



# Sustainability Report

2023 | 2024





# Foreword

Dear readers,

At XAL, we have anchored sustainability as a core value and a strategic factor in our management decisions. We have been taking steps towards more sustainable business practices for many years. Be it the use of geothermal energy at our headquarters in Graz, the installation of photovoltaic plants in Belgium, Slovenia and Austria and the use of biomass instead of gas at our production site in Slovenia. We also strive to optimise the social impact of our actions by summarising the principles of responsible co-operation with all our stakeholders in our Code of Conduct.

We are now also focusing on sustainability at our trade fair appearances. The principle of recycling and reuse has been radically implemented in the design of our exhibition stands. This has enabled us to minimise the use of resources and reduce the necessary transport volume by over 80%.

In 2024, we were awarded the EcoVadis Platinum certificate for this commitment for the first time. This international and independent rating is an important award that recognises sustainability and responsible actions in all areas of our business activities and motivates us to continue this path together.

Last year, our focus was on expanding the database and further improving data quality in order to create a reliable statement about our environmental footprint – at product level by developing additional environmental product declarations and at company level by determining our corporate carbon footprint. This gave us valuable insights into which of our measures have had the greatest impact so far and where there is still room for improvement. The results of both methods also highlighted the significant

impact that energy consumption has on the environment – confirming that our long-standing endeavours to find the most efficient lighting solutions make a significant contribution to sustainable development. We will continue this path by making lighting even more sustainable for our customers along the entire value chain. Our sustainability report, which was prepared with reference to the GRI standard, provides a comprehensive overview of our social responsibility throughout our organisation. It provides an insight into our greenhouse gas inventory, sustainable measures in production, logistics, sales and administration, as well as the measures taken by our subsidiaries. In this report, you can find out more about our commitment to sustainability and responsible practices.

We recognise that sustainability is not just about reducing emissions, but also about people's health and well-being. That is why we have included the human factor and show you how we are constantly working to improve working conditions and promote equal opportunities.

We are committed to a sustainable future. That is why we are determined to reduce emissions in all areas of our operations, both, at our production sites and at our sales and administrative locations. Our goal is to achieve carbon neutrality at our sites by 2030, which is not only environmentally friendly but also socially fair. By using more efficient methods in production, using renewable energy sources, improving working conditions and promoting equality, we hope to contribute to a better world for all.

We hope you enjoy reading our sustainability report!

Your XAL management and sustainability team

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# 1. Introduction

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# XAL and sustainability

XAL prioritizes sustainability – before we show you how we did last year, we provide context on who we are and what sustainability means to us in this chapter.

## Key facts

**1 448**

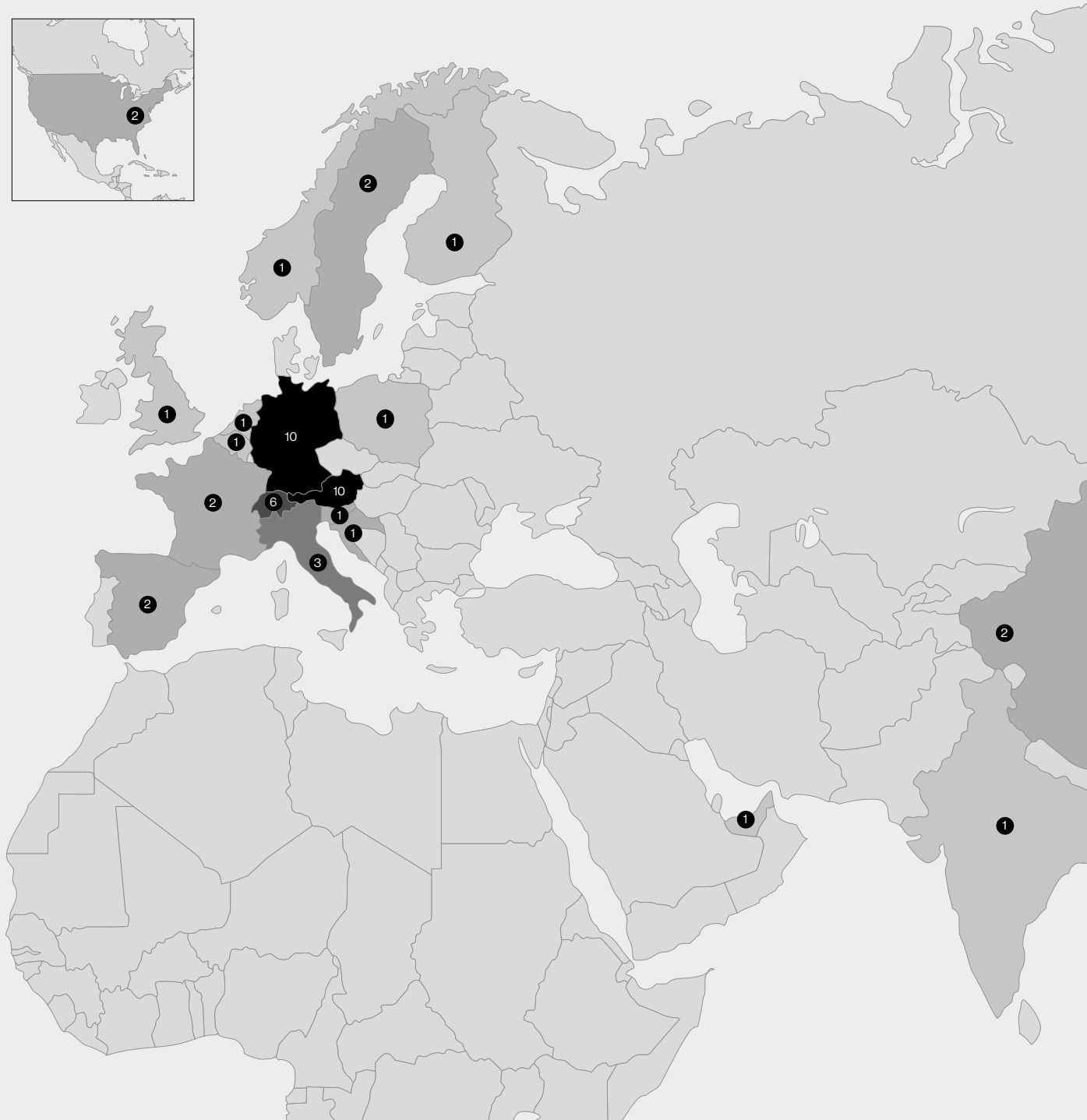
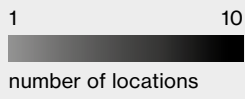
employees

**189**

million € turnover

**19**

countries





# 1.1 About XAL

XAL has been a leading manufacturer of high-quality lighting systems for shops, offices, hotels, and private homes for 35 years. Founded in 1989, the company is still family-owned today. From the very beginning, XAL's passion for light has brought it together with recognised personalities from the fields of architecture and design. This fruitful exchange led to the internationality that characterises the company today. More than 1 400 employees develop and produce lighting systems in three production facilities on two continents and supply customers worldwide via an extensive network of sales companies. XAL, with its headquarters in Graz, Austria, develops high-quality lighting solutions that are characterised by energy efficiency, functionality, and aesthetics.

The XAL Group unites various lighting brands under one roof – while XAL and Wever & Ducre joined forces over ten years ago, Wästberg has only been part of the corporate family since 2021. During the more than three decades that XAL has been operating, the company has experienced both strong growth and constant change and adaptation, learning the importance

of sustainability in the process: Only the values, relationships, habits and strategies that endure in a dynamic world enable sustainable development.

Quality, sustainability, and excellent working conditions are a priority for all our companies. The main production sites (including the headquarters) have had an externally accredited management system for quality (ISO 9001), environment (ISO 14001) and health and safety (ISO 45001) since 2015 and 2019, respectively. In 2020, we joined the UN Global Compact Initiative, whose principles guide our interactions with each other and our stakeholders, our supply chain management, and our resource strategies.

Our efforts were rewarded in 2024 with a platinum award from EcoVadis. You can find out more about this in chapter “3.3 Taking corporate responsibility” on page 59.



## 1.1.1 Lighting without limits – and beyond

With innovative lighting solutions that can be flexibly adapted to the needs of customers, XAL is a reliable project partner in the field of lighting technology. As a specialist in LED lighting, we recognise the major influence that lighting has on people's well-being. Our focus is on creating healthy and soothing environments for people in different areas such as schools, hospitals, restaurants, offices, and shops. We aim to design spaces that promote well-being and at the same time contribute to energy savings on a large scale. By using highly energy-efficient LED lighting solutions, XAL helps to minimise energy consumption at its customers' sites. XAL is a global player in the lighting sector and covers a wide range of design and technical options for

various applications with the XAL, Wever & Ducre and Wästberg brands. But we offer far more than just luminaires – with customised development, professional lighting design including intelligent control systems and replacement as well as maintenance services, we offer comprehensive project support, making us a strong partner for projects of all sizes and degrees of complexity. Our corporate activities even go beyond lighting: with Green Electrics and XALAX, which offer services in the field of photovoltaics and process digitalisation respectively, two further companies have become part of the Group in recent years whose activities contribute to sustainable development.

## 1.1.2 It's all about people

As climate change is moving forward, it shows how important efficiency and sustainable solutions are. In order to create top-quality, sustainable solutions, a team of committed individuals is essential. On the way to this goal, we want to put our colleagues around the world at the centre of our work.

Our dedicated team of technicians takes great pride in developing cutting-edge solutions that offer users the best lighting tools for their diverse needs. With our 580 production employees, manufacturing is one of the largest areas of the company. With two production sites in Europe and one in Asia, we strive to make production processes as efficient as possible while minimising transport distances. Our sales teams work

closely with local designers in all countries to ensure that the best solutions are found and implemented. Effective communication and cultural understanding are key to creating a productive and balanced working environment. To broaden our perspective and foster meaningful working relationships with departments in different countries, we encourage cross-company exchange.

This initiative enables individuals to broaden their horizons and gain valuable insights from different perspectives. Find out more about the talents behind our innovative lighting solutions in chapter "3. Social sustainability and sustainable governance" from page 45 onwards.

Branch	Location	Employees
<b>Research and Development</b> XAL, Wever & Ducre, Wästberg	Austria, Spain	144
<b>Production and Logistics</b> XAL, Wever & Ducre, Wästberg	Austria, Belgium, Slovenia, China	697
<b>Sales</b> XAL, Wever & Ducre, Wästberg	19 countries	371
<b>Other</b> XAL Holding, XALAX, Green Electrics	Austria, Croatia	236
<b>Total</b>		<b>1 448</b>

**Fig. 01** Total number of employees (headcount) by area of activity and location

Country	Employees
Austria	625
Slovenia	259
China	206
Belgium	95
Germany	67
Other countries Europe	185
Other countries rest of the world	11
<b>Total</b>	<b>1 448</b>

**Fig.02** Countries with more than 50 employees (headcount)

# 1.1.3 Our commitment to climate neutrality

Our goal is clear: we want to largely reduce the emissions directly attributable to XAL (Scope 1 and 2) by 2030 at the latest. We will achieve this goal by continuously reducing our emissions, particularly for fuel, heating and cooling as well

as electricity. In addition, we will also continuously reduce our indirect emissions (Scope 3) on the way to net zero. We will offset the remaining unavoidable emissions.



“We will have achieved climate neutrality for Scope 1 and 2 by 2030.”

Martin Dlaska, Managing Director of XAL Holding GmbH

We have been communicating our commitment to the fight against climate change as a participant in the UN Global Compact Initiative since 2020. By implementing numerous measures and anchoring the 10 principles of the UN Global Compact at all organisational levels, XAL is making an important contribution to compliance with these principles and is becoming increasingly transparent in the process. The preparation of the first XAL Sustainability Report for the 2022 | 2023 financial year was an important step towards strengthening our responsibility for sustainable development and demonstrating our potential for action in the fight against climate change. Measures that we began to implement

even before the first sustainability report was published are having an impact and are bringing us closer to our goal year after year.

With this report, we are continuing this work and supplementing the reporting on our greenhouse gas footprint with additional categories. This means that our Scope 3 footprint is now complete, providing an objective basis for defining a quantitative target and the associated reduction strategy for Scope 3 emissions.



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## 2.1 Our GHG emissions at a glance

This chapter provides an overview of our GHG emissions classified by their source of origin according to GHG Protocol (Scope 1, 2 and 3). Which business processes have the greatest impact on the results,

how we already have reduced our emissions and how we plan to further reduce them on our path to climate neutrality is outlined in the following chapters of this section.

### Key facts

# -1 144

t CO<sub>2</sub>-eq reduction Scope 1 and 2 compared to the base year

# -53.4%

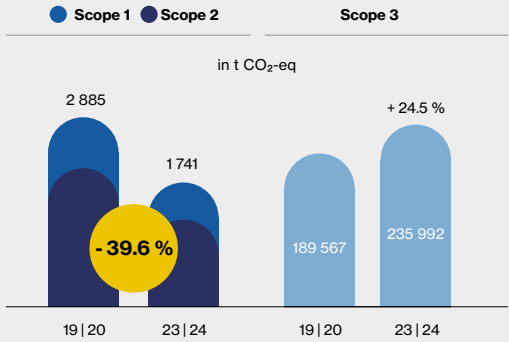
reduction total emissions (Scope 1-2) per € 100 000 turnover compared to the base year

# -4.6%

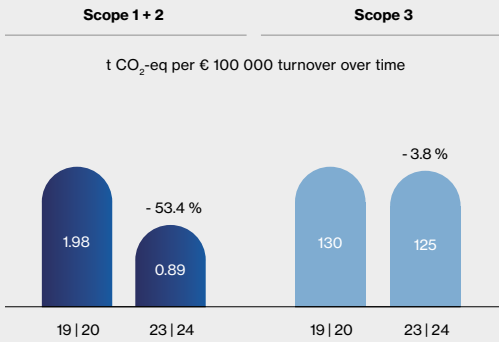
Reduction total emissions (Scope 1-3) per € 100 000 turnover compared to the base year

	Base year 2019 20	2022 23	2023 24	Change to base year	
				in %	per €100 000 turnover
<b>Turnover in million €</b>	146	178	189	29.5%	-4.6%
<b>Emissions in t CO<sub>2</sub>-eq</b>					
<b>Scope 1</b>					
Fuel	642	552	599	-6.7%	-27.9%
Heating	274	290	324	18.1%	-8.8%
Refrigerants	37	78	57	54.1%	19.0%
Process Emissions	n.a.	0	0		0.0%
<b>Total Scope 1</b>	<b>953</b>	<b>920</b>	<b>980</b>	<b>2.8%</b>	<b>-20.6%</b>
<b>Scope 2</b>					
Electricity	1 932	1 877	756	-60.9%	-69.8%
District heating and cooling	0	2	5		
<b>Total Scope 2</b>	<b>1 932</b>	<b>1 879</b>	<b>761</b>	<b>-60.6%</b>	<b>-69.6%</b>
<b>Scope 3</b>					
3.1 Purchased goods and services	39 268	36 516	37 395	-4.8%	-26.4%
3.2 Capital goods	n.a.	n.a.	1 564	-	-
3.3 Indirect emissions	539	498	361	-33.1%	-48.3%
3.4 Upstream Transportation	n.a.	n.a.	3 399	-	-
3.5 Waste from operations	n.a.	n.a.	131	-	-
3.6 Business Travel	2 604	1 781	1 914	-26.5%	-43.2%
3.7 Employee commuting	n.a.	n.a.	1 686	-	-
3.9 Downstream Transportation	n.a.	n.a.	178	-	-
3.11 Use phase	147 156	206 247	188 910	28.4%	-0.8%
3.12 End of life	n.a.	n.a.	453	-	-
<b>Total Scope 3</b>	<b>189 567</b>	<b>245 043</b>	<b>235 992</b>	<b>24.5%</b>	<b>-3.8%</b>
<b>Total Scope 1, 2 and 3</b>	<b>192 451</b>	<b>247 842</b>	<b>237 733</b>	<b>23.5%</b>	<b>-4.6%</b>

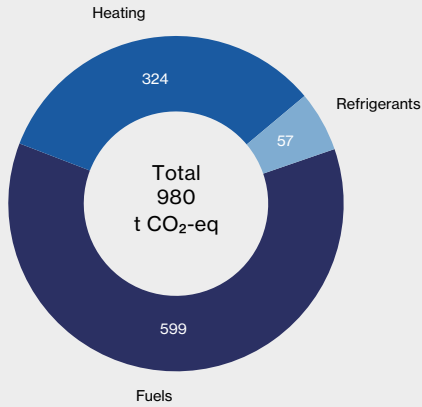
\*values for previous year corrected \*\*values for base year and previous year corrected



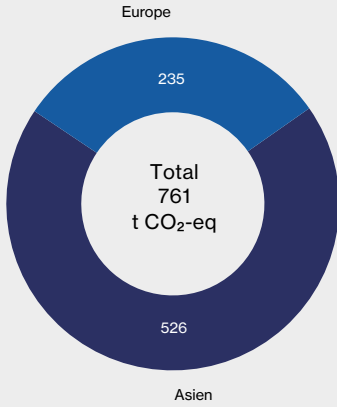
**Total emissions**  
for Scope 1 and 2 as well as Scope 3 in t CO<sub>2</sub>-eq compared to the base year



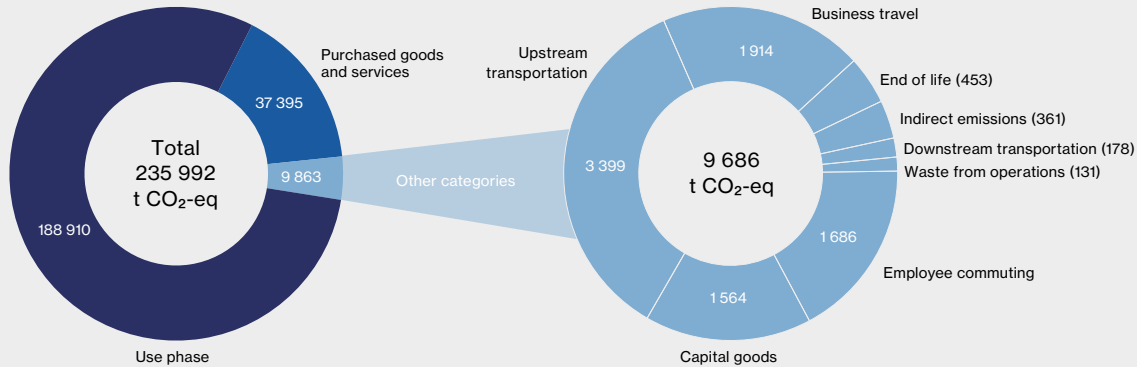
**Emissions intensity**  
The denominator used for calculating the emissions intensity is the total sales revenue for the respective period



**Scope 1 total**  
Breakdown into fossil fuels, refrigerants, heating



**Scope 2 total**  
Purchased electricity (market based) and district heating | cooling by region



**Scope 3 total**  
Purchased goods and services, capital goods, indirect emissions (from heat, fuels and electricity), upstream transportation, waste from operations, business travel,

downstream transportation, use phase of sold products, end-of-life treatment of sold products

# Overview

In this chapter, we show you which areas have the biggest potential for emission reduction of our products and how we are contributing to the transition to a sustainable economy in the future.

### Key facts

# 37 395

t CO<sub>2</sub>-eq from purchased goods and services

# 188 910

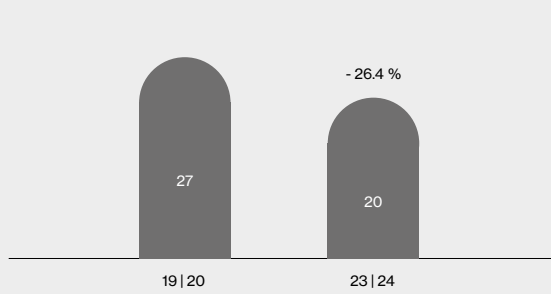
t CO<sub>2</sub>-eq during use phase (35 000h average life span assumed)

# - 26.4%

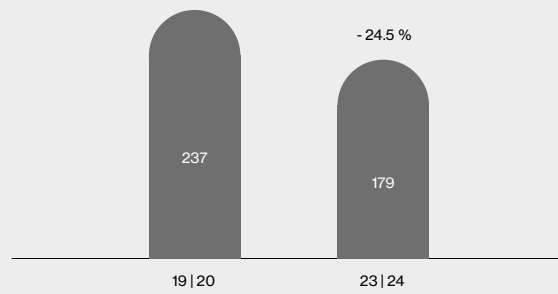
Emission reduction purchased goods and services per € 100 000 turnover compared to the base year

# - 24.5%

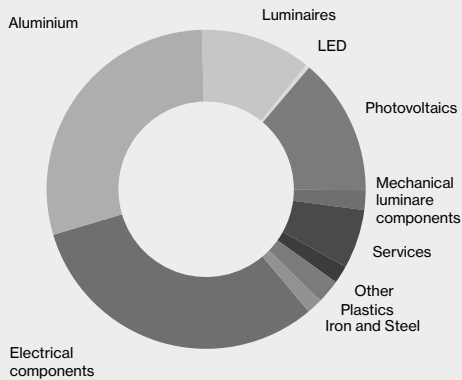
Emission reduction in use phase per piece of sold product compared to the base year



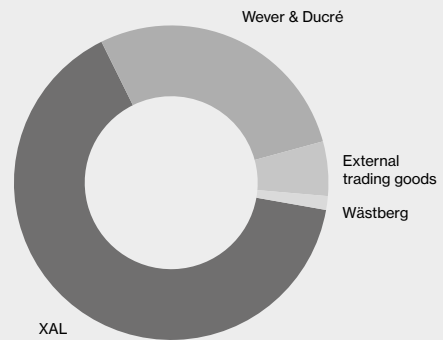
Emissions in t CO<sub>2</sub>-eq of purchased goods and services per €100 000 turnover compared to the base year



Emissions in t CO<sub>2</sub>-eq during the use phase per piece of sold product compared to the base year



Attribution t CO<sub>2</sub>-eq emissions for purchased goods and services by material type 2023 | 2024



Attribution t CO<sub>2</sub>-eq emissions during the use phase of our products by brand 2023 | 2024

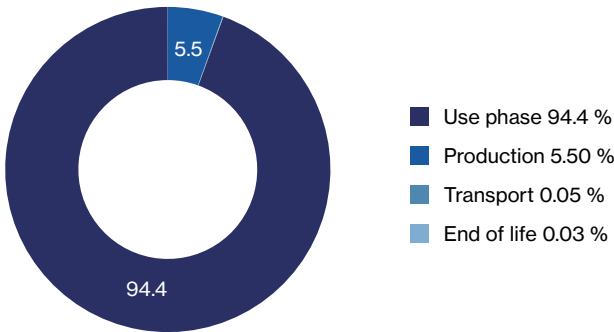


# 2.2 Developing sustainable lighting

The materials used and the energy efficiency of a luminaire account for the largest share of our environmental impact. This was not only the result of our calculations at company level, but also of in-depth LCA studies carried out for five of our products. The results of the LCA studies were published in environmental product declarations prepared in accordance with ISO 14025 and EN 15804:2012+A2:2019.

As you can see below, over 99% of the total emissions of our luminaires are caused during the production and use phase. This applies not only to greenhouse gas emissions (see below), but also to other environmental impacts that are assessed in the environmental product declarations, such as the depletion potential for minerals, metals and fossil resources or water consumption.

**GWP total Average of published EPDs**



**Fig. 03 Distribution of greenhouse gas emissions in % (GWP fossil without credits)**

We start our sustainability initiatives in the early stages of product development, as we know that these phases play a decisive role in the subsequent sustainability of the market-ready product (Scope 3.1 and 3.11 according to the

GHG Protocol). For this reason, especially our international research and development teams are working on solutions to make our products more sustainable.

## 2.2.1 Making our materials sustainable

Generally speaking, luminaires consist of the luminaire body, a light source, electronic components for connecting the luminaire to a power source (usually an LED converter) and – depending on the luminaire – other electronic components (e.g. for dimming or light control). The luminaire body can vary greatly from series to series and ranges from small spotlights and track systems with various installation options to large surface luminaires. In addition to electronic components, the main materials used are aluminium and plastics. The mass-based data collection of purchased materials in Scope 3.1

is supplemented in this report for the first time by cost-based purchasing data for goods and services.

These newly added elements resulted in a slight increase in emissions compared to the previous year. Despite the increase in sales compared to the previous year, emissions for purchased materials decreased in absolute terms in the mass-based categories for several reasons. One reason for this is the improvement in data quality. Part of the decline can also be attributed to measures implemented during the reporting

period to make our materials more sustainable. During the reporting period, for example, we continued to work on using more paper and cardboard as packaging materials instead of plastics. Reusable plastic packaging used during production was replaced by reusable cardboard packaging at the Slovenian production site. This resulted in an increase in emissions in the paper and wooden packaging category. The reduction due to the lower purchase quantities for plastic packaging cannot be seen in Figure 04, as the purchase quantities for other sub-categories summarised in this category have increased. However, we are not only trying to replace plastic with paper and cardboard but are also continuously reducing the use of paper and cardboard.

The reduction in emissions in the LED category is primarily due to a change of manufacturer of a frequently used LED type during the reporting period. These offer a lower weight per unit – which reduces the footprint – while at the same time increasing efficiency. A decrease in the average weight also led to a reduction in emissions in the electronic components category.

In the reporting period, the company largely switched to halogen-free cables. The reduction in the luminaire category is partly due to

the improvement in data quality for purchased luminaires and partly to the reduction in the emission factor used. The average footprint for all products for which EPDs (Environmental Product Declarations) were created was used as the data basis for defining the emission factor. As new EPDs were published in the reporting period, the average value was reduced by the inclusion of this data.

In addition, reductions in purchasing volumes in various categories can also be attributed to the fact that stocks built up in previous years were used up. Increases in the product categories relating to the installation of photovoltaic plants are attributable not only to the significant increase in sales due to the higher order volume, but also to improvements in data quality for the company Green Electrics Licht & Energietechnik GmbH. The activities of this company include the sale and installation of photovoltaic plants as well as the installation, maintenance, optimisation, and repair of lighting systems. The items purchased for this purpose, such as photovoltaic panels, storage systems and inverters, are summarised in the photovoltaics category.

Materials	t CO <sub>2</sub> -eq 19 20	t CO <sub>2</sub> -eq 22 23	t CO <sub>2</sub> -eq 23 24	Change to base year
Aluminium	21 068	13 712	10 342	-24.6%
Iron and steel	462	412	564	36.9%
Plastics	896	685	854	24.6%
Electronic components	12 069	12 062	11 169	-7.4%
LED*	470	220	145	-34.3%
Luminaires	1 656	5 598	3 974	-29.0%
Mechanical luminaire parts	611	806	710	-12.0%
Paper   wood packaging	1 110	1 360	1 343	-1.2%
Photovoltaics	n.a.	972	4 928	407.0%
Other mass based	926	688	600	-12.7%
Services cost based	n.a.	n.a.	2 123	-
Other cost based	n.a.	n.a.	643	-
<b>Total</b>	<b>39 268</b>	<b>36 516</b>	<b>37 395</b>	<b>+2.4%</b>
<b>Turnover in million €</b>	<b>146</b>	<b>178</b>	<b>189</b>	<b>+6.2%</b>

**Fig. 04** Total emissions for purchased goods and services in t CO<sub>2</sub>-eq over time \*value for 22|23 was corrected

Product development uses different approaches to further reduce the emissions associated with the materials used. We work together with suppliers to make the materials used more sustainable. For example, aluminium profiles have a large range in terms of their emission levels. Depending on where they are manufactured and the proportion of recycled aluminium in the end product, the greenhouse gas emissions in kg of CO<sub>2</sub> equivalents per kg of profile can vary by up to a factor of 10.

The country of production plays a special role for materials with energy-intensive manufacturing processes. The local electricity mix, whether predominantly from fossil or renewable sources, has a significant impact on the environmental impact of products. This is why XAL sources aluminium profiles almost exclusively from Europe. A higher proportion of recycled aluminium not

only reduces the footprint, but also has a positive effect on the extraction of mineral and metal resources. The increase of recycled content in the materials used is continuously evaluated.

In addition to this approach, which can help to reduce the environmental footprint of existing designs, the research and development department is also working on sustainable product innovations. These innovations focus on reducing the use of materials in general as much as possible and using innovative materials to replace emission-intensive materials such as aluminium or materials that are problematic for the circular economy, such as some plastics. For example, the reflector made of BPA-free plastic for the MOVE IT PRO product series, launched on the market in 2024, was developed during the reporting period.

#### **Sustainable product innovation out of the printer**

During the reporting period, components were produced using a 3D printer for the first time. This technology not only makes it possible to reduce the weight of our luminaires, but also to replace mechanical product components made of emission-intensive materials such as aluminium or steel. The material used for 3D-printed components is bio-based plastic, which uses sugar cane or corn instead of petroleum as a raw material, for example. If the printing also takes place at a location with electricity from renewable sources, 3D printing helps to reduce our emissions in the production of our luminaires.

## 2.2.2 Efficient lighting for more sustainability

Luminaires need electricity to function. This simple fact has a significant impact on the emissions profile of the XAL Group. While companies in many other sectors have no emissions during the use phase of their product, the energy consumption of our products is the largest area in our carbon footprint.

A simple example: a company that manufactures a wooden table must take into account the greenhouse gas emissions that occur until the table reaches the customer. After that, there are no more emissions until the product has reached the end of its life. With our luminaires – as with most other electrical or electronic products – most of the emissions are generated after the luminaire has reached the customer. Of course, XAL only has a limited influence on the emissions that occur during the use phase, as these depend, for example, on our customers' electricity mix. Nevertheless, we make a major contribution to reducing emissions during the use phase by designing our luminaires in such a way that they consume as little energy as possible. The

total emissions figures in the use phase are closely linked to our commercial success – the more luminaires we sell, the more electricity is consumed, which leads to higher emissions. However, emissions per unit sold have decreased by 7% since the previous year. This reduction is mainly due to higher efficiency and therefore lower average energy consumption of the products we sell. A smaller part of the decrease can be attributed to improved data quality.

All products containing a light source and separately sold light sources were included in the calculation.

The emission factor for electricity consumption was defined as a weighted average between an electricity mix for Europe and an electricity mix for the rest of the world based on sales per country during the reporting period. The average service life was assumed to be 35 000 hours and the proportion of dimmable products, for which a 25% reduction in consumption is assumed, was defined as 65% of products sold.

“Besides using high-quality LED and converters, we further increase efficiency through innovative materials and coating technologies for reflectors that maximise lumen output as well as new LED-technology, which makes especially LED with a high colour rendering index more efficient.”

Christian Kügerl, Head of Product Development, XAL GmbH

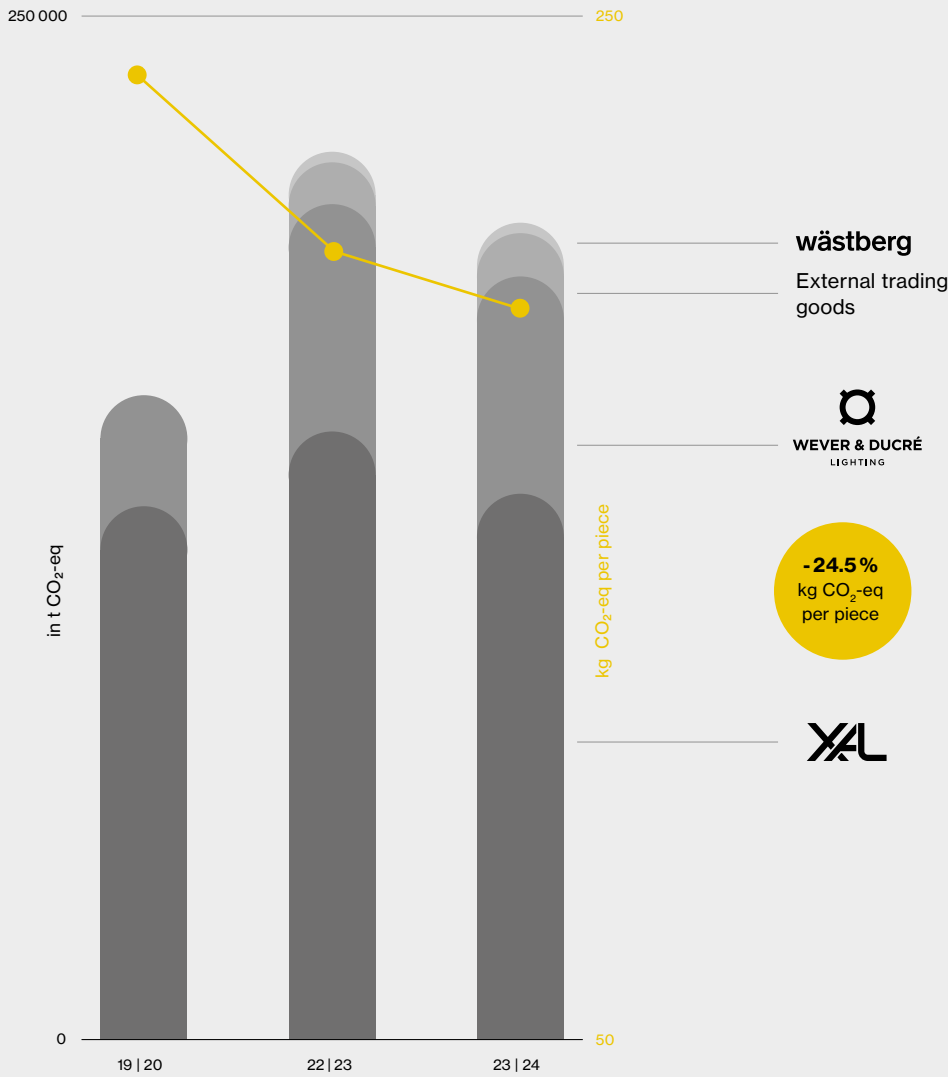
So, what can we do to make our products more energy efficient? Finding solutions for more energy-efficient lighting has been a core competency of our research and development team for many years. XAL was definitely an early adopter when LED-technology was introduced, and a lot has happened since then. The power consumption of a luminaire can be reduced via different approaches. One way is to reduce the general consumption during operation.

Another option is to take technical measures to ensure that the light is only used when required and to the extent necessary. This is a win-win situation: XAL reduces its footprint for products sold and customers reduce their footprint for electricity consumption. The first approach is implemented by using high-quality LEDs and control gear, and the product designs are adapted to achieve the highest light output with the lowest possible power consumption. In this way, up to 190lm/W can be achieved for the MOVE IT PRO series launched on the market in 2024. The second approach is implemented by integrating intelligent lighting controls with motion and daylight sensors into our luminaires and lighting systems. By offering customised lighting solutions and light planning, we help our customers to actively reduce their electricity

consumption. Reductions are achieved by using the right lighting solution for each area of application and avoiding unnecessarily strong lighting. However, customised solutions are not just luminaires that are specifically tailored or adapted to the customer's needs.

For example, the energy efficiency of a lighting system is significantly increased when a new light source replaces an old non-LED light source by offering customised kits for existing luminaires. At the same time, material emissions are saved as only the light source is replaced instead of the entire luminaire.

As a result of the development work of previous years, the VARO 80 S luminaire was updated in the reporting period. By using state-of-the-art LED, we were able to achieve an increase in efficiency of almost 64% to 149lm/W. Another example of this is the increase in efficiency for the TWIST 100 of just under 54%. Further projects were launched in the reporting period that will continue to drive forward the increased efficiency of our products in the future. We also worked on developing new components with a BPA-free plastic that is less harmful to the environment than other plastics.



**Fig.06** Use phase of total sold products in t CO<sub>2</sub>-eq over time per brand

Use phase CO <sub>2</sub> -eq	XAL	Wever & Ducré	Wästberg	External	Total
<b>t total*</b>					
19 20	119 653	27 123	n.a.	n.a.	146 776
22 23	137 914	55 529	2 589	10 215	206 247
23 24	122 703	53 078	2 554	10 576	188 911
<b>kg piece*</b>					
19 20	324	108	n.a.	n.a.	237
22 23	282	103	167	406	193
23 24	258	98	154	517	179
<b>Change in kg piece in % compared to the base year</b>	-20.3%	-9.6%	n.a.	n.a.	-24.5%

**Fig. 06** Comparison of total t CO<sub>2</sub>-eq and kg CO<sub>2</sub>-eq per unit of product sold over time per brand  
\*values for 19|20 and 22|23 corrected

#### **We reduce our footprint thanks to our own luminaires**

During the reporting period, we used the energy-saving potential of our luminaires and replaced the lighting system in our own production facilities at the Graz site. 68 luminaires equipped with efficient LED replaced 108 luminaires with discharge lamps. In addition, intelligently controlled motion sensors provide targeted lighting. This combination of efficient lighting and modern sensor technology contributed to a significant reduction in electricity consumption at the Graz site during the reporting period. In addition, the lower number of luminaires also optimised material emissions for replacement.

## 2.2.3 End-of-life treatment of sold products

In order to include the entire life cycle of our products in our reporting, end-of-life data was collected for the first time for this report. To this end, the items sold were grouped into categories with similar material compositions and scenarios were then defined for the disposal of the respective materials. These scenarios served as the basis for defining the emission factors for each material category. The figure on the next page shows the materials to which the products were assigned and the amount of emissions resulting from the disposal of each material category.

Further information can be found in chapter “4.1 About this report” from page 73 onwards.

The following figure shows that the majority of emissions are made up of metals. The high recycling rates for aluminium and steel with the relatively high energy input for the preparation of the materials for the recycling process led to

this result. The overview shows higher emissions for the categories with higher recycled content, such as metals or paper and cardboard, as recycling is associated with higher energy consumption than thermal recovery or landfill. With this method, the ecological benefits of recycling only become visible in the subsequent life cycle, i.e. when a new product is manufactured from the recycled materials. This is because the use of secondary materials reduces the footprint of the manufactured materials. Compared to other categories, the emissions in the category end-of-life of products are low. With regard to the total emissions in Scope 3, this category therefore offers less potential for significant reductions. In our product development, we strive to take steps to optimise the return of the raw materials used into the value creation cycle. In addition, the use of recycled materials allows us to reduce our footprint for 3.1 (purchased goods and services) and also minimise other environmental impacts caused by the extraction of primary materials.

Emissions at the end-of-life of sold products

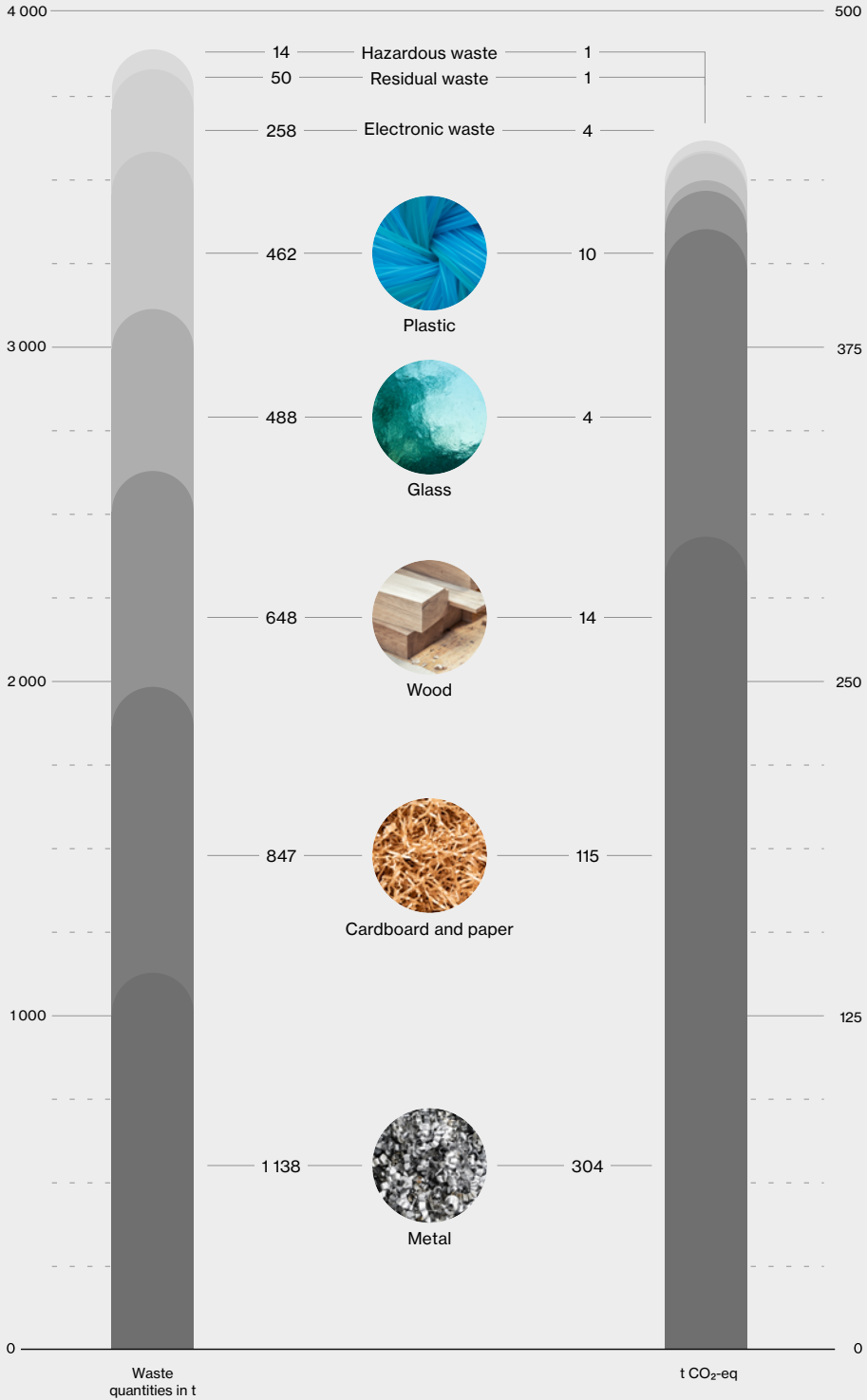


Fig. 07 Quantities in tonnes and emissions in tonnes CO<sub>2</sub>-eq generated at the end of the product life (Scope 3.12)

# Overview

In our plans to reduce our emissions in Scope 1 and 2 to zero by 2030 at the latest, the energy consumption of our facilities is a crucial factor. In this chapter, we show which measures we have taken and what we plan to do to reach our goals.

## Key facts

**381**

Scope 1 in t CO<sub>2</sub>-eq  
heat | refrigerants

**756**

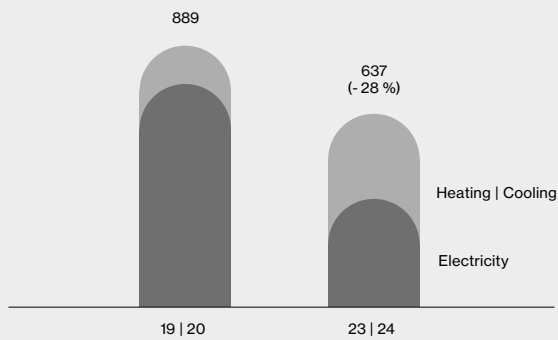
t CO<sub>2</sub>-eq from electricity  
in Scope 2

**+70**

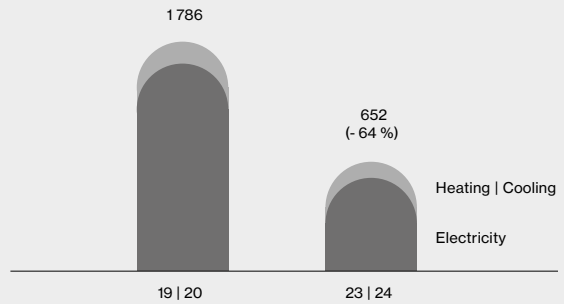
t CO<sub>2</sub>-eq for heat |  
refrigerants in Scope 1

**-1 176**

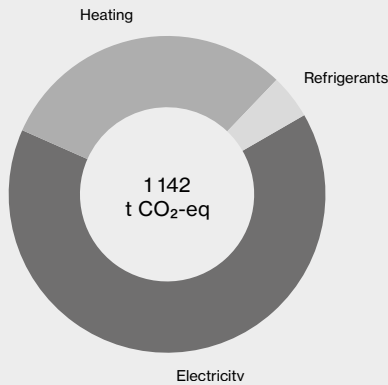
t CO<sub>2</sub>-eq for electricity  
in Scope 2



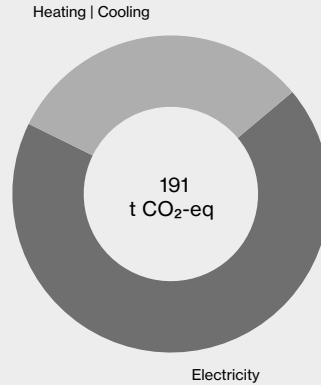
Total direct and indirect emissions of our facilities in Europe by energy category (Scope 1 and 2, excl. fuels) compared to the base year in t CO<sub>2</sub>-eq



Total direct and indirect emissions of our facilities in Asia by energy category (Scope 1 and 2, excl. fuels) compared to the base year in t CO<sub>2</sub>-eq



Allocation of Scope 1 and 2 emission of our facilities by energy category in t CO<sub>2</sub>-eq 2023 | 2024



Allocation of indirect emissions (Scope 3.3, excl. fuels) of our facilities by energy category in t CO<sub>2</sub>-eq 2023 | 2024



# 2.3 Sustainable production and logistics

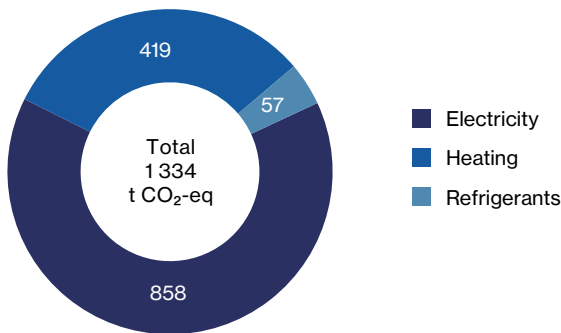
As described in the previous chapter, XAL undoubtedly has the greatest potential to contribute to the fight against climate change by developing highly efficient luminaires to reduce overall electricity consumption and thus contribute to the transition to a sustainable and circular economy. Nevertheless, it is still very important for us to reduce the environmental impact of our own production and logistics. In this chapter, we take a closer look at the greenhouse gas emissions caused by our facilities.

In terms of the GHG Protocol, this includes direct Scope 1 emissions for heating|cooling and process heat, refrigerants, and other process emissions as well as indirect Scope 2 emissions for purchased electricity. Scope 1 emissions occur directly at our sites, for example when heating oil is burnt for heating, while Scope 2 emissions for purchased electricity do not arise when the electricity is used at our sites, but when it is generated at the power plant. In contrast to indirect Scope 3 emissions, we have a higher degree of control over Scope 2 emissions. In accordance with the GHG Protocol, the indirect emissions from our energy consumption (Scope 3.3) – i.e. emissions that occur in the upstream of our sites' supply chain before combustion – are reported separately. Fossil fuels, which belong to Scope 1 according to the GHG Protocol, are included in chapter "2.4 Making sales and

day-to-day work sustainable" on page 37 as they are mainly attributable to our sales activities. Depending on the activities of the various companies and locations of the XAL Group, we have recognised different focal points for the use of reduction potential. Our production and logistics processes at our sites in Austria, China, Belgium and Slovenia consume a larger amount of energy compared to our office operations. The production processes are fuelled by electricity and heat, which are consumed in addition to the quantities required for the basic functions of the building and administration, such as heating | cooling, illumination, and IT equipment.

There are no production processes that emit greenhouse gas emissions. Small quantities of environmentally harmful emissions occur in our Chinese production facility during wet painting. This amounts to less than half a tonne in total.

**Total emissions of our facilities**



**Fig. 08** Total emissions from our locations (Scope 1, 2 and 3.3) excluding fuel consumption during the reporting period in t CO<sub>2</sub>-eq

We are constantly looking for ways to reduce our energy consumption and emissions to create a more sustainable future. We value sustainable practices within our production and logistics chain and are committed to reducing our energy consumption and emissions to minimise our impact on the environment. To achieve this goal, we regularly review our processes and look for

innovative solutions to ensure that our operations are in line with our sustainability goals. In view of the specific level of greenhouse gas emissions in production and logistics, measures to reduce emissions were intensified in the reporting period, particularly in the area of electricity, as explained in more detail on the following pages.

## 2.3.1 Sustainable heating and cooling for our facilities

Heat is required for various production processes at our production facilities in China and Slovenia. While these processes in China are currently still mainly fuelled by natural gas, we use biomass as a low-emission option for our production processes – especially for powder coating – in Slovenia.

### **Increasing the efficiency of our processes**

Previously, temperatures of between 180°C and 200°C were required in a curing oven to cauterise the coating powder during powder coating. During the reporting period, we were able to switch to so-called low-temperature powders, which are now available on the market and enable curing at temperatures as low as 160°C. This has significantly reduced energy consumption. This enabled us to significantly reduce our energy requirements. The powder coating plant in

Slovenia also avoids emissions by using the heat generated during powder coating for the drying process of the parts. Our headquarters in Graz is largely heated and cooled using groundwater heat pumps. Fossil fuels in the form of heating oil and natural gas play a subordinate role at the headquarters, as they are only used in the oldest parts of the historically grown building complex. All new buildings planned for the coming years will be equipped with groundwater heat pumps or other electrified methods for heating and cooling. This goes hand in hand with the installation of photovoltaic systems on our buildings – so the heat pumps are partly powered by our own clean electricity.

Further information can be found below under “2.3.2 Sustainable electricity” on page 29.

Development heating (non-electrified) in t CO<sub>2</sub>-eq

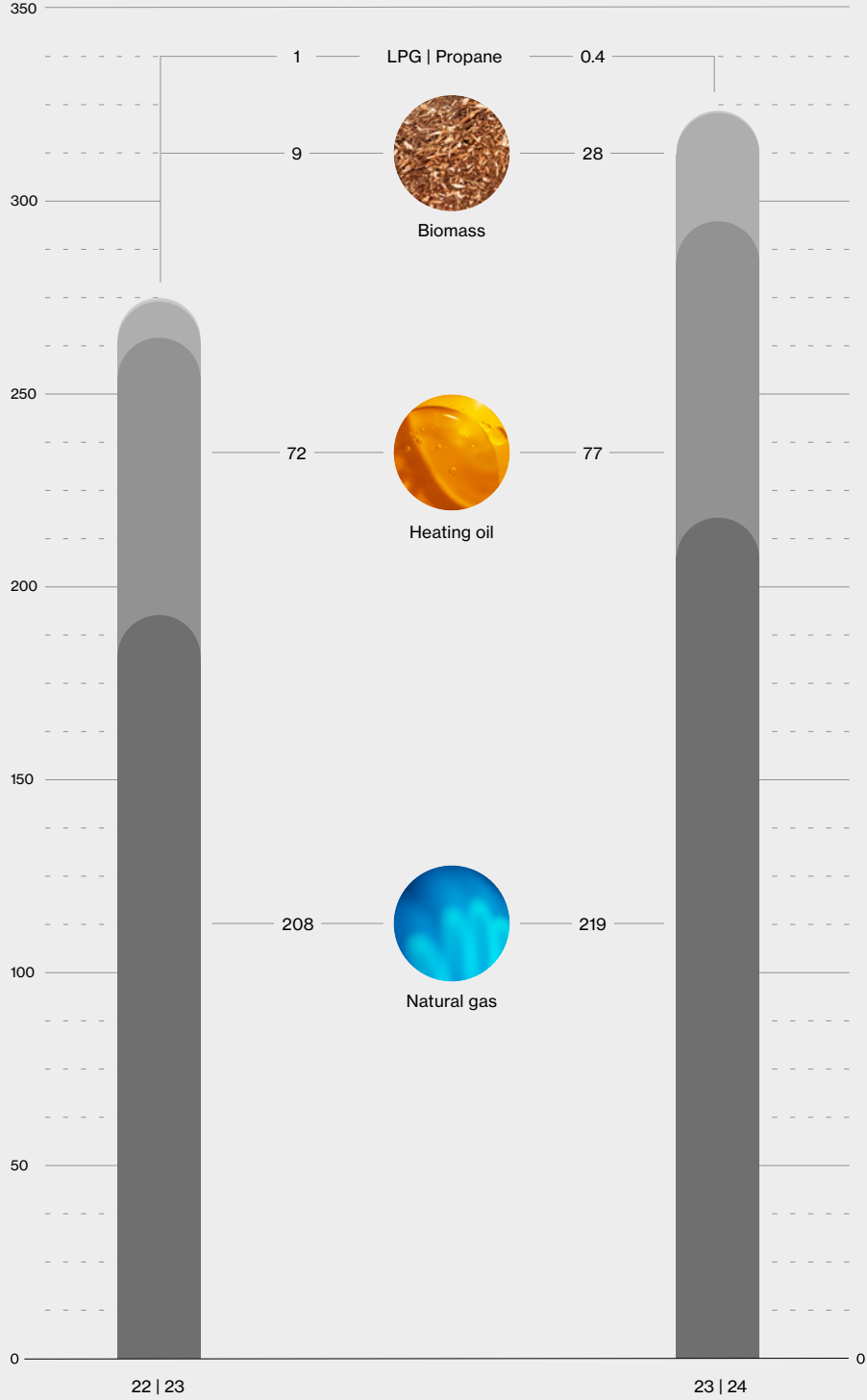


Fig. 09 Direct emissions (Scope 1) for heat in tonnes of t CO<sub>2</sub>-eq per energy source compared to the previous year

	Asia		Europe	
	22 23	23 24	22 23	23 24
<b>Total emissions in t CO<sub>2</sub>-eq</b>				
Natural Gas	126	117	154	155
Heating oil	0	0	88	98
LPG   Propane	1	1	0	0
Biomass	0	0	20	42
<b>Total</b>	<b>127</b>	<b>118</b>	<b>262</b>	<b>294</b>
<b>Change Europe   Asia to the previous year</b>	<b>-6.7%</b>		<b>+12.1%</b>	

**Fig. 10** Total emissions (Scope 1 and Scope 3.3) for heating and cooling in t CO<sub>2</sub>-eq per energy source and region compared to the previous year

#### Emissions to air by type for heating | cooling

Type of GHG	NO <sub>x</sub>	SO <sub>x</sub>	PM	CH <sub>4</sub>
kg	1 348	445	84	796

**Fig. 11** Emissions to air by type of greenhouse gas in kg for heating and cooling for the reporting period

Emissions from heating and process heat increased in the reporting period. The majority of this increase is due to the higher consumption of biomass at the Slovenian production site and the simultaneous increase in the emission factor for biomass in the source used. In addition, natural gas is assumed as heating for sales offices without access to usage data. The consumption for these locations is calculated using a standard value for the heating consumption per square metre of office space per year. An increase in office space without available data on heating consumption leads to an increase in emissions from heating with natural gas. Heating consumption of leased assets without available consumption data was allocated to Scope 1 for the first time for this report; these emissions were previously

found in Scope 3.8. In Figures 09, 11 and 12, the emissions from Scope 3.8 were also moved to Scope 1 for the previous year. Emissions from district heating and district cooling have now been correctly allocated to Scope 2.

We expect a significant reduction by 2030 through the further electrification of heating systems and the relocation of certain production activities from Asia to Europe. The existing building at the Graz site, which was previously heated with heating oil, will be converted to pellet heating in the current financial year, which will also contribute to a reduction of emissions in the future.

“We expect to be able to save around 90 t CO<sub>2</sub>-equivalents in the headquarters alone, by replacing the oil heating system.”

Patrick Zach, Department Head Facility Management, XAL GmbH

The emissions from the refrigerants used to cool our buildings are also included in Scope 1. Compared to heating agents, only small quantities of refrigerants are used per year, but as these have high emission factors, refrigerants still cause 57 tonnes of CO<sub>2</sub>-eq. Parts of the building at the headquarters in Graz are kept cool in an environmentally friendly way by cooling the ceiling with

well water. In addition to the direct emissions caused by combustion in our systems, heating and cooling processes already cause indirect emissions in the upstream supply chain before they reach our systems. Direct emissions arise, for example, during the combustion of natural gas for heating. Indirect emissions arise during the extraction and transport of natural gas until

it is available for combustion in our plants. These emissions are indicated separately in Scope 3.3 in accordance with the GHG Protocol. Fossil fuels have higher direct emissions during combustion and lower indirect emissions in comparison. In the case of renewable energy sources or

nuclear power, direct emissions are very low to non-existent; the emissions are mainly caused in the upstream supply chain. As you can see below, the development of indirect emissions is aligned with the development of total emissions.

Indirect emissions in t CO <sub>2</sub> -eq	22 23	23 24	Change in %
Natural Gas	71	53	-24.4%
Heating Oil	16	21	27.5%
LPG	0.14	0.14	0.0%
Biomass	11	14	22.8%
<b>Total</b>	<b>99</b>	<b>88</b>	<b>-11.1%</b>

**Fig.12** Indirect emissions for heating and cooling in tonnes of CO<sub>2</sub>-eq compared to the previous year (excluding district heating and cooling)

## 2.3.2 Sustainable electricity

Most of the electricity is consumed at the headquarters in Graz and at the production sites in China and Slovenia.

At the beginning of the reporting year 2023 | 2024, Slovenia switched to 100% electricity from renewable sources. This switch results in a significant reduction of emissions from electricity consumption, as the previous electricity mix contained around 73% electricity from fossil sources. This switch alone saved 723 tonnes of CO<sub>2</sub>-eq.

The majority of the remaining emissions in Scope 2 come from China, as a large proportion of the electricity still comes from burning coal. The electricity at the headquarters in Graz comes from 100% renewable sources, which means

that no direct emissions are generated at this site, although a significant proportion of the XAL Group's electricity consumption is attributable to the activities at the Graz site. This is due to the fact that the headquarters in Graz is the largest site in terms of both floor space and employees. In addition to the production activities and the workplaces of around 400 employees, the electrified heating and cooling of the premises also contribute to electricity consumption. Weather conditions therefore also influence our electricity consumption.

The purchased electricity is supplemented by self-generated photovoltaic electricity in Belgium (137 kWp), Slovenia (878 kWp) and Austria (722 kWp). Surpluses are fed into the public grid.

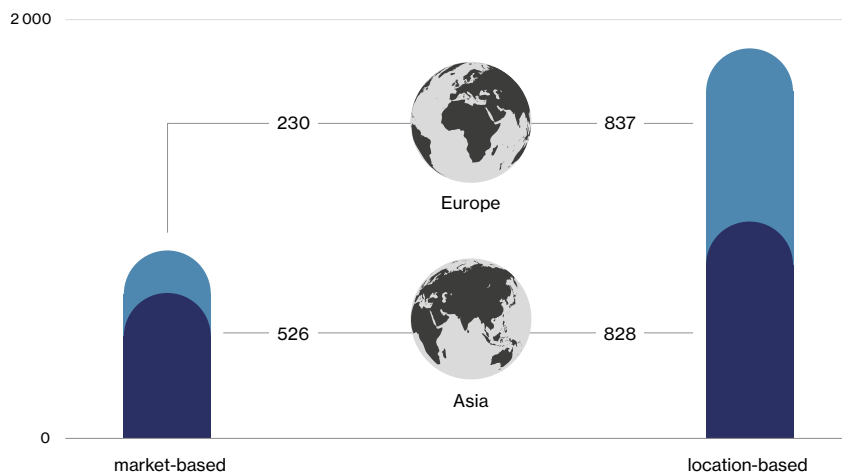
### Green electricity for all

Using our own photovoltaic electricity is a priority in order to continue reducing the footprint of our locations on the way to achieving our climate target. 93 MWh of the electricity we did not use ourselves was fed into the electricity grid in the reporting year. The two photovoltaic plants in Slovenia and at the headquarters, which only went into operation in the last quarter of 2023, have already contributed half of this, even though the plants only generated electricity in the months when production was weakest in the reporting year. This amount is enough to supply around 19 single-family homes with four residents with green electricity for a year.

For the first time, the amount of electricity charged in our growing e-fleet (more on this in section 2.4.1 from page 38 onwards) outside of our locations was also recorded for this report. In accordance with the European Sustainability Reporting Standards (ESRS), which stipulate that rented business premises should also be counted as part of the company's direct sphere of influence, the emissions from leased assets without usage data were counted as Scope 1 and Scope 2 for the 2023 | 2024 reporting period. In the previous year, this data was

allocated to Scope 3.8 in accordance with the GHG Protocol. For better comparability of the values, this change in allocation was also made for previous years. The following figure illustrates the success in reducing emissions associated with the use of electricity from renewable sources. The left-hand column shows the emissions from our actual electricity mix, while the right-hand column shows the emissions from the location-based approach. Location-based means that the average electricity mix of a country is used for this calculation.

**Comparison market-based | location-based approach**



**Fig. 13** Scope 2 electricity emissions during the reporting period with market-based and location-based method

In addition to measures to optimise and reduce our energy consumption in general, two photovoltaic plants (around 1700 kWp) were put into operation in the reporting year. Since autumn 2023, the systems in Slovenia and at the headquarters in Graz have been generating green electricity directly on site for our production facilities. Photovoltaics have also been generating electricity at the Wever & Ducreé logistics building since 2019. In the reporting period, 122 MWh of electricity was produced by the Belgian plant.

Capacity will be further increased in the following years. A further photovoltaic plant with around 227 kWp will go into operation at the end of the upcoming reporting period on the roof of

the building extension to the Graz site, which is expected to be completed in summer 2024. Adjustments were made to the building infrastructure in order to reduce electricity consumption. For example, adjustments to the cooling system reduced the electricity consumption of the air conditioning system at the Chinese production site. As described in the previous chapter, modernising the lighting, and equipping the Graz production facility with motion sensors also helped to reduce electricity consumption. The figures below show that the measures taken are already having an effect. Both electricity consumption and electricity emissions have decreased. There have been reductions at all key locations.

Purchased electricity (market-based) in t CO<sub>2</sub>-eq

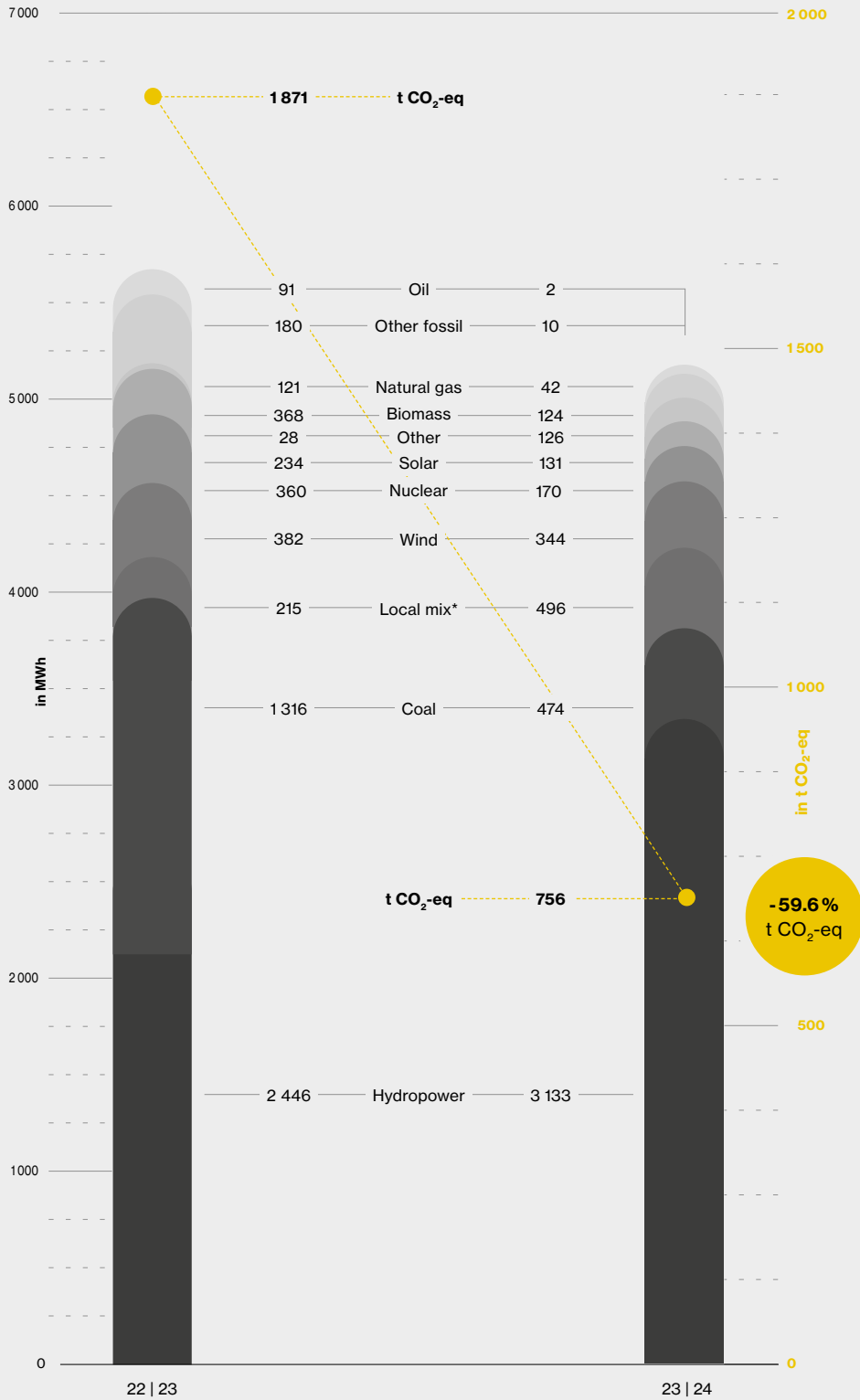


Fig. 14 Electricity consumption and resulting emissions (Scope 2) with marked-based method compared to previous year \*Composition of electricity mix unknown, local electricity mix used for respective country

Purchased electricity (market-based) in t CO <sub>2</sub> -eq	in MWh		in t CO <sub>2</sub> -eq		Change in %
	22 23	23 24	22 23	23 24	
Hydropower	2 446	3 133	0	0	0.0%
Nuclear	360	170	0	0	0.0%
Oil	91	2	108	1	-98.8%
Natural gas	368	124	145	46	-68.2%
Wind	382	344	0	0	0.0%
Solar	234	131	0	0	0.0%
Coal	1 316	474	1 316	468	-64.4%
Biomass	121	42	0	0	0.0%
Other fossil sources	180	10	180	9	-94.8%
Other sources	28	126	7	57	714.3%
Local mix (electricity from offices with unknown electricity usage and electric cars)	215	496	123	175	42.3%
<b>Total market-based</b>	<b>5 741</b>	<b>5 052</b>	<b>1 877</b>	<b>756</b>	<b>-59.6%</b>
<b>Total location-based</b>	<b>5 741</b>	<b>5 052</b>	<b>2 510</b>	<b>1 665</b>	<b>-33.7%</b>

Fig. 15 Scope 2 electricity consumption and resulting emissions with market-based method over time

## 2.3.3 Reduction of waste

Utilising raw materials efficiently also means avoiding waste as far as possible. Waste-optimised cutting of cardboard packaging, the reuse of transport packaging and the avoidance of unnecessary printouts in everyday office life are just some of the measures that help us to reduce waste at our sites. Real data from our production sites and sales offices was collected to calculate the footprint from the category of waste generated (Scope 3.5). For offices without

information on the quantities of waste generated, quantities were calculated based on real data. Recycling scenarios, which can be found in Chapter 4, were then defined for all types of waste, and used to calculate the emissions for the waste categories. Despite worst-case assumptions for sales offices with assumed waste volumes, this is not a material category for our overall footprint.

Waste category	t	t CO <sub>2</sub> -eq
Cardboard and paper	285 152	39
Metal	211 634	57
Residual waste	59 924	26
Glass	235	0
Hazardous waste	51 599	7
Plastic	55 865	1
Electronic waste	1 941	0
Wood	69 475	1
<b>Total</b>	<b>735 825</b>	<b>131</b>

Fig. 16 Waste generated in tonnes and emissions in tonnes CO<sub>2</sub>-eq (Scope 3.5)



Transport packaging that is generated during the transport of components within the Group is used several times. Our two cardboard cutting machines enable both the product packaging and the outer packaging to be cut to size. This reduces both the transport volume and the amount of cardboard used. In order to provide

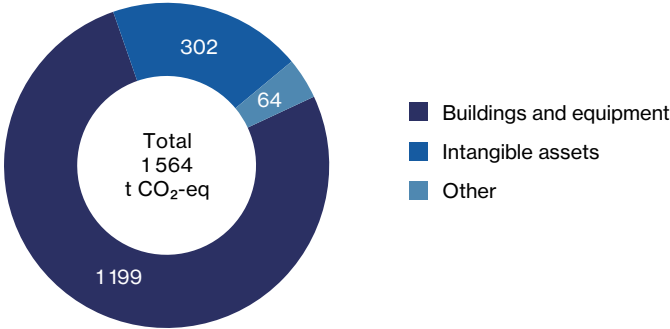
our products with the best possible protection during transport to our customers while keeping an eye on the environment, we are increasingly using tissue paper instead of plastic for product packaging. Cardboard waste is processed with a shredder as filling material for the packaging.

**Resource-saving packaging**  
We mainly use paper and cardboard to pack our products safely and at the same time conserve resources. We also wrap pallets in plastic film made from 30% recycled material to ensure protection against moisture and other influences.

### 2.3.4 Sustainable investments

The GHG Protocol provides for purchased capital goods to be taken into account in Scope 3.2. The company's carbon footprint is only influenced in the year of acquisition and the intensity

depends on the amount and type of investment. For data collection, acquisition costs for goods included in the fixed assets were allocated to this category.



**Fig. 17** Capital goods purchased (Scope 3.2) during the reporting period in t CO<sub>2</sub>-eq

The figure shows the emissions resulting from the acquisition of capital assets in the reporting year. The data for this reporting year also includes the emissions caused during the manufacturing of the photovoltaic plants in Graz and Slovenia, which were put into operation in

2023. This category accounts for a relatively low proportion of total emissions. An increase in this category is expected for the next reporting period, as the emissions attributable to the construction of the new part of the building at the headquarters will become visible in this category.

## 2.3.5 Transport

Transport accounts for a significant proportion of our Scope 3 emissions. According to the GHG Protocol, upstream transport is assigned to Scope 3.4 and downstream transport to Scope 3.9.

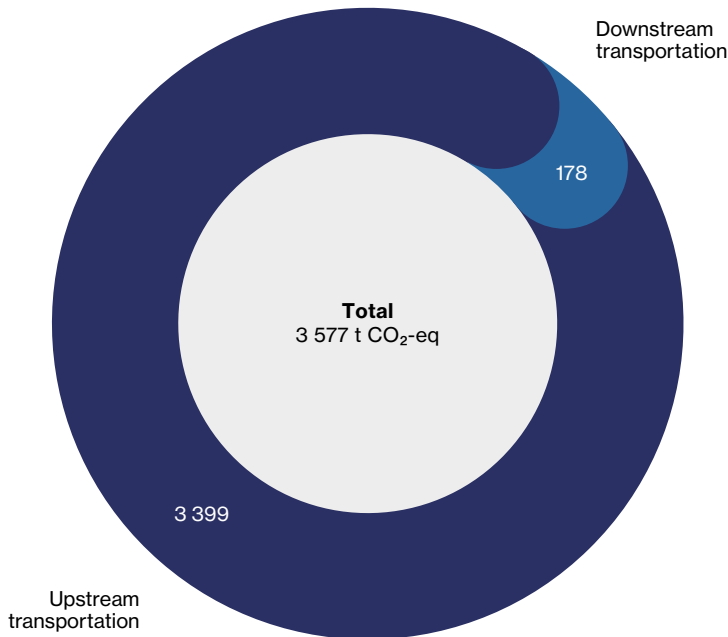
In accordance with the GHG Protocol, in addition to the transport of purchased goods, all transports organised by a company of the XAL Group that went directly to the end customer were also counted as upstream transports. Transports organised by our customers and assumed transport routes for deliveries from distributors to end customers were allocated to downstream transport.

As the majority of transports is organised by the companies in the Group, the far higher emissions

value results for upstream transport. To calculate the upstream transport emissions, the weights of the purchased goods and distances between the suppliers and the production site were determined. For downstream transport to our direct customers, weights and transport distances were also collected and used for the calculation. Assumptions were made for the transport distances for downstream transports from distributors to end customers.

In some cases, real data was available for the means of transport used; in other cases, assumptions were made based on the geographical location of the suppliers or customers.

### Emissions from transport



**Fig. 18** Distribution of transport emissions between upstream and downstream transport

**Distribution of transport emissions**

Type of transport	Upstream transportation	Downstream transportation	Total
Land freight	994	20	1 015
Sea freight	146	4	150
Air freight	2 259	136	2 394
Transport mix	0	18	18
<b>Total</b>	<b>3 399</b>	<b>178</b>	<b>3 577</b>

**Fig. 19** Overview of emissions from upstream (Scope 3.4) and downstream (Scope 3.9) transport in t CO<sub>2</sub>-eq

One measure to reduce emissions in the area of upstream transport is to promote local production and procurement. Partly due to these considerations, planning for the expansion of capacity at the plant in Slovenia began in the reporting year.

The short distance between our production facility in Murska Sobota (Slovenia) and the logistics

centre for XAL in Graz enables us to save on transport emissions. We are also constantly optimising product and transport packaging. The customised cutting of the product packaging and the shipment-specific cutting of the packaging leads to a reduction in transport volume and weight and thus to an additional reduction of emissions from transport.

“We are constantly optimising our production and logistics processes – in doing so, we recognise how beneficial efficient management is for the sustainability of our work.”

Martin Dlaska, Managing Director, XAL Holding GmbH

**Sustainability at our exhibition stand**

Sustainability was at the centre of our exhibition stand at Light + Building 2024. Our transport boxes were also used as furniture and the plasterboard for the stand construction came from just 20 km away. In total, we saved around 22 tonnes of CO<sub>2</sub>-eq compared to the 2018 trade fair by reducing transport volumes and shortening transport routes.

# Overview

In this chapter, we show you how our employees all over the world are contributing to reducing our carbon footprint.

### Key facts

**-15 690 l**

Reduction in litres fuel consumption compared to the base year

**-43**

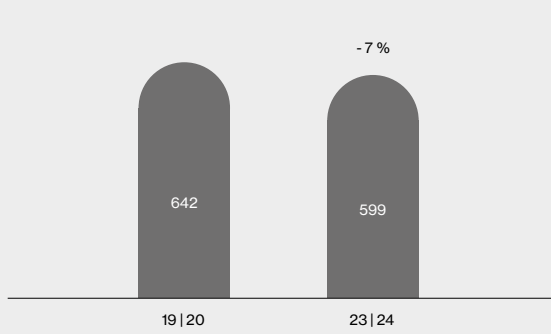
Reduction in t CO<sub>2</sub>-eq fuel consumption compared to the base year

**-551**

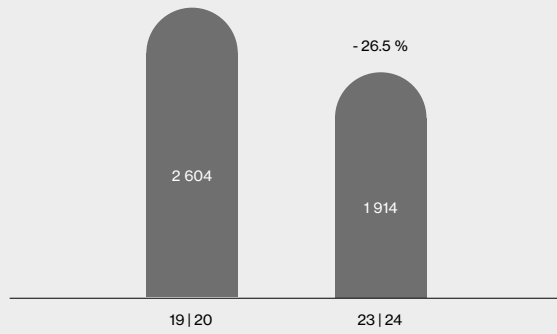
Reduction in t CO<sub>2</sub>-eq business trips compared to the base year

**18%**

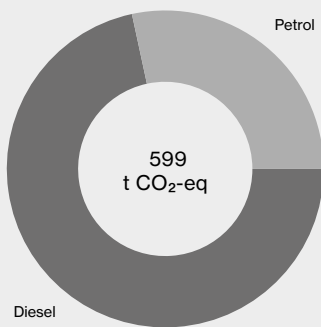
of our employees ride their bike or e-bike to work occasionally



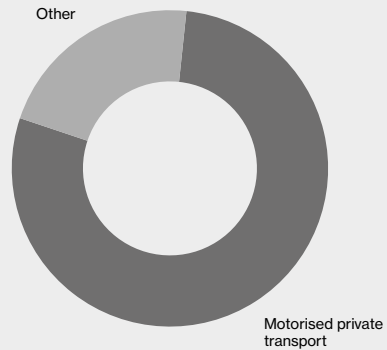
Direct emissions for fuels in t CO<sub>2</sub>-eq (Scope 1) compared to the base year



Emissions from business travel (Scope 3.6) compared to the base year



Allocation of direct emissions for fossil fuels used in company cars during combustion by fuel type in t CO<sub>2</sub>-eq (Scope 1) 2023 | 2024



**Travelled km per type of vehicle caused by employee commuting**  
motorised private transport (car and motorbike) and other means of transport (public transport, bike, e-bike, e-scooter and on foot)

# 2.4 Making sales and day-to-day work sustainable

Customer satisfaction is our top priority. We are there for our customers – on site, but increasingly also virtually. With our sales offices, we are where our customers are, and we focus on sustainable mobility.

Sustainability is an integral part of our sales and marketing strategies. One example of this is the design of our exhibition stand at Light + Building 2024, where our products were presented in a particularly sustainable light. In the reporting

year, we worked on a concept that allowed us to design our exhibition stand to be sustainable and long-lasting.

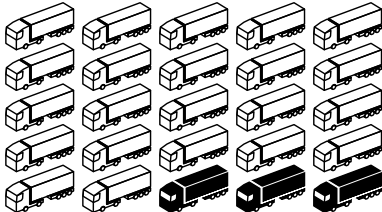
A significant reduction in stand space and the continued use of stand elements in the new building at the headquarters in Graz were part of the concept. In addition, transport was saved through local purchasing and the simultaneous use of transport boxes as furniture.

### Highlights from the 2024 exhibition stand



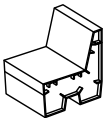
**1 000 m<sup>2</sup>**

Plasterboard walls are reused in the new office in Graz



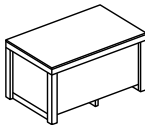
**3 x**

Trucks for transport compared to 25 trucks for Light + Building 2018



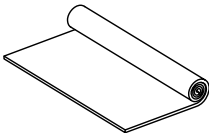
**52 x**

Cardboard furniture for our showrooms



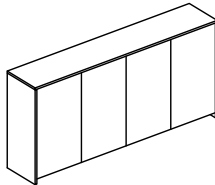
**25 x**

Transport boxes – packaging-free transport and use as furniture



**400 m<sup>2</sup>**

Carpet – circular product from Object Carpet, will continue to be used in the new office in Graz



**9 x**

Furniture from past trade fairs

## 2.4.1 Sustainable mobility

With a strong focus on e-mobility, the XAL fleet will be converted to e-vehicles in all areas where this is feasible by 2026 at the headquarters in Austria and by 2030 for all Group companies. At the end of the reporting period, the XAL fleet consisted of 79 electric vehicles and 10 hybrid vehicles compared to 122 vehicles with combustion engines. In the 2023 | 2024 financial year, around 35% of our fleet is therefore already

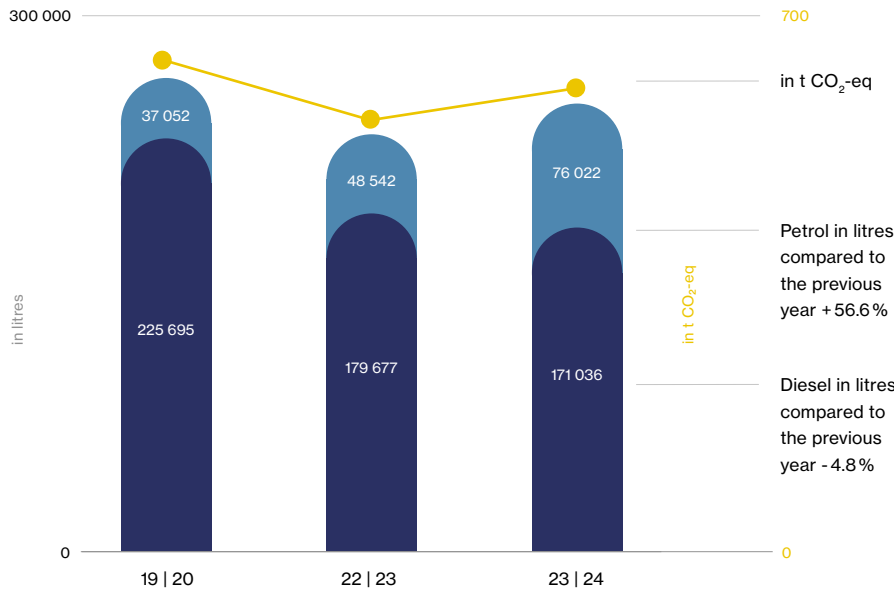
purely electric and 5% are hybrid vehicles. Around two thirds of the kilometres driven by employees of XAL Holding GmbH, XAL GmbH and Wever & Ducre GmbH were covered with e-vehicles. The number of e-cars was increased by 58% in the financial year compared to the previous year. The remaining conventional vehicles are being continuously replaced as far as possible.

Vehicles per type	Asia	Europe
Petrol	2	20
Diesel	0	100
Electric	0	79
Hybrid	0	10
<b>Total</b>	<b>2</b>	<b>209</b>

**Fig. 20** Number of vehicles by type and region at the end of the reporting period

The effectiveness of this measure is reflected in the decrease of fuel-related emissions in Scope 1 since the base year. The slight increase in fuel consumption, which can be seen in Figure 21, is

largely due to the improvement in data quality. A smaller proportion is due to the overall sharp rise in sales activities. Due to the high proportion of e-mobility, the increase is relatively low.



**Fig. 21** Fuel consumption and the resulting emissions over time

“We are increasingly focussing on e-cars for sales in Austria. Two thirds of the kilometres driven are already covered by e-vehicles.”

Harald Dirnberger, Managing Director, XAL GmbH

#### Fuel consumption and the resulting emissions

	19 20	22 23	23 24	Change compared to previous year
Diesel in litres	225 695	179 677	171 036	-4.8%
Petrol in litres	37 052	48 542	76 022	56.6%
Diesel t CO <sub>2</sub> -eq	563	448	429	-4.2%
Petrol t CO <sub>2</sub> -eq	79	104	170	63.5%
<b>Total t CO<sub>2</sub>-eq</b>	<b>642</b>	<b>552</b>	<b>599</b>	<b>8.5%</b>

**Fig. 22** Fuel consumption and resulting emissions over time

Fuel consumption causes both direct emissions (when the fuel is burnt in the vehicle) and indirect emissions (emissions caused by upstream fuel production processes). There is therefore also an increase in indirect emissions compared to the 2022|2023 financial year.

#### Direct and indirect emissions from fuels

Fuel-related emissions	t CO <sub>2</sub> 22 23		t CO <sub>2</sub> 23 24		Change in %
	direct	indirect	direct	indirect	
Diesel	448	115	429	128	-1.0%
Petrol	104	29	170	42	+59.0%
<b>Total</b>	<b>552</b>	<b>145</b>	<b>599</b>	<b>170</b>	<b>10.4%</b>

**Fig. 23** Direct and indirect emissions from fuel consumption in tonnes of CO<sub>2</sub>-eq compared to the previous year

The emissions in CO<sub>2</sub>-eq include all greenhouse gases. In the table below, the direct emissions of nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>) and other significant air emissions are listed separately.

#### Emissions to air by type of fuel

Type of GHG	NO <sub>x</sub>	SO <sub>x</sub>	PM	CH <sub>4</sub>
kg	271	192	18	897

**Fig. 24** Emissions to air by type of greenhouse gas in kg for diesel and petrol for the reporting period

## 2.4.2 Business trips

Business trips are mostly carried out using company cars, but longer distances also require the use of airplanes. Where possible, alternative means of transport such as trains or buses are used. Business travel at XAL increased in the past financial year following the end of the COVID-19 pandemic. This increased both the number

of kilometres travelled and the costs for business trips, such as hotels. This also led to an increase in emissions from business trips compared to the previous year. The significant changes in the categories compared to the previous year are partly due to changes in usage behaviour and partly due to changes in emission factors.

### Emissions for business trips

Category	22 23	23 24	Change from 22 23
Airplane	1 506	1 721	14 %
Train	10	5	-50 %
Bus	4	0	-97 %
Motorbike	1	1	0 %
Rental   private car (Diesel)	15	49	227 %
Rental   private car (Petrol)	36	75	108 %
Rental   private car (Electric)	n.a.	4	-
Taxi	n.a.	5	-
Hotel	244	54	-78 %
<b>Total</b>	<b>1 816</b>	<b>1 914</b>	<b>5 %</b>

**Fig. 25** Emissions in t CO<sub>2</sub>-eq for business trips (Scope 3.6) per mode of transport compared to the base year

Although business travel contributes less to overall emissions compared to other categories in Scope 3, it is significant in absolute terms (especially compared to Scope 1 and 2). In order to reduce emissions in this area in the future,

XAL will continue to encourage its employees to use virtual meetings wherever possible and to use alternatives to air travel and public transport for shorter distances.

#### Environmentally friendly journey to Light + Building 2024

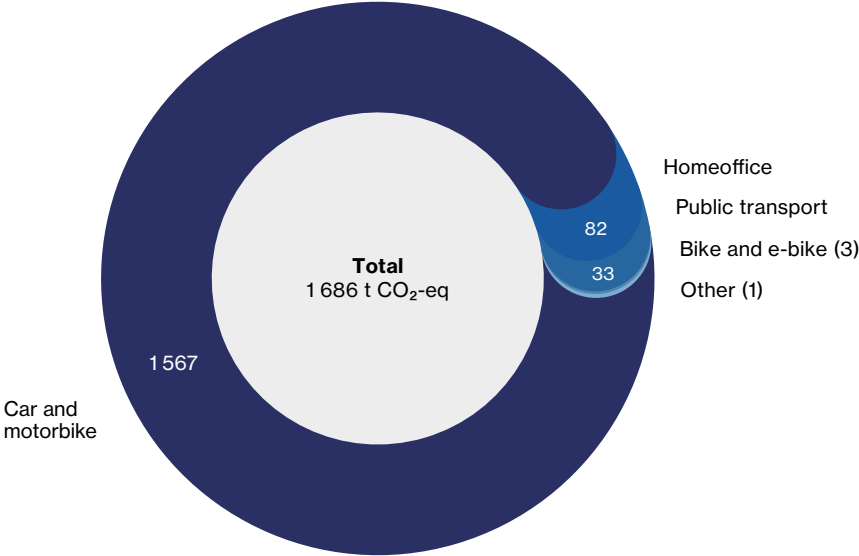
The employees' journey to the Light + Building trade fair in Frankfurt was planned during the 2023 | 2024 financial year. 46 people travelled around 700 km from Graz to Frankfurt by coach instead of by plane. This measure saved 20 tonnes of CO<sub>2</sub>-eq.



# 2.4.3 Commuting behaviour of employees

For the first time, a survey was conducted to determine which means of transport our employees use to get to work. This data provides the basis for reporting on our emissions in Scope 3.7 (employee commuting). The emissions caused by working from home were also taken into account.

### Emissions from employee commuting



**Fig. 26** Emissions for employee commuting (Scope 3.7) including home office

The majority of employees use a car to get to work. Across the Group, 13% of our employees use a bicycle to get to work. It is a particularly popular means of transport for commuting to work at our headquarters in Graz, with almost a quarter of the workforce there using a bicycle at least once a week.

Cycling to work not only protects the environment, but also has health benefits for our employees. It therefore suits our interest in several ways that more people cycle to work. Strengthening the cycling infrastructure is also

part of company health management. This is why there have been repeated projects to expand the cycling infrastructure in recent years. These include covered bicycle parking spaces, bicycle checks and charging stations for e-bikes. A further project to expand bicycle mobility was launched in the reporting year. The use of public transport is supported, and a special feature of the Graz site is certainly the bus stop located directly on the company premises.

#### Incentives for sustainable mobility

In autumn 2022, a programme was introduced to support our employees who wish to purchase a bicycle or e-bike. This offer was expanded even further in the reporting year. Employees can take advantage of tax benefits by leasing a bike through XAL. Depending on the employee's salary and the price of the bike, the savings for the employee can amount to around 25% of the market price.

# Overview

As we continue on our path towards climate neutrality, it is important to continuously increase the share of renewable energies in our total energy consumption. The previous chapters have looked at the potential for reducing emissions through this measure and this chapter provides a final overview of the composition of our energy consumption.

### Key facts

**201**

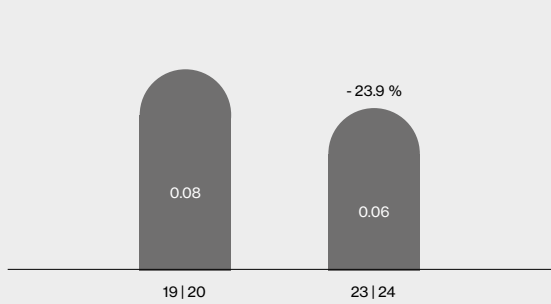
MWh electricity generated by our photovoltaic plants

**53.0%**

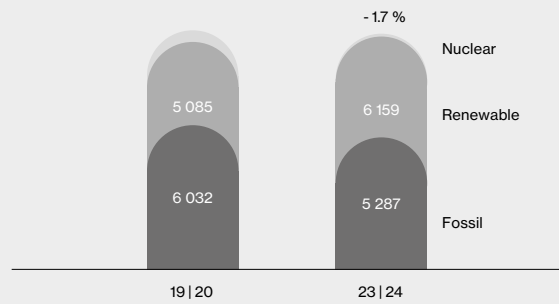
Share of renewable energies from total energy consumption

**-23.9%**

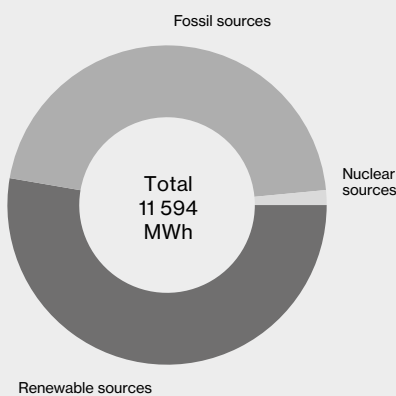
Reduction of energy intensity



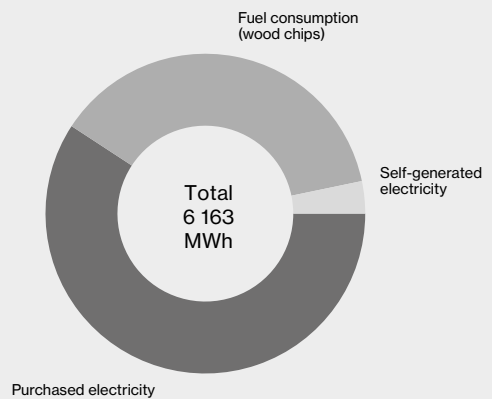
Reduction of energy intensity compared to the base year



Allocation of total energy consumption by sources compared to the base year in MWh



Allocation of the total energy consumption by sources for 2023 | 2024



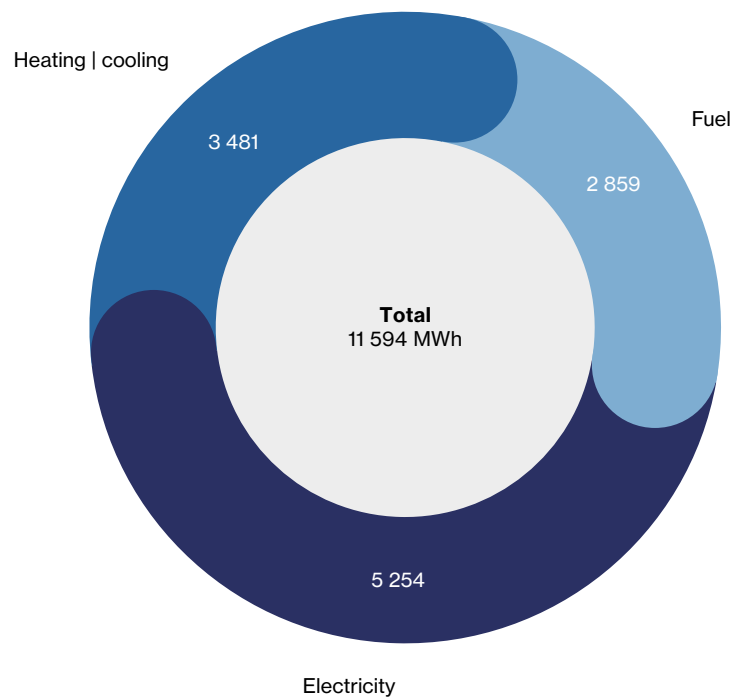
Distribution of consumption of energy from renewable sources

## 2.5 Total energy consumption

The total energy consumption shows a growing proportion of energy from renewable sources since the base year. During the reporting period, we have already obtained more than half of our energy consumption from renewable sources. The reasons for this increase lie in acquisition of two photovoltaic plants (around 1700 kWp), the

switch to an electricity mix from 100% renewable sources at the production site in Slovenia, the increased use of biomass for heat generation and also the increase in the share of e-vehicles. You can find out more about the measures taken in chapters 2.3 and 2.4.

### Composition of total energy consumption



**Fig.27** Composition of total energy consumption in MWh

As the figure above shows, 45% of energy consumption comes from electricity, 30% from heat and 25% from fuels. The proportion of energy from renewable sources is over 65% for both electricity and heat. Although total energy consumption rose by 2% in the last financial

year, it fell by 4% in relation to sales growth. A significant proportion of the increase in energy consumption is due to the increase in the amount of wood chips consumed, i.e. from a renewable source.



## 3. Social sustainability and sustainable governance

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# Overview

People are our most important factor for success. This chapter explores the composition of our workforce and how we strive to create working conditions that favour health, education, and diversity.

### Key facts

# 1 399

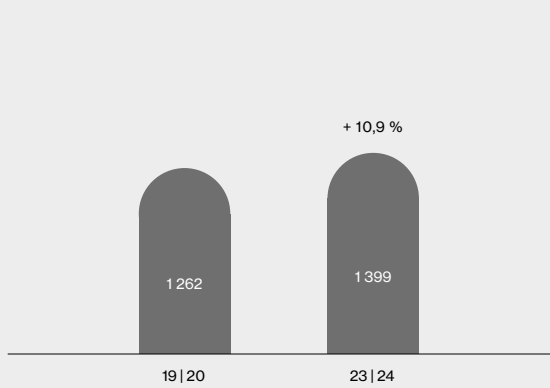
Employees worldwide (full-time equivalents)

# 28.7%

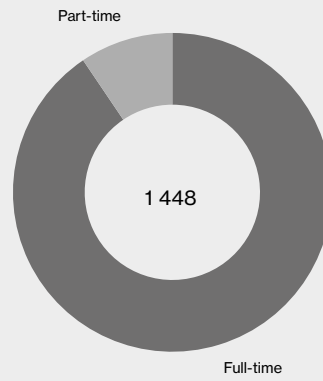
Women in management positions

# + 10.9%

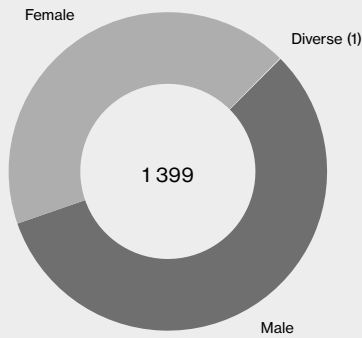
Increase in full-time equivalents compared to the base year



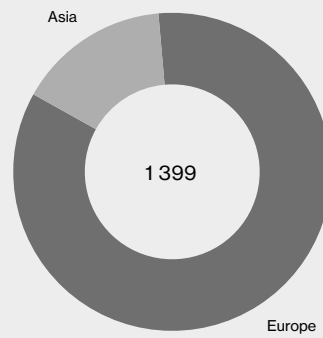
Total full-time equivalents compared to base year



Distribution full time | part time employees (headcount) 2023 | 2024



Distribution of full-time equivalents by gender 2023 | 2024



Distribution full-time equivalents by region 2023 | 2024

## 3.1 Our employees

Creating lighting solutions and their accompanying services for customers requires a high level of knowledge and a focus on quality. Achieving this high standard requires a high level of commitment from our approximately 1 450 employees, which we do not take for granted, but rather

we show our commitment to them by taking employee satisfaction and development seriously into account. Our employees work internationally at over 40 locations, most of them in Europe.

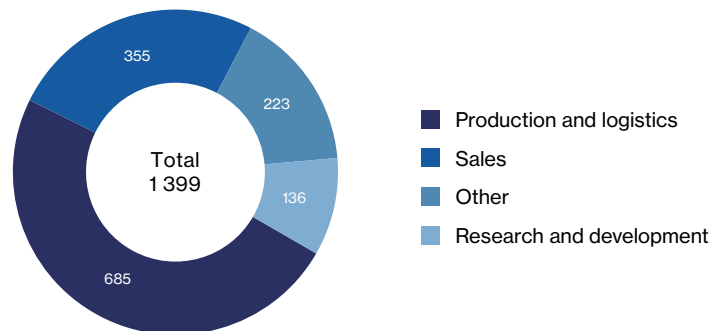
Distribution FTE by gender and region	Male	Female	Diverse	Total
Europe	680	501	1	<b>1 182</b>
Asia	120	97	0	<b>217</b>
<b>Total</b>	<b>800</b>	<b>598</b>	<b>1</b>	<b>1 399</b>

**Fig. 28** Distribution of employees (full-time equivalents) by gender and region

Our employees work in different areas around the world because the development of lighting solutions requires many experts to ensure a high-quality product at the end of the process. From designers and engineers to production and logistics employees and sales staff – every employee in this industry has unique skills and expertise that contribute to our success. Our

employees specialise in many different areas but can be roughly divided into six categories: Administration, Marketing, Procurement, Sales, Research and Development and Production and Logistics – with Production and Logistics being the largest area in terms of the number of employees.

### Full-time equivalent per activity area

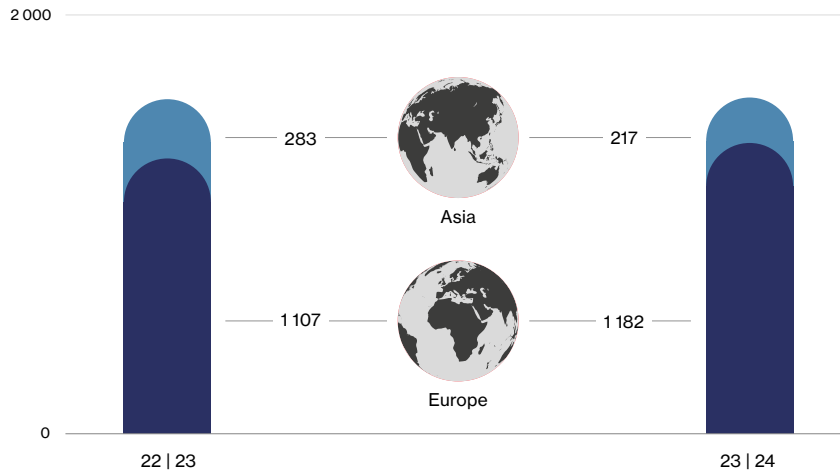


**Fig. 29** Distribution of full-time equivalents by area of activity in the reporting period

Compared to the previous year, there was a slight increase in both sales and the number of employees – 12 new positions with a full-time equivalent of 9 were filled. As in the previous

year, the slight shift in the number of employees from Asia to Europe is continuing. This is due to the final discontinuation of our production activities in India in 2022.

### Development full-time equivalent per region



**Fig. 30** Development of full-time equivalents per region compared to the previous year

In the reporting period, the average number of employees (excluding temporary workers) was 1 418 (headcount). 16 people who were not employed by a company in the XAL Group but whose work was controlled by XAL were working for XAL on the reporting date. During the year, 301 people were hired and only 289 people left the company. A significant proportion of this is due to job cuts at the Chinese production facility. This results in an overall fluctuation rate of 20%; adjusted for the site in China, it is 14%. Around 77% of employees worldwide

are covered by a collective labour agreement. We fulfil international standards such as ISO 45001 – our production and administrative sites in Austria and Slovenia have been certified in accordance with the standard since 2019 and improvement measures are being implemented on an ongoing basis.

You can read more about health and safety in the workplace in chapter 49.

## 3.1.1 A workplace tailored to individual needs

Everyone deserves a workplace that is tailored to their needs and offers ideal working conditions so that they can fulfil their potential. We want to promote the professional and personal development of our employees and endeavour to take advantage of opportunities for growth and development in order to make the workplace as ideal as possible. Employee training is crucial to achieving this high standard of quality.

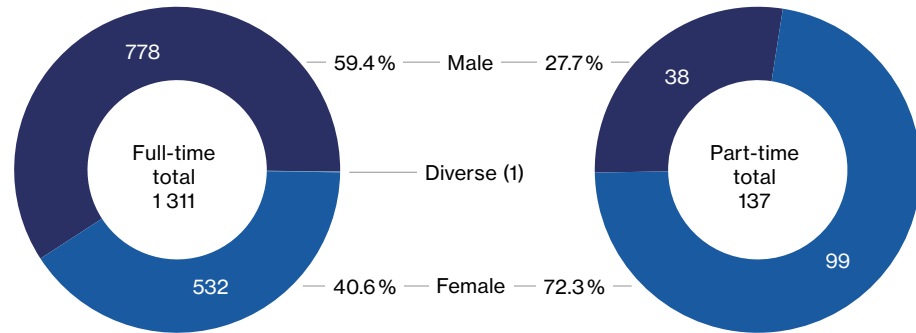
We therefore promote the development of our employees through internal and external training (see section below). Flexitime arrangements allow employees to organise their working hours flexibly. This makes it very easy to reconcile private and professional commitments. A home office concept enables employees whose work is not location-dependent to work flexibly and in a

results-orientated manner. The XALdc daycare centre on the company premises in Graz offers parents the best possible support in balancing family and career. The daycare centre also offers summer holiday childcare. In the reporting year, 24 men and 25 women took parental leave. All our employees are entitled to parental leave.

Compared to the previous year, the number of full-time and part-time employees has remained roughly the same. However, there is still a correlation between working hours and gender. Worldwide, around 72% of our part-time employees and only 41% of our full-time employees are women. This inequality certainly reflects – at least in part – the still unequal distribution of unpaid labour in our society.



**Number of full-time and part-time employees**



**Fig. 31** Distribution of full-time and part-time employees by gender

To counteract this social effect, we promote female employees in management positions. Some of our initiatives, such as the XAL daycare centre and leadership training, are available to all employees regardless of gender, but actively support women in management positions. With

a share of women of just under 29%, we are still on the way to achieving a balanced distribution of management positions in the company and will intensify our measures in the coming reporting periods.

**Number of employees in management positions**

	Headcount	Share in %
Male	132	71.4 %
Female	53	28.6 %
Diverse	0	0.0 %
<b>Total</b>	<b>185</b>	<b>100.0 %</b>

**Abb. 32** Distribution of management positions by gender

**3.1.1.1 Occupational health and safety**

As part of occupational health management, a wide range of behavioural and relationship-oriented measures with participatory approaches are implemented on an ongoing basis for the benefit of employees. Health management, occupational safety and health protection are an integral part of our HR policy. Our approach to health management goes beyond compliance with legal requirements.

employees. The list of measures implemented is long (changing sports and fitness programme, extensive in-house training and development management, team events, employee discounts, keynote speeches on a wide range of topics, walks, implementation of noise protection measures, creation of break rooms and much more) – and we are constantly adapting the offer to the needs of our employees.

We offer a variety of balanced measures with a wide range of focal points to strengthen the physical, mental, and social well-being of our

**Team spirit on the ice**

In November 2023, the traditional annual XAL ice hockey game took place in Austria once again. The equipment was provided by XAL. 20 people had great fun together on the ice and were able to demonstrate their team spirit as well as their sporting skills.

Both the headquarters in Graz and the site in Murska Sobota are certified in accordance with ISO 45001 for health and safety at work. As part of ISO 45001, the structured management and minimisation of health risks for employees and the associated statistics are a key task.

Only two accidents at work were recorded in Austria during the reporting period. The number of accidents at work thus corresponds to the annual average for the last ten financial years and is slightly below the industry's usual accident

rate. There were a further nine documented accidents at work within the XAL Group, four of which occurred in Slovenia, three in Belgium, one in Germany and one in the UK. Two of these were commuting accidents that occurred in Belgium. The average number of sick days was 12.5, which is in line with the industry average. Although our production facility in China is not currently certified to ISO 45001, it also records work-related accidents and illnesses. After one accident in 2021, there were no accidents in China in the previous or current reporting period.

#### **XAL safety is our top priority**

It is important that employees are able to react appropriately in emergency situations. To this end, we once again organised first aid courses in 2023 and trained and refreshed the knowledge of first aiders. Health and safety in the workplace are a top priority at XAL, which is why training courses for employees from all departments are held on an ongoing basis.

#### **3.1.1.2 Active participation**

Employees are actively involved in decision-making processes on an ongoing basis and bidirectional feedback loops are used. Goals/tasks and career planning are defined in structured, regular employee appraisals.

Regular employee surveys and health circles led by external experts serve to determine employee satisfaction and jointly develop suggestions for improvement. Employee surveys are conducted annually. Every three years, as was the case in June 2023, a comprehensive questionnaire is followed by health circles in which employees from all areas discuss the results of the survey, potential improvements, and proposed measures with independent third parties in small groups.

The results of the survey, potential improvements and proposed measures are discussed in small groups with independent third parties. The results of these health circles are then passed on to top management in anonymized form. We appreciate the valuable input from our employees – after the last health circles in November 2023, 10 measures were derived, some of which have already been implemented or are being planned. Short-term measures such as the expansion of the XAL in motion programme have already been implemented or will be implemented in 2024. Long-term plans such as the expansion of the headquarters to create more office workstations were already started in the reporting period and will be finalised in the second half of 2024.

#### **Employee satisfaction**

The questions covered the following topics in the employee survey conducted in June 2023: health behaviour, management culture, evaluation of mental stress and our company health promotion project XAL in motion. Commitment to the company remains at a consistently high level and is well above average. The above-average results in the areas of mental stress and health-promoting management compared to the norm group are particularly pleasing. In addition, the recovery stress balance has improved further compared to previous years, which indicates the positive impact of our health initiatives.

The fact that former employees regularly return to the XAL Group after gaining experience in other companies is also a sign that employees greatly appreciate the working environment and development opportunities at the XAL Group.

We have had an on-site reporting system at our locations in Austria and Slovenia for many years, which was expanded in the last reporting

period to include our web-based whistle-blower platform Trust Line for the XAL Group. This online system makes it possible – if desired – to anonymously report complaints relating to all areas of our business activities. The reporting system is an important measure to ensure that our values and guidelines relating to transparent and fair business behaviour, anti-corruption and anti-discrimination are put into practice.

The Trust Line is accessible to everyone from anywhere in the world around the clock. No substantiated incidents were reported during the reporting period.

“With the introduction of our Trust Line, we are sending a clear signal for transparency and integrity at XAL.”

Iris Gigacher, Senior Legal Counsel, XAL Holding GmbH

## 3.1.2 Our investment in education

We support all employees in their further training and promote potential in a targeted manner. We offer all our employees at all locations plenty of creative freedom, development opportunities and support in their ambitions to continue their

education. We promote the training of young people and offer a comprehensive internal training programme, which is supplemented by additional courses offered by external providers.

### 3.1.2.1 Continuous education for our employees

We want to accompany people on their professional journey. We support them in their career ambitions – not only by giving them the tools to develop their leadership skills through targeted training, but also by enabling them to gain further qualifications in their field of expertise or even to reorient themselves professionally. We firmly believe that lifelong learning is a great benefit

for people on a personal and professional level. XAL supports employees in combining work and education in the best possible way and jointly implementing flexible solutions tailored to the individual case – taking into account the options available under labour law in the respective country with regard to working hours and salary options.

### 3.1.2.2 Apprenticeship at XAL

XAL bears great responsibility for the society of tomorrow. This makes it all the more important for us to train apprentices in a modern working environment. 22 new apprentices were taken on in the reporting period. In Austria, an apprenticeship is a form of training that combines solid vocational training with work experience. This form of training is not provided for by law in every country. Most of our apprenticeships are therefore set up in our Austrian subsidiaries. In total, we offer apprenticeships for 15 different professions; in the reporting period, positions were filled for nine professions. We endeavour to offer a wide variety of apprenticeships, and last year we added an apprenticeship to become a production measurement technician. Another new apprenticeship is already planned for the 2024 | 2025 financial year. Our international

subsidiaries also support various forms of on-the-job training. XAL GmbH (Germany) took on two apprentices in the reporting period. XAL offers apprenticeships in technical and commercial fields, which are presented and familiarised to students at various events at the headquarters and at career fairs. We see our apprentices as our future specialists and managers. Depending on their personal life plans, apprentices are also supported in completing an apprenticeship with a university entrance qualification examination or an internship abroad at one of our subsidiaries. The right to education is particularly important to us. XAL offers young people the opportunity to take up one of many apprenticeships, become part of a successful team and learn in a practical way. Potential is recognised and specifically promoted.

### Out into the world

Apprentices at XAL have the opportunity to complete a multi-week internship abroad at one of our subsidiaries. This not only promotes cooperation with colleagues, but also strengthens self-confidence and personal responsibility. Time and again, our apprentices report on their valuable experiences, which enrich them both personally and for their careers. During the reporting period, our apprentices were able to gain new experiences in Spain, England, and Belgium. They not only had the opportunity to exchange ideas with our international colleagues abroad, but also to expand their own knowledge and skills.

### 3.1.2.3 Job rotation

Job rotation is an important tool in today's world of work, as it offers a range of benefits for both us as an employer and our employees. During the reporting period, 14 employees took part in a job rotation. Our job rotation is designed to provide insights into other departments and can be used as part of a development plan or to improve cross-departmental communication. In some areas, it is also possible for trainees.

Managers at XAL are informed in a structured manner about the possibility of job rotation, e.g. as part of management training or in regular meetings with HR Development. The scope of a job rotation is individually agreed with the HR department in order to meet the respective needs. Job rotations are also used across locations and internationally.

### 3.1.2.4 Internal and external training programs

Our internal training programme covers a wide range of topics. Some of these are training courses that support our employees in their work, such as product training, training on the use of software tools or training on processes and their legal and compliance background, as well as soft skills training. Our leadership programme, which is completed by all people in management positions and is open to employees who are interested in a management

position, includes organisational and leadership fundamentals as well as elements of personal development. While some of the programmes are location-based and are only available to our employees in Graz, a large proportion of our training courses are online (live online training and learning videos) and are therefore also available to our international subsidiaries. The programmes offered at headquarters are supplemented by local training initiatives.

### Innovation through education: The XAL Svetila Learning Academy

XAL Svetila d.o.o. introduced the Learning Academy in Slovenia during the reporting period. Here, employees have access to more than 330 different online courses covering both soft skills and technical knowledge. All employees have the opportunity to select the training content that interests them the most and then complete the courses at their own pace. The Academy strengthens the learning culture and thus promotes innovation and creativity. This lifelong learning approach enables our employees to be the driving force behind their own learning and to become catalysts for innovative solutions and new approaches.

XAL is aware of its own responsibility in the areas of compliance, data protection and information security. To ensure that our values such as respect for human rights and responsible business conduct are practised in our day-to-day business and that sensitive data of employees, customers, partners and competitors is treated confidentially and only passed on to authorised

third parties within the framework of the law, we have implemented a training programme with an external provider for our employees internationally, complemented by additional formats such as regular cross-departmental and cross-company meetings.

“Our training programme is carefully designed, targeted and promotes the continuous development of our employees. It supports lifelong learning and encourages our employees to constantly expand their skills.”

Helga Fazekas, Head of Human Resources, XAL Holding GmbH

#### Training hours by provider and region

Provider	Hours	Europe	Asia
External	1 597	1 483	114
Internal	10 922	n.a.	n.a.
<b>Total</b>	<b>12 519</b>	<b>n.a.</b>	<b>n.a.</b>

**Fig.33** Number of training hours during the reporting period, broken down by region

#### Trainings hours per employee

	External	Internal	All trainings
Male	1.06	n.a.	n.a.
Female	1.16	n.a.	n.a.
Diverse	0	n.a.	n.a.
<b>Gesamt</b>	<b>1.1</b>	<b>7.5</b>	<b>8.6</b>

**Fig. 34** Average hours of training per employee by gender and type of training programme

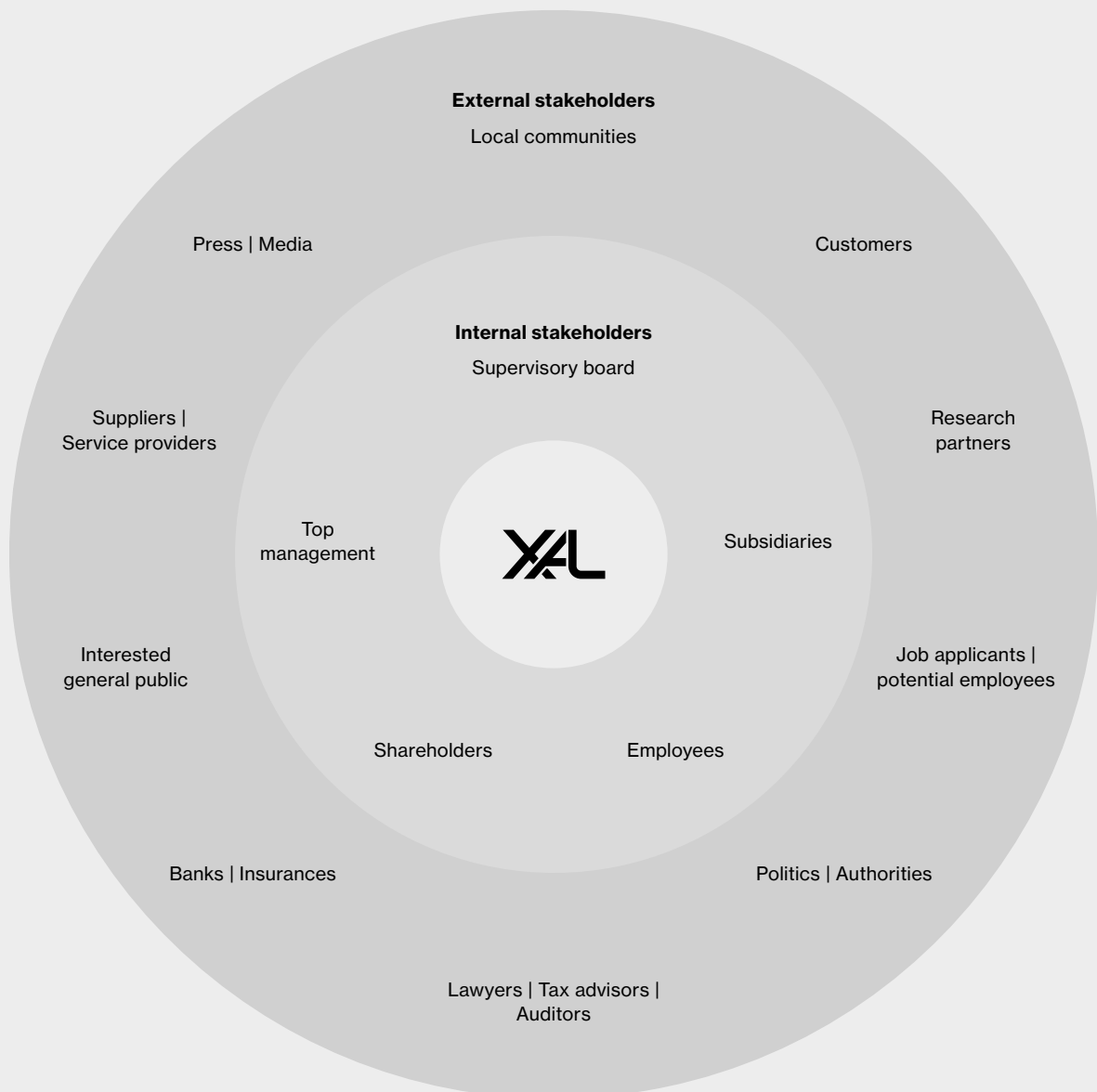
We continuously support our employees in their development. We attach particular importance to a successful start in the company. Depending on the area, employees undergo various training courses during their introduction phase that provide them with the information they need for their work and familiarise them with their new workplace and colleagues. The structured onboarding process also includes meetings with the direct supervisor for bidirectional feedback

to ensure that new employees receive the support they need during their onboarding phase. Bidirectional feedback loops have been common practice in Austrian companies for years. In structured, periodic meetings, not only is the current well-being at the workplace discussed, but also development goals are set for the future. During the reporting period, this process was also rolled out to the German companies.

# Overview

We value all our stakeholders. Transparent communication, meaningful engagement and mutually beneficial relationships are the cornerstones of our stakeholder management.

---



## 3.2 Our stakeholders

XAL attaches great importance to an open, transparent and target group-oriented dialogue with all stakeholders. As an international group of companies, we operate in a complex network of stakeholders who have different communication needs. It is often necessary to overcome language and cultural barriers. Our local branches and subsidiaries in many locations, most of which are managed by people with close ties to the

local communities, play a central role in our effective stakeholder engagement. Taking into account different perspectives, backgrounds and expectations enables us to identify potential and actual impacts at an early stage – to take advantage of opportunities for growth and development as well as to avoid or minimise risks for XAL or its stakeholders. This is particularly relevant in relation to sustainability issues.

### 3.2.1 Communication is key

We maintain constant contact with many stakeholders such as customers, suppliers, employees and applicants via various tools and channels. The dialogue with our customers helps us to better understand what they expect and need from our products and services. At the same time, close collaboration with suppliers, research partners and universities provides us with valuable input for innovative solutions and the sustainable development of our products and activities. Online communication offers a quick and easy way to get in touch with stakeholders over long distances or to interact with a large number of interest groups. However, face-to-face meetings

and events will continue to play an important role. Often, a combination of several channels proves to be the most effective method of engaging stakeholders in an appropriate and target group-orientated manner.

Sharing information about our products and activities with our customers, for example, is most efficient digitally. However, in order to demonstrate how our products look, feel and function, sales events and personal customer visits are essential.

#### **Social Ride in Belgium**

In Belgium, Wever & Ducré BV organised a social ride for various stakeholders in September 2023. Over 100 employees, customers and partners took part in the event, cycling 50, 75 or 100 kilometres together. In total, a distance of 7 900 km was covered, and donations were collected for a charity organisation that focuses on supporting people with dementia. The Social Ride not only united many of our stakeholders in a popular shared activity, but also demonstrated our commitment to social responsibility and community engagement.

#### **Solar energy for kindergartens**

Green Electrics Licht & Energietechnik GmbH is promoting the energy transition in kindergartens as part of the special "Energy bundle" campaign. Kindergartens receive a 15% discount on photovoltaic solar shading systems above sandpits/playgrounds, which not only provide shade but also generate electricity. In addition, a child-orientated presentation "The power of the sun" is offered. Each child is given a mini photovoltaic panel to familiarise them with the generation of electricity through solar energy in a fun way. An example project in the Mitterdorf an der Raab kindergarten shows the successful realisation of a 12 kWp photovoltaic roof over a sandpit with a play tower. This initiative not only raises awareness of renewable energy among children, but also makes a lasting contribution to reducing CO<sub>2</sub> emissions.

## 3.2.2 We connect to all groups of stakeholders

Although it is part of our day-to-day business to have a wide range of tools for communicating with frequent contacts such as employees and customers, it is equally important for us to maintain contact with stakeholders who are not involved in our daily business interactions. Years ago, the headquarters in Graz invested in making the extensive product development and testing activities in our competence centre transparent for visitors – in the truest sense of the word. Visitors can gain an insight into the working methods in our laboratories through glass windows. Even years later, the glass laboratories are still the highlight of the frequent company tours for many. We regularly organise events with various stakeholders. In addition to

customers and employees of our subsidiaries, our tours are also very popular with external interested parties. Schools in particular are very interested in visiting our facilities. During the reporting period, we were once again able to introduce many interested parties to the world of light with almost 730 visitors, almost reaching the visitor level before the COVID-19 pandemic.

Our commitment to lifelong learning is described in chapter "3.1.2 Our investment in education" on page 51. Our investment in education also extends to external stakeholders. Several of our internal experts and managers pass on their knowledge and experience by giving lectures or courses at universities and business schools.

#### **Knowledge exchange and new perspectives**

In autumn 2023, students at the University of Graz visited XAL. As part of a course, three groups of students interviewed managers on the topics: "Understanding sustainability in corporate contexts", "Sustainability reporting" and "The relevance of sustainability in customer relations". Through this exchange, the managers were not only able to pass on their knowledge of sustainable practices to the young talents, but also gain valuable new perspectives.

We also want to give something back to the community. We sponsor selected charitable organisations as well as cultural and sporting events. Given the international and local environment in which we operate, an annual charity sponsorship around the holiday season always includes an international and a local initiative. Meaningful engagement also includes communicating the

expectations we have of our business partners regarding human rights. This includes, for example, publicly communicating our values as part of the UN Global Compact initiative and making the acceptance of our Supplier Code of Conduct a prerequisite for cooperation with our suppliers.



**Support group for coma patients**

Since 2021, XAL has been a sponsoring member of the Austrian Awake Coma Society, which uses the funding to support medical aids for awake coma patients in need in Austria. XAL has donated RECOVER PRO lights, which have been proven to help stabilise and improve circadian rhythms in patients with severe brain injuries.

## Overview

Making a company sustainable requires commitment on all levels, but first and foremost from top management. In this chapter we show you how our management incorporates sustainable and transparent governance in its strategy.

### Key facts

**4 years**

Membership  
UN-Global Compact

**3**

Ecovadis ratings

**8**

SDGs contributed to in  
2023 | 2024

### Sustainable Development Goals according to the United Nations and XAL's engagement



# 3.3 Taking corporate responsibility

XAL recognises its responsibility towards the environment, its employees, and all other stakeholders. We know that change must come from within and that a work environment that fosters change is only possible if top management is committed to it. We believe that our actions must be traceable and transparent, which makes an orientation towards clear standards essential.

holistically and based on objective criteria with a focus on the environment, labour and human rights, ethics, and sustainable procurement. Most recently, XAL GmbH was awarded the Platinum Medal at its Graz site.

This is why we communicate our commitment and the resulting measures to contribute to the United Nations Sustainable Development Goals as a member of the UN Global Compact Initiative since 2020 and have our social responsibility assessed by independent providers. EcoVadis regularly evaluates our social responsibility

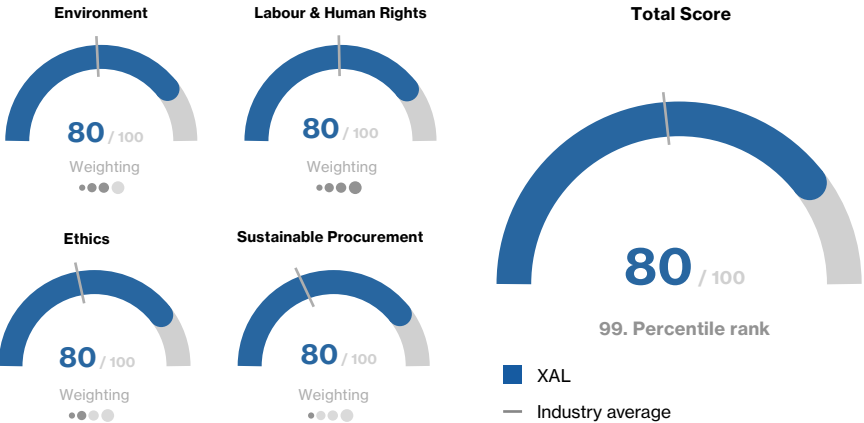


Fig.35 EcoVadis rating overall and by subject area compared to the industry average

“Receiving the Platinum Medal underlines our commitment to responsible behaviour and strengthens the trust of our customers and partners in our sustainable practices.”

Paul Fraissler, Managing Director, XAL GmbH

### 3.3.1

## We drive sustainable collaboration and growth

We promote sustainable production strategies to support business growth and are committed to ethical practices and respectful collaboration. The magnitude of our success determines the level of responsibility we must assume. To maintain our high standards, we take a variety of measures to guarantee the sustainability of our business activities. Our top management is committed to ensuring that sufficient resources are available to enable the creation of a sustainable operating organization.

In accordance with the principles of the UN Global Compact Initiative, XAL promotes the advancement and dissemination of environmentally friendly technologies. For decades, XAL has consistently pursued the path of developing lighting concepts with ever lower energy consumption. In addition, XAL strives to further reduce its environmental footprint, which is mainly influenced by the choice of materials and technologies in the development phase. XAL takes initiatives to promote greater environmental responsibility and supports a precautionary approach to environmental challenges. Economic, social, and environmental impacts and associated risks and opportunities are evaluated on a regular basis during the yearly risk assessments and management evaluation carried out in the framework of ISO 9001/14001/45001. Our management systems enable us to conduct thorough workplace risk assessments using a risk matrix, and to identify and manage environmental risks with appropriate controls to minimize potential

environmental impacts. We work in accordance with the precautionary principle, which supports us in detecting risks in advance and preventing harm even if not yet conclusive. XAL's management team is fully committed to upholding the principles outlined in the UN Global Compact, including the protection of international human rights within the company's sphere of influence. XAL takes concrete steps to ensure that human rights are respected and upheld in all aspects of its operations, in accordance with its guidelines. XAL upholds the freedom of association and the effective recognition of the right to collective bargaining, and we condemn all forms of forced and compulsory labour, child labour as well as discrimination in respect of employment and occupation. In order to make informed decisions, the management team needs a comprehensive set of skills and extensive knowledge of a wide range of topics.

To further advance those skills, and specifically to develop strategies for sustainable development based on objective and scientific criteria, inputs from internal and external experts are regularly included in the agenda of the strategic top management meeting, which is held monthly. While top management bears full responsibility for managing the organization's economic, environmental, and social impacts, including the review and approval of the information included in this report, management tasks are delegated to the local top management of subsidiaries to reach pre-defined goals in an efficient way.

### 3.3.2

## Making our commitment part of our corporate culture

XAL is committed to the ten principles of the UN Global Compact initiative and acts in accordance with human rights in all areas of the company. We take responsibility in our daily work and are committed to respecting international human rights in all our activities in the XAL Code of Conduct.

We strictly reject child labour and forced labour and our suppliers ensure that they do not use young employees for hazardous work and night work. XAL is committed to equal opportunities and fair treatment for all employees and ensures

that working conditions comply with both local laws and internationally recognised standards. XAL attaches great importance to ethical business practices. We respect the personal dignity of every human being, regardless of ethnic origin, race, culture, religion, ideology, age, disability, skin colour, sexual identity, and gender. The same high standards that we set for ourselves also apply to our suppliers – as set out in the Supplier Code of Conduct. This Code of Conduct is part of our purchasing terms and conditions, through which suppliers undertake to comply with fundamental principles such as respect

for human rights throughout the supply chain. We conduct formal supplier audits on an ad hoc basis. If we identify violations of our Supplier Code of Conduct, this leads to a reassessment of the collaboration. XAL's production strategy focuses on establishing facilities in close proximity to key markets, such as our production sites in Europe. This approach enables faster delivery times and shorter transport routes, which ultimately benefits customers. XAL also attaches great importance to a safe and pleasant working environment in which all employees can

fully develop their skills and grow professionally. Respectful behaviour both internally among colleagues and with external business partners is of the utmost importance to XAL. Employees have the freedom to terminate their employment relationship at will. They are also guaranteed the right to freedom of association and to participate in collective bargaining. Part of the strategy for implementing our values in day-to-day business is training on compliance topics such as anti-corruption, which is offered to all employees.

### 3.3.3 Transparency and compliance as key values

Transparent and open communication are part of our corporate culture and have been anchored in our mission statement for many years. This also applies to the area of ESG and related reporting. Developments in the area of ESG have shown that objective and uniform standards are decisive factors in achieving common (climate) goals at global, regional, national, and local level. With the CSRD (Corporate Sustainability Reporting Directive) and the ESRS (European Sustainability Reporting Standards), further regulations have now been created in addition to the Taxonomy Regulation and the associated delegated acts to ensure transparent reporting.

This will also result in future reporting and disclosure obligations for the XAL Group. However, we have already decided to start developing comprehensive ESG reporting in 2022 and to document this development transparently for all interested stakeholders by publishing our reports starting in the 2022 | 2023 financial year. You can read more about the current and planned development of our methodology in chapter 4. In preparation for the future disclosure obligation under the Taxonomy Regulation (Article 8 of Regulation (EU) 2020/852 Taxonomy Regulation), a screening was carried out for the first time for this report in order to categorise sales, investments (CapEx) and operating expenses (OpEx) according to the criteria of the Regulation.

According to the Regulation, the first step is to determine whether the economic activities of companies are covered by the taxonomy – and thus whether there are technical assessment criteria that can be used to determine whether this activity is carried out in a sustainable manner. If the activities are covered by the Regulation, they are taxonomy-eligible. If they also fulfil the technical criteria set out in the regulation, they are taxonomy-aligned, i.e. sustainable. There are technical criteria for six environmental objectives. For alignment, the activity must make a significant contribution to at least one objective and – to ensure comprehensive view – must fulfil minimum criteria for the remaining objectives in order not to counteract them ("do no significant harm" – DNSH). In addition, compliance with minimum social standards in the supply chain must be sufficiently ensured.

In implementing these requirements, the economic activities in the Group were analysed by Compliance & Sustainability and Controlling and assigned to the taxonomy categories. The following activities were allocated:

## Taxonomy-eligible activities

		Activity   sub-category	Explanation of categorisation
Delegated Regulation	2021/2139	3.5 Manufacture of energy efficiency equipment for buildings g) manufacture of light sources	LED modules and luminaires with an integrated light source which were manufactured in the XAL Group or manufactured on behalf of third parties for a brand of the Group were included here.
	2023/2486	1.2 Manufacture of electrical and electronic equipment	Luminaires that do not contain a light source and were manufactured in the XAL Group or manufactured on behalf of third parties for a brand of the Group were included here.
	2021/2139	3.5 Manufacture of energy efficiency equipment for buildings j) presence and daylight controls for lighting systems	Luminaires with included sensor modules that were produced within the Group are included here.
		7.3 Installation, maintenance and repair of energy efficiency equipment d) Installation and replacement of energy efficient light sources	Services for installation, maintenance and exchange of luminaires are included here.
		7.6 Installation, maintenance and repair of renewable energy technologies a) Installation, maintenance and repair of solar photovoltaic systems and the ancillary technical equipment	Services for planning, installation and maintenance of photovoltaic plants (including technical equipment) were included here.
		4.24 Production of heat   cool from bioenergy	Expenses for the wood chip heating at the Slovenian production site were included here.
		6.5 Transport by motorbike, passenger vehicle and light commercial vehicle	Mostly expenses for leasing and operation of company cars were included here.
		7.7 Acquisition and ownership of buildings	Acquisition of buildings as fixed assets (if not included in another category) were included here.

Fig. 36 Classification of economic activities with explanation

The categories manufacturing of energy-efficient building equipment, installation and replacement of energy-efficient light sources, installation, maintenance and repair of photovoltaic systems and manufacturing of electrical and electronic equipment are relevant for sales as well as for CapEx and OpEx. Investments and operating expenses that are directly related to the performance of activities or the realisation of sales for category 3.5 were allocated here. These include, for example, materials and tools for the production of energy-efficient lighting as well as pro rata personnel expenses for production and development. Only the CapEx share for photovoltaic systems also includes the photovoltaic plants that were installed at sites in Graz and Murska Sobota during the reporting period. No direct sales were generated with the remaining categories, but rather operating expenses that contribute indirectly to the performance of business activities, such as the expenses for leasing and operating company vehicles in category 6.5 (transport by passenger car).

Subsequently, it was checked whether the technical criteria for a significant contribution to an environmental objective were met for some of the assigned activities.

For the manufacturing of light sources, the technical criteria stipulate that light sources with the two highest energy efficiency classes in accordance with Regulation (EU) 2017/1369 and delegated acts fulfil the criterion. At the time of writing this report, these are classes A and B. Luminaires whose light source fulfils this criterion are therefore assigned to this activity. Luminaires with built-in systems for daylight and presence control were assigned to category 3.5 (j) (Presence detection and daylight control for

lighting systems), for which no further technical criteria are provided.

For CapEx and OpEx in the above-mentioned categories, the share with a significant contribution was aliquoted according to the turnover in the same category if a direct allocation of expenditure at product level was not possible. There were other categories for CapEx and OpEx, such as transport by motorbikes, passenger cars and light commercial vehicles (6.5). In this category, the technical criterion is zero emissions during operation or low CO<sub>2</sub>-emissions (<50g/km). Electric vehicles and hybrid vehicles with compliant emission values were allocated to this category. The wood chip heating system and the wood used as fuel also fulfil the technical criteria for the significant contribution to climate protection in activity 4.24 (generation of heat | cooling from bioenergy).

The shares of taxonomy-eligible activities and activities that make a significant contribution are shown in figures 37 to 39.

For the assessment of the other criteria, data was already partially available. In particular, a comprehensive basis already exists for carrying out the risk and vulnerability analysis to fulfil the criteria for the "adaptation to climate change" objective with the risk analysis carried out as part of ISO 9001/14001/45001. In order to ensure full compliance with these criteria and thus prove the sustainable pursuit (taxonomy alignment) of the activities with a significant contribution, a complete analysis of the DNSH criteria and minimum social standards will be implemented in the upcoming reporting period.

# Taxonomy Turnover

Fig. 37

Economic activities

## A. Taxonomy-eligible activities

### A.1 Environmentally sustainable activities (taxonomy-aligned)

Manufacture of energy efficient equipment for buildings

Installation, maintenance and repair of energy efficient equipment

Installation, maintenance and repair of renewable energy technologies

Manufacture of electrical and electronic equipment

Turnover of environmentally sustainable activities (taxonomy-aligned) (A.1)

### A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)

Manufacture of energy efficient equipment for buildings

Installation, maintenance and repair of renewable energy technologies

Manufacture of electrical and electronic equipment

Installation, maintenance and repair of energy efficient equipment

Turnover of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)

## Total (A.1 + A.2)

## B. Taxonomy-non-eligible activities

Turnover of Taxonomy-non-eligible activities

## Total (A + B)





# Taxonomy CapEx

Fig. 38

Economic activities

## A. Taxonomy-eligible activities

### A.1 Environmentally sustainable activities (taxonomy-aligned)

Manufacture of energy efficiency equipment for buildings

Installation, maintenance and repair of renewable energy technologies

Manufacture of electrical and electronic equipment

Acquisition and ownership of buildings

CapEx of environmentally sustainable activities (taxonomy-aligned) (A.1)

### A.2 Taxonomy-eligible, but not environmentally sustainable (not taxonomy-aligned activities)

Manufacture of energy efficiency equipment for buildings

Installation, maintenance and repair of renewable energy technologies

Manufacture of electrical and electronic equipment

Acquisition and ownership of buildings

CapEx of taxonomy-eligible, but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)

### Total (A.1 + A.2)

## B. Taxonomy-non-eligible activities

CapEx non taxonomy-eligible activities

### Total (A + B)



# Taxonomy OpEx

Fig. 39

Economic activities

## A. Taxonomy-eligible activities

### A.1 Environmentally sustainable activities (taxonomy-aligned)

Manufacture of energy efficiency equipment for buildings

Production of heat|cool from bioenergy

Transport by motorbikes, passenger cars and light commercial vehicles

Installation, maintenance and repair of energy efficiency equipment

Installation, maintenance and repair of renewable energy technologies

Acquisition and ownership of buildings

Manufacture of electrical and electronic equipment

OpEx of environmentally sustainable activities (taxonomy-aligned) (A.1)

### A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)

Manufacture of energy efficiency equipment for buildings

Production of heat|cool from bioenergy

Transport by motorbikes, passenger cars and light commercial vehicles

Installation, maintenance and repair of energy efficiency equipment

Installation, maintenance and repair of renewable energy technologies

Acquisition and ownership of buildings

Manufacture of electrical and electronic equipment

OpEx of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)

## Total (A.1 + A.2)

## B. Taxonomy-non-eligible activities

OpEx of taxonomy-non-eligible activities

## Total (A + B)





## 4. Background

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# Overview

This Sustainability Report is an instrument for XAL to reach its sustainability goals. This chapter explains the scope and structure of the report as well as the analysis processes and methodology that were used to define key topics and gather reliable data.

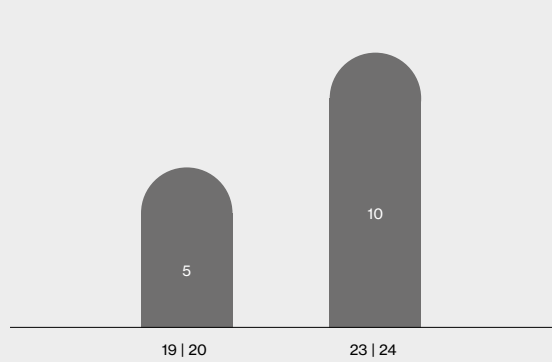
## Key facts

54

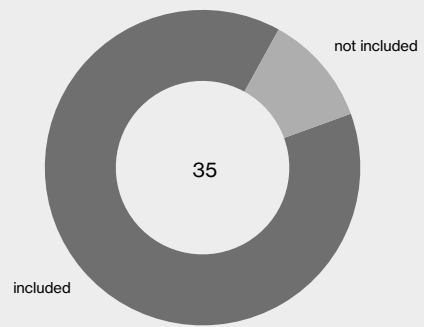
GRI disclosures

59

locations with data gathered



Number of Scope 3 categories included



Operative entities included in sustainability report 2023 | 2024 (included entities represent 100 % of Group turnover)



## 4.1 About this report

With this report, we are taking the next step towards complete, transparent, and objective ESG reporting. To ensure transparency, comparability, and accuracy, it was important to us to refer to an established framework of standards. For this reason, this report was drawn up with reference to GRI and the GHG Protocol was used to calculate our greenhouse gas inventory. In order to fully comply with future requirements under the CSRD, ESRS and Taxonomy Regulation, this report also makes reference to the ESRS. The

first report prepared entirely in accordance with ESRS and audited externally will be prepared for the 2025 | 2026 reporting period. This year, an external expert from susform OG, based in Vienna, already supported the preparation of the Corporate Carbon Footprint. This report is an important tool for communicating with our internal and external stakeholders and serves to track the effectiveness of our measures over time using objective and scientific criteria to ensure that we achieve our sustainability goals.

### 4.1.1 Reporting period and included entities

The reporting period for sustainability reporting is aligned with our financial year, which runs from February 1<sup>st</sup> to January 31<sup>st</sup>. The information in this report relates to the 2023 | 2024 financial year and is updated every year. In preparation for the report on last year's reporting period (2022 | 2023), a GHG inventory for the 2019 | 2020 financial year was calculated as the base year. The decision to use a base year that is not the immediately preceding financial year was made due to the COVID-19 pandemic, which temporarily had a significant impact on our business

activities. To ensure the comparability of the data, the last full financial year before the start of the pandemic was set as the base year for calculating our greenhouse gas inventory.

In terms of scope, all entities of the XAL Group in which the parent company, XAL Holding GmbH, holds a majority share were included in the reporting. Compared to the companies included in the consolidated financial reporting, there are only insignificant deviations, as is shown in the table below.

Company	Legal seat	Included in Report 23 24
XAL Holding GmbH	Graz, Austria	yes
XAL GmbH	Graz, Austria	yes
XAL GmbH	Markt Indersdorf, Germany	yes
XAL India Private Limited	Pune, India	no
XAL Limited	London, Great Britain	yes
XAL Schweiz GmbH	Zurich, Switzerland	yes
XAL Svetila d.o.o.	Murska Sobota, Slovenia	yes
XAL Tool India Private Limited	Pune, India	yes
XAL SARL	Paris, France	yes
XAL s.r.l.	Milano, Italy	yes
XAL Iluminación S.L.	Barcelona, Spain	yes
XAL B.V.	Amsterdam, Netherlands	yes
XAL sp.z.o.o.	Warsaw, Poland	yes
XAL Finland Oy	Helsinki, Finland	yes

Company	Legal seat	Included in report 23 24
<b>XAL Middle East DMCC</b>	Dubai, UAE	yes
<b>XAL AS</b>	Oslo, Norway	yes
<b>XAL AB</b>	Stockholm, Sweden	yes
<b>XALAX GmbH</b>	Graz, Austria	yes
<b>XALAX d.o.o.</b>	Varazdin, Croatia	yes
<b>Wever &amp; Ducré GmbH</b>	Graz, Austria	yes
<b>Wever &amp; Ducré Deutschland GmbH</b>	Markt Indersdorf, Germany	yes
<b>Wever &amp; Ducré BV</b>	Kortrijk, Belgium	yes
<b>Wever &amp; Ducré Schweiz GmbH</b>	Lucerne, Switzerland	yes
<b>Wever &amp; Ducré Asia Pacific Limited</b>	Hongkong, China	yes
<b>Wever &amp; Ducré SRL</b>	Milano, Italia	yes
<b>Asia Pacific Trading &amp; Investment Company Limited</b>	Hongkong, China	yes
<b>To Be Lighting Co. Ltd</b>	Dongguan, China	yes
<b>Wästberg Lighting AB</b>	Helsingborg, Sweden	yes
<b>Green Electrics Licht &amp; Energietechnik GmbH</b>	Graz, Austria	yes
<b>Wästberg Deutschland GmbH</b>	Frankfurt am Main, Germany	yes
<b>Wever &amp; Ducré Lighting S.L.</b>	Barcelona, Spain	yes
<b>XAL Lighting India Private Limited</b>	Hubli, India	yes
<b>XAL Singapore Pte. Ltd</b>	Singapur	no
<b>REW re:workX GmbH</b>	Vienna, Austria	no
<b>XAL Österreich GmbH</b>	Graz, Austria	no

**Fig. 40** List of entities included in sustainability reporting compared to entities included in financial reporting

Most of the companies not included are newly founded and did not yet have any significant operating activities in the reporting period, which is why they were not included in the data collection process for reasons of efficiency. However, they will be included from next year onwards (with the exception of XAL India Pvt. Ltd., which is no longer operationally active). The data for the minority shares of XAL Inc. are not included in the figures for previous reporting periods due to the

low level of operational control, integration into Group processes and data availability. In view of the deconsolidation of this investment at the end of the reporting period, the category Scope 3.15 (Investments) was not included in the inventory in the current reporting period. The development of the newly added investment REW re:workX GmbH is being monitored so that emissions in Scope 3.15 are included in the inventory as soon as they exceed the materiality threshold.

## 4.1.2 Determining our sustainability context

Based on feedback from various stakeholders, including customers, employees, suppliers and research partners, it was clear to us that, on the one hand, the fight against climate change is a focus of our sustainability efforts, but on the other hand, a comprehensive understanding of sustainability and sustainable development, which takes into account not only environmental but also social and governance aspects, also forms the basis for the selection of our material topics. This report contains the most important topics for each of these three aspects. The information presented already covers the majority of ESRS E1 (Climate Change), S1 (Own Workforce) and G1 (Corporate Policy). Based on the data already available from previous years, we assume that these three standards will certainly be material

for our activities. In the coming reporting period, we plan to carry out a full materiality analysis in accordance with ESRS in order to identify further material topics and include them in our reporting. The topic of climate change/THG emissions has already been expanded in this report, meaning that we now have a complete picture of our Scope 3 emissions, which will form the basis for developing a long-term reduction strategy and setting a target for the reduction of Scope 3 emissions.

The risk analysis in connection with the Taxonomy Regulation and the expansion of risk management in the supply chain in the coming years will also open up potential for continuous improvement.

## 4.1.3 Data quality and methodology

It is important for us to report accurate, reliable, and complete data in order to present the reality of the environmental impact of our business activities as accurately as possible. Data quality has been further improved compared to the previous year. For the base year, primary data was collected from production sites and representative sales locations. The results for the other locations were then extrapolated on this basis. For the previous reporting period, data was collected from all companies included, although there were differences in quality, particularly for Scope 3. 5 of the 15 categories were reported for Scope 3 for the previous reporting period and the base year. The categories were selected according to criteria of assumed reduction potential and data

availability. In this report, all other categories were reviewed, and the categories deemed to be material for the company's activities were included in the data collection and calculation. The categories "Further processing of products sold" and "Franchises" are not relevant to the Group's activities. There were no significant activities in category 3.15 (investments) in the reporting period. Emissions include all greenhouse gases and were calculated using factors derived from data sets from Sphera's LCA for Experts database (primarily for purchased materials) and public sources such as the Austrian Federal Environment Agency, the International Energy Agency, and the British DEFRA (Department for Environmental and Rural Affairs).

Used sources	Sources for Emission factors
<b>Scope 1</b>	Umweltbundesamt Österreich
<b>Scope 2</b>	Sphera
<b>3.1 Purchased goods and services</b>	Sphera
<b>3.2 Capital goods</b>	United States Environmental Protection Agency
<b>3.3 Indirect emissions</b>	Umweltbundesamt Österreich; Sphera
<b>3.4 Upstream transportation</b>	UK Government GHG Conversion Factors for Company Reporting
<b>3.5 Waste from operations</b>	UK Government GHG Conversion Factors for Company Reporting
<b>3.6 Business travel</b>	Umweltbundesamt Österreich; Climcalc Tool; UK Government GHG Conversion Factors for Company Reporting;
<b>3.7 Employee commuting</b>	Umweltbundesamt Österreich; Climcalc Tool
<b>3.9 Downstream transportation</b>	UK Government GHG Conversion Factors for Company Reporting
<b>3.11 Use phase</b>	Sphera
<b>3.12 End of life of sold products</b>	UK Government GHG Conversion Factors for Company Reporting

**Fig. 41** Sources used per scope

As reporting is done for the Group, data has been consolidated where appropriate. In particular, data was consolidated for product-related Scope 3 categories (Scope 3.1 Purchased materials and 3.11 Use phase) in order to avoid double counting. In the approach chosen, intragroup transactions were excluded from the calculation and only purchases/sales from/to external suppliers and customers were included for each

company. No consolidation was necessary for direct emissions; each company was included with 100% of the reported emissions. This is also in line with the requirement to align the scope of the corporate carbon footprint with the financial reporting.

For emissions for electricity, heating, and waste (Scopes 1, 2 and 3.5), primary data was available

for all large locations; for small sales locations – if no primary data was available – consumption was calculated using standard values per m<sup>2</sup> or per employee.

Where available, physical quantities were used as the basis for calculation. The emissions for purchased goods that we use to manufacture our products and trading goods were calculated based on weight. In this year's report, all other purchases of goods and services were also included in Scope 3.1 using cost-based emission factors. Capital goods (Scope 3.2) were also taken into account. Where available, emissions for business travel were calculated based on distances travelled, while the rest were calculated based on costs. The data quality for transport varied. In part, the place of dispatch and destination, gross weights and means of transport used were available. Kilometres were calculated using a route calculator. If no gross weight was available, the net weight was used with a packaging surcharge of 30%. If no means

of transport was available, different scenarios were defined depending on the geographical location.

For the use phase of the products sold, a significant improvement in data availability was achieved compared to the previous year, allowing the method to be adjusted for even more accurate results. In addition, the assumed service life was adjusted to 35 000 hours with regard to the existing standards at product level, in particular the definition of the functional unit for lighting in PEP (Product Environmental Passport). In order to obtain comparable results to the previous year, the values for the 2022 | 2023 financial year in this report were corrected and adjusted to the new method. For the end-of-life of products, a percentage distribution of the weight between different waste categories was defined for all goods sold. Waste utilisation scenarios were defined for each category. The scenarios for categories 3.5 (waste) and 3.12 (end of product life) were defined as follows:

Material category	Assumed recycling scenarios
Plastic	100 % Incineration
Metal	60 % Recycling, 40 % Landfilling
Glass	100 % Landfilling
Electronic waste	38 % Recycling, 62 % Landfilling
Paper and Cardboard	80 % Recycling, 10 % Incineration, 10 % Landfilling
Residual waste	15 % Incineration, 85 % Landfilling
Hazardous waste	78 % Landfilling, 22 % Incineration
Wood	54 % Incineration, 46 % Recycling

**Fig. 42** Recycling scenarios for the specified material categories at the end of product life

Emissions to air include NO<sub>x</sub> (nitrogen dioxide, nitrogen monoxide, nitrogen oxides), SO<sub>x</sub> (sulphur dioxide, sulphur trioxide, sulphur oxides), PM (PM>10, PM10, PM2.5-10, PM2.5) and CH<sub>4</sub>. As far as our employees are concerned, there are differences in the data availability of the companies. While basic data such as the number of employees is available everywhere, data on staff development, training participation and health and safety measures is not yet available Group-wide, which is one reason the reported data tends to focus on headquarters. The other reason is that the headquarters also develops concepts and training that – depending on labour

law requirements and other factors that affect the perception of such concepts – are also available for other companies. If measures or data are only available for some companies, this is indicated in the respective chapters. In the reporting period, some processes were already rolled out to international subsidiaries. We plan to regularly improve the Group-wide availability of data in this area.

# GRI-Index

<b>Disclosure no.</b>	<b>GRI Disclosure</b>	<b>GRI Standard</b>
<b>2-1</b>	Organizational details	General disclosures 2021
<b>2-2</b>	Entities included in the organization's sustainability reporting	General disclosures 2021
<b>2-3</b>	Reporting period, frequency and contact point	General disclosures 2021
<b>2-4</b>	Restatements of information	General disclosures 2021
<b>2-5</b>	External assurance	General disclosures 2021
<b>2-6</b>	Activities, value chain and other business relationships	General disclosures 2021
<b>2-7</b>	Employees	General disclosures 2021
<b>2-8</b>	Workers who are not employees	General disclosures 2021
<b>2-9</b>	Governance structure and composition	General disclosures 2021
<b>2-11</b>	Chair of the highest governance body	General disclosures 2021
<b>2-12</b>	Role of the highest governance body in overseeing the management of impacts	General disclosures 2021
<b>2-13</b>	Delegation of responsibility for managing impacts	General disclosures 2021
<b>2-14</b>	Role of the highest governance body in sustainable reporting	General disclosures 2021
<b>2-15</b>	Conflict of interest	General disclosures 2021
<b>2-16</b>	Communication of critical concerns	General disclosures 2021
<b>2-17</b>	Collective knowledge of the highest governance body	General disclosures 2021
<b>2-22</b>	Statement on sustainable development strategy	General disclosures 2021
<b>2-23</b>	Policy statements	General disclosures 2021
<b>2-24</b>	Embedding policy commitments	General disclosures 2021
<b>2-25</b>	Processes to remediate negative impacts	General disclosures 2021
<b>2-26</b>	Mechanisms for seeking advice and raising concerns	General disclosures 2021
<b>2-27</b>	Compliance with laws and regulations	General disclosures 2021
<b>2-28</b>	Membership associations	General disclosures 2021
<b>2-29</b>	Approach to stakeholder engagement	General disclosures 2021
<b>2-30</b>	Collective bargaining agreements	General disclosures 2021
<b>3-1</b>	Process to determine material topics	Material topics 2021
<b>3-2</b>	List of material topics	Material topics 2021
<b>205-1</b>	Operations assessed for risks related to corruption	Anti-corruption 2016
<b>205-2</b>	Communications and training about anti-corruption policies and procedures	Anti-corruption 2016
<b>205-3</b>	Confirmed incidents of corruption and actions taken	Anti-corruption 2016

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	ESRS 1 5 b	p. 73
	ESRS 1 §73	p. 73
If adaptations have been made, it is disclosed directly in the concerning chapter	ESRS 2 BP-2 §13, §14 (a) to (b)	GRI Index
		p. 73
	ESRS 2 SBM-1 §40 (a) i to (a) ii, (b) to (c), §42 (c)	p. 9
	ESRS S1 S1-6	p. 10   p. 47
	ESRS S1 S1-7	p. 48
Highest governance body of XAL group: to management of XAL Holding GmbH (Martin Dlaska) and supervisory board	ESRS 2 GOV-1 §21, §22 (a), §23; ESRS G1 §5 (b)	GRI Index
Chairman of supervisory board: Andreas Hierzer		GRI Index
	ESRS 2 GOV-1 §22 (c); GOV-2 §26 (a) to (b); SBM-2 §45 (d); ESRS G1 §5 (a)	p. 59
	ESRS 2 GOV-1 §22 (c) i; ESRS G1-3 §18 (c)	p. 59
		p. 59
No members of the supervisory board have executive functions in a group company		GRI Index
	ESRS G1 G1-1 AR 1 (a); G1-3 §18 (c)	p. 50
	ESRS 2 GOV-1 §23	p. 59
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	ESRS 2 GOV-2 §26 (b); MDR-P §65 (c); ESRS G1 G1-1 §9 and §10 (g)	p. 60
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		p. 59
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<b>Disclosure no.</b>	<b>GRI Disclosure</b>	<b>GRI Standard</b>
<b>206-1</b>	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Anti-competitive behaviour 2016
<b>301-1</b>	Used materials by weight or volume	Materials 2016
<b>302-1</b>	Energy consumption within the organization	Energy 2016
<b>302-3</b>	Energy intensity	Energy 2016
<b>302-4</b>	Reduction of energy consumption	Energy 2016
<b>302-5</b>	Reduction in energy requirements of products and services	Energy 2016
<b>305-1</b>	Direct (Scope 1) GHG emissions	Emissions 2016
<b>305-2</b>	Energy indirect (Scope 2) GHG emissions	Emissions 2016
<b>305-3</b>	Other indirect (Scope 3) GHG emissions	Emissions 2016
	Total GHG-Emissions	
<b>305-4</b>	GHG emissions intensity	Emissions 2016
<b>305-5</b>	Reduction of GHG emissions	Emissions 2016
<b>305-6</b>	Emissions of ozone-depleting substances (ODS)	Emissions 2016
<b>305-7</b>	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	Emissions 2016
<b>403-1</b>	Occupational health and safety management system	Occupational health and safety 2018
<b>403-2</b>	Hazard identification, risk assessment and incident investigation	Occupational health and safety 2018
<b>403-3</b>	Occupational health services	Occupational health and safety 2018
<b>403-4</b>	Worker participation, consultation, and communication on occupational health and safety	Occupational health and safety 2018
<b>403-5</b>	Worker training on occupational health and safety 2021	Occupational health and safety 2018
<b>403-6</b>	Promotion of worker health 2021	Occupational health and safety 2018
<b>403-7</b>	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships 2021	Occupational health and safety 2018
<b>403-8</b>	Workers covered by an occupational health and safety management system	Occupational health and safety 2018
<b>403-9</b>	Work-related injuries	Occupational health and safety 2018
<b>403-10</b>	Work-related ill health	Occupational health and safety 2018
<b>404-2</b>	Programs for upgrading employee skills and transition assistance programs	Training and education
<b>406-1</b>	Incidents of discrimination and corrective actions taken	Non-discrimination 2016
<b>n.a.</b>	Training and skill development metrics	n.a.
<b>n.a.</b>	Work-life balance metrics	n.a.
<b>n.a.</b>	Mitarbeiter:innenfluktuation	n.a.



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No legal actions pending or completed during reporting period		GRI Index
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	ESRS E1 E1-4 §34 (c); E1-6 §44 (c); §51; §AR 25 (b) and (c); §AR 39 (a) to (d); §AR 46 (a) (i) to (k)	p. 14   p. 17 p. 22   p. 32 p. 40
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	ESRS E2 E2-4 §28 (a); §30 (b) and (c); §31; §AR 21; §AR 26	p. 29   p. 38
	ESRS E2 E2-4 §28 (a); §30 (b) and (c); §31; §AR 21; §AR 26	p. 29   p. 38
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