing in ethical leadership, KOSTAL continues to promote a responsible and inclusive work environment that upholds the highest standards of social responsibility.



FROM **AMBITION**  
TO **ACTION**



# Working at KOSTAL

At KOSTAL, we believe our colleagues are essential to our future success. We are committed to acting with care and responsibility towards our employees, suppliers, customers, and the communities where we live and work.

Our values put special focus on how we treat people, and we strive to create a workplace where every employee can be themselves and is empowered to do their best. Our employees uphold high standards for performance, passion, and commitment. At the same time, we take pride in cultivating a familial atmosphere where values like fairness, integrity, and stability are deeply valued.

KOSTAL represents over 20,000 people in 63 sites within 22 countries with unique cultures across the globe, and our organisation is naturally diverse in many dimensions including age, religion, gender, ableness, ethnicity, and nationality. Our recognition and celebration of these differences contribute to innovation and creativity in our work and a sense of belonging in our communities.

Modern business life is characterised by change and transformation. We focus on addressing challenges like technical integration and providing a warm welcome to new employees across locations and business units. Our family-oriented culture ensures that every employee smoothly becomes part of the KOSTAL family.

We aim to provide our employees with support for all dimensions of their lives, including financial security, health, and work-life balance. As a family-owned company, we value the importance of balancing work, family, and leisure, which enhances performance, motivation, and commitment at work. These practices vary in the different regions in alignment with the local needs, that might include flexible working hours and attractive extras.

Digitalisation has been a major HR topic in 2024. In addition to data integration, one of our largest digitalisation projects was the implementation of an applicant tracking system, which improves the applicant experience and standardises and digitalises processes across the KOSTAL organisation. Further enrolment and development will contribute to improving our operations and strengthening our competitive position.

To remain an employer of choice in today's competitive market, we will introduce a global grading framework, a consistent system for defining job value, assessing roles, levels, and career paths across the organisation. This framework is more than just a job structure, because it provides a transparent and accessible roadmap for employees to navigate their careers.





By standardising how we assess roles and opportunities, it ensures fairness, values contributions equitably, and aligns with regulatory compliance, such as Pay Transparency Directives and pay equity commitments. By combining our heritage with this forward-looking approach, we are creating a sustainable future where both the company and employees can succeed.

To achieve high-level performance and consistently advance our corporate goals, we need qualified employees. Target group interviews and employee workshops outlined that authenticity and our five unique selling points are the most convincing factors for attracting new talents. This forms the foundation of our employer branding strategy.

These unique selling points reflect the values that ensure stable, reliable solidarity and foster employee retention at KOSTAL as an employer.

#### Empowering teams (in combination with team culture)

- Enabling team culture through trust, support, emotional connection.
- Collaboration across hierarchies and countries.
- Freedom to do what is right.
- Can-do atmosphere.

#### Individuality matters

- Attention to personal preferences and needs.
- Many diverse roles, responsibilities and opportunities within a growing environment.

#### Engineering the future

- A role in shaping leading technologies and innovative products.
- Attractive brand, first choice in its segments.
- Purpose, passion and pride.

#### Family-owned, family-run

- Socially and environmentally responsible.
- Long-term consistency and commitment.
- Down-to-earth attitude.

#### Growth

- Grow your skills, your responsibilities, your topics in a future-orientated business.
- A growing business, expanding networks, new positions.

In the next step, we will focus on structuring and enhancing our media presence across relevant social media channels to showcase KOSTAL's corporate performance in the most compelling way.

**KOSTAL**

Even the  
**BRIGHTEST MIND**  
needs an empowering team  
to unfold its full potential.

**Develop yourself**



## What we do to attract the best talents on the market

### ■ Flexible working hours

KOSTAL offers a variety of working-hour models, including flexitime. This makes it easier for employees to balance their work and personal lives.

### ■ Social benefits

KOSTAL takes social responsibility for our employees with various models of retirement benefits and in partnership with respected insurance companies.

### ■ Fair compensation

Good performance is rewarded at KOSTAL. Our compensation models create a balance between company targets and personal goals. KOSTAL respects and complies with the nationally applicable labour laws related to wages and working hours without exception.

### ■ Attractive extras

In addition to traditional employee benefits, KOSTAL offers a whole range of other benefits, discounts and experiences, such as the use of local gyms at discounted rates, company health management programmes, cafeterias, etc.

The listed initiatives are implemented to varying extents at each KOSTAL site, tailored to local business conditions and labour markets. In the upcoming years, our focus will be on standardising our compensation and benefits framework globally.





Even the  
**HIGHEST ACHIEVER**  
benefits from a company  
driven by family values.

KOSTAL

## Strengthening our employer brand: Reasons to believe in KOSTAL

KOSTAL continues to shape and strengthen the employer brand with video testimonial series shared on the [Group's LinkedIn platform](#).

The authentic and honest testimonial videos have been successful among KOSTAL's audience. The videos are built around the five “reasons to believe” in KOSTAL and they reflect our identity as an employer and serve as key drivers for attracting and retaining top talents.

In the making of the videos, the target groups are addressed with suitable humorous superlatives, followed by the advantages and mentality of a down-to-earth family business. These authentic and honest testimonial videos on the five defined “reasons to believe” in KOSTAL illustrate the key pillars of our employer branding: empowering teams, individuality matters, engineering the future, family-run and last, but not least growth.

Moving forward, we aim to involve an increasingly diverse range of employees in these videos, highlighting the value we place on our people. This will not only celebrate our dedicated workforce but also help attract top talent who share and resonate with our core values.

Read more about KOSTAL's employer branding on [page 83](#).



FROM **AMBITION**  
TO **ACTION**





# Health and safety

**The health and safety of our team members is our top priority. We are committed to investing in advanced manufacturing technologies that minimise risks in the workplace. By rigorously adhering to health and safety standards, we strive to create the safest possible work.**

As stated in KOSTAL Group's [Code of Conduct](#), safety and health protection is a crucial part of our responsibility and activities, and we always act in accordance with the applicable standards and regulations.

We operate in a variety of environments, from production floors to research centres and offices. While the risks may vary across these different workplaces, our goal remains the same: to prevent injuries. Our commitment is that everyone returns home safely at the end of each day.

We ensure that potential health and safety hazards are assessed and eliminated when planning new processes and facilities or making changes to existing ones. Regular health and safety risk assessments are conducted in accordance with relevant legal requirements to identify and mitigate safety hazards at all KOSTAL locations. These assessments focus on identifying, evaluating, and prioritising physical, chemical, biological, and other health risks, with appropriate measures implemented for any unacceptable hazards. We are also committed to aligning the health and safety definitions across all sites to ensure consistency and improving the measurement of global status and progress.



Our vision prioritises the well-being of individuals throughout all our processes; to actualise this principle, we continually strive to enhance our technical infrastructure, optimise organisational processes, and foster meaningful engagement with our people.



**“The success of an Occupational Health and Safety system**

**lies in leadership, commitment, and participation from all levels of the organisation. When these elements come together, they create a lasting safety culture. At KOSTAL Mexico, we believe: Safety and health are our number-one priority.”**

*Amalia García,  
Senior EHS Manager, KOSTAL Mexico*



## What we do for health and safety

### Health and safety ownership and reporting

We have a dedicated [Health and Safety Policy](#) that ensures the well-being of our employees and compliance with relevant safety standards.

Our goal is to continue enhancing ownership for health and safety activities within the KOSTAL organisation. Moreover, to improve internal reporting capabilities by implementing standardised definitions and methodologies for reporting occupational accidents and illnesses within KOSTAL Group.

### Occupational Health and Safety Management System

We established an Occupational Health and Safety Management System in line with the ISO 45001 standard, defining group-wide key policies, processes, and standards for occupational health and safety. A roadmap was defined for ISO 45001 certification to ensure 100% of KOSTAL's manufacturing sites were ISO 45001 certified. We integrated the evaluation of compliance with both internal and external Health and Safety requirements into the internal audit process.

### “Zero accidents” in our RACE Programme

“Zero accident” is a key component of our RACE programme, launched in 2021 to elevate production capabilities and the supply chain through the Lean Transformation method for global plants. The RACE Team implements regular audits and shares observations with the plants to improve processes. Safety requirements are integrated into layered process audits to ensure unsafe conditions and hazards are identified and corrected before causing injury. For more information on the RACE programme, please refer to [page 68](#).

### Supplier health and safety compliance

Suppliers must comply with national and international health and safety regulations as per the Supplier Code of Conduct, implementing systems and processes to ensure continuous compliance and mitigate potential risks to employee safety and health. In 2024, we conducted a gap analysis that included social sustainability topics and reviewed our existing health and safety KPIs. Based on the findings, we introduced new KPIs to better measure our health and safety performance. Additionally, we integrated health and safety ambitions into our broader sustainability goals, alongside other social objectives, emphasising the importance of taking proactive action in social matters and fostering a more holistic approach to sustainability.

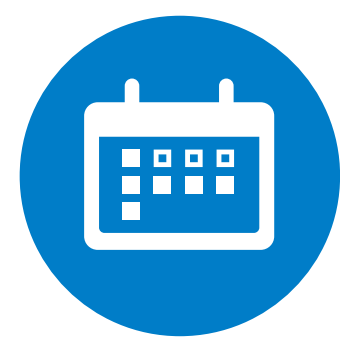


As the next steps, we will form a centralised health and safety team to adopt a more comprehensive approach to reducing accidents. To ensure health and safety risks are adequately addressed at the site level, health and safety organisations will be established at each location to lead and coordinate key activities related to health and safety management. Additionally, we will establish safety committees comprising management, employee representatives, if applicable, and the location's HSE (health, safety, and environment) representative. These committees will be tasked with managing and monitoring occupational health and safety issues and implementing measures for continuous improvement.

We recognise that implementing an internal global standard for health and safety will improve our performance in reducing recordable incident rates. This strategy supports our ambition to achieve a 30% reduction by 2030, compared to the baseline.



*Yellow September at KOSTAL Brazil is all about raising mental health awareness in the workplace*

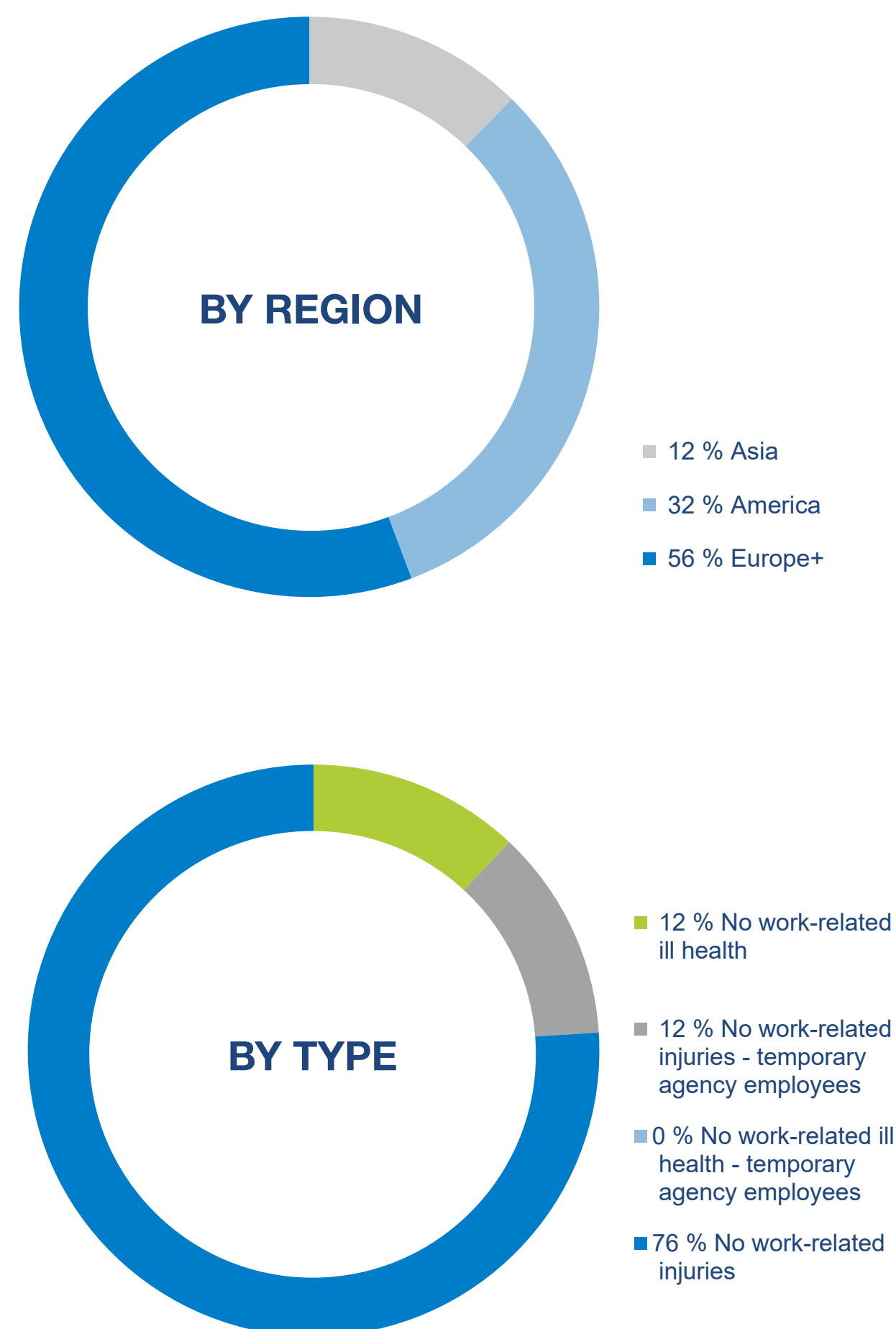


# 1.45%

reduction of the number of days  
lost to work-related injuries in 2024  
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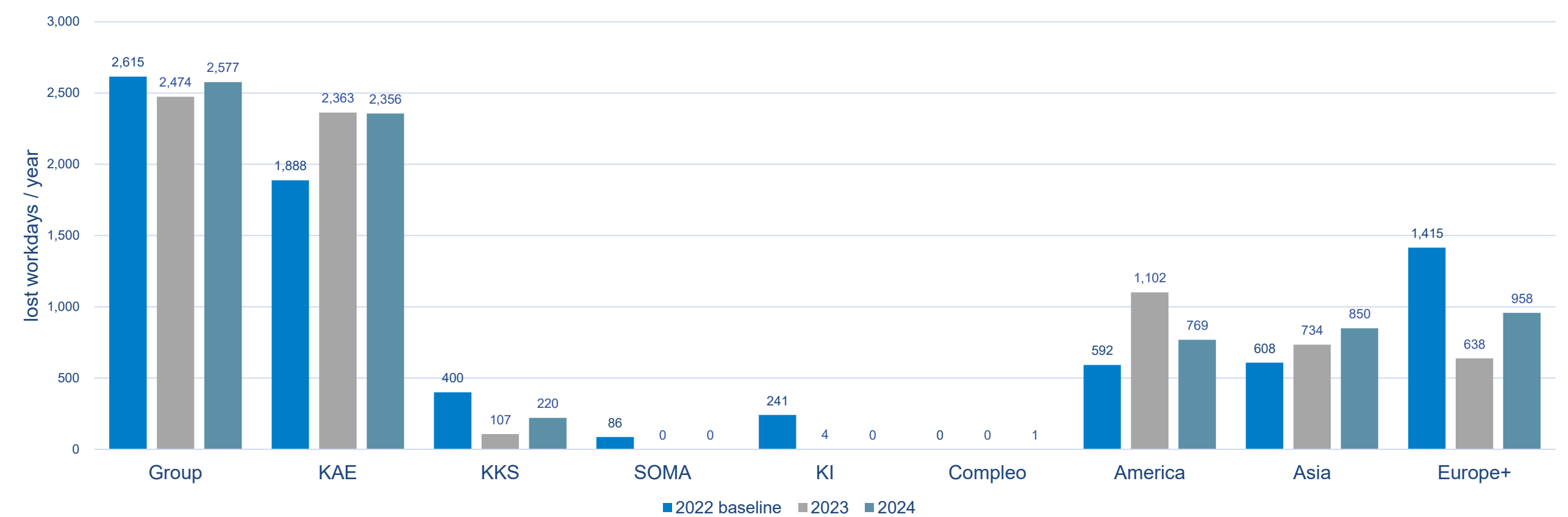


## WORK-RELATED INJURIES 2024



*During Health Days at KOSTAL China, employees take part in wellness checks supporting early detection and ongoing health*

## NUMBER OF LOST WORKDAYS





# Health initiatives in Mexico and Brazil

In 2024, KOSTAL facilities implemented health initiatives to protect employees and promote well-being. Specifically, in Mexico and Brazil, efforts were focused on ensuring the availability of essential vaccinations for our workforce.

In Mexico, each KOSTAL facility collaborates with the Social Security Institute (IMSS) to organise annual vaccination campaigns, ensuring employees have access to essential immunisations. IMSS provides medical resources, including nurses and vaccines, to support preventive healthcare efforts. For 2024, scheduled vaccination campaigns in May and November offered protection against tetanus, diphtheria, hepatitis B, pneumococcal infections, influenza, and COVID-19. These initiatives safeguard employees and reinforce KOSTAL's relationship with government institutions, strengthening workplace health management.

In Brazil, KOSTAL Brazil launched an anti-dengue campaign to combat the spread of this mosquito-borne viral infection, which poses a significant public health risk. The initiative involved collaboration with the city hall to distribute awareness materials, educational lectures, and employee engagement actions to encourage preventive measures at home. Internally, KOSTAL Brazil implemented mosquito control measures within its facilities to reduce breeding sites and ensure a safer work environment. This campaign reflects KOSTAL's commitment to corporate social responsibility by prioritising employee health, and positively impacting local communities.



FROM **AMBITION**  
TO **ACTION**



# Employee development

We firmly believe that the foundation of our success lies in our global team of strong, qualified individuals and high-performing teams, whose stability, perseverance, humanity, and unique values drive innovation. Fostering a community of talented, engaged, fairly treated people who are encouraged to grow is key to our continued achievements.

Our Group is growing at a fast speed at multiple locations and we are dedicated to finding and nurturing talents who join our team. This is why we devote our resources to reach excellence in recruitment and employee development, which are also major pillars of our global HR strategy.

Our **employee development strategy** focuses on integrating learning into the daily workflow, making it accessible and convenient for employees and ensuring it has a meaningful impact. We empower managers and team leaders to work closely with their teams to support their growth and provide training opportunities.

Our Excellent Leadership Initiative (ELI) is our way to develop our top talents. In this talent development system, we integrate individual career planning, to develop our people and succession planning, to ensure smooth business for the Group.





## What we do for employee development

### Annual goal-setting and performance appraisal practices

This process provides employees with an opportunity to manage their development and career progression and leaders to support them. By the end of 2024, this process (ELI Talents) has been rolled out in 21 KOSTAL locations and is being expanded to further locations and broader target groups

### Tailor-made development programmes

We offer development opportunities for various target groups. In 2024, we introduced several initiatives for identified talents, including: a Global Mentoring Programme (50+ international pairs), a development programme for leading other leaders (20 selected talents), virtual dialogues with senior leaders (90+ participants in the first session), virtual exchanges with other organisations (20 KOSTAL participants globally), and a development centre for leadership roles. Talents from all regions participated in these programmes. For all leaders, we developed a curriculum of standardised training tailored to each leadership level. By the end of 2024, a needs analysis was completed, and external providers selected. Pilot programs for the “Leading People” group are planned for the first half of 2025.

### Learning and development platform

With KOSTAL Talent and Learning Suite (KTLS), employees can find all training courses recently offered by KOSTAL in one platform. With the help of personalised learning experiences, the most suitable training courses are suggested to our colleagues. Employees can register for training dates, pre-book for events, or view all eLearning directly on the platform.

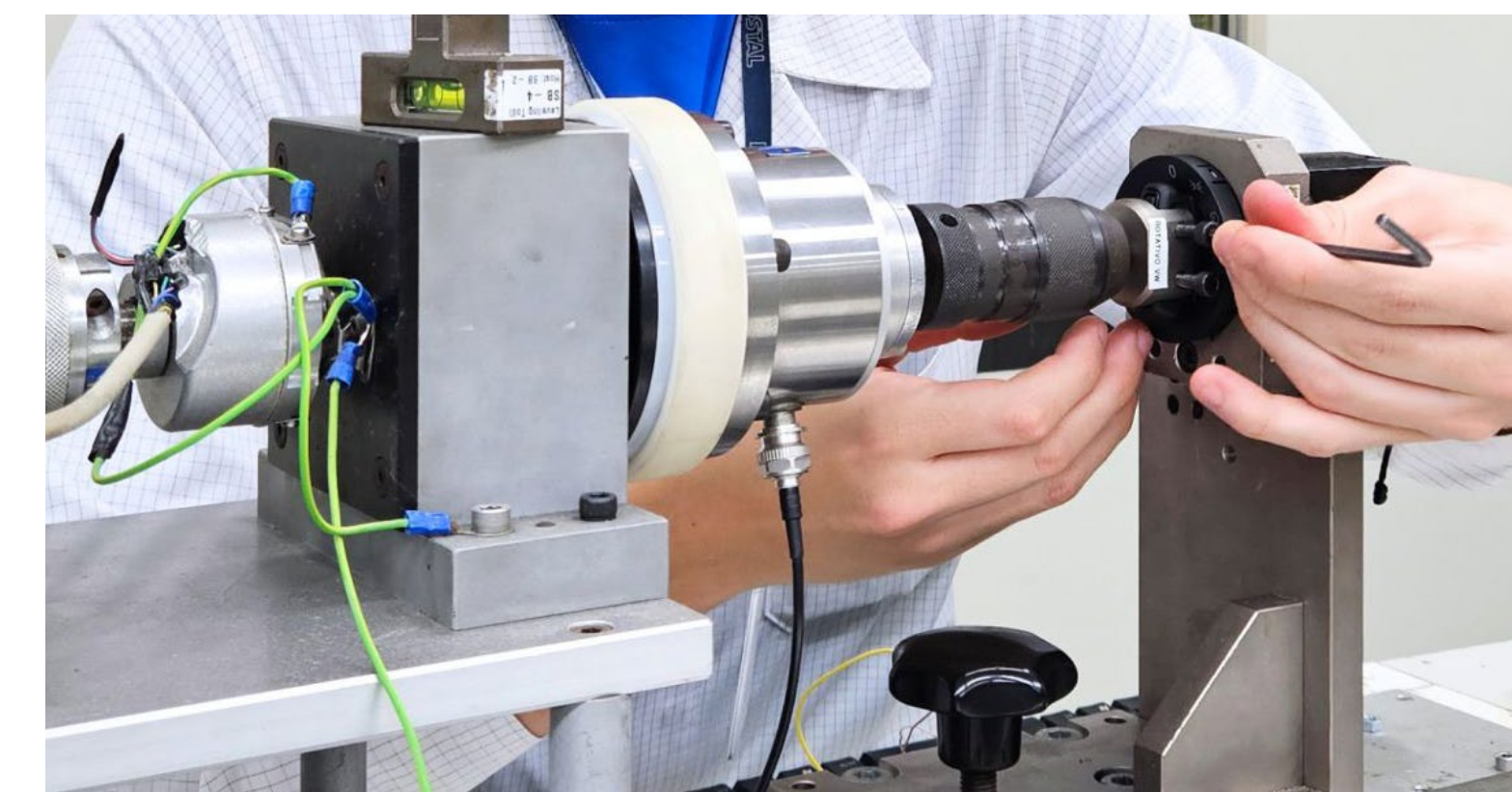
In 2024, the global Learning and Development team aims to enable stakeholders to create KOSTAL-specific courses alongside high-quality external materials. Over the past 12 months, KTLS, the organisation’s learning platform, saw a 247% increase in unique users and an 89% rise in content consumption, with 1,848 learners engaging and 1,786 completing at least one course. Popular topics included leadership, time management, collaboration, and digital transformation, highlighting a strong demand for professional skills.

The Information Security Training programme, a key global initiative for 2024, shifted from a localised to a standardised approach, ensuring compliance with the VDA-ISA standard. The training, available in eight languages, reached network users across 21 countries with a 70% completion rate, strengthening information security awareness and setting a foundation for ongoing compliance and employee engagement.

In 2024, the global learning teams coordinated the production of KOSTAL-specific courses, developed through cross-functional collaboration. Furthermore, purchased high-quality learning materials were made available in KTLS system for all employees.

In addition, KOSTAL focused on leadership development and talent progression through initiatives like the Future Leading Leaders Programme, Corporate Mentoring, and virtual series. These programmes aim to cultivate leaders by offering training, mentorship, and feedback to enhance organisational capabilities and resilience.

In the coming years, employee development will remain a priority as we strive for excellence in all endeavors, with our talented workforce and culture of teamwork enabling us to meet this ambitious goal, while fostering excellence remains at the core of our commitment.





# Driving sustainability through global training

To strengthen sustainability awareness across KOSTAL, we launched our first Global Sustainability Onboarding Training, equipping employees with the knowledge and tools to support our carbon neutrality goal by 2045.

Available to all employees, this training highlights KOSTAL's sustainability commitments and practical ways to integrate a people-focused approach, energy efficiency, waste reduction, and responsible resource use into daily work. Recognising its importance, KBS Hungary has made it part of its onboarding process, ensuring new employees embrace sustainability from day one.

With its easy to use and understandable format, the training is recommended for all KOSTAL sites to build a shared sustainability mindset and drive meaningful action.



FROM **AMBITION**  
TO **ACTION**



# Employee and community engagement

We view employee engagement as vital for driving sustainability, as it encourages ownership and responsibility towards our ambitions. Engaged employees contribute ideas, take initiative, innovate and collaborate on sustainable practices, ensuring long-term, impactful outcomes.

In its corporate social responsibility (CSR) initiatives, KOSTAL focuses on endeavours that go beyond profit generation. We involve our employees in activities and create long-term programmes that prioritise the welfare of society and the environment. Our CSR efforts include organising events and activities aimed at increasing community engagement, preserving nature, addressing social issues and promoting sustainability. By fostering a culture of engagement, we aim to turn the Group's sustainability goals into tangible results.

In line with the Sustainability Development Goals (SDGs), KOSTAL is committed to addressing social issues such as poverty, education, and healthcare in the communities where it operates. Through its HR departments and event organisation committees, the Group tailors initiatives to meet local needs, with the intensity and nature of these programmes varying by region. In countries like Brazil, Mexico, and India, KOSTAL focuses on volunteering opportunities against poverty and improving healthcare access. In regions such as Europe and China, the Group usually provides more programmes related to family, education, and mental health. By responding to the specific challenges of each community, KOSTAL helps create a positive and lasting impact.



*KOSTAL Brazil supports the local community with various donation activities (top); KOSTAL Hungary serves as a platform for collaborative thinking and knowledge sharing with local organisations (bottom)*



## What we do for employee engagement

KOSTAL also recognises and rewards employees through various recognition programmes and performance awards, emphasising the importance of embodying KOSTAL's core values. These initiatives not only celebrate individual achievements but also encourage employees to live the KOSTAL values, fostering a culture of excellence, commitment, and shared purpose across the organisation.

### Local employee engagement campaigns

At many KOSTAL locations, we have a long tradition of organising events that connect employees and foster a sense of community. These events focus on education, donations, team-building, and forming committees, such as sports committees, often involving employees' families. For example, regular international football tournaments help strengthen our team spirit while promoting global networking. Informal gatherings also provide opportunities for different and diverse groups to connect and build friendships within the KOSTAL family. These initiatives play a key role in engaging employees and supporting their personal and professional development.

### Global employee engagement campaigns for sustainability

Global sustainability campaigns have been organised since 2023 with the aim of sharing knowledge about sustainability-related topics with active engagement from our employees. These initiatives raise awareness, empower employees to contribute ideas, and support KOSTAL's long-term sustainability goals. Our first campaign is E-Waste Weeks, which are organised at multiple locations each year. Read more on [page 62](#).

### Involvement in local communities

We aim to make a positive impact on the communities where we operate. With our global presence, we support communities worldwide and encourage employees to engage in outreach and charitable activities. At our various locations, employees contribute their time and resources to support the communities where they live and work.

### Employee opinion surveys

At several KOSTAL locations, we conduct employee opinion surveys to gather feedback and understand our employees' views. This helps provide valuable insights to our management. We plan to expand this survey across the entire KOSTAL organisation and conduct it every two years.

### Transparent bilateral communication

We value transparent and two-way communication, offering various channels for employees to engage with leadership. These location- or region-specific practices may include town halls, all-hands meetings, and company newsletters. Employees are encouraged to provide feedback on the Group's performance, discuss employee engagement, and highlight areas for improvement.





### Long Service Award

At KOSTAL, fostering long-term collaboration is a core value. The high number of employees celebrating long service anniversaries and our very low turnover rate reflect the quality of the working environment. We recognise and celebrate outstanding performance and long-term commitment through the Long Service Award.

Recognising that different approaches work best in various cultures, countries, factories, and offices is key to achieving our sustainability goals. Local sustainability advocates are dedicated to ensuring that the social sustainability initiatives set at the Group level are implemented in their respective regions.

In 2025, we plan to conduct an **all-employee survey**, which will include sustainability-related questions to support our materiality assessment. This initiative will help us gather valuable insights into employee perspectives on sustainability and further guide our efforts.



“Our daily choices and actions can shape a better future for our planet and our communities.”

*Diwakhar V,  
Head of HR at KOSTAL India*



# Building a mindful and inclusive workplace culture

At KOSTAL, increasing sustainability awareness and strengthening community connections are integral to our engagement initiatives. Through various activities, we encourage employees to take an active role in shaping a more sustainable and inclusive workplace.

One such initiative in 2024, organised in Czechia, the Bike or Walk to Work Challenge encouraged employees to leave their cars at home and opt for cycling or walking instead. Spanning an entire month, the challenge aimed to reduce CO<sub>2</sub> emissions while raising awareness of the environmental impact of daily commuting. Beyond its ecological benefits, the initiative created a sense of community, motivating employees to support one another in their shared commitment to sustainability.

In addition to promoting sustainable behaviors, KOSTAL is committed to celebrating cultural diversity and fostering inclusion. A notable example is the Ramadan Iftar Gathering in Morocco. By hosting an Iftar gathering, KOSTAL created a welcoming space for employees to connect, appreciate cultural traditions, and strengthen workplace relationships.



*KOSTAL Morocco's Ramadan Iftar Gathering*



FROM **AMBITION**  
TO **ACTION**



**KOSTAL**



# Appendix

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# About KOSTAL

The automotive sector plays an essential role in society and everyday life, acting as the foundation of transportation while driving extensive research, development, innovation, and expertise.

As an essential player in this landscape, we, the KOSTAL Group, take pride in our industry position, especially in being the driving force of the e-mobility transition.

We are a global family-owned company with headquarters in Lüdenscheid, Germany, which develops and manufactures technologically complex electronic and mechatronic products. Our forte lies in the development and manufacturing of sophisticated electronic and mechatronic products. At the heart of our operations is a commitment to values that prioritise loyalty and sustainability.

We employ over 20,000 people at more than 63 locations in 22 countries, on five continents, offering flexible, knowledgeable, and customer-focused services. KOSTAL takes customer proximity literally. In 2024, the Group generated sales of 3.54 billion EUR.



**Our forte lies in the development and manufacture of sophisticated electronic and mechatronic products.**

**At the heart of our operations is a commitment to values that prioritise loyalty, and sustainability.**





**5**  
divisions

**3.54**  
billion EUR  
turnover \*

**6 % +**  
share of R&D  
investment

**20,105**  
KOSTAL  
employees\*

*The values presented on this page are actual for 2024 Q4 including Compleo.*

*\* Group revenue and total number of employees for 2024 were calculated by divisions.*



# Family-run for four generations

For us, being a family-owned company means cherishing our history and our roots, being aware of our duties and responsibilities, and fostering a deep sense of belonging and purpose within our organisation.

FIRST GENERATION

1912



Leopold Kostal

## Electrification

Sustainability and sparing use of resources are second nature to us.

We do what is necessary.

SECOND GENERATION

1935



Kurt Kostal

## Motorisation

Sustainable ideas unite mankind and nature – all is one.

We form a bond, and the bond is binding.

THIRD GENERATION

1972



Helmut Kostal

## Globalisation

We are an environmentally-sound organisation taking sustainable and effective actions.

We do things with feeling.

FOURTH GENERATION

2008



Andreas Kostal

## Energy Efficiency

Our over 100-year history is proof that we, as a family business, can act sustainably and on a long-term basis.

We shape the future today.



# Our Values

The KOSTAL Values are transmitted into all business divisions but are centrally coordinated. Sustainability is closely linked to our values and is reflected in our people-centred approach:

**‘We have our feet on the ground’,  
‘We are decent’,  
‘We shape the future today’.**

Therefore, our sustainability efforts and strategies are deployed identically in all business streams. Our sustainability governance structure is there to ensure the alignment between divisions, allocation of focus, and resources.



**We have our feet  
on the ground.**



**We are decent.**



**We make it easy.**



**We do things  
with feeling.**



**We do what is  
necessary.**



**We form a bond, and the  
bond is binding.**



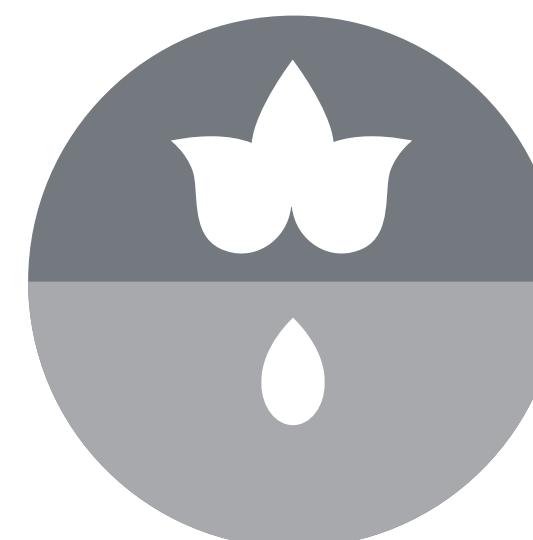
**We encourage people to  
achieve what we expect.**



**We are moved by  
what we do and aim  
to move others.**



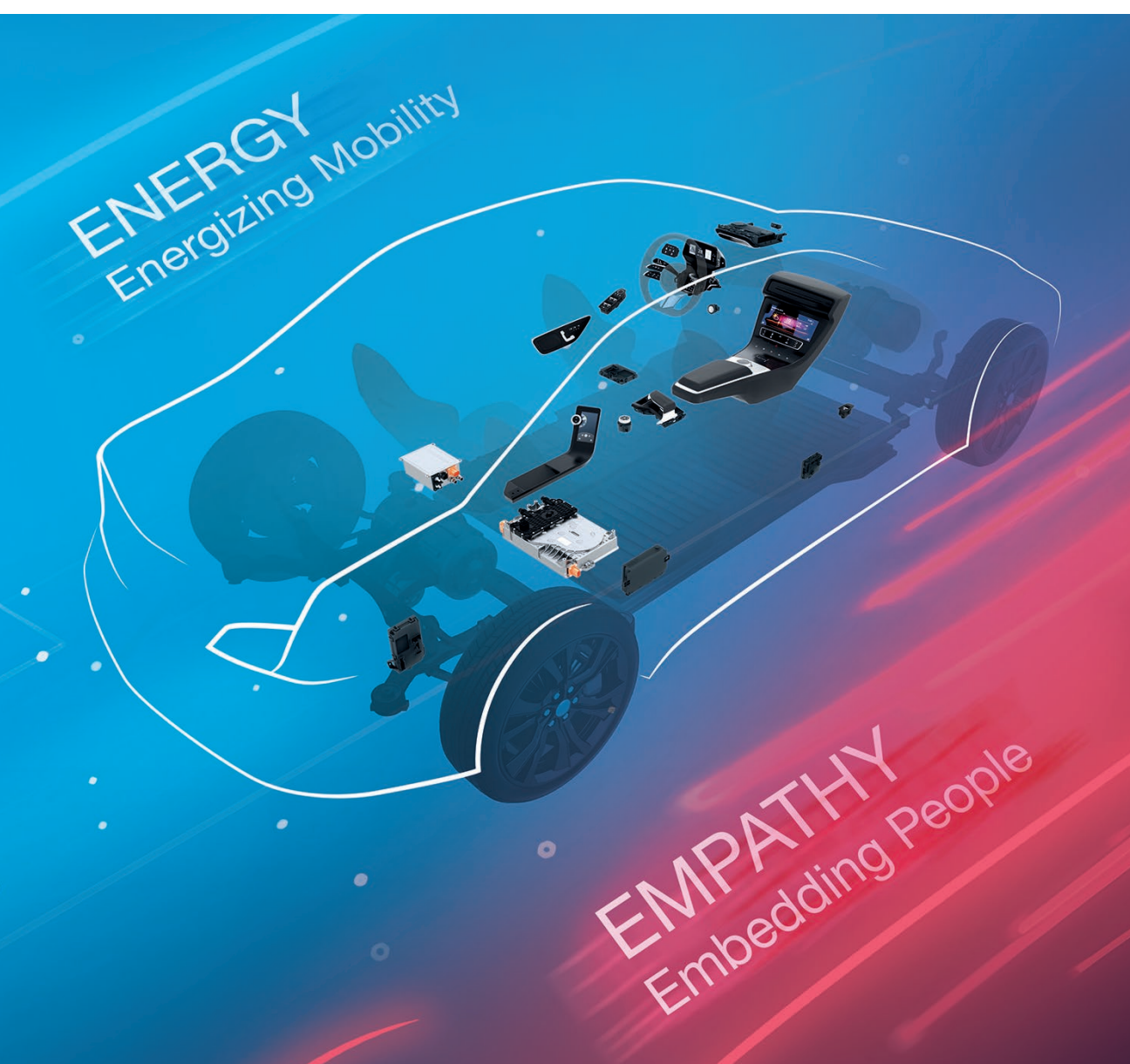
**What we do, we do  
with conviction.**



**We shape the future today.**



# One family business united by our business divisions



## Automobil Elektrik

### Energy and Empathy

Energising mobility and embedding people. Two product and innovation cornerstones, but one global team. With KOSTAL know-how in our mechatronic products, and successful collaborations with original equipment manufacturers (OEMs), KOSTAL Automobil Elektrik (KAE) creates efficient and innovative solutions for electromobility and for driving concepts of the future.

The success of the department is reflected in KOSTAL's position as the global market leader in significant and complex products such as steering column modules, as well as shift-by-wire modules and door control units with a market share of more than 30%.

- **Comfort Electronics**
- **Power Electronics**
- **Comfort Controls**
- **Drive Controls**

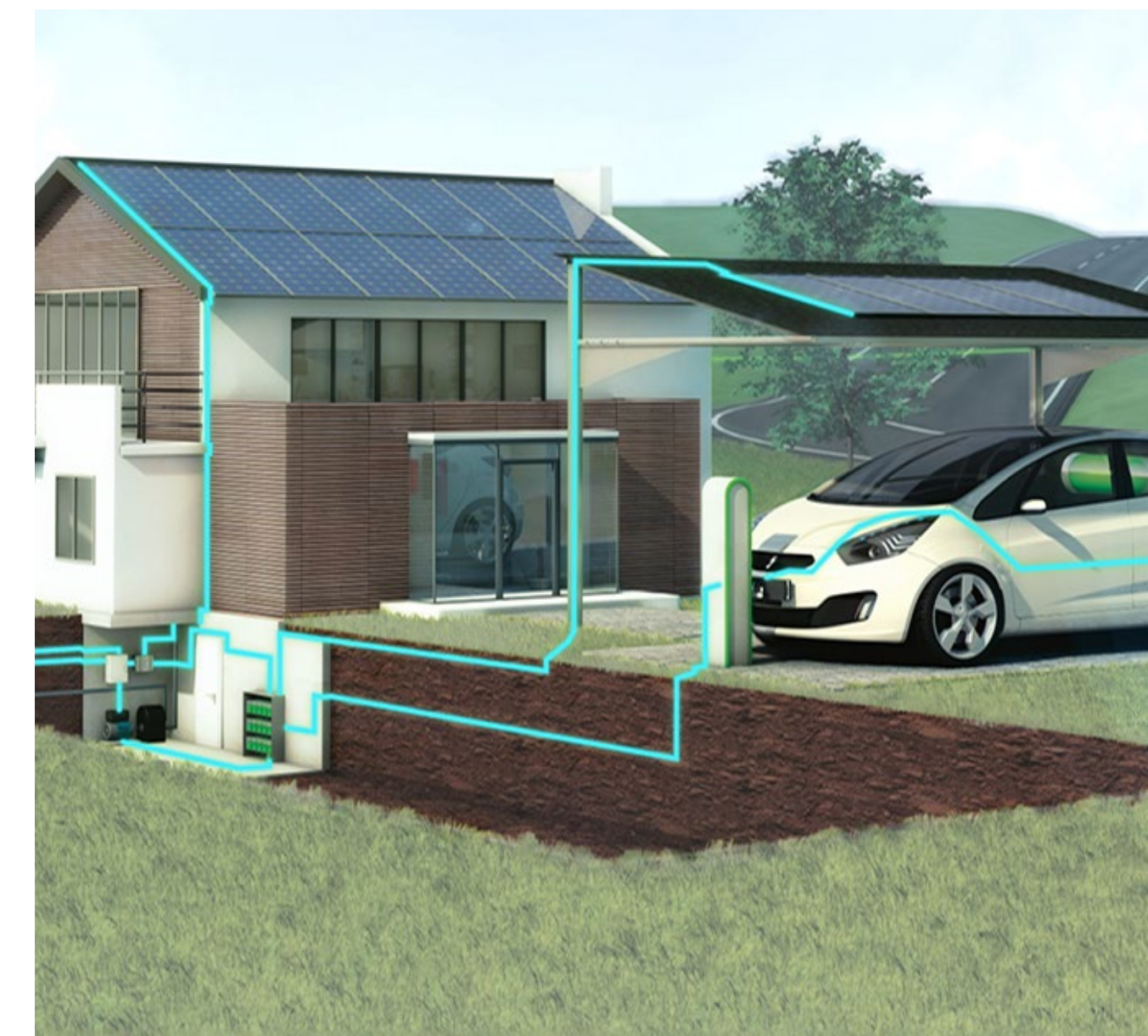
## Industrie Elektrik

### Smart Connections

KOSTAL Industrie Elektrik (KI) offers innovative solutions in four product fields: solar inverters, charging solutions, frequency converters and electronics for different customer applications. In this division, development expertise is smartly combined with the KOSTAL Group's know-how.

We are proud that our products and innovations also contribute to the expansion of clean energy use. KOSTAL is a leading supplier of inverters and storage systems.

- **Photovoltaics**
- **Drives**
- **Electronics**
- **Charging**





## Connectors

### New Connector = New Mobility

Since its founding in 1993, KOSTAL Kontakt Systeme (KKS) has focused on the development and production of connectors, primarily for the automotive industry.

With mature system competence, a wide performance range, compact sizes and low weights, high variant diversity and favourable system costs, KKS products always guarantee a good connection with certainty.

- Terminals
- Connectors

## Test Technology (SOMA)

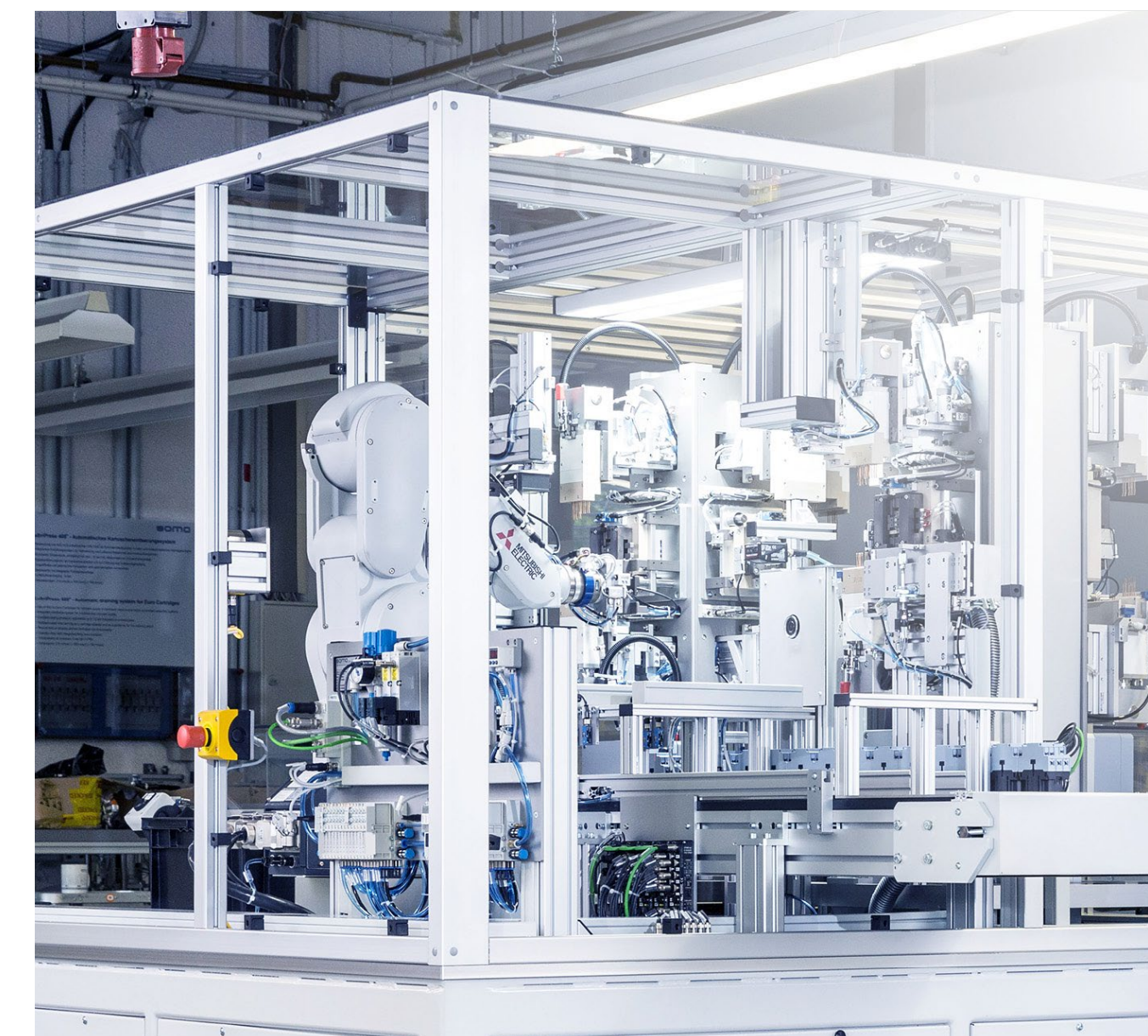
### Precision

Testing, automating, and metering – the three core product fields of SOMA.

SOMA GmbH has been a supplier of industry and product-specific testing and automation systems for mechatronic and electronic products for over 50 years.

SOMA also produces innovative and patented dosing technology for industrial lubricants and digital assistance systems for worker guidance in assembly, production, and packaging. In 2024, SOMA developed a concept for testing various products and variants from different customers on a fully automated line (flexCube).

- Test Technology & Automation
- Dosing Technology
- Worker Assistance





## Compleo

### Power to Move

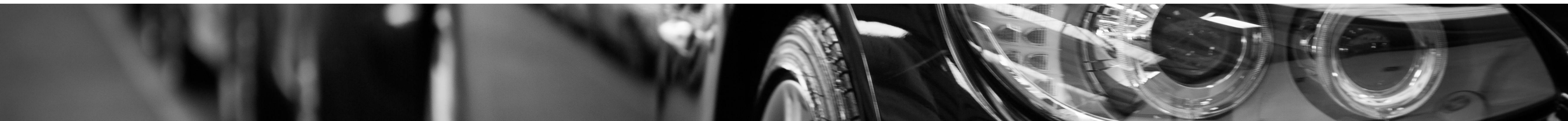
In 2023, the KOSTAL Group completed the acquisition of the entire operational business of the Compleo Group. Compleo, with its two existing divisions of charging technology hardware and charging technology software, will remain independent as a brand and company under the umbrella of the KOSTAL Group.

Compleo is one of the leading full-service providers of charging technology for electric vehicles in Europe and has been one of the pioneers of electromobility since its foundation in 2009: Compleo's vision is to accelerate electromobility as the most convenient and sustainable way of travelling for everyone. Compleo's products are the crucial link between consumers' mobility needs and the transition to a decentralised, decarbonised energy ecosystem. By the end of 2025, Compleo will have calculated the CO<sub>2</sub> footprint of its major products, DUO and eTower.

→ **Compleo Charging**

→ **Vaylens**





# Industry trends in 2024

**In 2024, several industries underwent significant transformations, reshaping the paradigm of competitiveness and sustainability.**

In the automotive industry, electrification and shifting consumer preferences dominated. Consumers were leaning towards more affordable vehicles, particularly those priced between 25,000 and 35,000 Euros, amid economic uncertainties. Economic challenges, such as inflation and rising interest rates, made consumers more price-conscious, prioritising vehicles that offer both affordability and long-term value. In Europe, the focus fell on battery electric vehicles (BEVs) to meet stringent CO<sub>2</sub> emission regulations. However, challenges remained with the high initial cost of BEVs and the lack of charging infrastructure, as well as concerns over range anxiety.

In the electronics industry, 2024 saw rapid growth driven by advancements in artificial intelligence (AI) and the Internet of Things (IoT). As demand for smart devices, wearables, and autonomous systems rises, companies prioritised energy efficiency and sustainability. Consumers were shifting towards more personalised and connected experiences, while concerns over data privacy and security continued to grow. Supply chain disruptions and the global chip shortage remained challenges, affecting product availability and launch timelines.

In the solar industry, 2024 marked a year of accelerated adoption as both residential and commercial sectors prioritised sustainability and energy independence. Technological advancements, such as higher efficiency photovoltaic (PV) cells and energy storage solutions, were making solar energy more accessible and cost-effective. However, high upfront installation costs, regulatory hurdles, and the need for skilled labour remained significant challenges.

These trends still keep shaping the future of energy, electronics, and mobility, reinforcing a collective push towards sustainability and innovation. However, industries must navigate the evolving challenges of rising consumer expectations, cost concerns, and the need for continuous technological innovation to maintain momentum.



# Environmental data

Performance indicator – ENVIRONMENT	Unit	Group		KAE		KKS		SOMA		KI		Compleo		America		Asia		Europe +	
		2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024
RESOURCE EFFICIENCY																			
ENERGY CONSUMPTION																			
Total fuel	[MWh]	21,334*	22,895	16,126*	19,092	3,236*	1,888	333*	133	1,639*	860	0	922	2,789*	1,603	3,008*	4,137	19,802*	17,154
Total purchased non-renewable electricity	[MWh]	99,163*	101,581	91,133*	89,371	8,030*	12,174	0	36	0	0	0	0	31,659*	30,064	47,177*	44,687	16,098*	26,830
Total purchased renewable electricity	[MWh]	67,965*	72,135	51,278*	55,611	13,560*	13,028	134	143	2,994	3,054	0	298	6,696	6,911	0	17,099	61,269*	48,124
Total renewable electricity generation	[MWh]	244	740	73	371	115	117	0	0	56	252	0	0	0	0	73	145	171	595
ENERGY INTENSITY																			
Total energy consumption	[MWh]	189,022*	197,776	158,923*	164,820	24,943*	27,242	467*	329	4,688*	4,165	0	1,220	41,143*	38,578	50,530*	66,359	97,348*	92,839
Energy intensity	[MWh]/million €	60.7*	58.7	60.7*	57.1	78.5*	79.4	42.2*	17.9	28.3*	44.5	0.0	17.3	71.6*	79.3	44.2*	40.7	69.5*	74.2
DECARBONISATION																			
GHG EMISSION																			
Scope 1 emission	[t CO <sub>2</sub> eq]	10,994*	8,829	9,199*	7,479	934*	696	109*	56	752*	393	0	206	764*	387	2,510*	1,546	7,720*	6,896
Scope 2 emission	[t CO <sub>2</sub> eq]	48,222*	48,243	45,081*	42,563	3,142*	5,667	0	13	0	0	0	0	12,699*	12,073	29,079*	27,615	6,445*	8,555
Scope 1+2 emission	[t CO <sub>2</sub> eq]	59,217*	57,072	54,280*	50,042	4,076*	6,363	109*	69	752*	393	0	206	13,463*	12,460	31,588*	29,161	14,165*	15,451
CARBON INTENSITY																			
Scope 1+2 emission	[t CO <sub>2</sub> eq]	59,217*	57,072	54,280*	50,042	4,076*	6,363	109*	69	752*	393	0	206	13,463*	12,460	31,588*	29,161	14,165*	15,451
Carbon intensity	[t CO <sub>2</sub> eq]/million €	19.0*	16.9	20.7*	17.3	12.8*	18.6	9.8*	3.7	4.6*	4.2	0.0	2.9	23.4*	25.6	27.6*	17.9	10.11*	12.4
WASTE GENERATION																			
WASTE																			
Total generated waste	[t]	10,301	10,564	7,738	7,616	2,223	2,511	14	20	327	257	0*	159	2,800	2,451	1,822	2,086	5,679	6,026
Waste intensity	[t]/million €]	3.3*	3.1	3.0*	2.6	7.0*	7.3	1.2*	1.1	2.0*	2.8	0.0*	2.3*	4.9*	4.6	1.6	1.3	4.1*	4.8

The values presented on this table are actual for 2024 Q4.  
Compleo was acquired in 2023.  
2022 = baseline.

\* Changes have been made to the baseline data due to internal data verification carried out in 2023 and 2024. Explanation is on page [108](#).



Performance indicator – Environment	Unit	Group		KAE		KKS		SOMA		KI		Compleo		America		Asia		Europe +	
		2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024
TOTAL WASTE GENERATED <sup>5</sup>																			
Non-hazardous composting	[t]	17	55	17	54	0	0	0	0	0	0	-	4	0	0	6	9	10	46
Non-hazardous reuse	[t]	24	193	24	193	0	0	0	0	0	10	-	0	0	0	24	91	0	9
Non-hazardous recycling	[t]	7,133	7,391	4,847	4,782	1,998	2,270	10	12	277	238	-	88	1,977	1,527	1,356*	1,411	3,735	4,453
Non-hazardous incineration with energy recovery	[t]	1,351*	847	1,209*	715	106*	116	4*	7	33*	9	-	0	0	0	0	0	1,351	847
Non-hazardous incineration - without energy recovery	[t]	87	174	53	171	34	3	0	0	0	0	-	0	0	0	46*	114	34	61
Non-hazardous landfill	[t]	947	1,069	902	916	45	82	0	0	0	0	-	71	660	662	0	0	287	407
Total non-hazardous	[t]	9,558	9,730	7,051	6,832	2,184	2,472	14	19	310	247	-	159	2,636	2,283	1,432*	1,625	5,418	5,822
Hazardous reuse	[t]	0	1	0	1	0	0	0	0	0	0	-	0	0	0	0	0	0	1
Hazardous recycling	[t]	197	305	146	270	37	35	0	0	14	0	-	0	33	29	87	125	77	151
Hazardous incineration - with energy recovery	[t]	279	274	276	270	0	4	0	0	3	0	-	0	64	54	172	216	43	4
Hazardous incineration - without energy recovery	[t]	111	4	109	4	2	0	0	0	0	0	-	0	0	0	0	1	111	3
Hazardous landfill	[t]	42	27	42	27	0	0	0	0	0	0	-	0	27	27	0	0	15	0
Hazardous other method	[t]	114	180	114*	170	0	0	0	0	0	10	0	0	39*	16	60*	119	15*	45
Total hazardous	[t]	743	791	687	741	39	39	0	0	17	10	-	0	163	125	319	461	261	205
WATER CONSUMPTION																			
TOTAL WATER WITHDRAWAL																			
Water withdrawal	[m³]	345,508	336,013	334,794	339,623	7,940	22,914	311	669	2,463	2,236	0*	571	43,077	40,987	206,261	241,616	96,170	83,410
Water intensity	[m³/ million €]	111.0	108.6	127.8*	117.6	25.0*	66.8	28.1*	36.4	14.9*	23.9	0.0*	8.1	75.0*	84.3	180.3*	148	68.7*	66.7

The values presented on this table are actual for 2024 Q4.  
Compleo was acquired in 2023.  
2022 = baseline.  
\* Changes have been made to the baseline data due to internal data verification carried out in 2023 and 2024:  
In 2023, non-hazardous waste composted was reduced due to a correction.  
In 2023, non-hazardous reused waste was significantly reduced due to reclassification of waste treatment (recycled).

In 2023, hazardous waste incineration without energy recovery was increased due to unit error corrected.  
In 2023, hazardous waste other method increased due to missing information.  
Only manufacturing sites are in scope.In 2023 and 2024, only manufacturing sites are in the scope of water with-  
drawal data.  
In 2024, Enablon software was introduced, which resulted in changes to the baseline in the resource efficiency and  
decarbonisation indicator cathegories.



# Employee data

Performance indicator – SOCIAL	Unit	Group		KAE		KKS		SOMA		KI		Compleo		America		Asia		Europe +	
		2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024
EMPLOYEE DATA																			
Total employees by regions	No.	19,123	20,105											4,356	3,677	5,241	4,888	9,526	11,540
Total employees in the business divisions	No.	19,123	20,105	16,933	17,185	1,551	1,852	83	95	556	599	-	374						
Female employees	%	45	44	42	47	28	29	12	13	28	32	-	20	58	58	46	45	39	37
Male employees	%	55	56	58	53	72	71	88	87	72	68	-	80	42	42	54	55	61	63
Employees under 30	%	25	20	26	21	14	15	14	23	15	12	-	24	32	27	33	16	17	20
Employees 30-50	%	56	60	57	61	53	57	47	42	52	51	-	54	53	54	65	82	53	52
Employees over 50	%	19	20	17	18	33	28	39	35	33	37	-	22	15	19	2	2	30	28
Total number of training hours	[h]	-	166,143	-	138,822	-	24,498	-	553	-	2,270	-	0	-	74,542	-	23,163	-	68,438
Training hours per employee	[h]	-	8	-	8	-	13	-	6	-	4	-	0	-	20	-	5	-	6
Number of employees left the company in the reporting year	No.	-	3,043	-	2,656	-	166	-	9	-	105	-	107	-	1,092	-	299	-	1,652
Employee turnover in the reporting year	%	-	17	-	18	-	9	-	9	-	18	-	29	-	30	-	7	-	17
Number of discrimination / harassment incidents	No.	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Number of employee complaints	No.	-	85	-	83	-	2	-	0	-	0	-	0	-	28	-	57	-	0
Number of severe human rights incidents	No.	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0

The values presented on this table are actual for 2024 Q4.  
Compleo was acquired in 2023.  
2022 = baseline.  
\*Changes have been made to the baseline data due to recalculation in 2024.



Performance indicator – SOCIAL	Unit	Group		KAE		KKS		SOMA		KI		Compleo		America		Asia		Europe +	
		2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024
Amount of employee-related penalties, fines or compensation	No.	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Total number of community engagement programs in the reporting year	No.	-	179	-	171	-	5	-	0	-	3	-	0	-	22	-	24	-	133
Total number of employees with disabilities (all employment type)	No.	-	423	-	288	-	66	-	2	-	55	-	12	-	33	-	3	-	387
Percentage of workforce covered by collective bargaining agreements	%	-	53	-	57	-	15	-	89	-	86	-	12	-	76	-	90	-	30
HEALTH AND SAFETY																			
Number of recordable accidents	No.	103	142	75	100	24	24	2	2	2	11	-	5	27	39	16	35	60	68
Recordable incident rate	[no of incidents/100 employees]	0.74*	0.8	0.4*	0.7	0.1*	1.3	0.0*	2.1	0.0*	1.8	-	1.3	0.1*	1.1	0.8	0.9	0.3*	0.7
Work related ill health cases	No.	39	19	35	19	4	0	0	0	0	0	-	0	4	2	22	8	13	9
Work related fatalities	No.	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0

The values presented on this table are actual for 2024 Q4.  
Compleo was acquired in 2023.  
2022 = baseline.  
\*Changes have been made to the baseline data due to recalculation in 2024.

There is no held gender and age information about temporary workers at KOCHI.



# GRI Standard

Statement of Use	Leopold KOSTAL Gmbh & Co. has reported the information cited in this GRI content index for the period 01.01.2023 - 31.12.2023 with reference to the GRI Standards.		
GRI 1 used in 2021	GRI 1: Foundation 2021		
GRI Standard	Disclosure	Location	page
GRI 2: General Disclosures 2021	2-1 Organisational details	About KOSTAL	99
	2-2 Entities included in the organisation's sustainability reporting	List of reported companies	119
	2-3 Reporting period, frequency and contact point	About this report	122
	2-4 Restatements of information	N/A	N/A
	2-5 External assurance	About this report	112
	2-6 Activities, value chain and other business relationships	About KOSTAL	99
	2-7 Employees	Working at KOSTAL	82
	2-8 Workers who are not employees	Working at KOSTAL	82
	2-9 Governance structure and composition	Sustainability governance	8
	2-10 Nomination and selection of the highest governance body	Sustainability governance	8
	2-11 Chair of the highest governance body	Sustainability governance	8
	2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability governance	8
	2-13 Delegation of responsibility for managing impacts	Sustainability governance	8
	2-14 Role of the highest governance body in sustainability reporting	Sustainability governance	8
	2-22 Statement on sustainable development strategy	Sustainability governance	8
	2-23 Policy commitments	Sustainability governance	8
	2-27 Compliance with laws and regulations	Compliance and ethics	26
	2-29 Approach to stakeholder engagement	Materiality and stakeholder engagement	12



GRI Standard	Disclosure	Location	Page
GRI 3: Material Topics 2021	3-1 Process to determine material topics	Materiality and stakeholder engagement	12
	3-2 List of material topics	Materiality and stakeholder engagement	12
	3-3 Management of material topics	Materiality and stakeholder engagement	12
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Compliance and ethics	26
	205-2 Communication and training about anti-corruption policies and procedures	Compliance and ethics	26
	205-3 Confirmed incidents of corruption and actions taken	Compliance and ethics	26
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Compliance and ethics	26
GRI 301: Materials 2016	301-2 Recycled input materials used	Sustainable product design	68
	301-3 Reclaimed products and their packaging materials	N/A	N/A
GRI 302: Energy 2016	302-1 Energy consumption within the organisation	Energy consumption	54
	302-2 Energy consumption outside of the organisation	Energy consumption	54
	302-3 Energy intensity	Energy consumption	54
	302-4 Reduction of energy consumption	Energy consumption	54
GRI 303: Water and Effluents 2016	303-1 Interactions with water as a shared resource	Water	64
	303-2 Management of water discharge-related impacts	Water	64
	303-3 Water withdrawal	Water	64
	303-4 Water discharge	Water	64
	303-5 Water consumption	Water	64



GRI Standard	Disclosure	Location	Page
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Decarbonisation	46
	305-2 Energy indirect (Scope 2) GHG emissions	Decarbonisation	46
	305-4 GHG emissions intensity	Decarbonisation	46
	305-5 Reduction of GHG emissions	Decarbonisation	46
	305-6 Emissions of ozone-depleting substances (ODS)	Decarbonisation	46
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Decarbonisation	46
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Waste	59
	306-2 Management of significant waste-related impacts	Waste	59
	306-3 Waste generated	Waste	59
	306-4 Waste diverted from disposal	Waste	59
	306-5 Waste directed to disposal	Waste	59
GRI 401: Employment 2020	401-1 New employee hires and employee turnover	Working at KOSTAL	82
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Working at KOSTAL	82
	401-3 Parental leave	N/A	N/A
GRI 403: Occupational Health and Safety 2016	403-1 Occupational health and safety management system	Health and safety	86
	403-2 Hazard identification, risk assessment, and incident investigation	Health and safety	86
	403-3 Occupational health services	Health and safety	86
	403-4 Worker participation, consultation, and communication on occupational health and safety	Health and safety	86
	403-5 Worker training on occupational health and safety	Health and safety	86
	403-6 Promotion of worker health	Health and safety	86



GRI Standard	Disclosure	Location	Page
GRI 403: Occupational Health and Safety 2016	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Health and safety	86
	403-8 Workers covered by an occupational health and safety management system	Health and safety	86
	403-9 Work-related injuries	Health and safety	86
	403-10 Work-related ill health	Health and safety	86
GRI 404: Training and Education 2016	404-2 Programs for upgrading employee skills and transition assistance programs	Employee development	91
	404-3 Percentage of employees receiving regular performance and career development reviews	Employee development	91
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Sustainability governance; Working at KOSTAL	8; 82
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Sustainability on our supply chain	32
	414-2 Negative social impacts in the supply chain and actions taken	Sustainability on our supply chain	32
GRI 415: Public Policy 2016	415-1 Political contributions	N/A	N/A
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	Sustainable product design	68
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	N/A	N/A
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	Sustainability product design	68



# ESRS CSRD index

ESRS 2	General disclosure	Location	Page
BASIS FOR PREPARATION			
BP-1	General basis for preparation of the sustainability statements	Sustainability strategy	16
GOVERNANCE			
GOV-1	The role of the administrative, management and supervisory bodies	Sustainability governance	8
GOV-2	Information provided to and sustainability matters addressed by the undertaking's administrative, management and supervisory bodies	Sustainability governance	8
GOV-3	Statement on sustainability due diligence	Sustainability governance	8
STRATEGY			
SBM-1	Market position, strategy, business model(s), and value chain	About KOSTAL	99
SBM-2	Interests and views of stakeholders	Materiality and stakeholder engagement	12
SBM-3	Material impacts, risks and opportunities, and their interaction with strategy and business model(s)	Materiality and stakeholder engagement	12
IMPACT, RISK AND OPPORTUNITY MANAGEMENT			
IRO-1	Description of the processes to identify and assess material impacts, risks and opportunities	Materiality and stakeholder engagement	12
IRO-2	Disclosure Requirements in ESRS covered by the undertaking's sustainability statements	Materiality and stakeholder engagement	12
DC-A	Actions and resources in relation to material sustainability matters	Sustainability strategy	16
METRICS AND TARGETS			
DC-M	305-2 Energy indirect (Scope 2) GHG emissions	Appendixes	98
DC-T	305-4 GHG emissions intensity	Appendixes	98



ESRS E1	CLIMATE CHANGE	Location	Page
E1-1	Transition plan for climate change mitigation	Decarbonisation	46
SBM-3	Material impacts, risks and opportunities and their interaction with strategy and business model(s)	Materiality and stakeholder engagement	12
IRO-1	Description of the processes to identify and assess material climate-related impacts, risks and opportunities	Materiality and stakeholder engagement	12
E1-2	Policies related to climate change mitigation and adaptation	Decarbonisation	46
E1-3	Actions and resources in relation to climate change policies	Decarbonisation	46
E1-4	Targets related to climate change mitigation and adaptation	Sustainability strategy	16
E1-5	Energy consumption and mix	Energy consumption	54
E1-6	Gross Scopes 1, 2, and 3 and Total GHG emissions	Decarbonisation	46
E1-7	GHG removals and GHG mitigation projects financed through carbon credits	Decarbonisation	46
ESRS E2	POLLUTION		
ESRS E3	WATER AND MARINE RESOURCES		
E3-1	Policies related to water and marine resources	Water	64
E3-2	Actions and resources related to water and marine resources	Water	64
E3-3	Targets related to water and marine resources	Water	64
E3-4	Water consumption	Water	64
ESRS E4	BIODIVERSITY AND ECOSYSTEMS		
ESRS E5	RESOURCE USE AND CIRCULAR ECONOMY		
E5-1	Policies related to resource use and circular economy	Resource efficiency	52
E5-2	Actions and resources related to resource use and circular economy	Resource efficiency	52
E5-3	Targets related to resource use and circular economy	Resource efficiency	52
E5-4	Resource inflows	N/A	N/A
E5-5	Resource outflows	N/A	N/A
E5-6	Potential financial effects from resource use and circular economy-related impacts, risks and opportunities	Resource efficiency	52



ESRS S		Location	Page
ESRS S1	OWN WORKFORCE		
SBM-2	Interests and views of stakeholders	Materiality and stakeholder engagement	12
SBM-3	Material impacts, risks and opportunities, and their interaction with strategy and business model(s)	Sustainability strategy	16
S1-1	Policies related to own workforce	Working at KOSTAL	82
S1-2	Processes for engaging with own workers and workers' representatives about impacts	Employee and community engagement	94
S1-3	Processes to remediate negative impacts and channels for own workers to raise concerns	Compliance and ethics	26
S1-4	Taking action on material impacts on own workforce, and approaches to mitigating material risks and pursuing material opportunities related to own workforce, and effectiveness of those actions	Working at KOSTAL	82
S1-11	Social protection	Working at KOSTAL	82
S1-13	Training and skills development indicators	Employee development	91
S1-14	Health and safety indicators	Health and safety	86
S1-15	Work-life balance indicators	N/A	N/A
S1-17	Incidents, complaints and severe human rights impacts and incidents	Health and safety	86
ESRS S2	WORKERS IN THE VALUE CHAIN		
S2-1	Policies related to value chain workers	Sustainability on our supply chain	32
S2-2	Processes for engaging with value chain workers about impacts	Sustainability on our supply chain	32
S2-3	Processes to remediate negative impacts and channels for value chain workers to raise concerns	Sustainability on our supply chain	32
S2-4	Taking action on material impacts on value chain workers, and approaches to mitigating material risks and pursuing material opportunities related to value chain workers, and effectiveness of those actions	Sustainability on our supply chain	32
ESRS S3	AFFECTED COMMUNITIES		



ESRS S		Location	Page
ESRS S4	CONSUMERS AND END-USERS		
S4-1	Policies related to consumers and end-users	Sustainably product design	68
S4-2	Processes for engaging with consumers and end-users about impacts	Sustainably product design	68
S4-3	Processes to remediate negative impacts and channels for consumers and end-users to raise concerns	Sustainably product design	68
S4-4	Taking action on material impacts on consumers and end-users, and approaches to mitigating material risks and pursuing material opportunities related to consumers and end-users, and effectiveness of those actions	Sustainably product design	68

ESRS G		Location	Page
ESRS G1	BUSINESS CONDUCT		
GOV-1	The role of the administrative, supervisory and management bodies	Sustainability governanance	8
IRO-1	Description of the processes to identify and assess material impacts, risks and opportunities	Materiality and stakeholder engagement	12
G1-1	Corporate culture and business conduct policies	Compliance and ethics	26
G1-2	Management of relationships with suppliers	Sustainability on our supply chain	32
G1-3	Prevention and detection of corruption or bribery	Compliance and ethics	26
G1-4	Confirmed incidents of corruption or bribery	Compliance and ethics	26



# List of reported companies

Company	Americas	Asia	Europe +	Head office	Engineering	Production	Research and development	Sales	Service
<b>Automobil Elektrik – Brazil</b> KOSTAL Eletromecânica Ltda. São Bernardo do Campo – SP, Brazil	●						●	●	
<b>Automobil Elektrik – Brazil</b> KOSTAL Eletromecânica Ltda. Cravinhos – SP, Brazil	●					●	●	●	
<b>Automobil Elektrik – Brazil</b> KOSTAL Eletromecânica Ltda. Winston Churchill – SP, Brazil	●					●	●	●	
<b>Automobil Elektrik – Bulgaria</b> KOSTAL SofiaSoft Bulgaria EOOD Sofia, Bulgaria			●				●		
<b>Automobil Elektrik – Bulgaria</b> KOSTAL Bulgaria Automotive EOOD Pazardzhik, Bulgaria			●			●	●		
<b>Automobil Elektrik – China</b> KOSTAL (Shanghai) Management Co., Ltd. Shanghai, China		●				●	●	●	
<b>Automobil Elektrik – China</b> Shanghai KOSTAL – Huayang Automotive Electric Co., Ltd. Shanghai, China		●				●			
<b>Automobil Elektrik – China</b> KOSTAL (Shanghai) Mechatronic Co., Ltd. Shanghai, China		●				●			



Company	Americas	Asia	Europe +	Head office	Engineering	Production	Research and development	Sales	Service
<b>Automobil Elektrik – China</b> KOSTAL (Changchun) Automotive Electric Co., Ltd. Changchun, China		●				●			
<b>Automobil Elektrik – China</b> KOSTAL (Guiyang) Mechatronic Co., Ltd. Guizhou, China		●				●			
<b>Automobil Elektrik – China</b> KOSTAL (Bao Ding) Mechatronic Co., Ltd. Baoding, Hebei Province, China		●				●			
<b>Automobil Elektrik – China</b> KOSTAL (Shanghai) Intelligent Equipment Co., Ltd. Shanghai, China		●				●			
<b>Automobil Elektrik – Germany</b> KOSTAL Automobil Elektrik GmbH & Co. KG Lüdenscheid, Germany			●	●		●	●	●	
<b>Automobil Elektrik – Germany</b> KOSTAL Automobil Elektrik GmbH & Co. KG Dortmund, Germany			●				●		
<b>Automobil Elektrik – Germany</b> KOSTAL Automobil Elektrik GmbH & Co. KG Meinerzhagen, Germany			●			●			
<b>Automobil Elektrik – Germany</b> KOSTAL Automobil Elektrik GmbH & Co. KG Munich, Germany			●					●	
<b>Automobil Elektrik – Germany</b> KOSTAL Automobil Elektrik GmbH & Co. KG Sindelfingen, Germany			●					●	
<b>Automobil Elektrik – Germany</b> KOSTAL Automobil Elektrik GmbH & Co. KG Ingolstadt, Germany			●					●	
<b>Automobil Elektrik – Germany</b> KOSTAL Automobil Elektrik GmbH & Co. KG Wolfsburg, Germany			●					●	



Company	Americas	Asia	Europe +	Head office	Engineering	Production	Research and development	Sales	Service
<b>Automobil Elektrik – United Kingdom</b> KOSTAL UK Ltd. Sheffield, United Kingdom			●				●	●	
<b>Automobil Elektrik – France</b> KOSTAL France Guyancourt, France			●					●	
<b>Automobil Elektrik – India</b> KOSTAL India Private Limited Tamil Nadu, India		●				●	●	●	
<b>Automobil Elektrik – Ireland</b> KOSTAL Ireland GmbH Mountmahon, Ireland			●			●			
<b>Automobil Elektrik – Ireland</b> KOSTAL Ireland GmbH Mallow, Co. Cork, Ireland			●			●			
<b>Automobil Elektrik – Italy</b> KOSTAL Italia s. r. l. Turin, Italy			●					●	
<b>Automobil Elektrik – Japan</b> KOSTAL Japan Co., Ltd. Hiroshima, Japan		●						●	
<b>Automobil Elektrik – Japan</b> KOSTAL Japan Co., Ltd. Kawasaki City, Japan		●					●	●	
<b>Automobil Elektrik – Korea</b> KOSTAL Korea Ltd. Seoul, Korea		●					●	●	
<b>Automobil Elektrik – North Macedonia</b> KOSTAL MAKEDONIJA DOOEL Ohrid Ohrid, North Macedonia			●			●			
<b>Automobil Elektrik – Mexico</b> KOSTAL Mexicana S. A. de C. V. Acambaro, Mexico	●					●			



Company	Americas	Asia	Europe +	Head office	Engineering	Production	Research and development	Sales	Service
<b>Automobil Elektrik – Mexico</b> KOSTAL Mexicana, S.A. de C.V Querétaro, Mexico	●					●	●		
<b>Automobil Elektrik – Mexico</b> KOSTAL Mexicana S. A. de C. V. Queretaro, Mexico	●					●			
<b>Automobil Elektrik – Morocco</b> KOSTAL Maroc, SARL. AU Zone Tanger, Morocco			●			●			
<b>Automobil Elektrik - Poland</b> KOSTAL Automotive Poland Sp. Z o.o. Świdnik, Poland			●			●			
<b>Automobil Elektrik - Poland</b> KOSTAL Automotive Research & Development Center Poland Sp. z o.o. Wrocław, Poland			●				●		
<b>Automobil Elektrik – Sweden</b> KOSTAL Sweden AB Gothenburg, Sweden			●				●	●	
<b>Automobil Elektrik – Spain</b> KOSTAL Eléctrica, S. A. Barcelona, Spain			●			●	●		
<b>Automobil Elektrik – Czech Republic</b> KOSTAL Engineering CR, spol. s r.o. Prague, Czech Republic			●		●				
<b>Automobil Elektrik – Ukraine</b> KOSTAL Ukraina TOV Boryspil, Ukraine			●		●	●			
<b>Automobil Elektrik – Ukraine</b> KOSTAL Ukraina TOV Kyiv, Ukraine			●				●		
<b>Automobil Elektrik – Ukraine</b> Production KOSTAL Ukraina TOV Pereyaslav-Khmelnytsky, Ukraine			●			●			



Company	Americas	Asia	Europe +	Head office	Engineering	Production	Research and development	Sales	Service
<b>Automobil Elektrik – USA</b> KOSTAL of America, Inc. Troy, MI, USA	●						●	●	
<b>Connectors – Germany</b> KOSTAL Kontakt Systeme GmbH Lüdenscheid, Germany			●	●		●	●	●	
<b>Connectors – China</b> KOSTAL (Shanghai) Kontakt Systeme Manufacturing Co., Ltd Shanghai, China		●				●	●	●	
<b>Connectors – Germany</b> KOSTAL Kontakt Systeme GmbH Dresden-Merbitz, Germany			●			●	●		
<b>Connectors – Czech Republic</b> KOSTAL Kontakt Systeme GmbH Jince, Czech Republic			●			●	●	●	
<b>Connectors – USA</b> KOSTAL Kontakt Systeme, Inc. Rochester Hills, Michigan, USA	●					●	●	●	
<b>Industrie Elektrik – Germany</b> KOSTAL Industrie Elektrik GmbH Hagen, Germany			●	●		●	●	●	
<b>Industrie Elektrik - Poland</b> KOSTAL Industrie Elektrik Poland Sp. Z o.o. Świdnik, Poland			●			●			
<b>Solar Electric – Germany</b> KOSTAL Solar Electric GmbH Freiburg i. Br., Germany			●					●	●
<b>Solar Electric – France</b> KOSTAL Solar Electric France SARL Guyancourt, France			●					●	●
<b>Solar Electric – Italy</b> KOSTAL Solar Electric Italia Srl Rivoli (TO), Italy			●					●	●
<b>Solar Electric – Spain</b> KOSTAL Solar Electric Iberica S.L. Paterna, Spain			●					●	●



Company	Americas	Asia	Europe +	Head office	Engineering	Production	Research and development	Sales	Service
<b>Solar Electric – Greece</b> KOSTAL SOLAR ELECTRIC HELLAS E.Π.Ε. Thessaloniki, Greece			●					●	●
<b>SOMA Test Technology – Germany</b> SOMA GmbH			●			●	●	●	
<b>Global Business Services - Hungary</b> KOSTAL Global Business Services Center Ltd. Budapest, Hungary			●						●
<b>Compleo Charging Solutions – Germany</b> Compleo Charging Solutions GmbH & Co. KG Dortmund, Germany			●	●		●			
<b>Compleo Connect GbH - Germany</b> Production Schlagen, Germany			●			●			
<b>Compleo Charging Solutions - Austria</b> Compleo Charging Solutions GmbH Vienna, Austria			●					●	●
<b>Compleo Charging Solutions - Switzerland</b> Compleo Charging Solutions AG Schweiz Zürich, Switzerland			●					●	●
<b>Compleo Charging Solutions - Sweden</b> Compleo Nordic Malmö, Sweden			●					●	●



# About this report

In its third Sustainability Report, the KOSTAL Group reports on its environmental and social performance of 2024, and its progress compared to 2023 and base year (2022). KOSTAL is committed to conducting its activities sustainably. We understand our impacts and manage our business in a way that respects the environment and surrounding communities, and that brings positive benefits to society.

This report is addressed to our stakeholders - employees, customers, suppliers, public authorities, NGOs - and all interested members of the public. We aim to present a transparent and credible representation of who we are, what we do, and how we do it.

## Period covered by the report

The focus of this report is the calendar year 2024 (1 January 2024 to 31 December 2024).

## Reporting cycle

KOSTAL intends to publish its Sustainability Report annually.

## Scope of the report

The scope of this report is KOSTAL Group's global operations covering all manufacturing and engineering locations as well as sales offices worldwide.

## GRI and ESRS compliance

The Sustainability Report was prepared based on the GRI Standards (GRI-referenced) and ESRS requirements.

The disclosures referenced by this material are presented in each subchapter and in the 'ESG data' chapter.

## External assurance

No third-party verification was performed.

## Contact

We value your feedback on our report. If you have any comments or suggestions regarding our Sustainability Report, please contact KOSTAL Group at [sustainability@kostal.com](mailto:sustainability@kostal.com)