SWARCO

SUSTAINABILITY REPORT

2022

CORPORATE SOCIAL
RESPONSIBILITY
OF AN INTERNATIONAL
TRAFFIC TECHNOLOGY GROUP

The Better Way. Every Day.

CONTENTS

01 INTRODUCTION

1.1 PREFACE

Welcome to SWARCO's first Sustainability Report! It gives you insights in what Corporate Social Responsibility (CSR) and sustainability mean for an Austrian-based leading global player in traffic technology.

Sustainable and energy- and resource-saving action has been laid in our genes. As early as 1969, SWARCO founder Manfred Swarovski recognised the potential of broken flat glass, which, when rounded into micro glass beads, can be converted into a road safety product and make road markings visible at night. This was at a time when words like recycling or upcycling were not yet on everyone's lips.

We were the first to bring the energy-efficient light source LED to market in traffic lights and variable message signs back in the 1990s. True to our guiding principle of improving the quality of life by making travel safer, faster, more comfortable and more environmentally friendly, our software solutions in urban and interurban traffic management contribute to optimised traffic flow and help reduce emissions and avoid congestion and accidents. This positively supports the environmental balance of our business partners.

It was also the entrepreneur Manfred Swarovski who recognised early on that you can only have lasting success if you think not only of yourself, but also of others. For us, entrepreneurship therefore also means social responsibility for our employees and for society in general. As a good corporate citizen, SWARCO gives part of its business success back to society, including support for social initiatives, promotion of university education and cooperation, health promotion, and as a sponsor of sports.

Although we have always helped our customers to save CO_2, the traffic management industry is neither taxonomy-eligible nor part of Carbon Border Adjustment Mechanisms as of today. While it is crucial to us that those legal framework aspects change, our focus is not only on fulfilling predefined Environment-Social-Governance (ESG) guidelines. We also want to do more voluntarily in certain areas and take our social responsibility seriously. Therefore, we continue to use the collective term Corporate Social Responsibility for all our sustainability topics.

We wish you interesting reading with our first report of this kind.

The SWARCO AG Executive Board (from left): Günther Köfler (CAO), Michael Schuch (CEO), Manuela Fürst (CFO)

"FOR US, SUSTAINABLE MANAGEMENT AND CORPORATE RESPONSIBILITY IN SOCIAL AND ECOLOGICAL TERMS ARE NOT JUST LIP SERVICE BUT HAVE BEEN A DAILY REALITY FOR MANY YEARS."

Günther Köfler, Chief Administrative Officer (CAO), SWARCO

1.2 ABOUT THIS REPORT

The present report, the first of its kind by SWARCO, refers to SWARCO's fiscal year 2022, equalling the calendar year (January 1st to December 31st). For readability purposes, we will use the shorter term "SWARCO" throughout this report, referencing to the complete list of consolidated companies in which SWARCO as the parent company is a 100% or majority shareholder.

The report was prepared with reference to the standards of the Global Reporting Initiative (GRI) and the European Sustainability Reporting Standards (ESRS). The management approaches and associated key figures are based on the internationally recognised GRI standards. The SWARCO Sustainability Report will be published on an annual basis from now on.

The carbon footprint data in this report was assessed from all production companies of the group and from a typical set of large, middle-sized, and small service operations. The corporate carbon footprint values were aggregated by the extra-polation of the typical service operations to all service operations.

At the beginning of 2022, the SWARCO Executive Board created a dedicated responsibility on Group level to look after sustainability and CSR and to coordinate local efforts in this respect.

Jointly with external consultancy, SWARCO carried out a comprehensive materiality analysis to identify those fields of activity in which the company can have the most significant impact in terms of sustainable behaviour and action.

A strategy process has been started, not only stating SWARCO's commitment to sustainability but also developing dedicated actions concerning the six material topics.

Among the decisions taken was the one making SWARCO publish for the first time a Sustainability Report related to fiscal year 2022.

Daniel Meier
Head of Corporate Social Responsibility
SWARCO Group

“SUSTAINABILITY IS AN INTEGRAL PART OF OUR CORPORATE PHILOSOPHY. WE ALIGN OUR CORPORATE RESPONSIBILITY WITH BUSINESS, SOCIAL AND ECOLOGICAL CRITERIA AND ARE CONVINCED OF THE COMPETITIVE ADVANTAGES OF SUSTAINABLE ACTION.”

Daniel Meier stating SWARCO’s CSR conviction

1.3 REGIONAL CSR HIGHLIGHTS

1.3.1. AUSTRIA

The SWARCO Global Glass Beads Technology Center in Neufurth is not only home to the most advanced and sustainable glass bead factory in the world, but also provides a valuable habitat for numerous animals and native plants.
In the course of the near-natural exterior design of the entire factory premises, wildflower meadows and flower soak-aways were planted with native and REWISA-certified seeds. In total, more than 7,000 m^2 were sown in several sub-areas.

Omitting of peat and synthetic chemical pesticides and fertilisers was a prerequisite in the planning. In addition, these areas also offer the great advantage that they do not need to be irrigated and only need to be mowed twice per year (instead of 10 times)! Since a wildflower meadow is much richer in species and ecologically more valuable than an English lawn, the seeding and planting are an important and exemplary contribution to the preservation of biodiversity respectively species diversity.

A large part of the flat roofs were also planted with greenery, and a total of 45 native large-crown deciduous trees were planted on the company grounds to positively influence the microclimate around the buildings (natural shading). Thanks to their high evaporation capacity, these measures will improve the indoor climate and air quality.

A wild shrub hedge was planted in the west to provide privacy from the neighbouring property. The hedge consists of 15 different native species. In this hedge, a variety of birds and insects find food and a habitat.

In addition, space was created for special natural garden elements on the site: a dry biotope with deadwood, a two-metre-high beneficial insect hotel, native wild shrubs and herbs, a spring stone, natural stone walls and cairns. Quality recreational areas were also created around the office building. The seating areas with furniture made of environmentally friendly materials are shielded from the traffic areas by a terrain modelling with flower meadows and groups of bushes and offer employees space to relax.

The lighting of the outdoor facilities is constantly being adapted and made more insect friendly. The LED lighting is dimmed to the extent that the minimum luminosity required by the labour inspectorate for 24/7 shift operation can be guaranteed.

On the occasion of "100 Years of Lower Austria", the Energy and Environment Agency of the Province of Lower Austria launched a quest for the 100 best climate projects. On 14 December 2022, the award ceremony took place in the Landhaus St. Pölten. The project “Near-natural outdoor design of company premises” made it into the top 100 out of 370 projects submitted. This award sends a strong signal for climate protection in Lower Austria and shows that companies can also make an important contribution to biodiversity.

SWARCO Futurit GmbH based in Burgenland is also constantly improving the environmental and social standards of their business, concentrating particularly on employee health and safety, training, and energy-efficient technologies.

A highlight of 2022 was the installation of new working tables in the signs production hall and the exchange of platforms besides the injection moulding machines to ensure safer and more ergonomic working conditions. Being ISO 14001 certified, the company furthermore enhances a comprehensive sustainability programme. The replacement of 5 sectional doors into heat insulated EFAFLEX high-speed spiral doors helped reduce the demand for heating energy remarkably. A research project for a detailed energy monitoring of internal production processes has been started with external partner “Sensorfact”. Once the analysis is finished, reductions in terms of energy and material use can be expected.

The switch from tinted masterbatch polycarbonate to liquid paints has already been an innovative driver for reducing the use of plastic materials in total volume. The decision to narrow down the product line of signal heads also helps reducing material input and improves the working conditions for the employees regarding organisation and production.

The SWARCO Global Glass Beads Technology Center in Neufurth / Austria

1.3.2 UNITED KINGDOM

Trees for Life Scotland – Smart Charging Ltd.
In October 2022, a team from SWARCO Smart Charging spent the day with its nominated charity Trees for Life at Dundreggan Nursery helping with a host of jobs, which included getting saplings ready for planting and harvesting seeds. Trees for Life is a charity committed to rewilding the Scottish Highlands and restoring the Caledonian Forest, which once covered most of Scotland. A mission that relies on public support and involvement and SWARCO Smart Charging, a leading provider of electric vehicle (EV) charging infrastructure in the UK, has been sponsoring it for the past two years. It has been making donations from every rapid EV charger installed and offering drivers using its EV charging network the option of making 'round up' donations. In addition to the amount raised in accordance with hardware purchases this year, drivers made additional donations totalling £11,616.68.

Melsonby Office Ground Source Heating - SWARCO UK & Ireland Ltd.
In the fields adjacent to the Melsonby office is a network of water pipes buried underground containing a mixture of water and anti-freeze. A ground source heat pump system harnesses natural heat from absorbing it underground. The water mixture is compressed and travels through a heat exchanger, this extracts the heat and transfers it to the heat pump. The heat is then pumped through our Melsonby office/factory heating system. The system requires electricity to run, but the idea is to use less electrical energy than the heat produced.

Industry Awareness Day at York College – SWARCO UK & Ireland Ltd.
York College recently hosted an industry awareness day aimed at students who are taking various electrical qualifications. The two half-day sessions were made up of a presentation and practical session from SWARCO with 60 students in total. This was followed by a presentation from Hull City Council and National Power Grid.

Renewable Energy in the UK – SWARCO UK & Ireland Ltd. , SWARCO Smart Charging Ltd. & APT Skidata Ltd.
Following on from the 2021 UK and Ireland carbon accounting project, they moved to renewable energy sources. 57% of our depots now source their electricity through renewable energy tariffs. SWARCO UK & Ireland is committed to ensuring 100% of their depots source their electricity from renewable sources by 2026.

All Electric Fleet – Smart Charging
In 2022, SWARCO Smart Charging Ltd.'s Customer Service Engineer fleet became 100% electric.

Going Green – APT Skidata
APT Skidata has taken steps towards more sustainable everyday practices. In 2022, they signed the contract to begin transitioning their fleet to electric hybrids with the rollout taking place through 2023.

Clepington Road – Smart Charging Ltd
Dundee Council has opened its fourth public EV charging hub, the result of a forward-thinking collaboration with SWARCO Smart Charging that puts innovation, sustainability, and accessibility for all EV drivers at the heart of the design. SWARCO has worked with its battery energy storage systems partner, Connected Energy, which uses second life EV batteries to store solar energy collected from the solar panels installed on the hub's canopy roof. This stored energy will support the energy demands of the site. SWARCO has also worked with leading water purification company, Bluewater, to include rainwater harvesting technology, which is the first time this has been done at a UK EV charging location. The system has been incorporated in the canopy roof to capture rainwater which is then filtered into the purifying machine so that EV drivers can refill water bottles with fresh drinking water, or to top up their windscreen washers.

Tranmere Rovers Women Development Team and Poulton Victoria Junior Football Team
HITEX Traffic Safety based in Ellesmere Port entered a new front of shirt sponsorship of the local Tranmere Rovers Women Development Team, funding the football kit expenses for the season.

Supporting Trees for Life Scotland

1.3.3 THE NETHERLANDS

Our SWARCO colleagues in the Netherlands have set the following nine goals in terms of sustainability and environment for the period from 2021-2025:

1. The main objective is to reduce the total CO_2 emissions, expressed in kg CO_2/year/ FTE, by 5% or more by the year 2025 (Scope 1 & 2*). In 2022, emissions were 5.8 tons of CO_2/ year/ FTE. This is a reduction of 29.6% compared to 2019.

2. All SWARCO employees with a leased vehicle from SWARCO need to follow the online training “New Driving” to ensure the safest and most sustainable driving habits. In the first and second quarter of 2022 this training course was sent to all 320 lease drivers (about 60% of all employees). Their target for 2022 was to have at least 20% of the employees completed this training. From January till June 2022, 40% of the lease drivers completed the e-learning course: a very good start.

3. Our third target is to have at least 25% of the ‘yellow license plate’ vehicles in our SWARCO car fleet to be electric or hybrid by 2025, of which 5% in 2022. By the end of 2022 we had twenty-two electric cars in our car fleet, which is 8% of the entire fleet.

4. A goal for our offices is to only consume green energy at the office locations where we manage energy contracts ourselves (Scope 2). All office locations in the Netherlands where we control the energy contracts successfully switched to green electricity providers as of February 2022.

5. Additionally, we aim to install smart meters for energy consumption at those office locations where we manage the energy contracts (Scope 1 and 2). In 2022, seven locations installed smart meters for energy consumption to monitor and control energy consumption in real time; this is 7 out of 8 locations where we manage energy consumption ourselves.

6. Our sixth target is to have 100% LED lighting at new (newly leased) office locations in the Netherlands. In 2022 we made budgetary provisions to invest in LED lighting renovations. Six locations have completely switched to more sustainable and safer LED lighting. One location has partially transitioned to LED lighting, and our plan is to install LED lighting at the remaining 5 locations in the coming year(s).

7. In addition, we aim to install and maintain two electric charging stations at all our SWARCO office locations per year in the Netherlands (Scope 1, 2 and 3) between 2021 and 2025. In 2022, a total of twelve charging stations have been installed.

8. We aim to reduce our CO_2 emission, expressed in kg CO_2/year, for SWARCO Mobility Nederland’s Traffic Light Controller coating process by at least 20% per year between 2021-2025 (Scope 3*). In 2022, we have introduced

a new coating method, thus realising a CO_2 reduction of 39.4% compared to the former coating process.

9. The final target applies to SWARCO Mobility Nederland's services of installing public lighting. Our goal is to save 910 tons of CO_2 per year, which totals to 13,650 tons of CO_2 between 2021 and 2025. Since 2021, a total of 5,631 tons of CO_2 were saved, and in 2022, an additional 1,363 tons of CO_2 .

Well-being and Environment

- SWARCO Mobility Nederland's Traffic Light Controllers are assembled by employees at a social workplace.

- SWARCO Mobility Nederland's Christmas gifts are made by a company called 'DoeGoods' that creates gifts with a social impact. DoeGoods works with sustainable products and packaging materials. What is special about DoeGoods is that the entire process from purchasing until packaging and shipment of our Christmas packages is arranged by employees from a social work place. DoeGoods arranges regional deployment of people with a distance to the labour market and / or an occupational disability. In this way, they offer SWARCO the opportunity to give substance to our objectives under the Participation Act.

- As part of the rebranding from Dynniq Mobility to SWARCO Mobility Nederlands in June 2022, all the work clothing and PPMs (Personal Protective Measures) with Dynniq branding were collected at central locations in the Netherlands and retrieved and recycled by 'GAIA', a company that ensures products are retrieved and recycled. This concerns newly developed, circular, but also existing, non-circular products. In this way, they make the transition to a circular economy.

1.3.4 SWEDEN

SWARCO Sverige AB organises a sponsorship among its employees every year, which is very popular. Every year, many employees apply for sponsorship, and every year SWARCO Sverige sponsors youth activities around the country with SEK 50,000. (approx. 5,000 EUR).

SWARCO Sverige sponsors children and young people who have parents or relatives employed by the company. As in the previous year, it must be children and young people up to 18 years of age and include both team sports and individual sports both indoors and outdoors as well as human sponsorship (children and young people) or the environment (for a more sustainable development).

The application for sponsorship is made through an employee at SWARCO who records a simple film/video (maximum three minutes, preferably together with the children/young people) in which the activity/association is presented and what the money will be used for. The employee who applies must be voluntarily involved in the activity intended for sponsorship. The management team will then review that all individual applications are consistent with the company's ethical standards and the pursuit of balance in the sponsoring activities between sports, society, the environment, and gender equality.

*Scope 1: (Direct) Emissions, emitted from facilities owned or controlled by the organisation, such as emissions from its own gas use and emissions from its own vehicle fleet.
Scope 2: (Indirect) Emissions, that occur from the generation of electricity, heat and cooling and steam at facilities that do not belong to the organisation's own business, but are used by the organisation, such as emissions released from the generation of electricity in power plants.
Scope 3: (Other Indirect) Emissions that arise as a result of the organisation's activities but from sources not owned or managed by the organisation, such as emissions arising from the production of purchased materials and the use of the work, project, service or supply provided/sold by the organisation.

02 ABOUT SWARCO

SWARCO is an Austrian-based international player in the field of traffic technology looking back to more than five decades of industry experience. Global market-leading positions have been obtained with the full range of retroreflective road marking systems and the production of LED-based traffic lights and variable message signs. SWARCO is a manufacturer, service provider, system integrator, software developer, turnkey solution provider, road safety and traffic management expert, and glass recycler and upcycler. The corporation is present on all continents and serves roughly 5,000 customers, many of them being long-standing business partners, in some 80 countries.

Road marking systems, the use of glass microspheres for industrial purposes, urban traffic control and mobility management, highway and tunnel management, and parking management are core market segments of its business. SWARCO actively contributes to the work of national and international road-related associations, standardisation bodies, and EU-funded projects and cultivates relationships with renowned research and development institutions and universities.

2.1 LEADING IDEA

In a corporate, cross-company process reflecting about what SWARCO stands for, we have developed and introduced the following Leading Idea as orientation for our daily work:

WE IMPROVE QUALITY OF LIFE BY MAKING THE TRAVEL EXPERIENCE SAFER, QUICKER, MORE CONVENIENT, AND ENVIRONMENTALLY SOUND.

SAFER

means to us:
saving lives on the roads of our planet with safe guidance, in-time information, and reliable infrastructures.

QUICKER

means to us:
making your trip from A to B as little time-consuming as possible, avoiding congestion and stress.

MORE CONVENIENT

means to us:
making trips based on real-time information and with improved user experience along the journey.

ENVIRONMENTALLY SOUND

means to us:
reducing the environmental impact of traffic infrastructure and of the journey itself.

2.2 CORE VALUES

Equally important is the set of core values we have identified for our Group. These values are the heart of our DNA and play a key role in ensuring our continued entrepreneurial success:

- **INNOVATION**
  This includes supporting new ideas and exploring new avenues.

- **COOPERATION**
  This includes listening attentively and finding solutions together.

- **AGILITY**
  This includes acting flexibly and thinking outside the box.

- **PASSION**
  This includes thinking one step ahead and going the extra mile.

- **RELIABILITY AND TRUST**
  This includes taking a friendly and honest approach and being always on the par with customers and partners.

2.3 OUR BUSINESS MODEL

As an international player in traffic technology, SWARCO serves both Business-to-Business (B2B) and Business-to-Government (B2G) customers. Sales range from individual products to turnkey solutions for urban and interurban traffic control, parking and e-mobility, and public transport management.

The B2B sales mostly refer to system integrators who use SWARCO products, for instance traffic lights, to integrate them into larger systems, for instance urban intersections. Road marking contractors buy glass beads and road marking materials from SWARCO to implement the retroreflective lane markings on streets, roads, motorways, and any kind of pavement. Such customers are mostly from the traffic technology and road safety sector. However, they can also be working in non-traffic sectors such as surface treatment, additive manufacturing, water filtering, or construction materials, since SWARCO micro glass beads are also appreciated blasting and filler media for such purposes.

The B2G sales rely on the budgets of public authorities for improving and maintaining road infrastructure. These can be federal offices, national highway operators, or city offices responsible for urban traffic control and management. The business is based on public tenders, for instance for the periodic supply of road marking systems for own contractors, the supply of motorway guidance systems, the supply of parking guidance systems or the supply of as-a-service software solutions for urban mobility management.

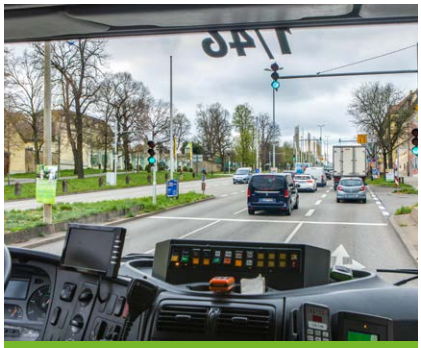
SWARCO covers a great part of the value chain including manufacturing, engineering, research, development, planning and design, project management, delivery, installation and maintenance, and after-sales services.

SWARCO has two divisions: Road Marking Systems (RMS) and Intelligent Transport Systems (ITS). One third of the revenues is generated by RMS, two thirds are generated by ITS.

In fiscal year 2022, SWARCO generated consolidated revenues of 1.13 billion € and employed a staff of 5357 colleagues.

ROAD MARKING SYSTEMS

INDUSFERICA



URBAN MOBILITY

HIGHWAY & TUNNEL

PARKING & E-MOBILITY

PUBLIC TRANSPORT

VALUE CHAIN ITS + RMS

UPSTREAM

RAW MATERIAL PRODUCTION

- Plastics
- Metals
- Chemicals
- Glass
- Other raw materials
- Energy & emissions
- Biodiversity
- Water consumption & waste water
- Transport emissions
- Resource scarcity
- Human rights & working conditions
- Occupational health & safety

UPSTREAM PRODUCTION

- Electronic component
- IT hardware / software
- Sensors
- Mechanical components
- Energy & emissions
- Water consumption & waste water
- Transport emissions
- Human rights & working conditions
- Occupational health & safety

CENTRAL BUSINESS PROCESSES

PRODUCTION (CHEMICAL, GLASS, ELECTRONICS)

- Energy & emissions
- Water consumption & waste water
- Waste & recycling
- Material efficiency

PROCUREMENT / INBOUND LOGISTICS

- Transport emissions
- Regional added value
- Sustainable procurement
- Ethics & compliance

TECHNOLOGY & INNOVATION

- Design for traffic safety
- Eco & circular product design
- Efficiency improvements

SALES / OUTBOUND LOGISTICS

- Transport emissions
- Packaging

SOFTWARE DEVELOPMENT

- Optimised traffic flow
- Design for traffic safety
- Efficiency improvements

EMPLOYEES

- Employee satisfaction
- Training & education
- Occupational health & safety
- Diversity & inclusion
- Attractive working conditions & work-life balance

DOWNSTREAM

CUSTOMERS (E.G. MUNICIPALITIES) & SERVICE COMPANIES (ROAD MARKING AND ROAD EQUIPMENT SERVICES)

- Energy & emission
- Energy efficiency
- Land consumption & sealing
- Human rights & working conditions
- Occuational health & safety
- Diversity & inclusion
- Ethics & compliance
- Product lifetime

USERS (ROAD DRIVERS)

- Optimised traffic flow
- Biodiversity
- Commuting times & convenient driving
- Traffic safety
- Product safety & quality

DISPOSAL

- Dissolution & waste management
- Reverse logistics
- Re-use & refurbishment

ENVIRONMENT SOCIAL GOVERNANCE

2.4 CORPORATE GOVERNANCE

SWARCO is a family-owned business founded in 1969 by Tyrolean entrepreneur Manfred Swarovski (1940 – 2018). Since 1998 the group has been organised in line with the standards of publicly listed companies, managed by an Executive Board, advised by a Supervisory Board with different sub-committees, and governed by a detailed set of codes, statutes, and by-laws.

The Executive Board delivers regular reports on the state of the group of companies to the Supervisory Board and the shareholders. Every year in spring, independently audited financial annual statements are published as a report (mainly addressed to financial institutions) detailing various figures according to IFRS principles and informing about the development of the business in the previous fiscal year.

One of SWARCO's core values is trust. Trust requires honesty, integrity and incorruptibility. Adherence to all legal requirements and internal rules (compliance) applicable to SWARCO and its subsidiaries, management and employees has long been a corporate objective and an integral part of our corporate culture. As SWARCO, we have a Code of Conduct (further detailed in chapter 3.6) to ensure the integrity of our behaviour. It defines our working principles and provides recommendations for proper conduct. The aim of all our compliance activities is not only to comply with laws and internal rules, but also to promote our own core values and implement them in our daily lives.

03 SUSTAINABILITY AT SWARCO

3.1 SUSTAINABILITY STRATEGY

To give the topic of CSR appropriate weight in SWARCO and to develop this strategically, the position of "Head of Corporate Social Responsibility SWARCO" was created in January 2022 and filled by an experienced manager with a long-standing SWARCO background.

Within SWARCO, two additional colleagues are currently working as CSR Specialists, one for each division.

They are responsible for building the CSR community in the respective SWARCO companies, driving this important topic, identifying policies and processes in CSR and sustainability, and implementing them.

3.2 MATERIALITY ANALYSIS

In 2022, the first SWARCO materiality analysis was performed with the support of the consultancy group *denkstatt*. The materiality analysis and the resulting material topics form the basis for this sustainability report.

3.2.1 MATERIALITY ANALYSIS PROCESS

The CSR department is responsible for driving this process and evaluating together with Group Management the materiality of sustainability topics.

Initially, the complete SWARCO value chain was analysed (cradle-to-grave), and the following 16 sustainability topics were identified and categorised according to Environment-Social-Governance (ESG):

ENVIRONMENT

- Energy & emissions
- Water consumption & waste water
- Waste & recycling
- Biodiversity & land use
- Ecological aspects in the supply chain
- Eco & circular product design

SOCIAL

- Optimised traffic flow
- Human rights & working conditions
- Occupational health & safety
- Traffic safety
- Employee satisfaction
- Training & education
- Diversity & inclusion

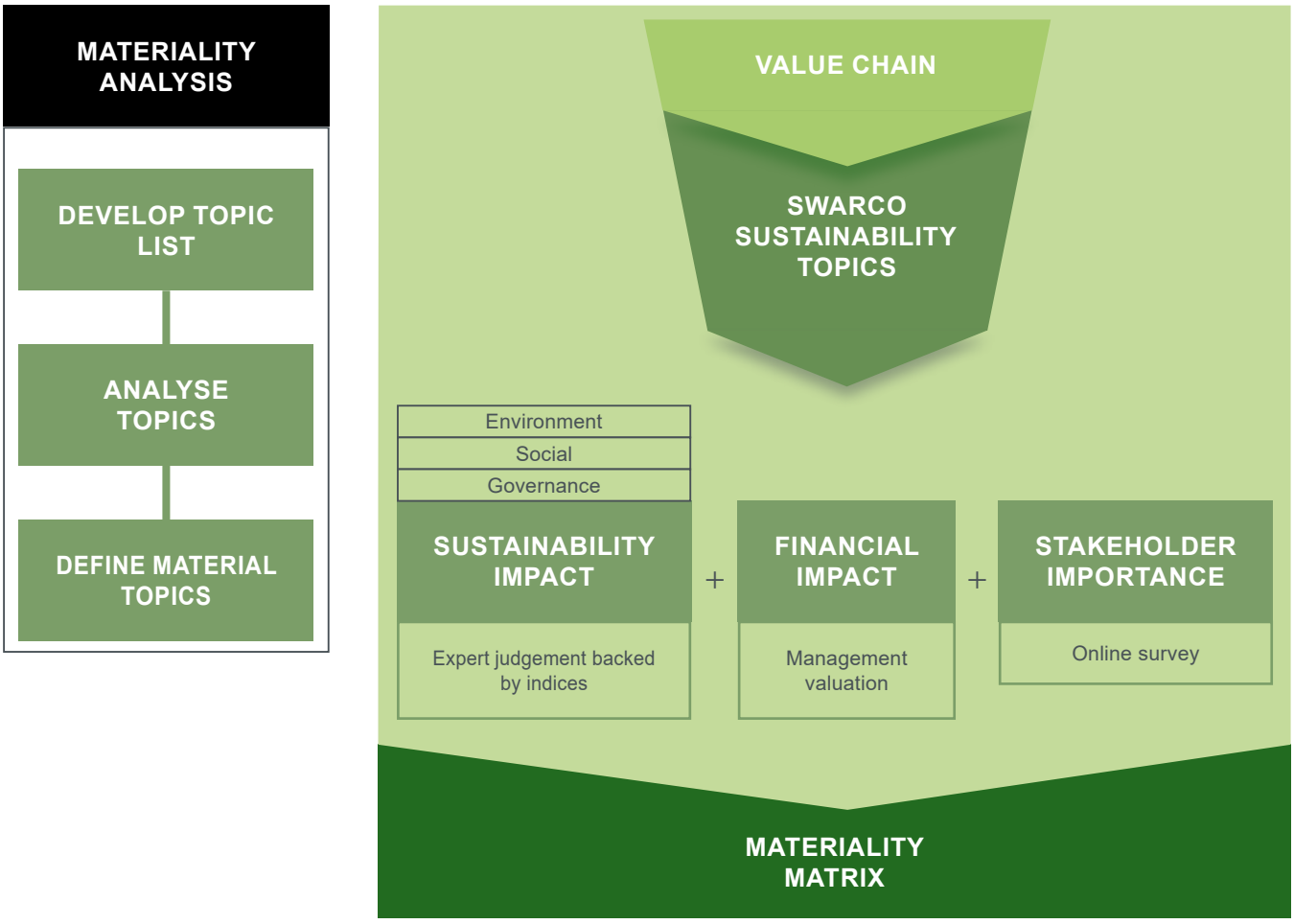
PRODUCT & GOVERNANCE

- Ethics & compliance
- Sustainable procurement and local value add
- Product safety and quality

Some topics can be allocated to more than one category (e.g., Eco & circular product design could be part of Environment or Governance), however, for the sake of simplicity, the above categorisation was decided.

For assessing the material topics for SWARCO, the "double materiality" principle according to CSRD was applied. The sustainability impact, the financial impact, and the stakeholder importance were considered for each sustainability topic as shown in the graph below.

The sustainability impact is determined via an expert judgement based on generally accepted indices. An online survey of various stakeholders is performed to assess the importance from their point of view. And finally, the financial impact is based on the valuation of Group Management.



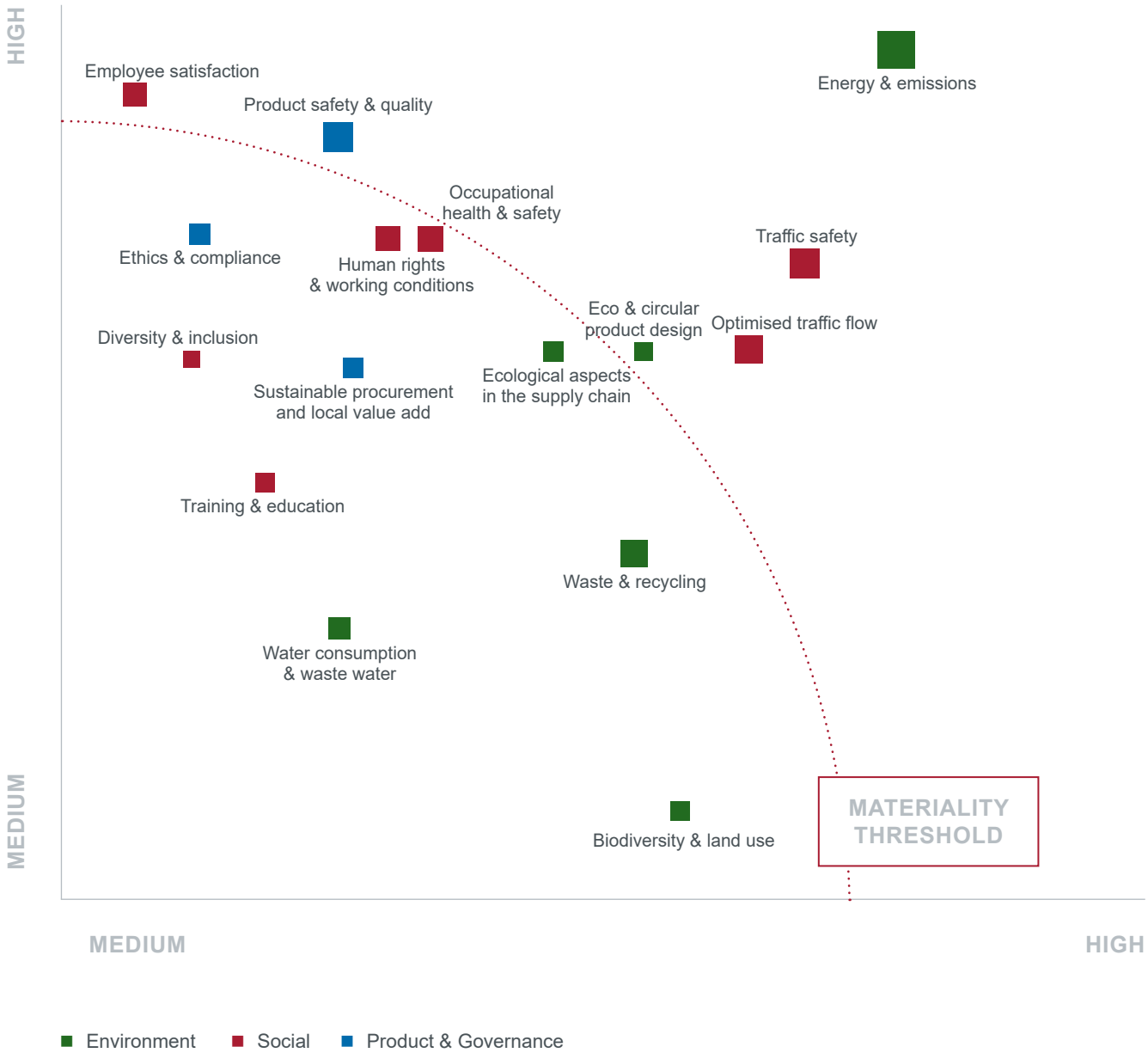
3.2.2 MATERIALITY ANALYSIS RESULT AND SELECTED THRESHOLD

The sustainability and financial impact were both evaluated and determined in a workshop together with Group Management and the external support of a consultancy firm. The stakeholder importance was evaluated based on the results of an online survey (see more details in chapter 3.3).

Sustainability Impact (inside-out perspective) refers to the assessment of the impacts on environment and society while the Financial Impact (outside-in perspective) refers to the assessment of risks and opportunities based on scenarios concerning SWARCO. The aggregation of both assessments led to the following result of the materiality matrix.

The size of the squares indicates the importance to stakeholders. In a further workshop with Group Management, the materiality threshold was determined, resulting in the following six material topics:

- Energy & emissions
- Employee satisfaction
- Eco & circular product design
- Product safety & quality
- Traffic safety
- Optimised traffic flow



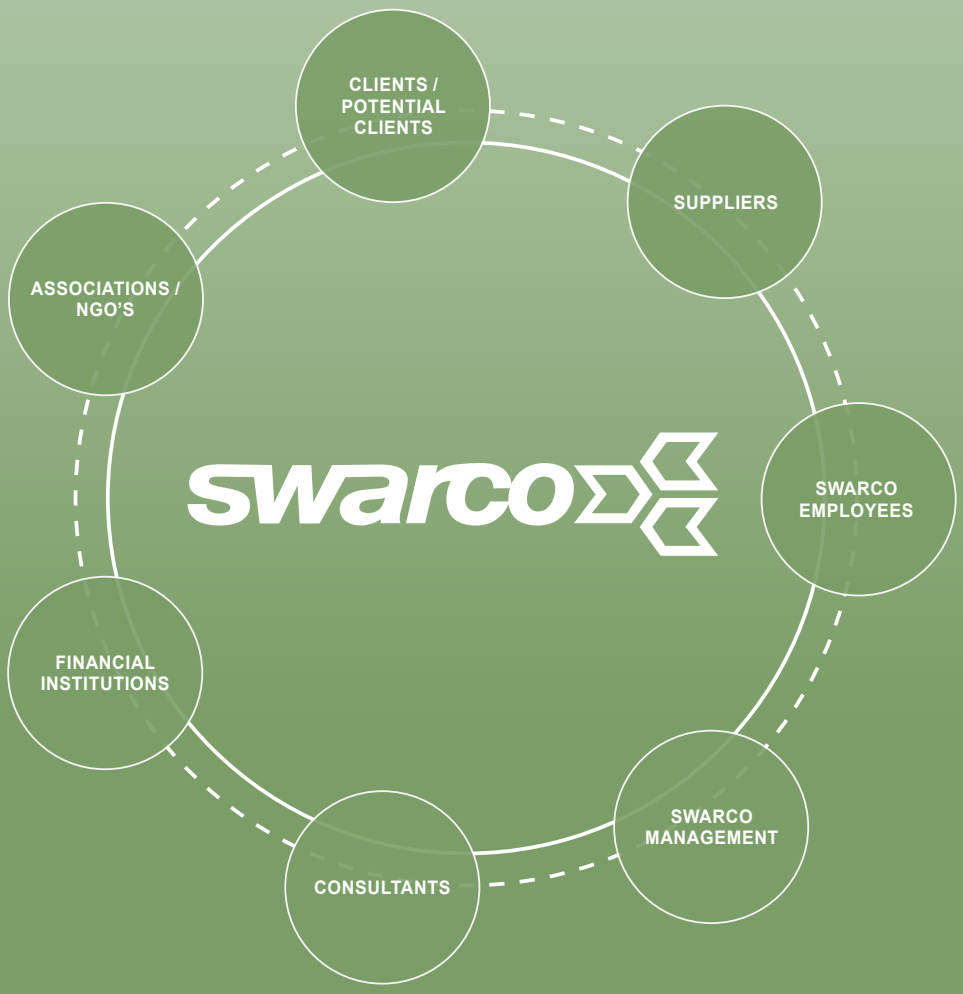
3.2.3 PRIORITIES FOR MATERIAL TOPICS IN 2023

"Energy & emissions" represents by far the topic with highest priority. In a further CSR strategy workshop in January 2023, it was decided to also prioritise "Employee satisfaction" and "Eco & circular product design" in 2023. The other three material topics "Product safety & quality", "Traffic safety", and "Optimised traffic flow" are all part of SWARCO's ongoing business processes so that an additional CSR focus is not explicitly needed.

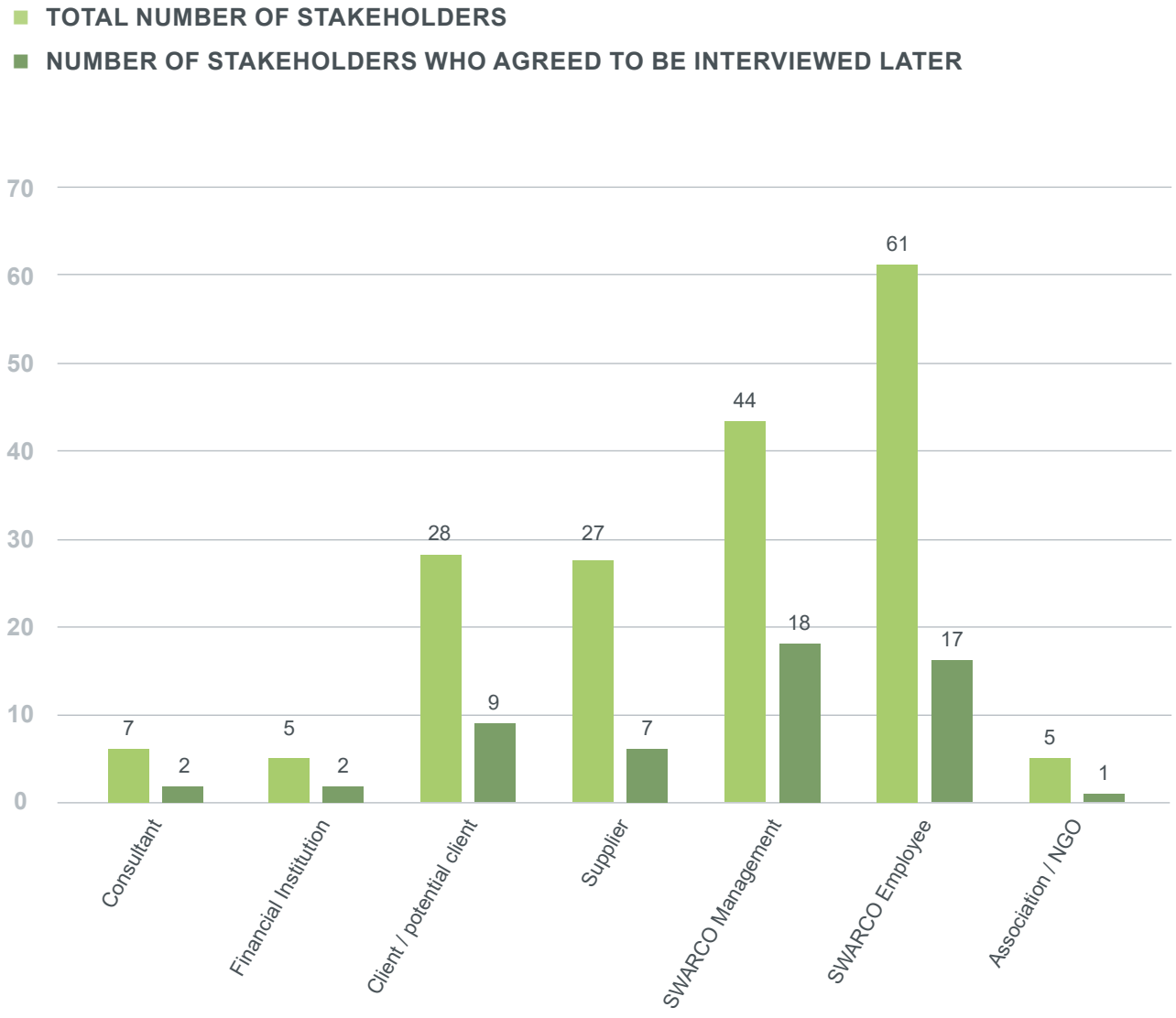
3.3 STAKEHOLDER ENGAGEMENT

The key stakeholders for SWARCO regarding CSR are:

1. Clients / potential clients
2. Suppliers
3. SWARCO employees
4. SWARCO Management
5. Consultants
6. Financial institutions
7. Associations / NGO's



As part of the materiality analysis, a detailed online survey was performed during July and August 2022. As specifically known contacts were addressed, the response rate was high with over 60%. A total of 177 stakeholders took part in the survey with evaluable responses as shown in the light green columns below. The dark green columns indicate the number of stakeholders who agreed to a personal interview in a second round.



The response rate showed that there were enough participants in each stakeholder group for a meaningful result and that additional participants would not have significantly changed the result. The participants of the online survey were asked to rate the relative importance of the 16 sustainability topics (see page 21) and to assess how engaged they perceive SWARCO in each of these topics. A higher importance to the stakeholders is displayed by a larger size of the squares in the Materiality Matrix graph on page 23. The largest gap between “Importance of topic for stakeholders” and the “Perceived engagement of SWARCO” in a certain topic was found to be in the topic of “Energy & emissions”. This evaluation confirms our planned focus on “Energy & emissions” in the short and medium term.

In November 2022, 30-minute in-depth interviews were conducted with selected stakeholders using a defined template. The interviews were used to confirm and further detail the results of the July/ August 2022 stakeholder survey. The results were also incorporated into the CSR strategy process.

3.4 SUSTAINABILITY GOVERNANCE

The Head of the CSR Department reports directly to the Chief Administrative Officer (CAO) who is part of the Executive Board. The CSR Department informs the CAO every second week about the current CSR and Sustainability matters that can cause material impacts, risks, and opportunities as well as any other sustainability-related concerns. CSR addresses material sustainability matters at the monthly Executive Board meetings where the decision-making process takes place. If deemed necessary, the Group Executive Board raises these topics in the quarterly Supervisory Board meetings.

SWARCO has endorsed a Code of Conduct (see chapter 3.6) which explicitly promotes that corporate social responsibility is lived today in order to preserve our planet for future generations. The organisational structure of each SWARCO company guarantees that every employee can revert directly to his or her superior for addressing any ideas or identified issues. In addition to that or in case an employee does not have the feeling to receive serious consideration for his/her issues, the compliance hotline indicated in the Code of Conduct on the Intranet can always be involved.

3.5 SUSTAINABILITY RISKS

SWARCO is in the process of revising its corporate risk management. As part of this process, ESG risks will be included in the overall assessments. The ultimate goal is to periodically monitor ESG risks as part of the corporate risk register.

3.6 COMPLIANCE AND ETHICS

SWARCO’s Code of Conduct promotes equal opportunities and denounces harassment as well as discrimination. Discrimination covers negative impacts due to race, ethnicity, colour, sexual orientation, gender, disability, age, religion, political attitude, or social origin as well as any other way of discrimination. It also covers the areas of "Dealing with various Stakeholders" as well as how to behave in the case of "Conflicts of Interest". The department "Compliance & Risk Management" reviews this Code of Conduct on a regular base, minimum once per year. The department of "Compliance & Risk Management" located in Wattens is responsible for entire SWARCO. It formally reports to the Chief Administrative Officer (CAO) who is part of the Group’s Executive Board.

The Code of Conduct has been translated into all relevant corporate languages. Every new employee receives the Code of Conduct on their first day of work and undertakes to comply with it. A compliance introduction is also an integral part of the onboarding process for new colleagues. In addition, compliance training sessions are held at regular intervals, and there is a local compliance officer at each site.

All sites are checked for corruption risks. There are also other compliance risks, such as insufficiently specified policies and procedures or policies and procedures of which employees are unaware. We want to counteract the lack of awareness of corruption risks among employees and in particular managers and have therefore made our communication and training on corruption policies and procedures central pillars of SWARCO's anti-corruption efforts.

A Whistleblower Hotline was introduced in 2013. Via compliance@swarco.com, we offer our employees, customers, and business partners the opportunity to report violations of our Code of Conduct. We emphasise that we want to be informed about any violations so that they can be resolved and remedied. We therefore encourage our employees, customers, and business partners to use the whistleblower system to report indications of violations or suspicious incidents to us. This can also be done anonymously. Promoting this opportunity is a central task, which is implemented every year through new campaigns.

No violations were reported within the reporting period. Furthermore, no fines or non-monetary sanctions have been imposed due to non-compliance with laws and/or regulations.

The Group-wide Information Technology Usage Guidelines apply to our employees as of 2021. In particular, these guidelines regulate the reliable, efficient and secure use of information technologies in the companies, social media and communication principles, the behaviour in the event of data breaches and IT security incidents, and the private use of internet devices. Special attention is paid to compliance with applicable laws on data privacy, copyright, criminal law, such as the prohibition of any kind of glorification of violence, discrimination, sexism, political radicalism, bullying, pornography or gambling.

3.7 EXTERNAL INITIATIVES & MEMBERSHIP IN ASSOCIATIONS

SWARCO values its suppliers as an integral part of the value chain. Therefore, it is the aim to have fair, partner-oriented relationships with the key suppliers. The process of entering a relationship with suppliers usually starts with the requirements of the development or operations departments. Based on that, SWARCO's supply chain management screens the market for potential suppliers. Resulting from sample testing to ensure the quality, certifications, and supplier audits, the Procurement department identifies relevant suppliers and negotiates a framework agreement with strategic suppliers either on a local or on a central level. In either case, SWARCO's central Procurement department is involved. Here it considers various criteria such as quality, reliability, and also sustainability. It is SWARCO's target to diversify the supplier base to minimise the risk of disruptions in the supply chain. Supplier visits, audits, and regular communication with strategic suppliers enable a cooperative approach over the lifetime of a supplier relationship.

SWARCO is committed to contribute to the work and advocacy of national and international road associations, among them the following:

- ATSSA – American Traffic Safety Services Association
- ATTC - Austrian Traffic Telematics Cluster
- BPA - British Parking Association
- DSGS - Deutsche Studiengesellschaft für Straßenmarkierungen
- ERF - European Union Road Federation
- ERTICO – ITS Europe (European Road Transport Telematics Implementation Coordination Organisation)
- GSV – Gesellschaft für Straßen- und Verkehrswesen
- IRF - International Road Federation
- ITS America - Intelligent Transportation Society of America
- ITS Germany - Intelligent Transportation Systems Germany
- ITS UK - Intelligent Transportation Systems United Kingdom
- TTS Italia
- ZVÖ – Zukunft – Verkehr – Österreich

04 ENVIRONMENT – SOCIAL – GOVERNANCE (ESG)

In the course of the materiality analysis, six sustainability topics were rated as particularly material – both in terms of financial impact, sustainability impact and stakeholder assessment.
These topics are assigned to the three dimensions E – Environment, S – Social and G – Governance.
For these topics, the following chapters describe why they are significant, SWARCO's existing management approach, defined goals and KPIs, and measures already implemented and planned.

4.1 E – ENVIRONMENT

4.1.1 INTRODUCTION

Environmentally friendly approaches have always been part of SWARCO's way to do business. Our Leading Idea integrates "environmentally sound" as an attribute how we design the travel experience for the road users. There are many aspects and initiatives that have positive impact on our environment:
SWARCO fosters the use of **electric vehicles** in the group's car fleet guidelines with simultaneous build-up of the charging infrastructure at our premises (e.g., wall boxes). A customary practice in some of our production plants is the use of electric forklift trucks, avoiding noise and harmful emissions in the direct working environment on the shop floor.
The best tactic to manage waste is to stop creating it. That is why SWARCO companies operate active **waste management and reduction plans**, setting binding annual goals to avoid or reduce waste, find alternatives to hazardous waste materials, and develop ambitious programs for the development of products and production technologies with a lower carbon footprint.

Digitalisation is another important lever for the responsible handling of resources and avoiding waste. SWARCO companies have moved to electronic invoicing instead of sending out invoices on paper. „Paperless" programs, like at SWARCO ITALIA, are implemented to avoid paper. Such programs include the digital visitor registration and an electronic documents management system.
The pandemic has led to a drastic reduction of travel by air and road and related environmental footprints and fostered the use of digital conferencing media. Other SWARCO companies have put the standard setting of their copy machines and printers to double-page printouts.
In many countries legal regulations prescribe the separation of waste into paper, cardboard metals, plastics, inks and toners, batteries, and electronics to facilitate their recycling.
Some SWARCO companies monitor their environmental footprint with KPIs concerning the amount of electronic waste produced, the number of printed copies (B/W and colour) associated with trees, the number of toners used in printers, and the tons of CO_2 emitted through flights.

The PE packaging of our thermoplastic powder materials for road markings are part of the thermoplastic formulation. They are molten with the material and leave no waste.

Larger quantities of liquid road marking materials are delivered in containers which are returned to the factory for re-use.

In the road marking sector, SWARCO pushes the more frequent use of methanol-free waterborne paints. Savings are also being attained by using fewer temporary tapes for roadwork zone markings.

As a rule, we at SWARCO try not to unnecessarily waste the **precious resource of water but use it responsibly**. This is an attitude every employee should internalise. A simple but effective measure can be the technical limitation of the flushing water of toilets. Some of our companies run Water and Energy Saving Programs.
In the USA, the water to wash our raw material mixers is recycled.
SWARCO companies have an eye on measures how to **reduce the electricity consumption in buildings**. Switching off the power consumers at the end of a working day is a personal responsibility of every SWARCO employee. The replacement of conventional light sources with energy-saving, long-life LEDs is another useful measure.
SWARCO companies strive to only use ecological electricity from „green" electricity providers.

The performance of energy audits, i.e., a systematic investigation of the energy use and energy consumption of organizations, plants, buildings, and systems, is an important basis for improving energy efficiency and reducing the energy consumption of organizations, especially in the commercial, industrial, or residential sectors. The EN 16247 standard – applied by some SWARCO companies –
specifies requirements for a decent quality energy audit and is thus intended to provide clarity and transparency in the market for energy audit services.

A classic example where SWARCO has a market leading position in energy savings is the use of LED technology in traffic lights and variable message signs, allowing power consumption reductions of more than 90% compared to conventional light sources. Calculations prove that operating the LEDs at minimal nominal power not only extends their life span, but also leads to our best-in-class status concerning the total cost of ownership of our variable message signs (VMS).

Recycling
The recycling and re-use of valuable materials like waste glass and waste plastic is a key element in protecting our environment. In our Centre of Competence for Glass Technology we conduct R&D work with the aim to find green substitutes for certain raw materials and to develop new use cases for our finished products.

Glass recycling
SWARCO is an active part of Circular Economy by giving waste glass a second life.

Since its foundation, SWARCO has been collecting flat glass cullet from glass production to upcycle this precious raw material into glass beads serving multiple purposes in road safety and surface treatment. In our bead plants, internal glass waste streams are reintroduced into the production process. The use of recycling flat glass to produce beads for traffic and industrial purposes leads to a 50% saving of energy compared to the production of flat glass by melting primary raw materials.

A second aspect is the collection of used glass packagings like bottles, jars, flacons, etc. This is a service provided by SWARCO in the Austrian state of Tyrol within the recycling framework of Austria Glas Recycling (AGR).

Glass is probably one of the oldest materials in the world. The oldest finds date back as early as the 3rd millennium BC, and in the 7th century BC the first known recipe for glass was written and archived in the library of the Assyrian king Assurbanipal: "Take 60 parts of sand, 180 parts of ash from sea plants and 5 parts of chalk and you get glass."

A material with such a long tradition should continue to be treated with particular care and appreciation. Thus, it is also a matter of the heart for us at SWARCO to help our company's basic building block, glass, to achieve a sustainable recycling cycle.

In the Austrian state of Tyrol, SWARCO is responsible for the collection of waste glass for recycling purposes. The drivers of our fleet of special trucks ensure that bottles, jars and other glass packagings as well as broken flat glass cullet are consistently collected and subsequently given a second life. The material cycle for glass packagings is almost perfect.

Glass can be melted and reprocessed repeatedly, as there is no loss of quality in the process. This cycle allows us to save the valuable primary raw materials and thus contributes significantly to the preservation of the environment.

Glass recycling is an Austrian success story, and we are proud to be actively involved. In our country, more than 2/3 of the glass packagings produced is now already made from waste glass.
The raw materials saved annually through the recycling of glass packagings are impressive and an important contribution to the reduction of our CO_2 footprint:

- 190,000 tons of quartz sand
- 61,000 tons of lime and dolomite
- 48,000 tons of soda ash
- 665,000 m³ of mining volume
- 260,000,000 kWh of electrical energy
- 7,000,000 m³ of natural gas

(Source: www.agr.at/glasrecycling/umweltvorteile)

It is up to all of us to support and continue this successful path based on conscious glass separation.

Plastic recycling
Recycling is also a core element of daily production at the sign and signal production site of SWARCO Futurit in Neutal. Waste material, mainly polycarbonate deriving from the injection moulding machines, is being collected and shredded locally to be either processed again as input material for new products or to be sold in the form of plastic granulate. Only plastic waste meeting sufficient quality criteria can be directly recycled. Other waste fractions like wood, packaging, paper, and mixed electronic waste are collected and recycled by the external partner company Stipits, a regional specialist in waste treatment. SWARCO Futurit currently examines in which ways recycled and recyclable plastic materials can be further used.

Upcycling: from flat glass cullet to reflective glass beads for improved road safety

4.1.2 ENERGY & EMISSIONS

A) Importance of the topic

The emissions (e.g., CO_2, local air pollution) caused directly by SWARCO's processes and along the value chain are closely related to energy consumption, primarily to high electricity and natural gas consumption to produce reflective glass beads, and the electricity consumption for all other production processes in SWARCO. Better energy efficiency and increased use of renewable energy sources can reduce both the negative impact on people and the environment as well as expensive energy costs and CO_2 taxes. Our biggest and already long-standing goal is therefore to outperform competition in terms of energy efficiency, emission avoidance and decarbonisation.
In order to be able to assess and measure CO_2 emissions and other parameters such as resource intensity, the LCA analysis tool from Ecochain is already being used at some production sites of the Road Marking Systems Division. Scope 1, 2 and 3 emissions can be calculated at both company and product level, and processes and products can be sustainably optimised in terms of their environmental footprint. Production companies in the Intelligent Transport Systems Division will implement an analysis tool for tracking and evaluating emissions.

The stakeholder analysis has shown that energy related emissions are a central environmental issue considered particularly important by all stakeholders. On the one hand, there is potential here for differentiation by positioning the products as a "green choice". On the other hand, a USP (Unique Selling Proposition) can also be generated by taking Scope 3 emissions into account, as there is currently no standard or obligation in the industry in this regard. The recommendation for the use of biogas or for the construction of an own biogas plant to promote planning security and reduction of fossil energy sources illustrates the importance of the topic of energy demand and use for the future. In addition, our stakeholders recommended further expanding the use of waste heat and offering fuel-saving training for service companies in order to save resources. Furthermore, according to the stakeholders, incentives for car-pooling should be created and commuter buses should be installed to reduce car commuting. During the stakeholder interviews, one customer also raised the prospect that the EURO class rating of the trucks used could be taken into account in tenders in the near future. The SWOT analysis has brought further insights to light. One of the most energy-intensive production facilities of SWARCO, and at the same time currently the most advanced glass bead factory in the world, was commissioned by M. Swarovski GmbH in Neufurth in 2022. The strengths of this new production facility lie in a highly energy-efficient beading process, a low-emission melting process, extensive waste heat recovery, and the use of 100% green electricity. In addition, the company recently installed a photovoltaic system with a capacity of 468 kWp on its roof and developed a concept for further expansion.

B) Management approach

SWARCO has ISO 14001 and 50001 management systems in place at most of its production sites, (see 5.3). Certified sites use appropriate energy management tools and manage their systems themselves. Resources such as instructions, quality management manual, etc. are used to manage the requirements of the ISO certifications. The introduction of energy management systems is necessary in many manufacturing companies of SWARCO, as high energy consumption leads to high costs. Many companies are therefore already pursuing their own energy reduction targets, which have been defined as part of the ISO 50001 certifications. At large production sites, dedicated energy managers have also been installed who are responsible for conducting ISO 50001 audits and implementing efficiency improvement measures. The Head of IMS (Integrated Management Systems) is responsible for the implementation of a comprehensive IMS in SWARCO.
Each site with ISO certifications has responsible representatives who provide an annual summary of the respective targets and their achievement / non-achievement in the management review. If several management systems are implemented, the IMS officer checks the completeness and plausibility of the data together with the persons in charge of quality, environment and energy.
In accordance with the PDCA cycle, key figures are defined and measures derived for the following year. In the course of the internal audit, the key figures / measures from the following year are evaluated and summarised in the management review. The evaluation of environmental aspects takes place at annual intervals and is also part of the management review if the sites are certified according to ISO 14001.

C) Goals

The SWARCO's strategy development is characterised by high ambitions of both divisions and individual subsidiaries.
To define and commit to further decarbonisation and energy savings, a dedicated working group (Decarb Task Force) will be formed to define group-wide targets.
Whereas top-down climate targets in line with the Science Based Targets initiative (SBTi) for emissions are to be defined, bottom-up targets through aggregation and harmonisation of divisional and site targets will also be elaborated to achieve common progress.

Goal: Develop decarbonisation strategy and targets for the entire Group and increase independence from fossil energy sources.

In the future, energy consumption monitoring and control is to be conducted uniformly via smart meters to ensure comparable performance measurement and control. So far, however, this monitoring is not yet carried out in a structured manner at the production sites, as each business unit acts independently and many monitor energy consumption manually. In addition, some use their own systems to record consumption, which makes it difficult to identify peaks and reduction potential. The first measure is to create a basis for measuring and collecting data in order to create transparency with regard to actual values. Concrete quantitative targets can then be set on this basis. It is recommended that sites that have not yet carried out energy monitoring be brought up to a minimum technical level. For this purpose, a catalogue of minimum criteria is available as a starting aid. A "basic set" of energy indicators already exists at SWARCO production sites, which is collected independently, especially if ISO 50001 and ISO 14001 certifications are in place. In the future, it is planned to fully implement a harmonised "tool chain" via the IMS in order to standardise the collection of data.

Goal: Harmonisation of energy monitoring

One of the company's long-term goals is to automate the collection of key energy data. This will reduce manual processes and errors and achieve greater accuracy and efficiency in the collection of energy indicators. Automating the collection of energy indicators will help to increase the transparency and traceability of the company's energy consumption and thus create the basis for effectively reducing energy consumption.

Perspective goal: Automation of data collection

At the Road Marking Systems division, there is also a clear commitment to a comprehensive, sustainable as well as resilient focus of business activities to ensure economic success. The following targets have been set for achievement in 2025:

- Recording and analysis of material flows at all production sites (energy consumption, media consumption and emissions)
- Evaluation of alternative fuels for the production process (e.g. biogas, hydrogen, electricity, biofuels)
- Definition of guidelines for technical requirements for machinery / systems / equipment and for the structural design of new and existing buildings
- Certification of all production and service companies according to ISO 9001, ISO 14001, ISO 50001
- Purchase of 100% green electricity
- Installation of photovoltaic systems at all operating sites, where possible, and complete energy self-sufficiency of administrative buildings
- Definition of reduction and substitution targets (water, waste water, oxygen, compressed air, heat)
- Circular economy (waste heat): Development of a concept for converting waste heat into electricity
- Emissions: Definition of reduction targets (VOC, CO_2, NOx, waste)
- Optimisation of transport routes
- Business travel: Record distance, purpose and mode of transport for each business unit. Examination of possibilities to reduce the CO_2 footprint

By 2030, the Road Marking Systems Division must implement the following targets:

- EU Green Deal: Commitment to reduce net greenhouse gas emissions by at least 55% compared to 1990 levels
- EU Green Deal: Increase the share of renewable energies in the overall energy mix to 40%
- EU Green Deal: Reduce energy consumption at EU level by 36% in final energy consumption compared to business-as-usual scenario

- European Climate Pact: Emission-free company cars, planned collective journeys of less than 500 kilometres to be climate-neutral
- Conversion of all production and operations to state-of-the-art technology
- Conversion of all operations (Scope 1) to CO_2 neutrality (except shaft furnaces & low index smelters)
- Energy & emissions: Main lever is avoidance, not compensation (max. 25%)
- Switch from natural gas to 7.7% renewable gas (biomethane, renewable hydrogen)
- Raw materials / additives: production plants can do without hazardous substances

Also in the Intelligent Transport Systems Division, strategic goals to improve the sustainability performance of all companies are being set. Whilst following top-down priorities, individual measures are defined by each company according to their own capabilities and needs.

To enhance improvements on all levels, the following goals have been set for ITS companies as baseline for their individual action plans:

- Increase e-mobility in company fleet
- Use of 100 % renewable electricity
- Reduce energy consumption
- Assess environmental impact of product solutions (e.g. CCAM)
- Reduction of packaging waste (e.g. use of renewable materials)

The perspectives taken into account in ITS range from product level (from design to sales), production (materials, processes) to business organisation (management, employees, society). There are already encouraging examples of frontrunner companies within ITS, inspiring with sustainable solutions, actions and programmes:

1. Product Level:
GoGreen programme, low and off-grid solutions, smart charging, certification, solutions modernisation programmes, product longevity

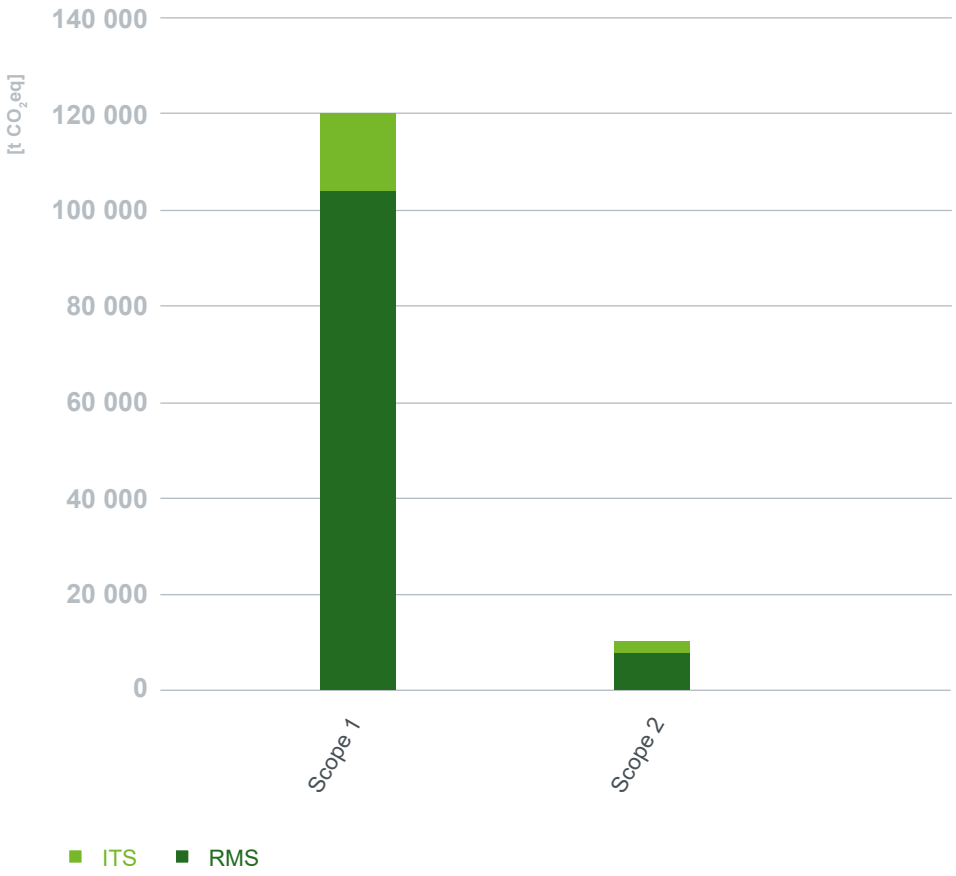
2. Production:
Green energy and energy saving initiatives

3. Business organisation:
Zero Harm programme, engagement in social and environmental projects

D) KPIs and explanations of the development of key performance indicator trends

SWARCO has calculated its Corporate Carbon Footprint (CCF) for the reporting year 2022 according to the internationally recognised Greenhouse Gas (GHG) Protocol for the whole group. This includes Scope 1 emissions (directly generated emissions from energy sources at the site or from the company's own vehicle fleet) as well as Scope 2 emissions (indirectly generated emissions by purchased electricity, steam, heat or cooling).

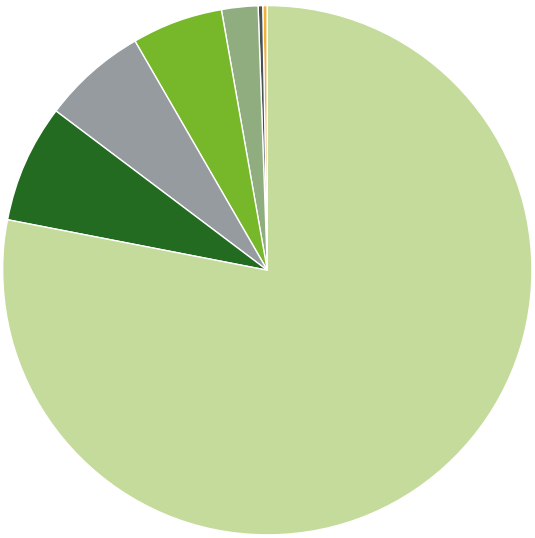
SWARCO (MARKET-BASED)*



Scope 1 emissions at SWARCO were calculated for both production and the individual service sites including the vehicle fleet. In total, the Scope 1 emissions for SWARCO amount to approx. 120,000 t CO_2eq, while Scope 2 emissions for SWARCO are approx. 9,000 t CO_2eq. Thus, Scope 1 emissions compared to Scope 2 emissions account for a majority of the total emissions (129,000 t CO_2eq) on group level, referring to location-based data.

When divided by the two divisions of SWARCO, the total emissions for the RMS division amount to approx. 113,000 t CO_2eq, while they are significantly lower for the ITS division with approx. 16,000 t CO_2eq.

*(The data is based on the market-based approach for calculating the corporate carbon footprint, see appendix for more information.)

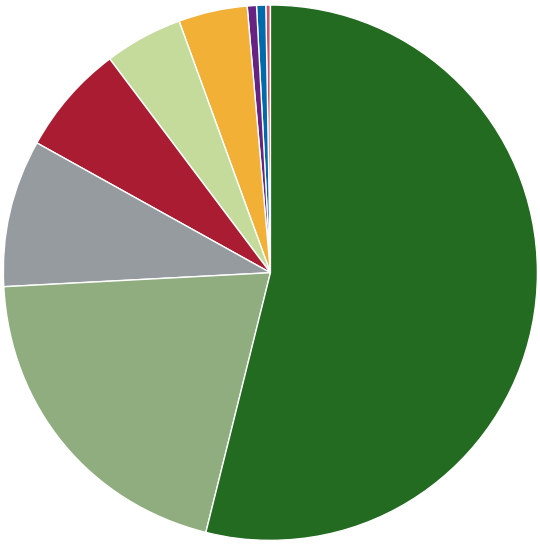


SCOPE 1 & 2 EMISSIONS - RMS (MARKET-BASED)

- Natural gas: 78.2%
- Diesel: 7.2%
- Electricity: 6.2%
- Process emission: 5.6%
- LPG: 2.4%
- Heating oil: 0.2%
- Gasoline: 0.1%
- Fugitive gases: 0%

Road Marking Systems:

The pie chart shows the CO_2eq emission hotspots within the RMS division. The largest emission driver is clearly natural gas with 88,600 t CO_2eq (78%), mainly used to provide heat energy in production, followed by emissions for diesel with 8,200 t CO_2eq (7%) and electricity with 7,000 t CO_2eq (6%) of the total emissions. Lastly, process emissions from glass manufacturing also lead to a relevant contribution of 6,300 t CO_2eq (6%).



SCOPE 1 & 2 EMISSIONS - ITS (MARKET-BASED)

- Diesel: 54%
- LPG: 20.4%
- Electricity: 8.9%
- Gasoline: 6.5%
- Natural gas: 4.7%
- Heating oil: 4.3%
- Propane: 0.6%
- Fugitive gases: 0.4%
- District heating: 0.2%

Intelligent Transport Systems:

In contrast to RMS, the ITS division clearly shows a different distribution of emissions. A closer look shows the hotspots, which are both emissions from diesel with 8,400 t CO_2eq (54%) and emissions from LPG with 3,200 t CO_2eq (20%). Moreover, emissions from electricity with 1,400 t CO_2eq (9%) and from gasoline with 1,000 t CO_2eq (7%) also have a large share in the total emissions.

E) Measures implemented

Exemplary measures already successfully implemented in 2022 to save energy and reduce emissions in SWARCO are the following:

Use of green electricity
Almost 10 years ago, SWARCO laid the foundation for the use of green electricity. The holding company switched to the green electricity provider TIWAG and has since been using 100% electricity from renewable sources (mainly hydropower, but also wind power, PV and biomass). Some of SWARCO Road Marking Systems' operating sites have also followed this good example in recent years, and the share of green electricity in the joint energy portfolio has continuously increased. With the move away from fossil fuels and the increasing electrification of our process plants and heating systems, we are thus moving forward towards a future with lower CO_2 emissions.
We are particularly pleased when, even in times of high energy prices, this visionary decision is taken by individual sites. SWARCO LIMBURGER LACKFABRIK GmbH and Straat1 GmbH have been relying 100% on electricity from renewable sources since the turn of the year 2022/2023, thus reducing their carbon footprint for their products and services.

Energy efficiency through waste heat recovery
The production of glass beads generates a great deal of waste heat, which we are already using in part to supply our building areas at SWARCO SCHÖNBORN GmbH and M. Swarovski GmbH with self-sufficient heating.

At the production site of SWARCO VESTGLAS GmbH, a system is currently being rebuilt and modernised in order to dry cullet with the resulting waste heat. And other possible uses of waste heat are also being examined.

In 2022, M. Swarovski GmbH was also able to conclude two heat purchase agreements with immediate neighbours – Voestalpine Precision Strip GmbH and Molkerei Berglandmilch eGen. The required pipelines to the neighbouring properties were already built during the construction phase of the greenfield project. Thanks to this forward-looking investment in the local infrastructure, valuable synergy effects can now be used to supply the Voest production halls and the Berglandmilch biogas plant with heat.

These measures are leading to a significant increase in energy efficiency throughout the production process, and more will follow.

Voestalpine using excess heat from SWARCO glass bead production

Photovoltaic system at SWARCO Global Glass Beads Technology Center

Own generation of green electricity

As a large energy consumer, the company M. Swarovski GmbH would also like to be able to cover part of its electricity requirements itself in times of increasingly scarce resources. In order to set a good example within SWARCO, a first major step was taken in 2022: a photovoltaic system with a rated output of 468 kWp was installed on the roofs of the new Neufurth plant site and successfully put into operation.

But that was just the beginning. Further options for expanding capacity and increasing energy independence are already being examined, and a corresponding PV concept has been drawn up for all SWARCO Road Marking Systems production sites.

F) Planned measures

Defined packages of measures / targets for the coming year and the future according to the Sustainability Management Roadmap:

Decarbonisation strategy at Group level
A dedicated Decarb Task Force will be established to set decarbonisation targets for the entire Group. A bottom-up survey is conducted to quantify CO_2 reduction measures in Scope 1 and 2. This also includes calculating the costs for the entire Group of switching to green electricity and examining the possibilities for using renewable energies in production. A model calculation of future CO_2 certificate prices and framework conditions will be prepared. The definition of the climate target in Scope 1 and 2 is carried out by using the Science Based Targets initiative (SBTi). In addition, the systematisation and definition of the climate target in Scope 3 is carried out.

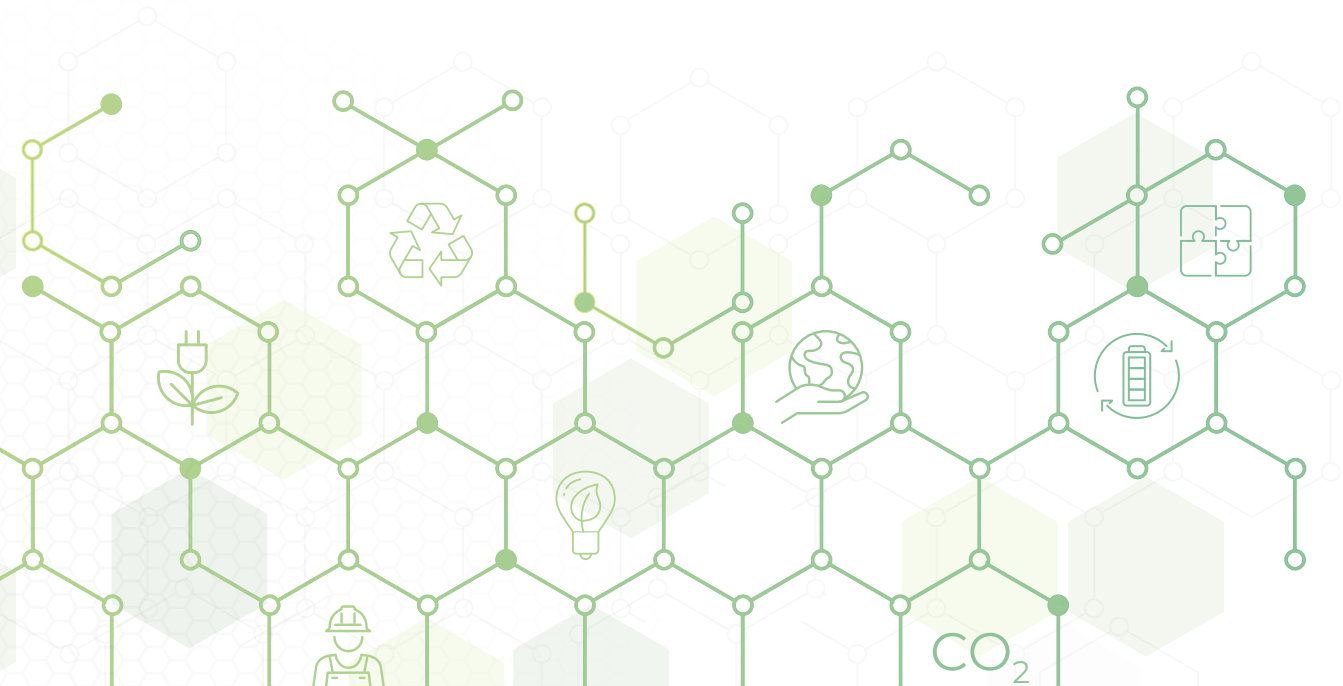
Climate risks & opportunities
To tackle the challenges of climate change, we as a company need to adapt our risk management strategies and also assess climate resilience. This is done by implementing specific reporting standards such as the CSRD (Corporate Sustainability Reporting Directive) and the TCFD (Task Force on Climate-related Financial Disclosures), which make it possible to assess the financial impact of climate change on the company and take appropriate measures to minimise risks.

Energy data & management
The measures aim to harmonise and improve energy monitoring and management. To this end, a concept for the area-wide deployment of smart meters is to be developed first, including a cost-benefit analysis, a prioritisation of locations and a rollout plan. Subsequently, the rollout of the measuring points is to take place throughout the organisation and the measurements are to be integrated into the IT landscape (ERP system). In addition, automation of the energy indicator survey is planned for the future, and a fully comprehensive IMS (ISO 14001 / ISO 50001) is to be established in SWARCO.

4.1.3 ECO & CIRCULAR PRODUCT DESIGN

A) Importance of the topic

For SWARCO products, environmental, social and economic factors are being considered for the entire life cycle of the products and solutions. In this way, the energy efficiency of the application can be increased, the lifetime of the product can be extended, the ease of repair can be improved, and the reuse of product components can be considered already in the design. These initiatives lead to favourable Product Carbon Footprints (PCF) and Life Cycle Assessments (LCA). At the end of the product life cycle, the circular economy can be promoted through well-designed deconstruction concepts that facilitate reverse logistics or second-life product refurbishment initiatives.
Various raw materials are processed at SWARCO sites, generating both by-products and waste. The resulting waste volumes can be optimised through reduction, reuse, and recycling. Safe handling of the waste generated (especially hazardous waste) is also an important factor. Key objectives in SWARCO's product development are to use resources efficiently, to rely more on secondary raw materials, to give preference to raw materials with a low environmental footprint, while still guaranteeing a long product life and energy efficiency.
The stakeholder analysis has shown that there is a trade-off between the need to apply road markings and the degradability of these markings (e.g., water-soluble paints), as weather is an uncertainty factor in the application. To reduce microplastics, more water-soluble paints should be used (i.e., move away from spray plastics toward water-soluble paints). Furthermore, it was noted that sustainability is becoming more important as a "second rail" in tenders, which is why Ecolabels and Environmental Product Declarations are of increasing importance. Another issue raised by stakeholders is the "end-of-life" of the product, i.e., where it ultimately ends up in nature. It was also emphasised that SWARCO beads have high product quality and longevity, which leads to less re-marking and is thus beneficial in a "cradle-to-grave" product consideration. Surprising and gratifying at the same time for some stakeholders was that the topic of recycling is so much in focus at SWARCO, which is often neglected at many industrial companies. As input, the idea came up to also analyse the recycling rate materially and thermally in the future. Furthermore, it was pointed out that an early consideration of the supply chains brings clear advantages (on a voluntary basis away from national obligations).
According to the SWOT analysis, SWARCO has some strengths, such as the full-range supplier position for road marking systems, and in mechanical engineering as well as in-house research facilities such as the Centre of Competence (CoC). Furthermore, carbon footprint analyses have already been carried out on product (group) level as well as on company level, and there is a first criteria catalogue for the development of sustainable products. The increased use of secondary raw materials (flat glass cullet, recyclates) and the durability of the products are further very positive factors. SWARCO has also developed a GoGreen icon to identify sustainable products and communicate CSR measures. However, there are also weaknesses, such as the untapped potential for larger waste fractions and the lack of supply chain assessment. On the other hand, there is an opportunity to differentiate against imported products and to optimise circularity, e.g., by optimising the end-of-life management of LED-based signalling systems at SWARCO Futurit GmbH.



B) Management approach

The responsibilities of the in-house research facilities include the development of energy-efficient, recyclable and repairable products with consideration of energy consumption, CO_2 reduction and resource consumption. To this end, we use management systems such as energy management and, when approving each new product, check its impact in accordance with the project management manual. The Road Marking Systems division places particular focus on reducing the CO_2 footprint compared to existing products. In addition, product declarations and eco-labels are of increasing importance, particularly in the UK, France and Scandinavia. Measures are already being taken and corresponding resources are being built up to meet these requirements.

The CO_2 footprint is determined at annual intervals. For this purpose, there are standard documents that are filled out by the CSR officers at the RMS locations. The CO_2 footprint is calculated from this data with the help of software. The CO_2 values determined in this way allow a comparison and evaluation of the products. This figure is an important indicator for the development of new products.

The CSR officer also completes a standard document at annual intervals in which defined key figures are queried in order to be able to compare locations with similar product groups. The annual results are discussed in meetings with the CSR officers, experiences are exchanged and measures are derived. The defined measures and corresponding results are monitored and documented by the divisional CSR officers (RMS and ITS).

C) Goals

The following is a description of goals, progress and adjustments in the management approach and measures on the topic of Eco & circular product design. The current status quo shows that the Intelligent Transport Systems Division already has energy-efficient products such as Smart Green, Smartprio, Smart Intersection and Smart Corridor in its portfolio. These examples are not exhaustive, as all our ITS products, when used correctly, help to reduce emissions through optimised traffic flow. The Road Marking Systems Division operates a research centre called the Centre of Competence (CoC), which focuses on developing durable and sustainable road marking materials with the lowest environmental footprint in the industry. Here, the focus is also on the development of energy-efficient processes. Accordingly, the portfolio of both divisions is already geared towards efficiency.

Goal: Achieve further efficiency improvements in products and processes

The Road Marking Systems division has developed a strategy to promote sustainable products such as water-based paints and is already using environmental analysis software to perform life cycle analyses. In the course of 2023, all relevant European production plants including the road marking contracting company SWARCO Markierung GmbH are to be integrated into the system. The Intelligent Transport Systems division plans to implement the Ecochain LCA analysis tool at its production sites as well. A criteria catalogue for sustainable product development was developed to define when a product may be called "sustainable" at SWARCO. In addition, a dedicated GoGreen icon and the new SWARCO ECO-LINE product line were created to distinguish sustainable products in the portfolio. The service operations of Road Marking Systems are also being optimised, but measures to reduce the carbon footprint do not currently bring any advantage in public tenders in Austria and Germany, as they are mainly price-driven, making the products too expensive.

Goal: Add sustainable products to the product portfolio and sensitise customers to them

The packaging for the thermoplastic powder materials for road markings is already part of the formulation and therefore leaves no waste. The glass beads are mainly packed in paper bags, and paint and varnish buckets are reused. In addition, an IBC reusable container system is used for liquid marking materials. Broken flat glass fragments from the glass industry are collected and upcycled into glass beads, and a rotating spiral conveyor is also used to recover reject beads. At SWARCO Futurit GmbH, there are already many implemented recycling themes. In 2022 for instance, nearly half of all waste produced, about 60 tonnes, could be recycled. Also the use of collective packaging with some key suppliers helps to reduce waste. At the moment, the usability of cardboard pallets instead of wooden pallets is being tested. Further improvements are investigated on a regular basis according to ISO 14001.

Goal: To further advance upcycling / waste avoidance in production

With comprehensive sustainability monitoring using the LCA analysis tool Ecochain, the aim is to create transparency and comparability in terms of CO_2 emissions and resource intensity. Ecochain is also used to identify low-emission alternatives for raw materials. The LCA results are partly verified externally by third parties and additionally KPIs have been defined to identify improvement potentials. Apart from that, SWARCO is already pushing an active waste management with binding annual targets.

Goal: Increased use of monitoring / controlling in the area of sustainability

At the Road Marking Systems division, there are clear targets for ecological and circular product design. The following targets have been set to be achieved by 2025:

- Develop a SWARCO guide for calculating the ecological footprint and an environmental analysis software tool to create transparency
- Define criteria catalogue and determine ecologically acceptable product groups
- Homologation of a product portfolio with the lowest carbon footprint (at least 1 product from the fields of glass beads, thermoplastics, preformed products, 2-component, and paints)
- End of life (EoL) of products: Assess environmental (e.g., microplastics) and health impacts
- Innovation process: the environmental potential of new products must be considered in project planning and documentation (PMEx templates)
- Make environmental and emissions data of business units and products available to our customers
- Green public procurement: Evaluate purchased goods and define green criteria catalog
- Selection of suppliers taking into account Code of Conduct and carbon footprint
- Substitution of raw materials / additives of concern – two hazardous substances at each site per year

By 2028, the Road Marking Systems division aims to achieve the following goal:

- Provide a product portfolio with the lowest carbon footprint in our industry (significant percentage of products with minimal environmental footprint – at least one high performance road marking system each of thermoplastic, 2-component coldplastic, and paint)

The companies of the ITS division define their individual goals for ecological and circular product design based on four key topics:

- Key value products certified according to LCA standard
- Rating of products and service according to sustainability criteria
- Investments in circular economy solutions for products and services
- Purchase of refurbished or recycled materials (e.g. office equipment)

D) KPIs and explanations on the development of key indicator trends

There are currently no indicators / KPIs for the Group or the divisions that are collected centrally and can be compared. However, greater focus should be placed on the following KPIs in the future in order to monitor them more closely:

- Recycling rate
  - Amount of packaging material used
  - Recycling (proportion of material recycling / thermal recycling)
  - Incineration
- Product development
  - How many new products are developed with road safety benefits? Only qualitative statements desired.
  - Proportion of water- and solvent-based products or paints
  - For how many products has an environmental data analysis already been carried out?
  - What proportion of sales is covered by sustainable products and energy-efficient processes? A proportion that will increase in the future.
  - Share of research budget for sustainable products and efficient processes:
    In 2022, 15% of the total development budget at the Road Marking Systems division was spent on sustainable road marking materials and application processes – for 2023, as much as 23% is planned.
- Complaint rate and other KPIs
  - Number of complaints
  - Installation costs

E) Measures implemented

GoGreen project to further develop energy-efficient processes and products

In 2022, the go-ahead was given for a major research and strategy project to further develop sustainable processes and products at SWARCO Road Marking Systems and to focus on saving resources and substituting raw materials with negative environmental impacts. A dedicated GoGreen icon was also designed to identify sustainable products and processes.

Smart products – sustainable and energy-efficient

The ITS Division is also increasingly focusing on expanding its smart products and solutions portfolio, bringing added value to existing technologies. SWARCO LED traffic lights are being equipped with smart features.

AirDec is a traffic light add-on, measuring environmental parameters such as CO_2, NOx, ozone, heavy rain, or noise directly at the intersection. The data are transmitted into a cloud from where they can be retrieved by traffic managers to derive strategic actions.

SafeLight is an add-on feature to a traffic signal head with the aim of shining a red light downward onto the pavement, warning distracted smartphone users from running a red traffic light.

Visually impaired people get acoustic signals on the green or red status of a traffic light by means of an **acoustic unit** also integrated elegantly into the traffic light housing.

New traffic control algorithms help provide the **Green Wave** for vehicles, cyclists, and pedestrians. Extending the management perspective from individual intersections to longer road corridors keeps traffic in motion, reduces stops and emissions.

Priority for Public Transport at intersections is another feature aiming to make the use of buses or trams more attractive, thus reducing the number of individual vehicles in a city.

Priority for Emergency Vehicles at intersections is another feature, taking ambulances or firebrigades quicker to their destination by switching the traffic lights at an intersection to green and prioritising these life-saving participants in traffic. **Also, all our products and solutions focusing on optimised traffic flow lead to reducing emissions, when used correctly.**

F) Planned measures

Defined packages of measures or targets for the coming year and the future according to the Sustainability Management Roadmap:

Product development

The Road Marking Systems division has set itself the goal of offering one sustainable product with the GoGreen icon in every product group by 2028 and to rely primarily on environmentally friendly raw material substitutes and water-borne paints. The goal is to provide environmental analyses for the top 10 products and to further push environmentally friendly packaging, considering a possible collaboration with a paper company. The use of the LCA analysis tool Ecochain will be rolled out further throughout SWARCO and, in addition, a catalog of criteria will be developed for each business unit to define which products deserve the GoGreen icon.

As part of the harmonisation of product management and the sustainability assessment of products, the Intelligent Transport Systems division also plans to implement various measures. These include the standardisation of material conformity testing, including RoHS, REACH and conflict minerals, etc.. Furthermore, the design of products will be defined to ensure uniform design principles across all business units.

Product communication

The company plans to improve product communication by sharing verified environmental data with customers, including environmental aspects in Environmental Product Declarations (EPDs). To this end, the environmental benefits of products are also to be communicated more clearly, for example by providing a download centre for environmental data. In this way, the company aims to increase its transparency with regard to environmental aspects and help customers make informed purchasing decisions.

4.2 S – SOCIAL

It is a fact that in bidding processes for tenders the criterion of creating social value is gaining more and more weight.

Social value considers a company's

- commitment to local communities (employment opportunities, use of local contractors, supporting local noble causes),
- staff well-being (managing the workforce and being a "responsible employer", training and development of people),
- ethical procurement and production (end-to-end supply chain considerations) and the
- promotion of equality and diversity

4.2.1 EMPLOYEE SATISFACTION

A) Importance of the topic

Employee satisfaction is influenced by a wide range of factors. A high level of employee satisfaction is often associated with increased productivity, better retention rates and a positive work environment. Company culture, job responsibility, fair pay, benefits, employee participation and a good work/life balance are only some important factors that contribute to employee satisfaction. Preventing accidents at work and taking preventive measures to protect employees' health are also key concerns for SWARCO. This includes both physical and psychological aspects of health. Mitigating the effects of shift work, heavy manual labour, stress, workload and the creation of a safe environment are in the focus here. Employee satisfaction is a topic that is considered essential by various stakeholders. This is due in particular to the shortage of skilled workers and the risk of knowledge drain. According to stakeholders, a principal factor for employee satisfaction is the identification of employees with the company's values, culture, purpose and also products. They also emphasise the importance of creating incentives for employees, for example through opportunities for growth, open communication,performance reviews, incentives. Stakeholders see the passing on of experience and knowledge of retiring persons to younger employees as crucial for retaining knowledge in the company. They also suggest promoting sustainable employee mobility, for example by increasing the use of public transport, setting up a commuter shuttle, and creating incentives for carpooling.

Additional findings were obtained as part of the SWOT analysis. High employee satisfaction was identified as a strength in surveys, particularly in the production plants of the Road Marking Systems division. With regular safety training and the identification of sources of hazards, employees are continuously sensitised to the important topic of occupational safety. There are numerous employee benefits such as the option of home office, flexible working time models, modern office equipment, numerous team-building events and a wide range of offers for company health promotion. In addition, there are many long-term employee loyalties and there are volunteer projects where employees can donate their service time.
Weaknesses revealed were that seasonal workers are not employed year-round, and that there is a lack of a harmonised standard for conducting and documenting job-related trainings for workers.

B) Management approach

For topics in the area of Employee satisfaction, the OHAS 19001 and ISO 45001 management systems have been implemented at some sites (see 5.3). There is a group-wide Code of Conduct for employees, which also addresses the topics of human rights, safety, health, and data protection. On the topic of equal pay, due to the heterogeneous structure of SWARCO there are no specific guidelines or function classifications, but SWARCO is committed to equal pay for men and women. Women are very welcome at SWARCO in management positions and also in technical disciplines. By offering flexible working time models, home office agreements, parental leave schemes and other family-friendly measures SWARCO wants to help women to better balance their professional and personal commitments. For the coming year it is planned to offer more women’s development programmes that provide women with training, mentoring to enhance their career development. These include leadership skills training and networking events that facilitate the sharing of experiences, information and resources.
Regarding critical illnesses, decisions are made on a case-by-case basis in consultation with the occupational physician, but as a rule SWARCO keeps employees with a serious illness in the company.
The Long-Term Incentive Plan (LTI) is a new instrument which was implemented to create a high level of identification of managers with the company as a whole. By handing out virtual SWARCO shares and focussing on a longer term, sustainable success entrepreneurship is strenghtened. In terms of human resources development, the SWARCO Academy helps strengthen competences and continuous education of our existing management and employees, and identify potentials and talents for management positions to guarantee efficient succession plans.The Academy provides international trainings for employees of all companies, focusing on leadership, and social skills. In addition, several regions offer further training with a focus on personal development for their employees through the Regional Academy, including product training, foreign language skills etc. There are also individual trainings for managers as part of an internal career path with analyses of how participants develop within the company over a longer period (success stories).

SWARCO HR manages strategic HR priorities for whole SWARCO.

C) Goals

To get feedback about employee satisfaction, several companies are conducting staff surveys on a regular basis. Most of the German-speaking countries are already using the same external independent service providers to ensure a professional, comparable and anonymous evaluation. The goal is now to define a common standard in SWARCO and to work with one provider in the future in order to create better comparability and to identify regions / locations with a greater need for action.

Goal: Harmonisation of the employee surveys in order to be able to collect comparable HR key figures across the group

There are as yet no defined internal targets or a target corridor for the score to be achieved in the employee satisfaction surveys. No targets have yet been defined for the quality of the evaluations, the response rate or the derivation of measures. In contrast, however, there is already a guideline for dealing with the survey results and implementing measures from the employee survey. This guideline is just being gradually rolled out to the sites of SWARCO and has so far only been used by the individual sites on a voluntary basis. A roadmap with measurable goals and targets is to be worked out in order to be able to maintain and even expand the high satisfaction standard in the workforce in the future.

Goal: Define Group-wide targets for attractive working conditions and work-life balance, occupational health and safety

It was recognised that in the future, company health management should also focus more on the mental health of employees. Some companies are already working with psychological or health institutes which offer anonymous and confidential avice. Further offerings are to be created here.

Goal: Promote occupational health management with a focus on mental health

At the Road Marking Systems division, there are also clear targets for increasing employee satisfaction. The following goals have been set to be achieved by 2025:

- Continuing education: create qualification and training matrix for employees (blue and white collar) and "bring it to life"
- Launch school campaign and interface with potential employees
- Employee benefits: start with leasing of bicycles and e-bikes
- Continuing Education: employee empowerment (goal: 8 hours of training per employee per year)
- Offer awareness training for employees (e.g., waste reduction, buy local, code of conduct, etc.)
- Encourage employees to generate awareness via employer reviews on Google and sharing posts on social media
- Reduce workplace accident rate and improve occupational safety

The companies of the ITS division define their individual goals to improve employee satisfaction within five key topics:

- Offer training for employees to enhance their personal and professional development
- Foster equality and inclusion for fair chances in recruiting and promotion
- Encourage participation in community and charity projects
- Deployment of regular harmonised employee surveys
- Enable highest possible standards for safe and healthy working conditions

D) KPIs and explanations of the development of key performance indicator trends

Due to the complexity of the organisational structure and a non-harmonised HR IT landscape, SWARCO does not yet have group-wide data on KPIs according to GRI guidelines. Only SWARCO companies in which the latest version of the ERP system has been rolled out or those who work with HR systems can rely on a People Analytics tool giving an overview on basic personal data. Therefore, great focus will be placed on HR-related data collection during the preparation of the next sustainability report.

E) Measures implemented

Employee participation strengthens employee retention

To complement established communication channels, a digital platform is already used for internal communication at a number of SWARCO Road Marking Systems Division sites. SWARCO Road Marking Systems employees at all levels and continents can exchange views on important topics, gather knowledge and work on projects. Employees are regularly asked for their opinion on certain topics, such as their willingness to participate in company volunteering projects in order to get involved in ecological or social projects during their working hours. This also gives employees the opportunity to help shape the company in many ways: An integrated suggestion system makes it possible to submit suggestions at any time via the digital platform. This leads directly to new solutions for saving materials and increasing occupational safety, for example. Valuable ideas can also be collected from the workforce in order to establish new CSR cooperation partnerships. Communication always takes place at eye level – and in all directions.

Transparent communication of employee feedback

Volunteer projects to do good during working time
With projects in both nature conservation and animal welfare as well as in the social sphere, the aim is to allow society in the immediate vicinity of the individual company sites to share in the company's economic success. The companies make resources available for these initiatives – in addition to financial contributions, above all the time and expertise of their employees – in order to create added value for society and the environment. As part of the corporate social responsibility strategy, commitment to issues where there is a general lack of resources and opportunities is a particular concern.
In this context, volunteer projects may well be exhausting, sweaty and challenging - but they are incredibly valuable for society and the environment. In SWARCO companies across the globe many employees are passionate about this and diligently engage in creating value for society and the environment in a variety of ways. This also creates a welcome change of perspective from everyday work, is meaningful and promotes team building.

Health care and Work/Life Balance
Especially in times of pandemic, SWARCO proved its responsibility for its staff by supporting the entire process of overcoming such a health crisis.

- Corona Task Force
- Plan by stages for work at the office and home office
- Behavioural support (face masks, hygiene rules, distance regulations, travel bans, …)
- Antigen test kits for staff
- Vaccination program
- Appeal to self-responsibility

In the UK, SWARCO recognises the importance of promoting health and well-being throughout and has recently made the move to introduce the Scooch platform to its employees (https://www.scooch.co.uk/). Scooch provides an incentivised way to introduce a health platform for our employees. Scooch designs a bespoke rewards schemes for our employees to maintain a healthy level of physical activity.

Giving back initiatives: volunteering projects

In some countries, such as Austria, Germany, the UK, and the Netherlands, there are additional offerings to foster employees‘ health, for instance:

- the SWARCOFit program
- the bike@work scheme
- joint sports activities over the lunch break
- anti-stress and time management seminars
- workshops and trainings to promote the development and better performance of employees
- preferential rates at a physiotherapy studio or at a gym
- consultancy on how to improve physical fitness
- monthly doctor’s visit and work safety inspection
- vaccinations at favourable conditions (FSME, influenza, hepatitis A and B …)

All these offerings are appropriate to support the work/life balance of our staff. Many SWARCO companies offer flexible working time models. Flexible working hours can be a wonderful way of helping employees find a better work/life balance and as a result perform better at work. They are increasingly popular in the modern working place and becoming more and more common across different industries.

SWARCO has also shown several times that it supports employees in case of serious illnesses so that they receive high quality medical services and treatment and can be kept in employment.

F) Planned measures

Defined packages of measures or targets for the coming year and the future according to the Sustainability Management Roadmap:

Measurability of employee satisfaction
Employee survey are currently carries out every two years in many organistional ubnits, with a standardised procedure being used in the DACH region, while the rest of the Group uses local providers. In order to standardise the measurability of employee satisfaction at a global level, it was decided to conduct - as a first step - a global 'Pluse Employee Survey' covering topics like cross country cooperation, company culture, etc. The added value of this standardised survey lies in the provision of comparable values and KPIs.

Responsibilities for defining measures
It is planned to define clear responsibilities for deriving measures from the results of the survey. The evaluation of the employee survey and the derivation of corresponding measures are to be carried out more consistently than before. In addition, by implementing a groupwide employee survey, important measures to develop specific common actions across companies can be elaborated. Moreover, the aim is to identify countries and regions which have not yet conducted surveys so that specific measures can be taken there as well.

Target corridors for employee satisfaction
Measures for target setting and alignment comprise several steps. First, it is planned to narrow down the topics and define partial aspects. Analyses and benchmarks are to be carried out to create a sound basis. Guiding principles will then be proposed and agreed with the Executive Board. Where available, metrics will be used to propose **S**pecific **M**easurable **A**chievable **R**elevant **T**ime-bound (SMART) targets to be agreed again with the Executive Board. Finally, ambitions are to be set, including the base year and target year. This process enables clear alignment and goal setting for the relevant areas.

Employee training and personnel development
Systematic documentation of training is to be implemented throughout the Group, either by using a learning management system at the relevant sites or by other recordings. Furthermore, a continuous evaluation of the training hours is planned in order to obtain an overview of the training provided. In addition, the onboarding process is to be structured and standards introduced to ensure a uniform process.

Mental health
To strengthen the mental health of employees, measures are in place to raise awareness among managers of the importance of burnout prevention. In Germany, for example, an external Mental Health Coaching Hotline is already being used in cooperation with the external partner Fürstenberg Institute to offer employees anonymous support and counseling. Such services are also to be extended to other regions.

HR key performance indicators
Required key figures for further sustainability reporting are to be defined and, if possible, automatically queried in the future with the help of a system for entire SWARCO.

External employer certification
In the future we consider targeting recognised employer certifications for SWARCO.

4.2.2 TRAFFIC SAFETY

A) Importance of the topic

Measures to increase traffic and road safety are crucial to prevent accidents and positively impact societal costs of these. SWARCO products play a significant role in this sector and help save lives every day. Reflective glass beads and high-performance road markings provide clear guidance and orientation for the road users, increasing the visibility of road markings in bad weather and lighting conditions such as night and rain. Well maintained, well contrasting, and retroreflective lane markings are also a key element in enabling Automated Driving by making the roads readable for the optical assistance systems of modern vehicles. Dynamic LED displays and LED signals provide clear warnings and information to prevent congestion, rear-end collisions, speeding, and accidents due to icy road conditions. Multiple measures are offered to protect the vulnerable road users, ranging from tactile markings for visually impaired people via conspicuous cycle path markings to safer layouts of crossings for pedestrians.

While the importance of this topic was rated as particularly high from a customer perspective, no further comments or descriptions are available for the topic of road safety from the stakeholder surveys. In this context, it is of interest to gain even more detailed insights in the future and to examine stakeholder perceptions more closely.

B) Management approach

At SWARCO, mobility products are developed based on EN standards to protect vulnerable road users, as for instance with cycle path markings, SafeLight, push-buttons, audible signals and more. Mission Zero is designed to reduce injuries and fatalities in traffic accidents through the use of high-performance reflective glass beads and marking systems.

The essential topic of road safety is thus firmly anchored in the company's principles. In addition, there are also numerous studies on the topic of road safety, for example on the assessment and use of SWARCO traffic technology products, which are continuously prepared by in-house research facilities such as the CoC - "Centre of Competence" in Neufurth in cooperation with various universities.

The success of this mission is measured on the one hand by publications comparing proven road systems with new systems, but also by active participation and collaboration in standardisation committees. Our mission here can only be the improvement of road systems - accompanying factors such as traffic volume, driving style, road conditions, etc. are outside our sphere of influence. Data collection for publications is carried out in the course of R&D projects.

C) Goals, KPIs and Measures

The biggest goal for SWARCO as a traffic technology group is to remain a pioneer and market leader in road safety worldwide.

The topic of road safety forms the core business of SWARCO (in terms of sales, products with corresponding benefits and objectives of research activities) and is thus the absolute focus of its activities. SWARCO is thus committed to providing social value to society through increased safety in the mobility sector.

The materiality analysis did not reveal discrepancies between the importance of the topic and SWARCO's commitment in terms of external perception. In the strategy workshop, it was decided together with the Executive Board and the consultancy firm that, for the time being, no KPIs and no further packages of measures would be defined for this topic in the framework of the sustainability strategy, since it forms part of our core business already. However, due to the importance of the topic for us and our stakeholders, we will continue to strive for a positive impact and remain the pioneer and market leader in road safety worldwide.

4.2.3 OPTIMISED TRAFFIC FLOW

A) Importance of the topic

SWARCO solutions help make road traffic smoother by reducing stop-and-go and optimising traffic flow. This has a positive impact on the environment by reducing traffic emissions and also a significant social benefit by reducing commuting times and improving the quality of life. SWARCO's focus is primarily on improving commute times and comfortable driving.

The essential topic of Optimised Traffic Flow forms a core business of SWARCO's Intelligent Transport Systems division (in terms of sales, products with corresponding benefits and targets of research activities) and is thus the absolute focus of its activities.

The findings from the stakeholder interviews show that customers already perceive an elevated level of responsibility for this topic, especially in the area of signalling systems and related software. Although stakeholders consider the topic important, they do not provide further comments or descriptions on it. In future stakeholder interviews we therefore aim to gain further insight and explore stakeholders' exact perceptions of SWARCO's products and their importance.

B) Management approach

Currently, no management systems for the essential topic Optimised Traffic Flow have been implemented in the company. However, in order to be able to measure the effects of an installed route management system, it would be possible to conduct a pre- and post-study for a specific route section. A central guiding principle for saving resources should be the obligation to keep traffic flowing at all times. This can be achieved through network adaptive traffic management using INES (Intelligent Network Adaptive Traffic Control System), which aims to continuously maintain traffic flow. By implementing these measures, SWARCO aims to optimise traffic flow and ensure efficient and smooth mobility.

C) Goals, KPIs and Measures

SWARCO strives to be recognised as the global thought leader in the field of Optimised Traffic Flow.

The materiality analysis did not reveal discrepancies between the importance of the topic and SWARCO's commitment in terms of external perception. In the strategy workshop, it was decided together with the Executive Board and the consultancy firm that, for the time being, no KPIs and no further packages of measures would be defined for this topic in the framework of the sustainability strategy, since it forms part of our core business already. However, due to the importance of the topic for us and our stakeholders, we will continue to strive for a positive impact and to be recognised as the global thought leader in the field of Optimised Traffic Flow.

4.3 G – GOVERNANCE

4.3.1 PRODUCT SAFETY AND QUALITY

A) Importance of the topic

SWARCO's corporate policy and goals are clearly defined. Problems and risks are continuously identified and opportunities for innovative solutions and improvements are seen in them. The importance to fulfill customer requirements, customer proximity and customer satisfaction are top priorities for SWARCO in all business areas and ensure the sustainable success of the company. All activities are aimed at making road traffic significantly safer, optimising traffic flows, thereby reducing emissions and easing the burden on the environment.
Results from the stakeholder interviews show that the focus on the topic of product safety and quality is predominantly on product quality. However, product-related documents such as sustainability information on products, technical and safety data sheets, process descriptions accompanied by hazard evaluations and compliance with relevant laws or other obligations and standards ensure that product safety is also a natural part of the manufacturing process and may be cited as an important purchasing argument. Stakeholders also view environmental product declarations (EPDs) positively in this context. These certificates provide additional information about the origin of the raw materials and the ecological properties of the product "cradle-to-grave", i.e., about upstream and downstream processes.
The SWOT analysis shows the company's strengths, such as ambitious standards in quality assurance, high-performance premium products, comprehensive know-how as a full-range supplier of road marking systems and in mechanical engineering, and high customer friendliness. SWARCO products are also characterised by the establishment of sustainable criteria where there are no suitable environmental label criteria. This opens opportunities, such as the possibility to differentiate from low-cost products through ecological and social optimisation of the supply chains. Potentials are still seen in the future in the uniform implementation of ISO standards at the individual sites and better management in product development and the quality criteria required for this.

B) Management approach

About 60-65% of the company sites in SWARCO have already implemented the ISO 9001 quality management system. Depending on the Scope of the companies, there are also management systems for environment (14001), occupational health and safety (45001) or energy efficiency (50001). The continuous improvement process (PDCA cycle), the definition of key performance indicators and the external audits that take place ensure that all employees live up to the respective standard requirements and that standard-compliant products (EN 1423, CE label) are produced.
The Intelligent Transport Systems division is placing greater emphasis on ISO 27001 certification in IT security, as this is of great relevance in this business area and also required by customers. The future goal will be to implement ISO 9001 and ISO 27001 throughout the Group.
ISO 9001 is a suitability criterion for tenders for the application of road markings. Some customers also require ISO 14001 and 45001 certifications. These management systems guarantee process and job descriptions as well as ongoing training, and the customer can assume that the products have been produced and applied in such a way that all relevant standard specifications are met. If the relevant parameters do not meet the specifications, a predefined complaint process is set in motion and the fault is rectified as quickly as possible. Our reflective glass beads are characterised by a higher reflection than many others in the competition and thus stand out clearly from the norm. This represents a quality feature that convinces our customers. Regarding the framework conditions and processes of sustainable product development, the market is the determining factor, as development is mainly geared towards increasing sales. However, if no new requirements arise in the market or standards do not place additional demands on the manufacturer, the development of sustainable products is hindered.
Customer satisfaction, supplier evaluation, complaints and blocked goods are key figures collected annually by the quality management officer and incorporated into the management system. An annual summary can also be found in the management review. Measures and key figures are derived from the collected data in the sense of the PDCA cycle.

C) Goals, KPIs and Measures

The biggest goal for SWARCO is to maintain the quality of its products in the long term despite price pressure and to remain a thought leader in the topic.

The management systems implemented at the sites mean that improvement measures are already being implemented on an ongoing basis. Therefore, it was decided in the strategy workshop together with the Executive Board and the consultancy firm that for the time being no KPIs and further packages of measures will be defined for the essential topic of product safety and quality in the present first sustainability report.

05 APPENDIX

5.1 SUSTAINABILITY DATA TABLE

ENERGY CONSUMPTION[1]		RMS	ITS
GRI 302-1: Energy consumption within the organisation	**Unit**	**2022**	**2022**
Fuel consumption (non-renewable)	kWh	423 977 646	17 951 100
- Natural gas	kWh	420 302 324	2 417 760
- LPG	kWh	644 850	13 446 542
- Diesel	kWh	2 783 939	1 986 943
- Gasoline	kWh	246 532	99 855
- Heating oil	kWh	0	0
Fuel consumption (renewable)	**kWh**	**0**	**0**
Fuel consumption (in total)	**kWh**	**423 977 646**	**17 951 100**
Fuel consumption SWARCO[1]	**kWh**	**441 928 745**	
Energy consumption	**kWh**	**46 079 549**	**3 138 705**
Heat energy consumption	**kWh**	**0**	**96 388**
- District heating	kWh	0	96 388
- District cooling	kWh	0	0
- Steam	kWh	0	0
Purchased energy (in total)	**kWh**	**46 079 549**	**3 235 093**
Energy consumption (in total)	**kWh**	**470 057 195**	**21 186 193**
Purchased energy SWARCO[1]	**kWh**	**49 314 642**	
Energy consumption SWARCO[1]	**kWh**	**491 243 387**	

[1] only production sites, excluding offices and service sites.

CO_2 EMISSIONS SWARCO[2]		LOCATION-BASED	MARKET-BASED
GRI 305-1: Direct (Scope 1) GHG emissions	**Unit**	**2022**	**2022**
Direct (Scope 1) GHG emissions SWARCO	t CO_2eq	119 920	119 920
GRI 305-2: Energy indirect (Scope 2) GHG emissions	**Unit**	**2022**	**2022**
Indirect (Scope 2) GHG emissions SWARCO	t CO_2eq	15 090	8 970
GHG emissions SWARCO (in total)	t CO_2eq	135 010	128 890

GRI 305-4: GHG emissions intensity	**Unit**	**2022**	**2022**
GHG emissions SWARCO	t CO_2eq	135 010	128 890
Turnover	KEUR	1 132 000	1 132 000
GHG emissions intensity SWARCO (in total)	**t CO_2eq / KEUR**	**0.12**	**0.11**

CO_2 EMISSIONS DIVISIONAL[2]		RMS	ITS
GRI 305-1: Direct (Scope 1) GHG emissions	**Unit**	**2022**	**2022**
Direct (Scope 1) GHG emissions	**t CO_2eq**	**106 280**	**13 640**

GRI 305-2: Energy indirect (Scope 2) GHG emissions	**Unit**	**2022**	**2022**
Indirect (Scope 2) GHG emissions (location-based)	**t CO_2eq**	**12 370**	**2 720**
Indirect (Scope 2) GHG emissions (market-based)	**t CO_2eq**	**7 040**	**1 930**

[2] including offices and service sites, including owned fleet vehicles. 15% of service fleet locations covered by primary data, remaining 85% extrapolated based on employee count (FTE).

5.2 GRI CONTENT INDEX

Statement of use	SWARCO has reported the information cited in this GRI content index for the period of 1 January 2022 to 31 December 2022 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	PAGE NO. IN THIS REPORT	FURTHER INFORMATION
GRI 2: GENERAL DISCLOSURES 2021	2-1 Organisational details	14, 60-61, 63	
	2-2 Entities included in the organisation's sustainability reporting	6, 17-19	
	2-3 Reporting period, frequency and contact point	6, 62	
	2-4 Restatements of information		first sustainability report
	2-5 External assurance		no external assurance
	2-6 Activities, value chain and other business relationships	14-18, 27	
	2-7 Employees	46-51	No quantitative information available on group-level for this topic. KPIs may be reported in future reporting cycles
	2-9 Governance structure and composition	19, 21	www.swarco.com/about-us
	2-11 Chair of the highest governance body	4, 19	www.swarco.com/about-us
	2-13 Delegation of responsibility for managing impacts	6, 21, 26	partly covered
	2-15 Conflicts of interest	26	www.swarco.com/compliance
	2-16 Communication of critical concerns	26	www.swarco.com/compliance/-whistleblower-portal no violations within reporting period
	2-22 Statement on sustainable development strategy	4-5	
	2-23 Policy commitments	26-27	www.swarco.com/compliance
	2-24 Embedding policy commitments	26-27	www.swarco.com/compliance
	2-26 Mechanisms for seeking advice and raising concerns	26	www.swarco.com/compliance/-whistleblower-portal
	2-27 Compliance with laws and regulations	26	
	2-28 Membership associations	27	
	2-29 Approach to stakeholder engagement	24-25	

GRI STANDARD	DISCLOSURE	PAGE NO. IN THIS REPORT	FURTHER INFORMATION
GRI 3: MATERIAL TOPICS 2021	3-1 Process to determine material topics	21-25	
	3-2 List of material topics	23	
	ENERGY & EMISSIONS		
GRI 3: MATERIAL TOPICS 2021	3-3 Management of material topics	29, 32-40	
GRI 302: ENERGY 2016	302-1 Energy consumption within the organisation	56	
GRI 305: EMISSIONS 2016	305-1 Direct (Scope 1) GHG emissions	36-37, 57	
	305-2 Energy indirect (Scope 2) GHG emissions	36-37, 57	
	305-4 GHG emissions intensity	57	
	ECO & CIRCULAR PRODUCT DESIGN		
GRI 3: MATERIAL TOPICS 2021	3-3 Management of material topics	29-30, 41-45	
			No quantitative information available on group-level for this topic. KPIs may be reported in future reporting cycles.
	EMPLOYEE SATISFACTION		
GRI 3: MATERIAL TOPICS 2021	3-3 Management of material topics	46-51	
			No quantitative information available on group-level for this topic. KPIs may be reported in future reporting cycles.
	TRAFFIC SAFETY		
GRI 3: MATERIAL TOPICS 2021	3-3 Management of material topics	52	
			No quantitative information available on group-level for this topic. KPIs may be reported in future reporting cycles.
	OPTIMISED TRAFFIC FLOW		
GRI 3: MATERIAL TOPICS 2021	3-3 Management of material topics	53	
			No quantitative information available on group-level for this topic. KPIs may be reported in future reporting cycles.
	PRODUCT SAFETY & QUALITY		
GRI 3: MATERIAL TOPICS 2021	3-3 Management of material topics	54-55	
			No quantitative information available on group-level for this topic. KPIs may be reported in future reporting cycles.

5.3 LIST OF SWARCO COMPANIES AND SITES

COMPANY NAME	DIVISION	COUNTRY	ISO CERTIFICATE
APT SKIDATA LTD.	ITS	United Kingdom	
ASS Verkehrsservice GmbH	RMS	Germany	
BERGAUER AG	ITS	Switzerland	
CEROGLASS TECHNOLOGIES INC.	RMS	United States	
COLORADO PAINT COMPANY II, LLC	RMS	United States	
Consortium Companies: SWARCO & KBAS for Contracting W.L.L.	ITS	Qatar	
Eisenschutzgesellschaft mbH	RMS	Austria	
FEICHTNER UND BOSSERT GmbH	RMS	Germany	
HEINZ + FEIER GmbH	ITS	Germany	
Heoscont Hungaria Kft.	RMS	Hungary	
Herbert Ruch GmbH	RMS	Germany	
HIMA GmbH	RMS	Germany	
Hitex Holdings Ltd	RMS	United Kingdom	
Hitex Traffic Safety Ltd	RMS	United Kingdom	
Hitzblech Markierung GmbH	RMS	Germany	
JONE GmbH	RMS	Germany	
L&R Roadlines Ltd	RMS	United Kingdom	
M. Swarovski GmbH	RMS	Austria	
Road Marking Equipment Pty Ltd	RMS	Australia	
Schlothauer & Wauer GmbH	ITS	Germany	
Somerford Equipment Ltd	RMS	United Kingdom	
Straat 1 GmbH	RMS	Germany	
Stradacolor Kft.	RMS	Hungary	
Supalux Holdings Pty Ltd	RMS	Australia	
Supalux Linemarking Pty Ltd	RMS	Australia	
Supalux Paint Co Pty Ltd	RMS	Australia	
SWARCO AG	Holding	Austria	
SWARCO America Inc.	ITS	United States	
SWARCO ANDINA S.A.S.	ITS	Colombia	
SWARCO BELGIUM NV	ITS	Belgium	
SWARCO Croatia d.o.o.	ITS	Croatia	
SWARCO DAMBACH GmbH	ITS	Germany	
SWARCO DANMARK A/S	ITS	Denmark	
SWARCO ECO-TEC GmbH	RMS	Austria	
SWARCO FINLAND OY	ITS	Finland	
SWARCO FUTURIT Verkehrssignalsysteme GmbH	ITS	Austria	
SWARCO HELLAS A.E.	ITS	Greece	
SWARCO Industries Inc.	RMS	United States	

COMPANY NAME	DIVISION	COUNTRY	ISO CERTIFICATE
SWARCO ITALIA s.r.l.	ITS	Italy	■ ■ ■
SWARCO LEA d.o.o.	ITS	Slovenia	■ ■
SWARCO LIMBURGER LACKFABRIK GmbH	RMS	Germany	■ ■
SWARCO MARKIERUNG GmbH	RMS	Austria	■ ■ □ ■
SWARCO McCAIN, Inc.	ITS	United States	
SWARCO Mobility Nederland B.V.	ITS	Netherlands	■
SWARCO NEDERLAND BV	ITS	Netherlands	■
SWARCO Nederland Holding B.V.	Holding	Netherlands	■ ■
SWARCO NORGE AS	ITS	Norway	■ ■ ■
SWARCO Peek NL B.V.	ITS	Netherlands	■ ■
SWARCO Peek Traffic B.V.	ITS	Netherlands	■
SWARCO Poland Sp. z o.o.	ITS	Poland	■
SWARCO REFLEX, LLC	RMS	United States	■ ■
SWARCO SAUDIA LLC	ITS	Saudi Arabia	
SWARCO SCHÖNBORN GmbH	RMS	Germany	■ ■
SWARCO SCHWEIZ AG	ITS	Switzerland	■
SWARCO Smart Charging Ltd	ITS	United Kingdom	■ ■ □
SWARCO Solution Center Croatia d.o.o.	ITS	Croatia	
SWARCO Solution Center GmbH	ITS	Germany	■
SWARCO SVERIGE AB	ITS	Sweden	■ ■
SWARCO TECHNOLOGY APS	ITS	Denmark	■ ■
SWARCO Trade and Service OOO	ITS	Russia	
SWARCO TRAFFIC AUSTRIA GmbH	ITS	Austria	
SWARCO TRAFFIC CZ s.r.o.	ITS	Czech Republic	■ ■
SWARCO TRAFFIC HOLDING GmbH	ITS	Germany	■ ■
SWARCO TRAFFIC HUNGARIA Kft.	ITS	Hungary	■ ■ □
SWARCO TRAFFIC ROMANIA s.r.l.	ITS	Romania	■ ■ ■ □
SWARCO TRAFFIC SYSTEMS GmbH	ITS	Germany	■ ■
SWARCO UK & Ireland Ltd.	ITS	United Kingdom	■ ■ ■ □
SWARCO UK Holdings Ltd	RMS	United Kingdom	■ ■ □
SWARCO UK Ltd	ITS	United Kingdom	■ ■ □
SWARCO UKRAINE LLC	ITS	Ukraine	
SWARCO V.S.M. GmbH	ITS	Germany	
SWARCO VESTGLAS GmbH	RMS	Germany	■ ■ ■
SWARCO VICAS SRL	RMS	Romania	■ ■ □
Texprint Surfacing Ltd	RMS	United Kingdom	
Vialux Bulgaria Ltd.	RMS	Bulgaria	■ ■ ■ □

■ ISO 9001 ■ ISO14001 ■ ISO 18001 ■ ISO 27001 ■ ISO 39001 ■ ISO 44001 □ ISO 45001 ■ ISO 50001

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