

VARIOSYSTEMS®

Variosystems ESG Report 2023

March 2024

Generated by

ESG Advantage

In collaboration with



Executive summary

This year marked the fifth annual ESG assessment of Variosystems, as part of the Capvis ESG review cycle.

During these years, Variosystems has built up its understanding and management of key ESG topics and in 2023, it demonstrated commitment to addressing and improving on all key areas. As an electronic services partner, Variosystems' environmental impact has always been a focus area, particularly regarding its carbon footprint (Scope 1 & 2) and its resource efficiency. On carbon, Variosystems conducted for the first time, a full scope 1, 2 and 3 assessment, and as a result of improved visibility over its emissions and has plans to define some decarbonisation targets. Regarding waste, KPIs are already tracked and waste intensity targets (as a % of revenue) have been set for each location. Whilst the company has limited influence over the materials used in its products, it can influence the material efficiency of the production process and this is where the company is focusing its efforts on minimising waste from manufacturing/assembling processes, through improved employee awareness. In order for Variosystems to meaningfully impact these topics, it will need to shift from an ad-hoc to a strategic approach to carbon/waste reduction.

Social topics are also of importance to Variosystems, specifically employee engagement. The company is finalising a project to standardise HR practices across all locations through best practice sharing, to increase employee wellbeing and satisfaction across the group. Whilst talent attraction and retention remains a challenge for Variosystems, the company is establishing an extensive learning academy for all employees and has processes in place to investigate and manage employee departures.

One of the biggest areas of improvement in 2023 was in the development of a new Purpose & Vision, Missions and Values statement. Sustainable growth and operational excellence are two key pillars of this company strategy and demonstrate to employees the value that Variosystems places on ESG. The company makes a great effort to communicate externally on its sustainability plans and progress, and continuing this into the future with its more ambitious plans (e.g. decarbonisation) will help to strengthen its position as a responsible and sustainable player in its industry.

Key performance indicators 2023

738.2	17	57.7%	17	3
tCO ₂ e / €m net rev	%	%	#/20	#/3
Carbon intensity	Renewable energy used	Gender diversity of the workforce	Governance policies in place	Variosystems SDG projects achieved

Company overview

About Variosystems

Variosystems is an international electronics services partner in the field of the development, industrialisation, production and life-cycle management of electronics solutions.






Country of HQ	Switzerland
City of HQ	Steinach, Switzerland
Total number of employees as of 31.12.2023	2'329
Country of operations	Switzerland
Primary industry	Electronic Manufacturing Services
Website	www.variosystems.com

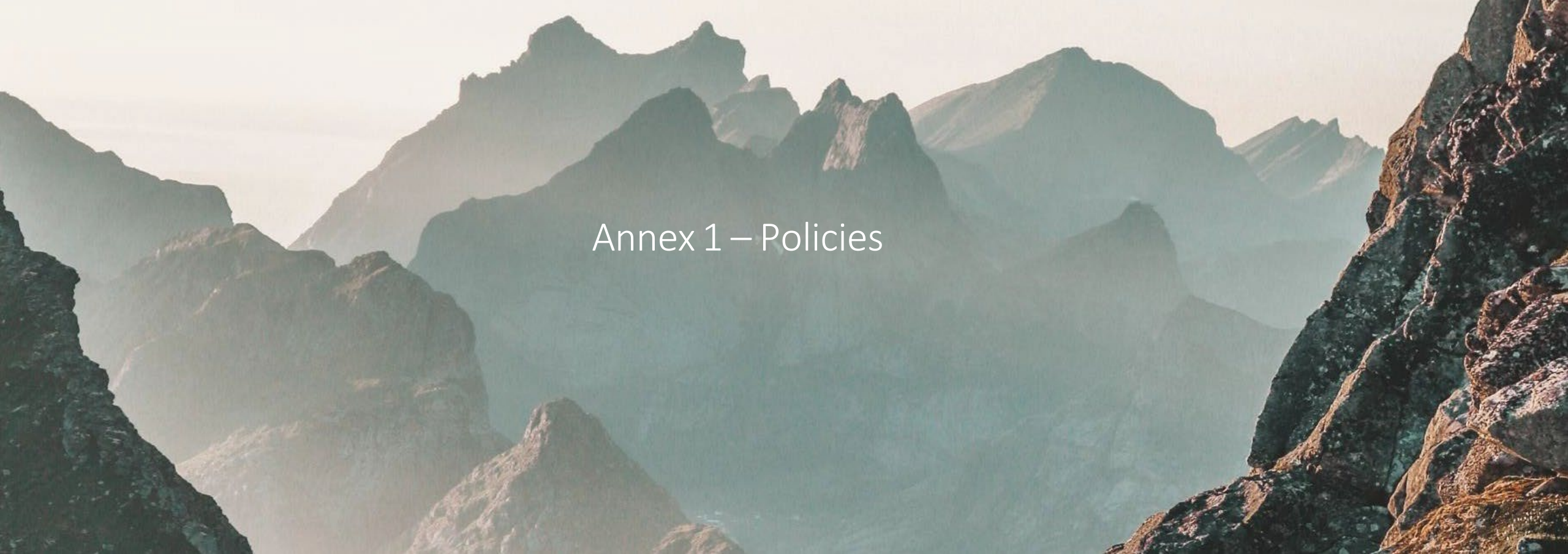
Relevance of ESG

- Prioritizing sustainability throughout the supply chain is essential for the Electronics Services industry. In operations, the focus on product durability and material circularity is paramount to deliver high-quality products while minimizing electronic waste.
- Upstream, effective supply chain management is critical to uphold ethical working conditions, including those for mineworkers, and to avoid the use of conflict minerals.
- While the industry holds the potential for sustainability, overcoming substantial challenges is necessary. Companies excelling in ESG practices are poised to gain a competitive advantage. Achieving future-proof status involves enhancing product durability and circularity by sourcing high-quality recycled materials for production, ensuring the reusability and recyclability of e-waste. Companies must also ensure that their supply chain is sustainable and ethically governed. Furthermore, minimizing the carbon impact of both operations and products is crucial to achieve a carbon-neutral outcome.

ESG Theme Performance

Each year, Variosystems undertakes 3 strategic projects aligned with the below mentioned key material themes to enhance the environmental impact, support employees, and ensure robust governance across all operations. In 2022-23, Variosystems has achieved significant milestones in carbon footprint management, employee well-being, ESG integration, supply chain control, and resource efficiency.

	Carbon footprint management Theme progress 2022-23: Variosystems measured its scope 3 footprint for the first time this year, providing a comprehensive overview of its overall emissions. Quick wins have been addressed and decarbonisation efforts are underway. Renewable electricity is both procured and generated, representing around 17% of overall electricity consumption.
	Employee engagement & well-being Theme progress 2022-23: Variosystems set out to harmonise its HR processes across locations, mainly by sharing best practices across the employee lifecycle. This project is ongoing and has been extended into another SDG project set for 2024.
	Integration of ESG strategy Theme progress 2022-23: Variosystems developed a new Purpose & Vision, Missions and Values statement and introduced this to the organization. This strategy is divided into four areas: customer satisfaction, value-driven culture, operations excellence, and sustainable growth.
	Supply chain control Theme progress 2022-23: Variosystems published its Supplier Code of Conduct on its website and has plans to increase the % of suppliers for which improvement programmes are in place.
	Resource efficiency & waste management Theme progress 2022-23: ISO 14001 has been achieved in the three biggest production locations (Switzerland, Sri Lanka & China). All other locations are preparing for ISO 14001.



Annex 1 – Policies

ESG Policies

This section highlights which ESG-related policies are in place.

Anti-bribery and anti-corruption policy	Yes	Waste management policy	No
Biodiversity policy	Yes	Workplace accident prevention policy	Yes
Data security and privacy policy	Yes	Modern Slavery statement	Yes
Diversity, equity and inclusion policy	Yes	Employee survey conducted bi-annually	Yes
Employee Code of Conduct	Yes	Purchasing policy	Yes
Environmental policy	Yes	Supplier Code of Conduct	Yes
ESG / sustainability policy	Yes	Whistleblowing policy	Yes
Gifts and hospitality policy	Yes	Cybersecurity policy	Yes
Health and safety policy	Yes	Energy consumption policy	No
Human rights policy	Yes	Climate / carbon policy	No



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Variosystems
Carbon report 2023
March 2024

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About this report

Company profile Variosystems is an electronic engineering and manufacturing services provider, with products including complete devices with wire harness assembly and box build services. The company is headquartered in Steinach, Switzerland, with further global production plants in Mexico, Croatia, Sri Lanka, China, and the US. Design and prototyping occurs in the US and Switzerland. The company serves multiple end-markets globally.

Temporal limits



2020 - 2023

Standard



GHG Protocol Corporate Standard and Corporate Value Chain (Scope 3) Standard

Study approach



Operational Control Approach¹
With the aim of covering 100% of the activities carried out

Exclusions from study



Emission sources exclusion criteria are based on:
1. Low materiality (negligible effect on footprint)
2. Low data quality, integrity or accessibility of information
Details can be found on the Materiality page

This document presents the greenhouse gas footprint assessment of Variosystems conducted in Q1 2024, based on desk research, data provided by the company, its suppliers, and customers, as well as several discussions between company management and Holtara.

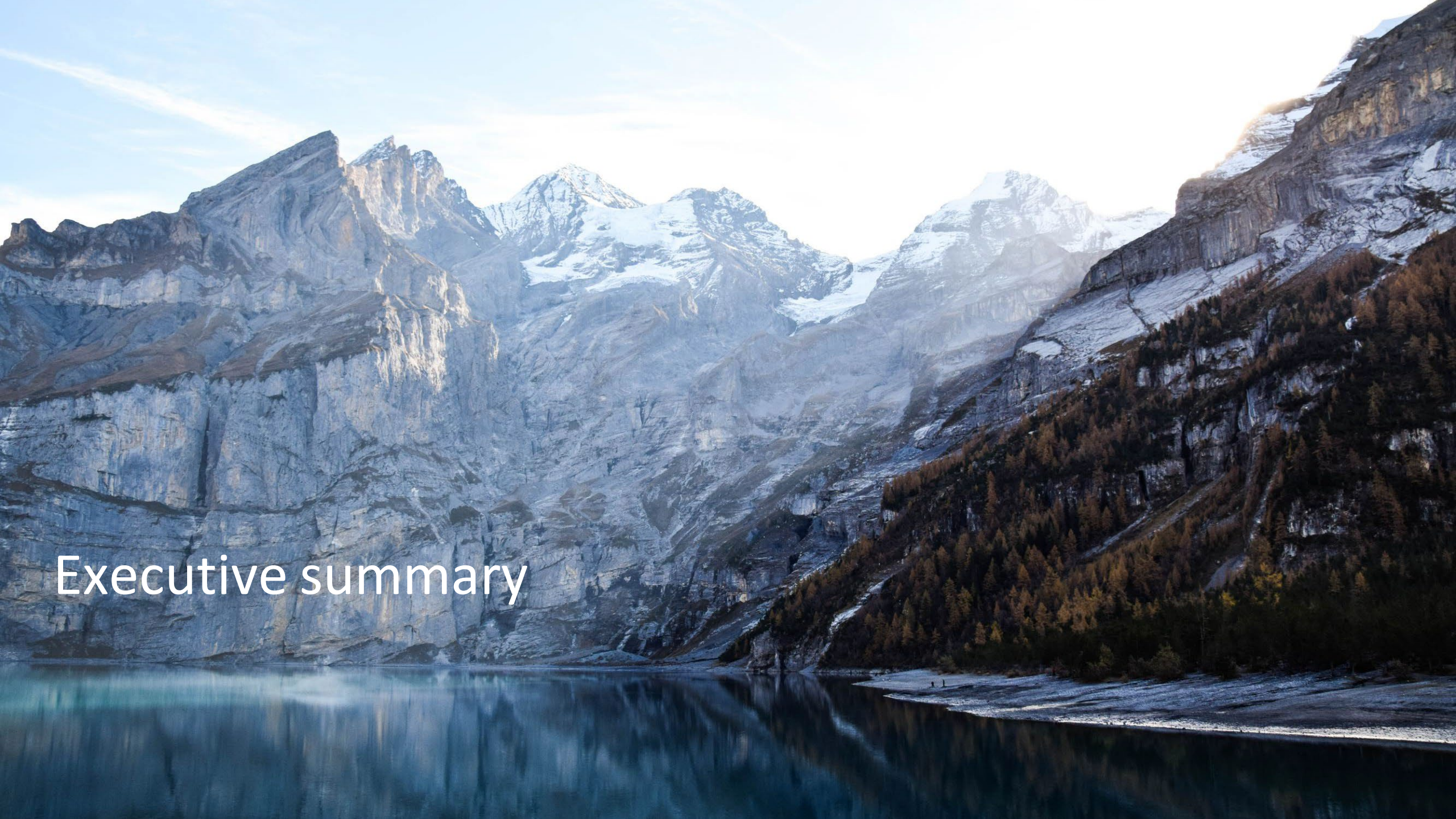


Executive summary

Carbon footprint

Annex

¹Scope 2 values are reported using the market-based approach, unless otherwise stated.



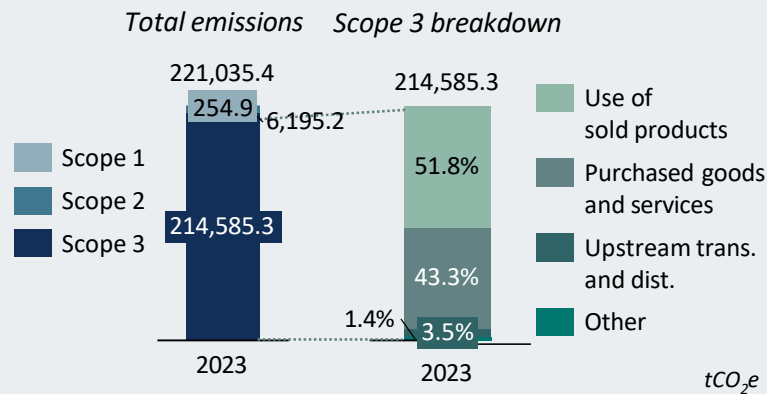
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Variosystems has undertaken a comprehensive carbon footprint assessment which helps to inform decarbonisation targets

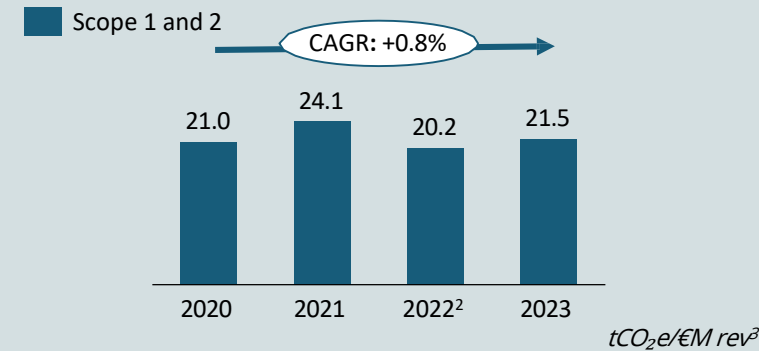
Key takeaways

- Variosystems is committed to mitigating its climate impact and is taking action on lifecycle of products, waste and energy efficiency to achieve sustainable operations.
- Operational carbon intensity has remained relatively constant, such that emissions have increased commensurate with company growth.
- Variosystems' emissions are dominated by its value chain emissions, driven mostly by the global use of sold electronic components, as well as the procurement of goods. This prompts various potential decarbonisation measures.

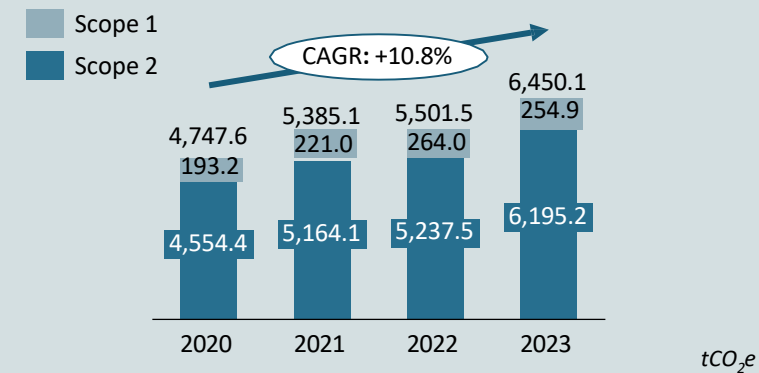
Variosystems measured full value chain emissions for the first time in 2023, covering scope 1-3 emissions



Operational (scope 1 and 2) carbon revenue intensity has remained relatively constant since 2020



Operational (scope 1 and 2) carbon emissions increased on average by 10.8% since 2020



Data quality is high across operational emissions and moderate on value chain emissions categories

Data is predominately activity-based, particularly for scope 1 and 2 categories, while scope 3 relies on some estimations from activity-based data and expenditure data. Variosystems should consider ensuring all purchases data is activity-based.

Metric	Scope 1	Scope 2	Scope 3
Quality	HIGH	HIGH	MEDIUM
Coverage	HIGH	HIGH	HIGH

High-level carbon reduction opportunities have been identified for Variosystems

#	Action
A	Procure sustainable and locally sourced input materials
B	Design products to optimise on energy efficiency
C	Ensure low-carbon logistics providers, and switch outbound logistics to rail and road transport
D	Increase renewable energy procurement while improving operational energy efficiency

More details can be found in the carbon footprint section of this report. ²The relative reduction in carbon intensity for 2022 is in part due to the inclusion of the Mexico site in the total revenue figures, but its exclusion from the operational emissions assessment.

³Revenues converted from CHF to EUR using Eurostat annual average exchange rates.

Source: Company data, Holtara analysis



Carbon footprint

Value chain scope 3 emissions are reported for the first time and account for the majority of Variosystems' carbon footprint

Total carbon footprint & intensity

221035.4	738.2
tCO ₂ e	tCO ₂ e/mEUR ¹

Variosystems' 2023 carbon footprint is 221035.4 tCO₂e, and its operational carbon footprint amounts to 6450.1 tCO₂e, representing an increase by 17.2% in the past year.

The top emissions categories are driven by value chain emissions, which account for 97.1% of the footprint. Of these value-chain emissions, use of sold products and purchased goods and services constitute the majority.

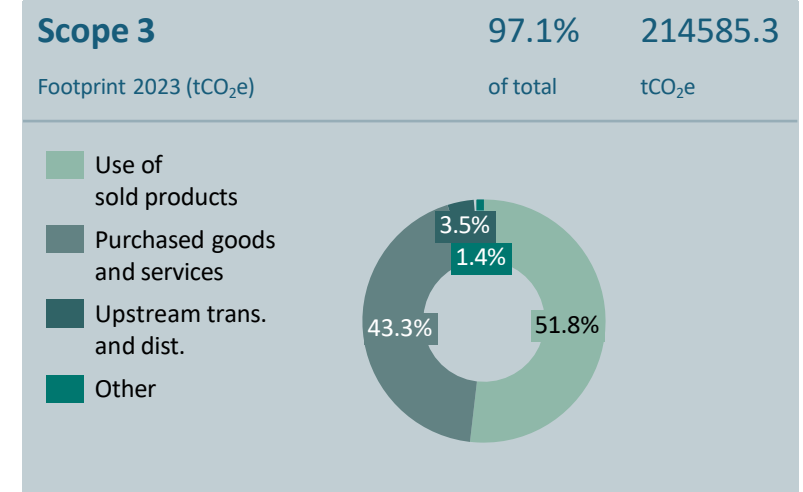
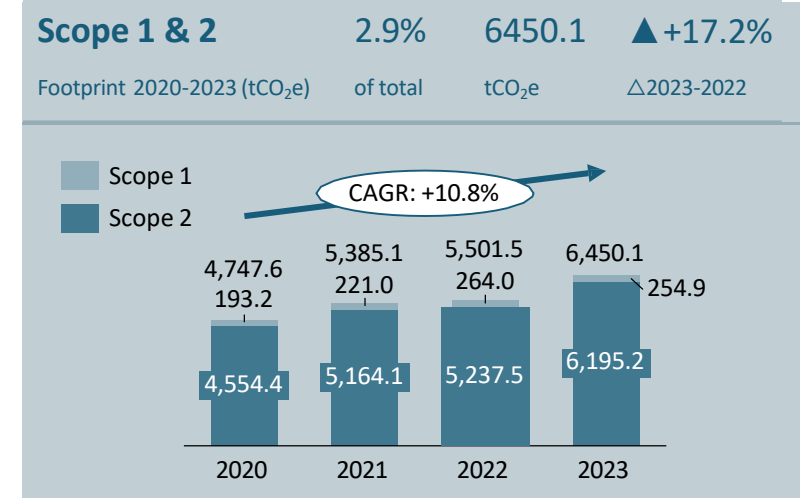
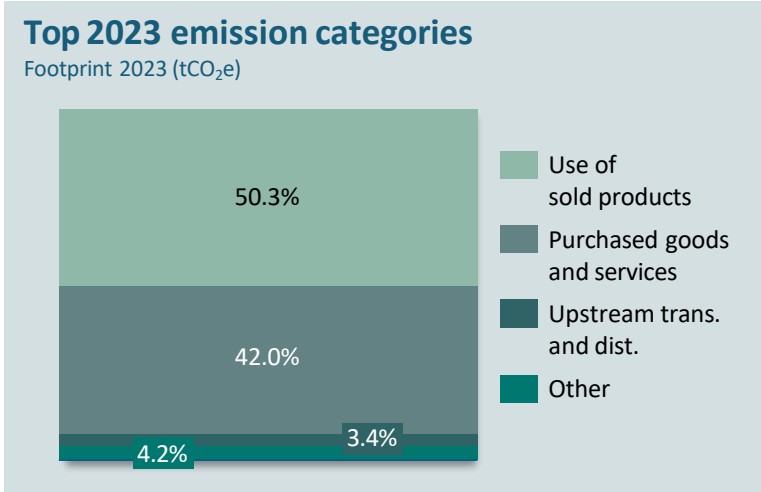
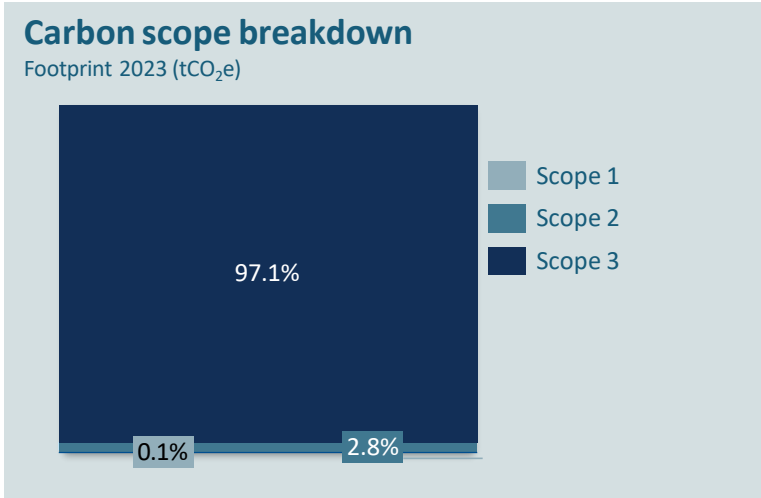
Data quality

MEDIUM	111
Indicative data quality	Data points captured in 2023

Variosystems' 2023 hypothetical carbon costs

€22.1 M	Company carbon cost based on €100/tCO ₂ e ² carbon price
7.4%	Carbon cost vs revenue ²

¹Revenues converted from CHF to EUR using Eurostat annual average exchange rates. ²Figures are indicative; this figure gives an insight into annual costs if an internal or external carbon price would be set to €100,-/tCO₂e. Source: Company data, Holtara analysis



Variosystems' operational carbon footprint is dominated by electricity use, and has seen a steady increase since 2020, largely due to company growth

Market-based emissions¹

2.9% Scope 1 & 2 share of total footprint in 2023	6450.1 Total scope 1&2 footprint 2023, tCO ₂ e	▲ +17.2% Scope 1&2 Δ2023-2022
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Location-based emissions¹

2.9% Scope 1 & 2 share of total footprint in 2023	6360.7 Total scope 1&2 footprint 2023, tCO ₂ e	▲ +16.6% Scope 1&2 Δ2023-2022
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Performance

Variosystems' energy use primarily comes from electricity (91.1% in 2023), with smaller contributions from natural gas consumption in company facilities, and petrol and diesel use from the company car fleet. The Sri Lankan and Swiss facilities produce renewable electricity on-site.

Main actions

Total energy usage has increased as electricity consumption has increased, while the share of renewable electricity procurement has decreased to 17.0% from 21.4% in 2022.

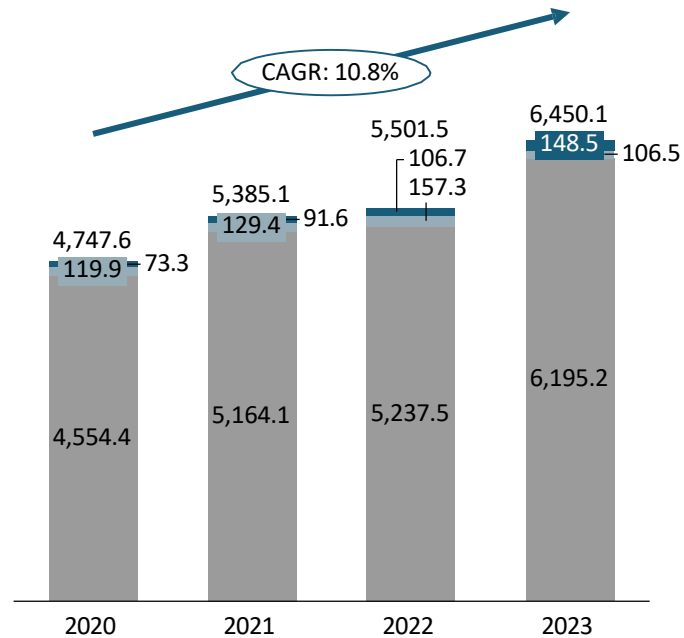
Data quality

Variosystems achieved high levels of data coverage and quality for scope 1 and 2 emissions, reporting consumption-based data for all locations.

Scope 1 & 2 breakdown

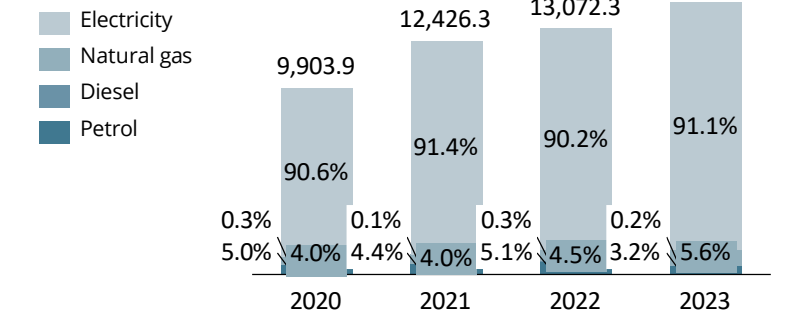
Scope 1 & 2 footprint,² 2020-2023 (tCO₂e)

- Stationary combustion
- Mobile combustion
- Purchased electricity



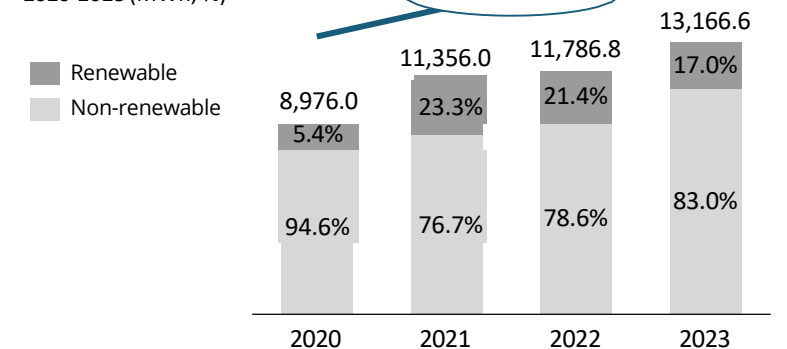
Energy consumption

Energy consumption per fuel type,² 2020-2023 (MWh, %)



Electricity consumption

Scope 2 electricity consumption renewable vs non-renewable, 2020-2023 (MWh, %)



¹The market-based approach reflects emissions for the type of electricity procured, whereas location-based reflects the emissions from the local grid. ²2020-2022 stationary combustion for the US location is not available and therefore not reported.

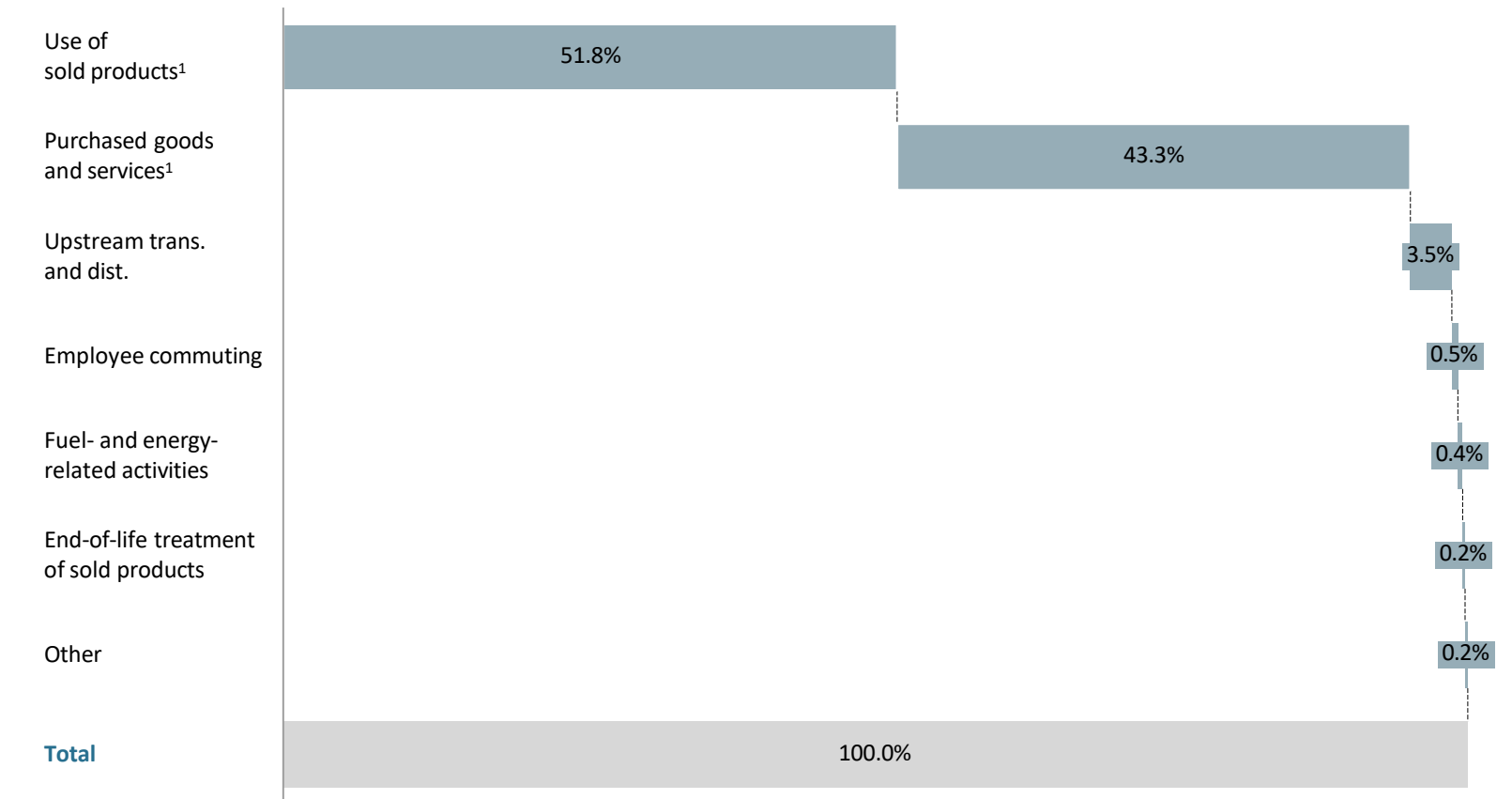
Source: Company data, Holtara analysis

Value chain scope 3 emissions represent the majority of Variosystems' carbon footprint

97.1% Scope 3 share of total footprint in 2023	214585.3 Total scope 3 footprint 2023, tCO ₂ e
<p>Performance</p> <p>Value chain emissions for Variosystems are driven by the energy use of sold electronic components and by purchases of goods and services, both of which comprise a total of 95.1% of value chain emissions, as is typical for electronic components companies.</p> <p>Other material categories contribute much less to the total footprint, and include upstream transportation and distribution, employee commuting, indirect emissions from energy consumption at company facilities, and end-of-life treatment of the sold printed circuit boards (PCBs) and cables.</p>	
<p>Main actions</p> <p>Variosystems measured its scope 3 value chain emissions for the first time in 2023. The company is already taking steps to reduce the impact of products through waste monitoring and supporting customers with lifecycle and maintenance of their products.</p>	
<p>Data quality</p> <p>Variosystems' data quality is moderate for its value chain emissions. The most material categories rely on a combination of activity-based and spend-based data, where activity-based data was not available.</p>	

Variosystems' scope 3 emissions are dominated by the use of sold products and purchased goods and services categories

Scope 3 footprint split by main emission categories, 2023 (tCO₂e, %)

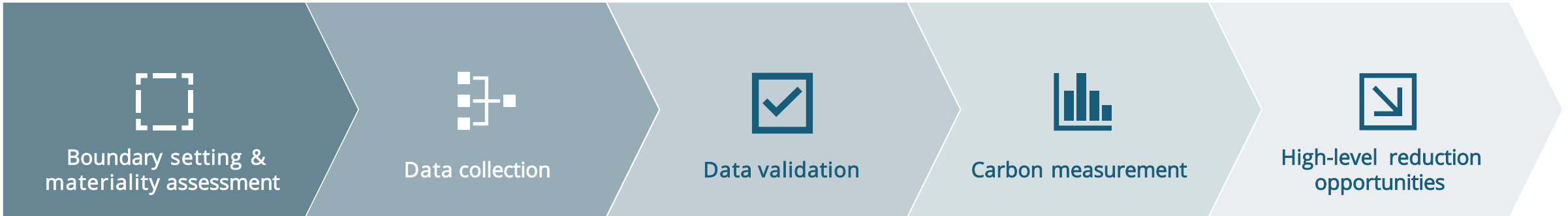


¹More detailed breakdown provided on subsequent page.
Source: Company data, Holtara analysis



Annex

Through a five-step process, we assess the full value chain emissions of Variosystems, and identify key emissions reduction opportunities



1

The boundaries and scope of the study are defined based on company activities.

Organizational and operational boundaries are defined to determine the scope of the report. An analysis of the company's business offerings, operations, and their supply chain interactions informs whether, specific emission categories are identified as relevant and material.

2

Data is requested and collected for all material emission categories.

A custom data request is prepared for the company based on relevant emissions categories. A carbon data collection is established across a company's operations. This can involve direct communication with suppliers, monitoring the company's operational data (e.g. energy bills), and other means.

3

The data is checked, classified and validated.

The data undergoes a review for relevance, completeness, and consistency to ensure an accurate emissions assessment. During this process, emphasis is placed on the most accurate data types, prioritizing supplier-specific data, followed by activity data, and finally, spend-based data.

4

The carbon footprint is calculated in line with the GHG protocol.

When applicable, geographically and temporally relevant emission factors are applied to convert activity- or spend-based data, enabling the calculation of the carbon footprint for a particular activity. In cases of data gaps, estimation models may be employed to derive the carbon footprint for that activity.

5

High-level reduction opportunities are identified for the company.

The carbon footprint assessment offers insights into the primary emission drivers of the company, revealing crucial information and pinpointing avenues for reduction. This analysis can lead to the formulation of carbon reduction measures aligned with the company's objectives.

Material scope 1 & 2 emission sources are identified based on typical company activities

- ✓ Material and included
- Material but not included in assessment
- ✗ Deemed not material

Scope 1 & 2 Materiality assessment

To enable an effective and efficient carbon monitoring and -reduction process, it is key to focus on material emissions sources. An analysis of the company's business offerings and operations was performed, informing whether specific emission categories are identified as relevant and material. Material emission sources contribute significantly to the company's overall footprint, whereas a category is deemed immaterial if its contribution to the overall footprint is negligible (<5% of overall footprint).

Analysis boundary

Organisational boundary Variosystems has direct operational control for the company HQ in Switzerland, as well as its production locations globally in the US, China, Mexico, Croatia and Sri Lanka.



Scope of activities Main activities at company locations include manufacturing, sales, product design and development.



Emission category	Materiality	Reason for inclusion/exclusion
Scope 1	Stationary combustion	✓ Variosystems heats its locations through the combustion of natural gas, and emissions are calculated based on energy consumption in kWh.
	Mobile combustion	✓ Variosystems operates a vehicle fleet, that consume a mix of petrol and diesel, and emissions are calculated based on petrol and diesel consumption.
	Fugitive and process emissions	✗ Variosystems does not have any activities that materially contribute to fugitive or process emissions, so this category is excluded from the assessment.
Scope 2	Purchased electricity (facility use)	✓ Variosystems procures 17.0% renewable electricity, and emissions from total purchased electricity are calculated based on electricity consumption.
	Purchased electricity (vehicle use)	✗ Variosystems does not operate an electric vehicle fleet, so this category is excluded from the assessment.
	Purchased heat and steam	✗ Variosystems does not procure heat or steam energy, so this category is excluded from the assessment.

Material upstream scope 3 emission sources are identified and included in the assessment

- ✓ Material and included
- Material but not included in assessment
- ✗ Deemed not material

Scope 3 Upstream - Materiality assessment

For the scope 3 emission categories, a materiality analysis was performed based on the company's business offerings, and supply chain interactions, informing whether specific emission categories are identified as relevant and material. Categories are deemed immaterial if they are either not applicable to the company's operations and/or supply chain, or their contribution to the overall footprint is negligible (<5% of overall footprint).

Analysis boundary

Organisational boundary Variosystems has direct operational control for the company HQ in Switzerland, as well as its production locations globally in the US, China, Mexico, Croatia and Sri Lanka.



Scope of activities Variosystems' upstream value chain actors are predominately the suppliers of the electronic components and other services, as well as the logistics providers for transportation of supplies to and from company locations.



Emission category	Materiality	Reason for inclusion/exclusion
Purchased goods and services	✓	Variosystems purchases goods and services, including PCBs and other electronic components, and emissions are calculated based on volumes of purchases and expenditures.
Capital goods	✗	Variosystems did not procure any capital goods in 2023, so emissions are not included in the analysis.
Fuel and energy-related activities	✓	Variosystems purchases natural gas and electricity (scope 1 and 2), so indirect emissions from sourcing these energy sources are calculated based on energy consumption.
Upstream transportation and distribution	✓	Variosystems purchases transportation and distribution services and emissions are calculated based on weights, distance travelled for outbound logistics, and expenditure for upstream logistics.
Waste generated in operations	✓	Variosystems produces waste during its operations, and emissions are calculated based on volumes and waste type, as well as assumed disposal type.
Business travel	✓	Variosystems' employees travel for business-related activities (in vehicles not owned or controlled by the company) and emissions are estimated based on distance travelled per transportation type per company location.
Employee commuting	✓	Variosystems' employees commute to work, and emissions are estimated based on the number of employees, days working from home, and national average commuting distances and transportation types.

Material downstream scope 3 emission sources are identified and included in the assessment

- ✓ Material and included
- Material but not included in assessment
- ✗ Deemed not material

Scope 3 Downstream - Materiality assessment

For the scope 3 emission categories, a materiality analysis was performed based on the company's business offerings, and supply chain interactions, informing whether specific emission categories are identified as relevant and material. Categories are deemed immaterial if they are either not applicable to the company's operations and/or supply chain, or their contribution to the overall footprint is negligible (<5% of overall footprint).

Analysis boundary

Organisational boundary Variosystems has direct operational control for the company HQ in Switzerland, as well as its production locations globally in the US, China, Mexico, Croatia and Sri Lanka.



Scope of activities Variosystems' downstream value chain actors are predominately the end users of the electronic components and services produced by Variosystems.



Emission category	Materiality	Reason for inclusion/exclusion
Downstream transportation and distribution	✗	Variosystems pays for all outbound logistics meaning all transportation of goods is covered under upstream transportation and distribution, so this category is not included in the analysis.
Processing of sold products	✗	Variosystems does not sell intermediate products, so this category is not considered in the analysis.
Use of sold products	✓	Variosystems sells products containing PCBs that consume energy, and emissions are calculated based on typical energy use and product lifetime.
End-of-life treatment of sold products	✓	Variosystems sells products that will turn into waste at the end of their lifetime, and emissions are estimated based on sales volumes and disposal type.
Downstream leased assets	✗	Variosystems does not lease to others, so this category is not considered in the analysis.
Franchises	✗	Variosystems does not operate franchises, so this category is not considered in the analysis.
Investments	✗	Variosystems does not have investments, so this category is not considered in the analysis.

Definitions and terms

Metric	Unit	Definition
Total energy consumption	MWh	The calculated total energy consumption from all sources (scope 1 and 2; including electricity, fuel, gas, and if relevant, steam and heat), during a reporting period.
Carbon intensity	tCO ₂ e / €M rev	Carbon emissions in metric tonnes per millions of net revenue, during a reporting period.
Scope 1 emissions	tCO ₂ e	Direct emissions due to owned, controlled sources accounted for using the GHG Protocol, during a reporting period.
Scope 2 emissions	tCO ₂ e	Indirect emissions due to purchase of electricity, heat, steam, etc. accounted for using the GHG Protocol, during a reporting period.
Scope 3 emissions	tCO ₂ e	All indirect emissions (i.e. not included in scope 1 or 2) that occur in the company value chain, including both upstream and downstream emissions. Accounted for using the GHG Protocol, during a reporting period.
Proxy data	-	Proxy data refers to indirect or substitute information used to estimate GHG emissions when direct emissions data is unavailable or difficult to obtain.
Activity data	-	Activity data specifies how many units of a particular product or material that a company has purchased. For example, it could be litres of fuel, kilograms of textile, etc.
Spend data	-	Spend data relates to the financial expenditures associated with GHG emissions. It involves tracking the monetary costs associated with activities, processes, or purchases that lead to emissions.
Supplier data	-	Supplier-specific data is information provided by suppliers or vendors that is relevant to GHG emissions accounting. This data typically includes details about the emissions associated with the production, transportation, or provision of goods and services by suppliers.
Market-based approach	-	A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice).
Location-based approach	-	A location-based approach accounts for emissions based on the average emissions intensity of grids where energy consumption takes place, primarily utilizing grid-average emission factor data.
Base year	Year	A historic datum (a specific year or an average over multiple years) against which a company's emissions are tracked over time.
CO ₂ equivalent	CO ₂ e	The universal unit of measurement to indicate the global warming potential (GWP) of each of the six greenhouse gases, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate different greenhouse gases against a common basis.

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