CREATING VALUE SUSTAINABLY

Sustainability Report 2023

PASSION. PRECISION. PURITY.

VAT is the world's leading supplier of high-end vacuum valves and related services used to manufacture semiconductors, digital displays, solar panels, and many other innovative products. VAT believes that long-term business success can only be sustained by integrating a broad range of values into strategic and operational planning. This includes providing employees with opportunities to grow and develop, playing a positive role in the communities in which it operates and reducing the impact on the environment.

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Dear Stakeholders,

Despite the market headwinds in 2023, VAT continued to benefit from its leadership position in long-term growth markets, driven by global digitalization. This is being augmented by other factors, such as the need for sustainable energy and the increased use of vacuum processes in a wider range of industries. This wider proliferation of vacuum processes is at the core of our sustainable growth strategy and value creation.

We work closely with our customers to help them improve their environmental footprint – and those of their customers. We also focus internally to ensure we understand our own contributions and impacts from environmental, social and governance (ESG) perspectives.

To this end, we continued to make progress on building a truly sustainable culture in the company and on our ambitions to become industry leaders in ESG performance, to match our global leadership in vacuum valves and related services used in the semiconductor, solar photovoltaic and other industrial sectors. In this context, we welcome the latest external ESG and sustainability benchmarking of VAT by Sustainalytics which recorded an improvement in 2023 for the third year in a row, signaling progress in our continuing efforts to de-risk our business. Throughout the year we also decided to sign-up our factory in Malaysia to the Responsible Factory Initiative (RFI), an element of the Responsible Business Alliance (RBA), which lays out expectations on several sustainability and labor metrics. We are pleased to be part of this improvement effort.

As sustainability and ESG becomes increasingly important, VAT continues to embed sustainability considerations within our core business. We formally integrated ESG performance as one of the four priorities in our mid-term 2022 – 2027 strategic plan and continue to build a sustainability focused culture and mindset in the company, while strengthening our management and governance structures. As a result, we allocated the supervisory oversight of sustainability within the Board of Directors. The formal amendment of VAT's Articles of Association in May 2023 established sustainable development as a central part of its corporate purpose.

In our second Sustainability Report last year, we outlined VAT's inaugural set of sustainability targets – initially concentrating on reducing emissions and increasing gender diversity in the company.

Consequently, we added respective management resources with expertise in sustainability to support the implementation of our strategy and our sustainability targets across the business. This will drive the implementation and transparent reporting of our sustainability related efforts in 2024 and beyond.

"VAT includes sustainability considerations in how we operate the business and we have embedded ESG performance criteria in our strategic plan."

DR. MARTIN KOMISCHKE
CHAIRMAN OF THE BOARD OF DIRECTORS

URS GANTNER
CEO

As announced last year, we aim to achieve our target to reduce Scope 1 and Scope 2 greenhouse gas (GHG) emissions to 50% of our 2022 levels by 2025, largely by increasing the use of renewable energy at our manufacturing and service sites. We have since made good progress with installing solar power panels on our existing facility in Malaysia and will overall double our solar capacity there in the next few years and across VAT globally. This ensures we can grow our business without increasing our carbon emissions on a pro-rata basis.

Our second major target area is diversity, where we aim to raise the proportion of women in leadership positions to 25% by 2027. Secondly, by 2030 we aim to fill 25% of all vacancies with women, up from 23% today. In terms of diversity in the broader sense, we are proud to have colleagues of more than 50 nationalities working in the VAT family and a balanced generational background is cherished with a diverse age mix spanning from apprentices aged below 20 years to senior employes aged over 60 years.

We will continue to broaden and strengthen our ESG targets and the underlying measures we need to reach them. At the same time, we believe it is important to acknowledge the positive impacts that our vacuum valve technology has on the environment and on society in general, both directly and indirectly.

In this context, our products play a direct role in confronting the challenge of climate change. Vacuum valves are utilized in the production of high-efficiency photovoltaic cells, in uranium enrichment within the nuclear fuel cycle, and in prototype applications for next-generation nuclear power generation based on fusion. Through their key role in the fabrication of semiconductors, VAT valves also contribute to more efficient and less wasteful industrial production. They also enable the expansion of smart power grids that harness and transmit renewable energy on a large scale and the rollout of electric vehicles that reduce reliance on fossil fuels and improve urban air quality. Additionally, our technology aids the manufacture of medical devices that create new opportunities to treat diseases more effectively.

This is why today we say, "We change the world with vacuum solutions."

We hope you find this Sustainability Report informative as we share what we have accomplished so far, and outline some of the challenges that lie ahead. We look forward to working together with all our stakeholders to make VAT a truly sustainable company.

ESG HIGHLIGHTS 2023

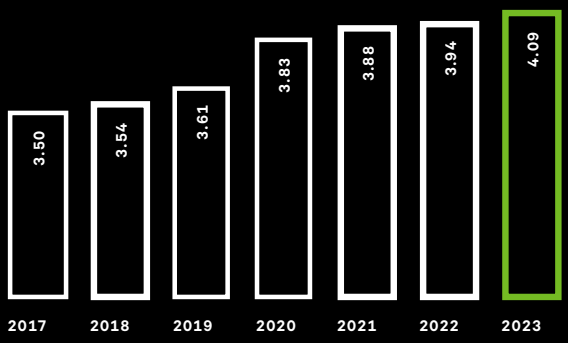
Progress on our ESG targets and commitments

			Reference timeframe or year	Current value	Target value
Environment	**Climate protection**	Reduce GHG emissions (Scope 1 and 2) by 50% by 2025, versus 2022 levels	2025		
	Energy consumption	**Aim for 100% renewable energy:** The share of renewable energy should increase from 68% to >90%		68%	>90%
	Water	Take steps to improve water conversion		~108,000 m^3	
	Waste reduction	Prioritize waste reduction, recycling and proper disposal methods		~4,500 tonnes	
Social	**Workforce diversity**	**Increase the share of women among new hires** to 24% by 2027 and to 25% by 2030	2030	24%	25%
	Leadership diversity	**Increase the share of women in leadership positions** to 25% by 2027	2027	20%	25%

We aim to lead in ESG the way we lead in vacuum valves

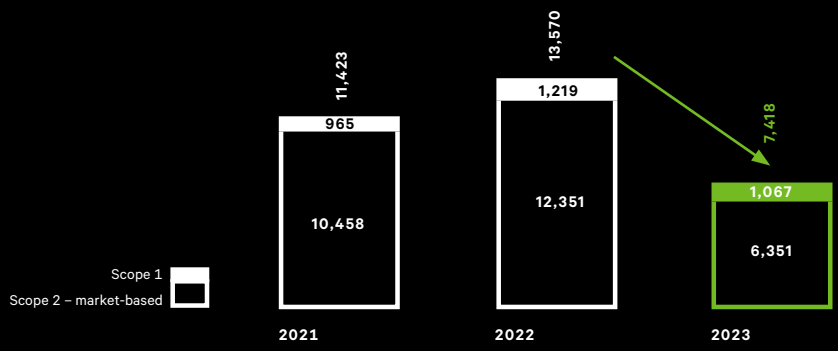
Employee engagement score

increased again – 7th year in a row –
from 3.94 (2022) to 4.09 (2023)



Emission reduction of 45%

driven by reduction efforts in Malaysia



Reduction of work-related accidents:

32 accidents (2023) vs. 49 accidents (2022)

Improvement of LTA / 1,000 FTEs

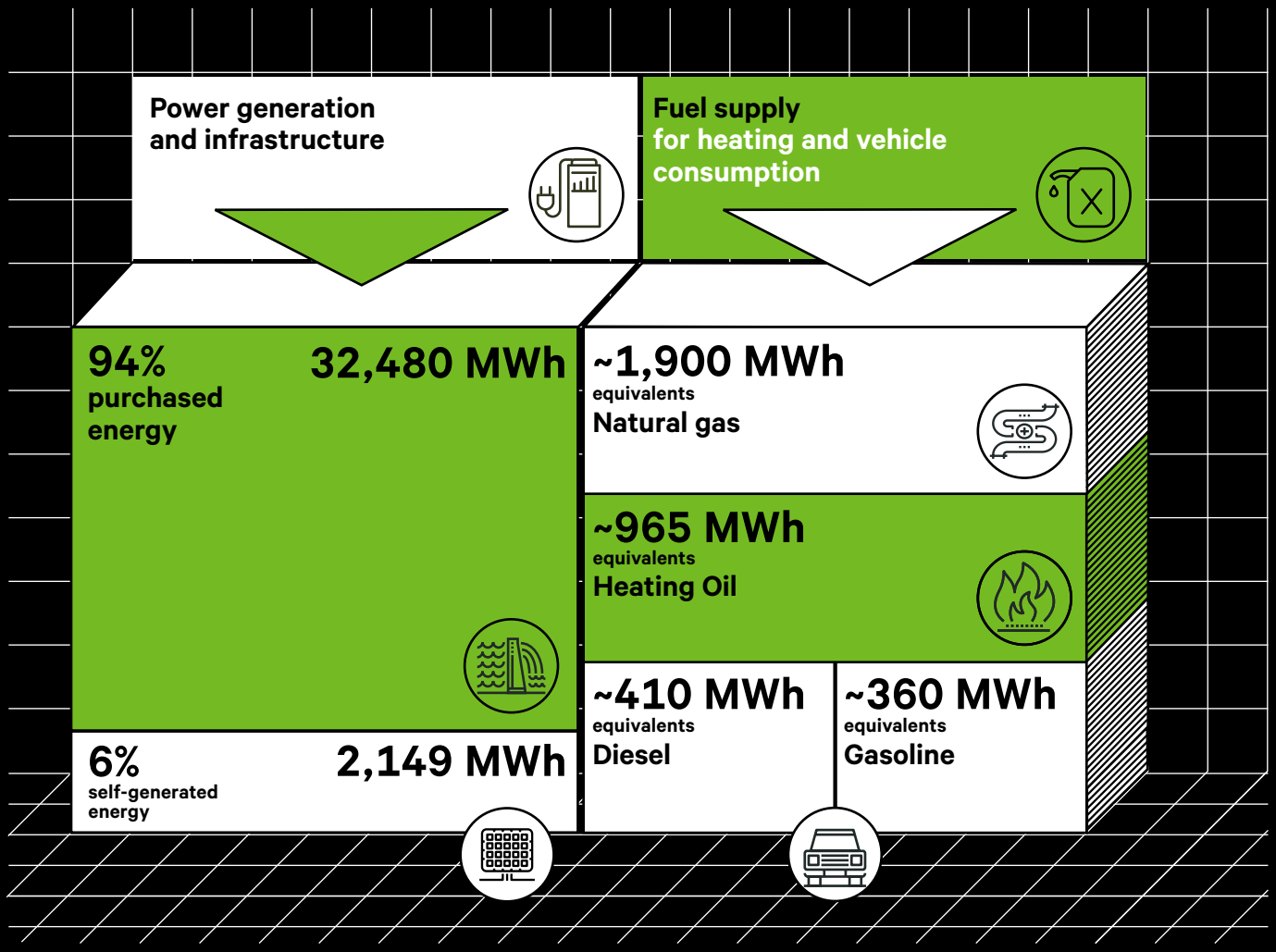
from 16.4 (2022) to 13.4 (2023)
(see p. 40)

Responsible Factory Initative

VAT Manufacturing Malaysia Sdn Bhd joins the Responsible Factory Imitative

ENERGY CONSUMED BY VAT BY TYPE

2023

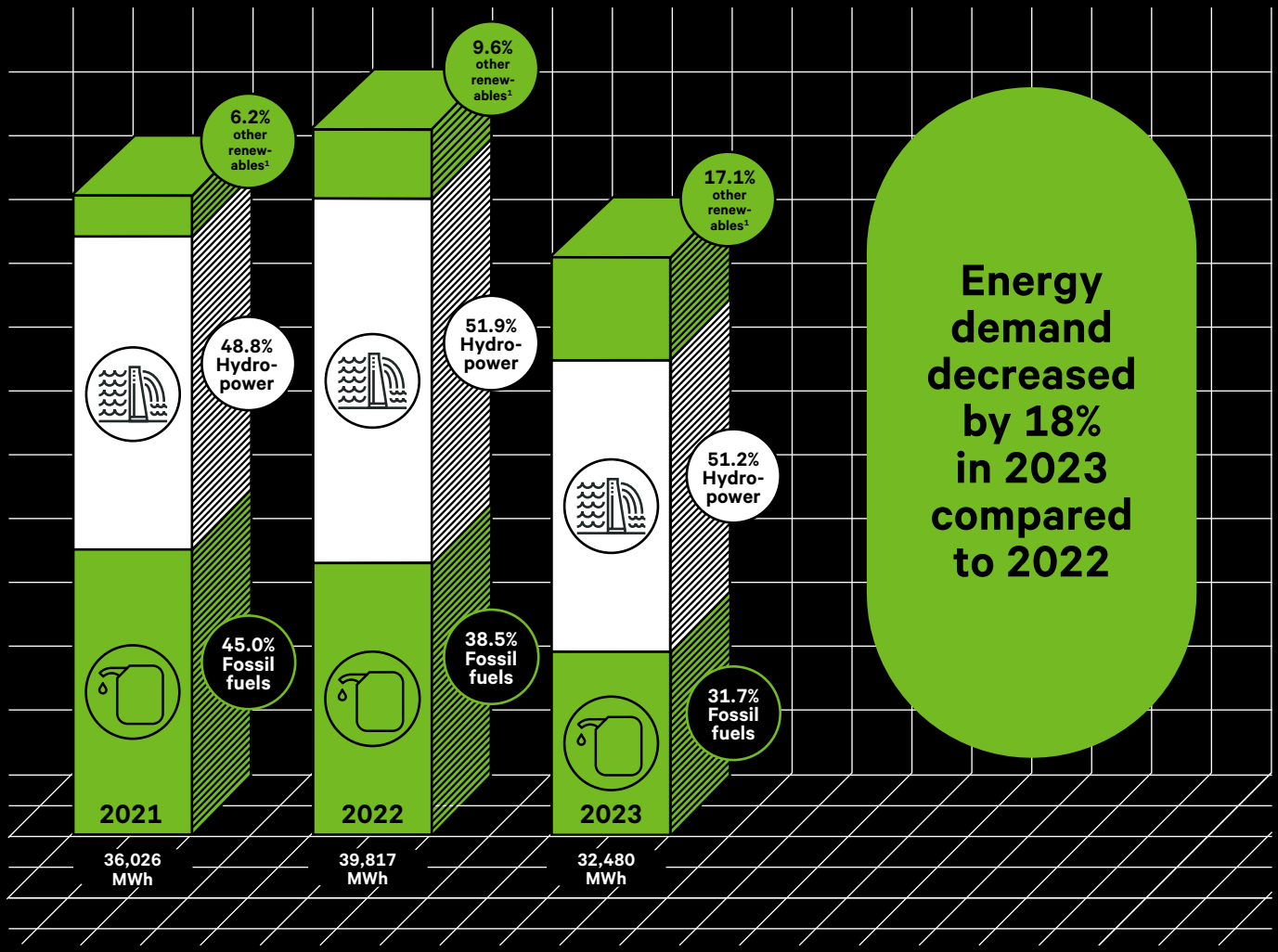


Energy generated through VAT's solar power installations

2,149 MWh

COMPOSITION OF ELECTRICITY MIX- GLOBAL (PURCHASED ELECTRICITY ONLY)

2021, 2022 and 2023



[1] Other renewables include wind, sun, biomass, nuclear and other non specified renewables

Proportion of renewable energy from purchased energy globally

68.2%

2022: 61.6%

Our Business: We change the world with vacuum solutions.

VAT is the world's leading supplier of advanced vacuum valves used to make semiconductors, photovoltaic solar cells, digital displays and a wide variety of other products used in advanced industrial and research applications. These are products whose manufacture requires a level of precision only attainable in near-perfect vacuum environments.

Semiconductors, for example, contain molecule-sized transistor nodes. The tiniest unwanted particle can contaminate the entire fabrication process, in an industry where equipment reliability, uptime and the highest possible product quality are essential to commercial success. The need for reliable high-precision manufacturing environments is growing in many industries and applications, where VAT is the market and technology leader.

Global megatrends driving growth

Several long-term technological, economic and environmental trends provide VAT with significant growth opportunities. Digitalization is among the most important, as demand continues to grow for more, and more powerful, semiconductors used in, for example, personal digital devices, data centers, smart factories and homes, and the development of Artificial Intelligence.

Renewable energy and the need to address climate change is another growth driver for VAT. Vacuum valves are used to manufacture high-efficiency solar photovoltaic panels, and high-power semiconductors are needed to integrate the fluctuating levels of electricity generated from wind and solar installations into conventional power grids designed to carry steady loads from large power plants. Semiconductors are also critical components of electric vehicles, whose growing use promises to improve urban air quality around the world, while vacuum valves are also used in direct air carbon capture, in existing nuclear power generation as well as in research for future fusion power generation.

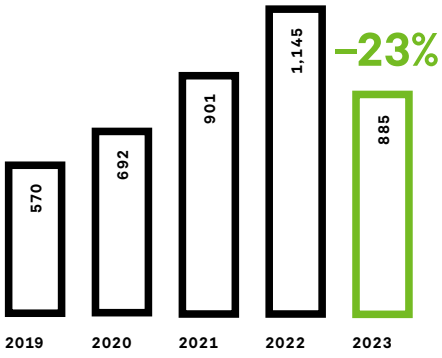
Furthermore, ongoing advances in high-precision manufacturing at a scale of nanometers has enabled significant improvements in product quality, performance, and reliability, not only in semiconductors but also high-performance optical elements, biomedical

R&D investment 2023
in CHF million

54

2022: CHF 50 million

Net sales development
in CHF million



parts, industrial coatings and other applications. These trends are expected to continue and can only be realized with the use of the most advanced vacuum valves.

Leading technology and market position is the basis for VAT's ongoing profitable growth

VAT benefits from these trends – growing investment needs and higher technological requirements – in two ways.

The first is simply the growing volume of semiconductor units needed as chips are used in more and more devices. There is ever-increasing demand for more digital devices in industry, greater interconnectivity in consumer electronics, expanded cloud computing and data storage related to the growth in AI. Together, these developments require the fabrication of a larger number of chips, which drive increasing investments in additional manufacturing tools, thus generating increasing demand for vacuum valves.

The second factor is the increasing complexity in the manufacturing of the leading-edge semiconductors with node sizes of 3 nanometer and less. These more powerful and more energy-efficient chip designs typically pack more transistors into the same or a smaller space, which in turn require more process steps, higher manufacturing purity and longer times in the process chambers. Vacuum valve performance becomes even more critical to meet these new demands.

As the global technology and market leader in vacuum valves, VAT is poised to benefit accordingly from these two growth drivers.

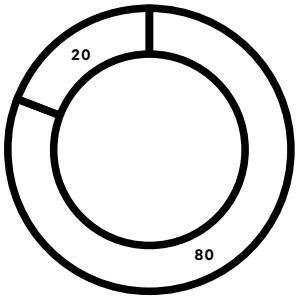
The semiconductor equipment market

The semiconductor industry is VAT's largest end market, accounting for close to 80% of net sales in 2023. The overall value of semiconductor sales is expected to reach more than USD 1 trillion by 2030, up from about USD 600 billion in 2023. This represents an annual growth rate (CAGR) of about nine percent over the period 2023 to 2030, and almost double the pace of growth during the previous decade.

VAT typically sells its valves to OEMs (original equipment manufacturers) who build the valves into a wide variety of tools used in chip fabrication, generally referred to as wafer fabrication equipment (WFE). VAT also sells a wide variety of service products, from spare parts to customized retrofits that allow customers to adjust production without having to invest in new equipment.

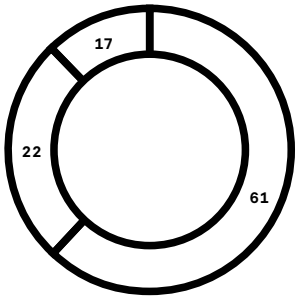
As a result, and with its major exposure to the semiconductor industry, VAT's most useful measure of demand through the business cycle is investment from semiconductor manufacturers into large fabri-

Net sales by segment
in %



80 VALVES
20 GLOBAL SERVICE

Net sales by region
in %



61 ASIA
22 AMERICAS
17 EMEA

cation facilities, both new capacity and the retrofit and upgrade of existing equipment. In 2023, global WFE spending was flat at around USD 98 billion*, after having grown substantially from less than USD 60 billion in 2019. It is expected that 2024 will see slight growth of WFE over the 2023 level, with an acceleration in 2025 to around USD 113 billion, followed by around USD 130 billion in 2027.

Business segment structure and global scope

The company is structured in two segments. The Valves segment is focused on VAT's core vacuum valves technology and consists of the two business units aligned with its biggest markets: Semiconductors and Advanced Industrials. Starting January 1, 2023, VAT reorganized its Display and Solar activities – previously a separate business unit within the Valves segment – by integrating these activities into the Semiconductors and the Advanced Industrials business unit. The display business became part of the Semiconductors business and the Solar business moved to the Advanced Industrial business unit. The moves were aimed at taking advantage of synergies and economies of scale related to technology, business drivers and customer needs.

The second segment, Global Service, supplies a growing range of service products and solutions to help customers improve their competitiveness through increased productivity and uptime.

* VLSITechInsights Inc., January 2024.

VAT employs approximately 2,700 people with its headquarters in Haag (Switzerland) and additional manufacturing sites, Penang (Malaysia) and Arad (Romania). The company also operates sales and distribution sites in the US, Europe (France, Germany, the Netherlands and the UK) and Asia (China, Japan, Singapore, South Korea and Taiwan).

Many of VAT's largest customers have their major production centers in Asia, although Europe and the US remain key locations, especially for chip technologies such as extreme ultraviolet lithography (EUV). VAT also has an increasingly global supply chain of mainly small- to medium-sized companies, many of whom are technology leaders in areas such as surface-coated metals, sealing and mechatronics. Being close to customers, especially in times of rapid market and technology changes, is becoming increasingly important to maintain and expand technology leadership, customer relationships and market share. In this respect, our current and future facilities in Malaysia play a significant role in promoting this proximity to customers, which also helps us cut transport costs and consequent environmental impacts.

EBITDA margin

EBITDA as % of net sales

30.6

2022: 35.0

Our People: The driving force behind our market and technology leadership.

VAT is convinced its employees are a key competitive advantage. Their skill, experience, engagement and flexibility have been key to the company's ability to innovate and build strong, long-term relationships with both customers and suppliers, thus driving VAT's technology and market leadership. VAT is therefore committed to creating a supportive and empowering work environment that recognizes, values and nurtures their diversity, talents and contributions.

Diversity is one of our key sustainability focus areas and we are committed to our stated targets of 25% share of women in leadership positions and 23% among new hires by 2027 (25% by 2030). In terms of diversity more generally, the company also has a cultural richness, with colleagues of more than 50 nationalities working in the VAT family.

At the end of 2023, VAT employed almost 2,700 people on a Full-Time Equivalent (FTE) basis, including both direct full-time and part-time employees as well as temporary contract employees. Switzerland, Malaysia and Romania account for more than 90% of total employees. To increase flexibility and adapt its business activities to the cyclical nature of the semiconductor industry, VAT employs up to 15% temporary staff during peak times, sourced from a small number of carefully selected employment agencies. However, in 2023, due to the prevailing economic situation, few temporary workers were engaged during the year.

Direct employees per country

As of December 31	2023	2022	2021	Change
Europe	**1,643**	**1,620**	**1,447**	**1%**
thereof Switzerland	1,342	1,320	1,181	
thereof Romania	280	279	248	
Asia	**904**	**866**	**609**	**4%**
thereof Malaysia	710	667	441	
Rest of the world	**63**	**67**	**59**	**–6%**
Total[1]	**2,677**	**2,553**	**2,115**	**5%**
Employee turnover (rolling 12 month trend)	14%	14%	13%	–

1 This report only contains data for employees directly employed by VAT at all VAT locations in 13 countries.

Employee turnover in 2023 remained at consistent levels versus the previous year. VAT believes this can be attributed in part to competitive compensation, its training and employee development programs, and its efforts to create positive work environments for all its people. One important way we evaluate our efforts to create a positive working environment is through the company's Employee Engagement Survey (EES), based on Gallup. Since 2017, VAT has conducted an annual survey together with an outside consultancy to measure how well the interests of employees align with those of the company. The survey seeks employee input on issues ranging from how they view the company's strategy and their role in achieving VAT's goals, to management's effectiveness at communicating those goals and whether people feel recognized for the work they do. Their ideas, insights, and feedback are invaluable in improving processes, driving efficiency, and identifying new opportunities for growth. Line managers are given training in how to build employee engagement and are required to report regularly on what measures they have taken in this area.

The EES is an important tool for establishing a dialogue with one of the company's most important stakeholder groups. In 2023, 2,208 employees participated in the survey and VAT improved its engagement score for the seventh year in a row to 4.09 versus a maximum of five.

Our Products: How VAT products contribute to a sustainable economy.

At VAT, our strength is the wide range of our product portfolio which comprises approximately 140 valves series with more than 8,000 customized and 2,500 standard products. We offer solutions for all vacuum levels from sub-atmospheric to extremely high vacuum (XHV).

This product range and functionality is important because generating and maintaining high-purity vacuums – capabilities in which VAT is the technology leader – are vital to the creation of many of the products and processes required to address critical issues such as global climate change and natural resource depletion.

In many cases, vacuum valves play an indirect role, such as in the manufacture of semiconductors, which are needed, for example, to store energy in a modern smart grid, to operate electric vehicles and to vastly improve the energy and resource efficiency of a wide variety of industrial processes.

Scientists and researchers use our vacuum technology to push the boundaries of technology as they seek new ways to improve existing low carbon power generation, as well as playing a critical role in developing new solutions.

For example, while VAT technology has been present in the conventional low carbon nuclear power generation sector for many years, both at the generation and waste treatment ends of the process, we are also active in research and development in nuclear fusion.

Working on nuclear fusion around the world
Developments in government-sponsored nuclear fusion research globally are proving that 'scientific breakeven' – where power output equals power input – is within reach. VAT has a diverse range of customers for our valves among national nuclear fusion laboratories, including in the United Kingdom, Japan, Korea and Germany. These organizations have been working on the technology of producing power from fusion for decades. Aside from government research, there are also several start-up companies focusing on fusion and we are tracking their progress.

Other leading-edge and emerging low carbon power storage and power generation technologies that require our vacuum technology and expertise include the next generation of Lithium-ion batteries which require a vacuum coating, while bipolar plates in hydrogen fuel cells need a vacuum coating to prevent corrosion and conduction.

Developing products for extreme applications provides VAT with technology insights that can be applied in the design of valves for wider commercial applications.

Innovation – pushing the boundaries of technology
VAT measures the success of its R&D efforts partly through the number of new specification wins and agreements with customers on new product designs to address specific customer requirements for upcoming generations of new equipment. A specified component will be used for the entire lifespan or production period of that tool. Today, developing new products for our customers not only includes increased operational performance, but also better energy efficiency, less use of materials or the recyclability at the end of a products useful life.

In 2023, VAT succeeded in securing a record number of specification wins, predominantly in the leading-edge technologies. Some 120 wins were achieved in 2023 – a new record – giving the company a clearer view of future sales and market position.

Solar cell manufacturing development
VAT valves are also needed in the increasingly complex processes of manufacturing the most efficient solar photovoltaic cells, which convert sunlight to electricity and are essential in the successful transition to low carbon power generation. The solar cell market for VAT's technology is expected to experience a compound annual growth rate of eight percent to 2027 as ongoing efforts to make these solar pan-

els more efficient require more vacuum deposition steps in the production process.

VAT valves allow for the extremely high precision and quality required to apply thin films to passivate surfaces, control interfaces and deposit conductive layers of solar cells, all of which are needed to achieve further increases in solar cell efficiency. As the race towards higher cell efficiency will continue, lowering the levelized cost of solar energy through more efficient use of space available for panel installation, VAT will be a key partner in these efforts.

Understanding and managing the impact of our own products

As a responsible manufacturing operation, VAT is focused on meeting our customers' needs now and for the future, but we have also begun to evaluate the impact of our products through their lifecycle.

During 2023, as part of our commitment to continuous improvement, we initiated a pilot project that took a deep dive into the environmental aspects of two of our valves by conducting a Life Cycle Assessment (LCA), which would give input to an Environmental Product Declaration (EPD), outlining the products' impacts. The two valves selected were:

1. Valve 10.8: steel isolation valve which is used by our OEM customers in their semiconductor manufacturing tools. In addition, this valve is also widely applied in many of the advanced industrial markets VAT is serving. The 10.8 isolation valve is manufactured in Switzerland;

2. Valve 65.3: a heated aluminum control valve used by our OEM customers in their semiconductor manufacturing tools. It is produced in VAT facilities in both Switzerland and Malaysia, potentially enabling the comparison between the two production sites.

The scope of the LCA included the sourcing of the raw materials from the mine, through manufacturing and use to their end-of-life recycling or disposal and taking into account resource and energy use at each stage.

As an example of the findings of the LCA on the steel valve, the major global warming potential (GWP) impacts are the mining and conversion of ore into steel, followed by the logistics from the factory to customer (assuming the customer is in Asia). Production of the valve in the Swiss factory has a low GWP due to the low carbon energy mix in the country itself and a negligible impact is caused by the product in use, due to the low energy demand to run it on site for its lifetime in use.

In terms of next steps, VAT will thoroughly review the LCA and resulting EPDs for the two valves and seek to understand where possible improvements might be made to the EcoDesign of the products, sourcing of raw material, production and customer-bound logistics. You can expect to have access to the EPDs soon, as they will be published online.

Number of specification wins 2023

120

2022: 99

Our Supply Chain: Building sustainability through responsibility.

How VAT ensures responsible sourcing and collaborative improvements in the supply chain
VAT is dedicated to ethical and sustainable procurement practices and transparency, particularly regarding conflict minerals and child labor in its supply chain. VAT, a global provider of valves for advanced industries, operates a complex global supply chain spanning tiered suppliers who provide raw materials, components, and services to its facilities worldwide.

VAT has conducted the checks of its supply chain in accordance with the Swiss Ordinance on Due Dilegence and Transparency in relation to Minerals and Metals from Conflict-Affected Areas and Child Labour (DDTrO), in order to determine applicability of due diligence and reporting obligations. The checks confirmed that VAT is not subject to full due diligence and reporting obligations for conflict minerals and child labor. Nevertheless, VAT will continue to conduct its annual checks to ensure compliance with Swiss regulations and will continue to voluntarily engage in due diligence measures to ensure responsible sourcing. This commitment is evident in its proactive approach to evaluating and addressing the impact of conflict minerals and child labor within its supply chain.

Conflict Minerals
VAT has a publicly available Conflict Minerals Policy and expects suppliers to comply with responsible sourcing practices under the company's Supplier Code of Conduct.

VAT conducts due diligence through supplier surveys using templates provided by the Responsible Minerals Initiative. These surveys aim to gather information on the presence of conflict minerals in the supply chain and identify smelters or refiners associated with these minerals. However, not all suppliers provide currently complete information, leading to gaps in data. Despite this challenge, VAT remains committed to improving transparency and accountability further within its supply chain.

During 2024 and beyond, VAT plans to improve data quality by requesting specific product-level information from suppliers and reducing the number of unidentified smelters. By focusing on product-level information, VAT aims to develop a more granular understanding of the presence of conflict minerals in its supply chain and enhance its ability to address potential risks effectively.

Child Labor
VAT assessed its suppliers on the country of origin of the product sourced and compares this information with UNICEF's Children's Rights in the Workplace Index. These assessments indicated that VAT's suppliers are predominantly from countries with basic risk scores with a lower likelihood of child labor practices. However, some suppliers are from countries with enhanced risks, where VAT therefore conducts further evaluations of these suppliers to ensure compliance with ethical standards and mitigate the risk of child labor in its supply chain.

Through due diligence measures, engagement with suppliers, and adherence to international standards, VAT aims to improve transparency, accountability, and ethical practices throughout its supply chain ecosystem.

Our Approach to Sustainability

Business success can only be sustained by integrating a broad range of values into strategic and operational planning.

VAT has always paid attention to the impacts of its manufacturing activities on the environment, reflecting its origins in Switzerland, where environmental protection has a long tradition. However, VAT has more recently begun to address specific environmental challenges, such as climate change, in a more systematic and rigorous way, in line with the growing concern within society about these issues and how businesses can play a more active role.

In addition, VAT recognizes that business success also depends on providing employees with opportunities to grow and develop, and on playing a positive role in the communities in which it operates. Building a solid framework within which the company can integrate all these issues into a comprehensive ESG strategy has been a management goal since the company went public in 2016.

One of the first steps came in 2018 when VAT adapted the Responsible Business Alliance (RBA) Code of Conduct. VAT has also adopted other international standards, such as the Universal Declaration of Human Rights, the International Labor Organization's conventions, the Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises, a number of ISO standards, the UN's Sustainable Development Goals, and the Global Reporting Initiative.

Within this framework of standards and principles, VAT then began building sustainability into the company's business strategy using an ESG framework, based on the company's performance in the areas of environmental impact, social responsibility, and governance. This process culminated in 2022 with the addition of sustainability to the mid-term strategic plan and the allocation of supervisory oversight of sustainability within the Board of Directors. The same year a first double Materiality Assessment was conducted assisted by external experts and in line with industry standards.

In 2023, a formal amendment to its Articles of Association established sustainable development as central to the company's corporate purpose.

Operationally, a number of steps were taken in 2023. These include a lifecycle assessment on various valves and investments in the expansion of our own solar power capacity. At the same time, VAT continues to drive ongoing initiatives, such as the annual Employee Engagement survey, the VAT cares program to support projects that help people in need around the world, and a variety of individual projects in areas such as increased recycling, reducing waste, and promoting the use of renewable energy.

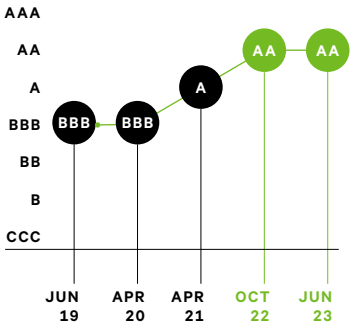
Looking ahead, VAT sees significant opportunities to do more. The company is committed to creating a sustainability culture, recognizing that improved performance in social responsibility, lower environmental impacts and stronger corporate governance supports business success, makes VAT an attractive employer and preferred partner for customers, suppliers, local communities and shareholders.

Ratings

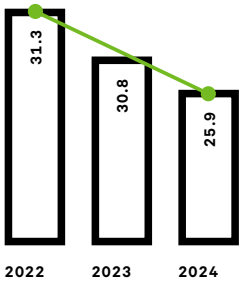
First Ecovadis rating in 2023 based on 2022 data
(out of 100 points)

45

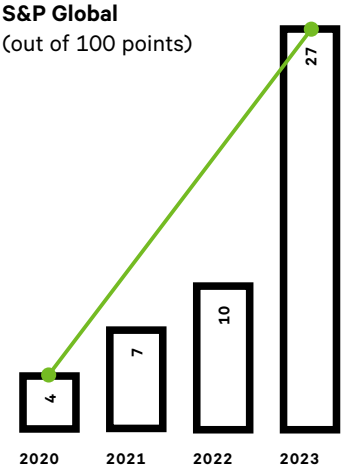
MSCI ESG Rating
substantial improvement over the last years
– ratings ranging from CCC to AAA



Sustainalytics
risk rating: negligible (0-10), low (10-20), medium (20-30), high (30-40) and severe (40+)



S&P Global
(out of 100 points)



CDP
score focuses on the completeness of a company's response and its performance on climate action

Rating C

Disclosure (D/D-), Awareness (C/C-), Management (B/B-) and Leadership (A/A-)

Working with partners to achieve change

VAT believes that collaborating with its partners along the entire value chain – as well as with other stakeholders – is essential to developing successful long-term strategies to address critical global issues such as climate change.

Our Membership Associations

SWISSMEM

semi

Initiatives

Energy Agency Swiss Private Sector
WE ARE ON BOARD!

Semiconductor Climate Consortium

The Semiconductor Climate Consortium (SCC) is an alliance formed in 2022 to focus on the challenges of climate change and to speed up industry efforts to reduce greenhouse gas emissions in member company operations and in other parts of the value chain. For this reason, VAT decided to join the SCC as a founding member.

The SCC includes companies across the semiconductor value chain, from component and equipment manufacturers to semiconductor fabricators and digital device manufacturers. Since its founding with 65 members, a further 16 have joined.

By collaborating with other members and by using our accumulated knowledge and innovative technology, we can all accelerate solutions to the most pressing problem and solve issues that no one company can do alone.

Semiconductor Climate Consortium
FOUNDING MEMBER

The Semiconductor Climate Consortium has three broad goals:

Collaborate and Align

Align on common approaches to continuously improve, and reduce greenhouse gas emissions in the semiconductor industry value chain.

Be Transparent and Report

Publicly report progress on Scope 1, 2, and 3 GHG emissions for the value chain annually, according to the guidelines and principles in the GHG Protocol, and agree to key underlying assumptions.

Be Ambitious and Target Net Zero

Set near-term and long-term targets in the value chain in accordance with best available science, with the aim to reach Net Zero greenhouse gas emissions per the GHG Protocol no later than 2050.

Materiality Assessment

A robust baseline for future performance improvement

VAT recognizes that its business has impacts that cannot be measured through financial results alone. Long-term success depends on understanding both the opportunities and risks that our activities may present for all of our stakeholders. With this in mind, the company carried out its first Materiality Assessment during 2022, together with an external consultant. The assessment was carried out in line with the requirements of the European Corporate Sustainability Reporting Directive (CSRD), which is the central directive for sustainability reporting in the European Union, and the supplementary European Sustainability Reporting Standards (ESRS).

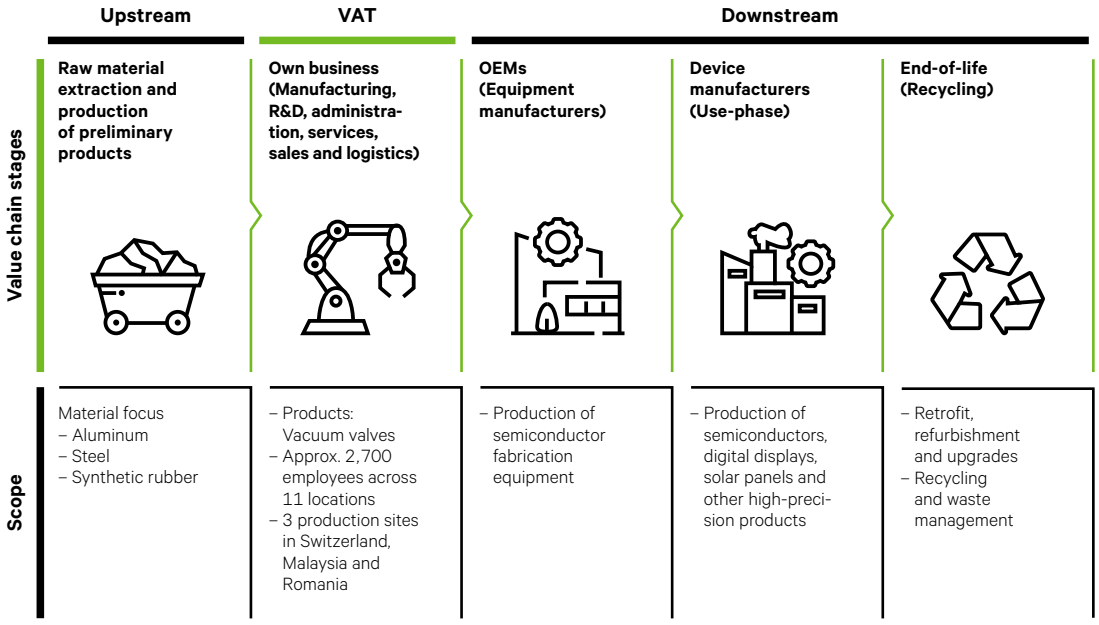
The guiding concept is called "double materiality." It consists of two perspectives: impact materiality, which looks at the effects of VAT's activities on the environment and society along the entire value chain; and financial materiality, dealing with sustainability-related opportunities and risks for the financial development of the company. Both perspectives must be considered to identify material topics.

The process took place in four steps:

Step 1: Review the company's existing ESG policies and management, define VAT's value chain and, within that context, derive a long list of potential ESG topics.

Step 2: Define the scope of the materiality assessment. The relevance of topics to VAT's business model and value chain was determined using a variety of tools and methods, including VAT data, the CSR Risk

The VAT value chain



Check (ESG risks in specific countries and regions), the Sustainability Accounting Standards Board standards, and the MSCI materiality map.

Step 3: Analyze the impact and financial materiality of each topic, including input from internal and external stakeholders. Internal stakeholders included a member of VAT's Board of Directors, members of executive management, and other senior managers in areas such as operations, sales and marketing, supply chain, and distribution. External stakeholders included shareholders, customers and suppliers. Participants from both groups were located in North America, Europe and Asia.

Step 4: Derive the strategic implications of the assessment and integrate the results into the strategic planning process.

The assessment was based on a model of VAT's value chain that extends from raw material extraction, such as aluminum and steel used in manufacturing, to VAT's own operations, and on to the OEMs who build VAT's valves into their equipment and the final end customers, who are the manufacturers of semiconductors, solar panels, digital displays and other products.

From a long list of 11 topics (28 sub-topics) along VAT's entire value chain, a shortlist of six topics, comprising ten sub-topics, were identified as materially negative. Together with various stakeholders including members of VAT's executive management, internal topic experts and risk managers the following topics were concluded as material topics:

1. Climate protection (GHG emissions; energy consumption and renewable energy)
2. Water management (Water conservation)
3. Resource use and circular economy (Waste, disposal and recycling)
4. Own workforce (Diversity, inclusion and equal pay; talent recruitment and development; occupational health and safety)
5. Governance (Ethics and integrity, cybersecurity)
6. Affected communities (Local community and charitable engagement)

VAT intends to periodically update its Materiality Assessment and to use the insights gained as an important way to shape management priorities, set ESG performance targets, improve transparency and governance, and to build stronger relationships with our stakeholders.

Concerns

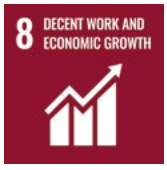
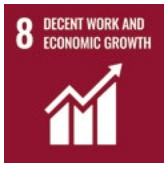
(according to Art. 964b OR)

Environmental concerns	Greenhouse gas emissions and climate protection (p. 25) Energy consumption (p. 31) Waste generation (p. 33) Water consumption (p. 36)
Social matters and employee concerns	Occupational health and safety (p. 38) Talent recruitment and people development (p. 41) Diversity, inclusion and equity (p. 44) Community and charitable engagement (p. 47)
Respect for human rights	Our Supply Chain (p.16)
Fight against corruption	Ethics and integrity (p. 48)

VAT and the UN's Sustainable Development Goals

VAT's approach to sustainability is in line with the UN's 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs).

VAT Targets and Commitments	Rationale	UN SDG
Environment – Climate Change		
Reduce GHG emissions (Scope 1 and 2) 50% by 2025 compared with a 2022 baseline Reduce Scope 3 GHG emissions	By significantly decreasing our GHG emissions (Scope 1–3), VAT aims to mitigate its impact on climate change, contribute to global efforts to reduce carbon emissions, and safeguard the environment for future generations. This aligns with international climate agreements and regulatory frameworks but also positions our company as a responsible and forward-thinking leader in our industry.	
Aim for 100% renewable energy	As part of our effort to reduce GHG emissions, VAT will increase its share of energy consumed from renewable sources at all our production and service sites, as well as to promote the use of more energy-efficient technologies, such as groundwater cooling.	
Engage in the Semiconductor Climate Consortium	Through collaborative efforts, we leverage collective expertise, resources, and innovative solutions to drive meaningful progress towards reducing emissions and advancing sustainability in the semiconductor sector.	
Environment – Circular Economy		
Use resources efficiently Reduce waste Take steps to improve water conservation	Through the analysis of the Lifecycle impact of our products we improve our EcoDesign principles, adopting practices that promote the efficient use of aluminum, water and other resources. Thereby VAT can enhance cost-effectiveness, reduce environmental impact, and contribute to the overall sustainability of our operations. By prioritizing waste reduction, recycling, and proper disposal methods, we aim to minimize our ecological footprint, conserve resources, and promote a circular economy.	 

VAT Targets and Commitments	Rationale	UN SDG
Social – Own Workforce		
Build our reputation as a socially responsible employer by focusing on equal pay, diversity and inclusion, with a particular focus on fostering diversity in the talent pipeline	Embracing diversity enhances our reputation as an employer of choice, enables us to harness the benefits of varied perspectives, experiences, and backgrounds to increase innovation and improve decision-making. It leads to stronger relationships with customers, suppliers, local communities and other partners who value and prioritize diversity and inclusion in their own practices. By actively seeking out and nurturing diversity in the talent pipeline, we secure these benefits into the future.	
Increase the share of women among new hires to 23% by 2027, and to 25% by 2030 Increase the share of women in leadership positions to 25% by 2027	By increasing female hires and aiming for gender-balanced leadership, we tap into diverse talent and perspectives. This reflects our commitment to an inclusive workplace where all have equal opportunities for advancement, driving innovation and setting a standard for others.	
Social – Workers in the Value Chain and Community Engagement		
Engage with RBA requirements	VAT has been involved with the Responsible Business Alliance, one of the world's largest industry coalitions promoting corporate social responsibility in global supply chains, for several years. We plan to maintain and further expand this commitment.	
VATcares program	VAT is deeply committed to making significant and lasting contributions to the communities in which it operates, as well as to society at large. As part of its VATcares program, the company prioritizes initiatives that aim to enhance STEM education and provide essential humanitarian aid on a global scale. Through these targeted efforts, VAT seeks to empower individuals, foster sustainable development and create positive impacts that extend beyond its business operations.	 

Greenhouse gas emissions and climate protection

3-3 Management of material topic
Greenhouse gas emissions pose significant risks and opportunities for VAT, given their profound environmental implications and the escalating effects of climate change. As a responsible corporate citizen, VAT acknowledges the imperative to combat climate change by curtailing its emissions.

In 2023 the Swiss "Federal Act on Climate Protection Targets, Innovation and Strengthening Energy Security" came into force, stipulating intermediate reduction targets for various sectors including the industrial sector and requiring Swiss companies to develop long-term decarbonization roadmaps before 2029, highlighting how they will reduce their emissions.

While Swiss legislation may be relatively progressive, other countries, both where VAT maintains facilities and beyond, might eventually adopt similar legislation, thus advancing decarbonization efforts. Transitioning to a low-carbon economy presents both a significant opportunity and an enormous challenge for VAT. The shift to a low carbon-economy will trigger a large-scale economic transformation requiring substantial investments in net-zero technologies and clean energy industries. With VAT's products contributing to the creation of emissions-reducing technologies, such as solar photovoltaic, solar thermal technologies and nuclear power, VAT stands to benefit from this trend through the growth of its related business segments.

On the other hand, VAT also faces risks through its business model which is energy intense in the supply chain and in the manufacturing process. VAT must ensure emissions reductions across all its sites, necessitating ongoing infrastructure upgrades and investments. By proactively considering these regulatory requirements and developments as part of its growth strategy, VAT can incorporate them into the design of new products and production sites, thereby mitigating its own risk.

To calculate its emissions, VAT followed a comprehensive methodology according to the Greenhouse Gas Protocol, based on verifiable data gathered from various emission sources per site. In a next step, the specific emission factors provided by recognized standards and guidelines were applied to convert the collected data into CO_2-equivalent (CO_2-eq.) emissions. By meticulously following this methodology, the company obtained an accurate assessment of its GHG emissions, enabling it to track its environmental impact and make informed decisions when devising emissions reduction strategies.

In 2023, VAT launched an intensive effort to develop a decarbonization strategy aimed at achieving the target of reducing GHG emissions (Scope 1 and 2) by 50% by 2025 compared to a 2022 baseline. The Sustainability department oversees the global progress and monitors the implementation of the emission reduction initiatives to meet the company's emission reduction targets.

Addressing Scope 1 and 2 emissions, VAT is initially prioritizing the reduction of emissions associated with electricity consumption. This initiative involves the implementation of three primary approaches. Firstly, VAT intends to maximize self-generated electricity by fully utilizing all available roof areas for solar energy. Secondly, the company is committed to transitioning to 100% renewable energy for its purchased electricity across its operational sites. Lastly, VAT is actively working to reduce its electricity demand by enhancing energy efficiency throughout its operations. In order to ensure the attainment of emission reduction targets and the implementation of necessary reduction initiatives, executive management's variable pay is tied to these emission reduction objectives.

For 2024, the company will continue to identify opportunities to reduce Scope 3 emissions, with the aim of establishing a comprehensive emission reduction target for its supply chain. It intends to finalize this target and commit to the Science-based Target Initiative (SBTi) in the coming years.

In 2023, several significant projects were initiated at the Malaysia site, where most emissions are generated. Approximately 12,000 square meters of roof space were commissioned for solar installations, with the first projects completed and operational by early 2024. An additional energy generation of 2,544 MWh (enough to power 237 homes) is anticipated for 2024 alone, representing a doubling of existing solar capacity and increasing the proportion of self-generated energy for the facility from its current 12% to 24%. Upon the completion of all solar installations and the full utilization of these new rooftop solar panels at the two existing factories in Malaysia, a total additional solar capacity of 3,384 MWh is projected for 2025.

305-1 Direct (Scope 1) GHG emissions

To calculate Scope 1 GHG emissions, VAT considered direct emissions from sources it owns or controls. This includes factors such as diesel and gasoline consumption in vehicles, oil and natural gas consumption for heating, as well as refrigerant and Volatile Organic Compound (VOC) consumption. This input data, including fuel and consumption quantities, was used to determine the corresponding CO_2-eq. emissions using appropriate emission factors and methodologies.

The main contributors to Scope 1 emissions include heating in Switzerland, as well as the vehicle fleet. When considering vehicle consumption, VAT decided to make no distinction related to owned or leased vehicles and included all related emissions in Scope 1, as VAT has operational control and a direct impact on them. An increase in emissions was observed in the consumption of fossil fuels (both gasoline and diesel) associated with the vehicle fleet. To mitigate these emissions, the aim for the coming years is to electrify the vehicle fleet. The overall decrease in emissions was driven by reductions in heating oil and natural gas consumption, facilitated by infrastructure upgrades, alongside favorable weather conditions in Romania and Switzerland that reduced the demand for heating.

GHG emissions – Scope 1 (direct emissions)

		2023	2022	2021	Change
Scope 1[1]	From direct energy sources (tonnes of CO_2-eq.)	**1,067.34**	**1,219.16**	**965.56**	**–12%**
Breakdown of Scope 1 per energy source					
Diesel consumption – vehicles (liters)		37,428	32,498	21,997	
Gasoline consumption – vehicles (liters)		37,396	35,254	30,190	
Heating oil consumption (MWh)		978.7	1,850.6	92.2	
Natural gas consumption (MWh)		1,976.7	2,478.1	3,938.7	
Refrigerant consumption: R-32, R-134A, R-407C, R-449A (kg)		131[2]	3	3	

1 Scope 1 emissions for all sites VAT has operational control and a direct impact on. All greenhouse gases included (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3).
The Scope 1 emissions are calculated based on DEFRA 2021, DEFRA 2022 and DEFRA 2023 emission factors.
2 Increase in consumption due to improvement in data availability and transparency.

GHG Scope 1 emissions per region[1]

tonnes of CO_2-eq.	2023	2022	2021	Change
Europe	**831.89**	**1,146.59**	**897.64**	**–27%**
Thereof Switzerland	653.75	941.39	685.74	
Thereof Romania	120.90	162.44	191.54	
Asia	**224.27**	**61.84**	**58.18**	**263%[2]**
Thereof Malaysia	167.32	8.73	8.73	
Rest of the world	**11.18**	**10.74**	**9.74**	**4%**
Total GHG emissions	**1,067.34**	**1,219.16**	**965.56**	**–12%**

1 Scope 1 emissions for all sites VAT has operational control and a direct impact on. All greenhouse gases included (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3). The Scope 1 emissions are calculated based on DEFRA/BEIS 2021, DEFRA/BEIS 2022 and DEFRA/BEIS 2023 emission factors.
2 Increase due to improvement in data availability and transparency.

305-2 Indirect (Scope 2) GHG emissions,
305-4 GHG emissions intensity

When calculating GHG emissions for Scope 2, VAT considered both location-based and market-based approaches. For location-based emissions, the company assessed the grid-average emission factor of the specific geographical region of its operations. In addition, incorporated market-based emissions were calculated by taking into account the specific electricity mix procured, including renewable energy certificates, or by entering into specific power purchase agreements to offset the emissions associated with purchased electricity. By utilizing both location-based and market-based approaches, the company gained a comprehensive understanding of its Scope 2 emissions and could effectively address its indirect environmental impact.

In absolute terms, GHG Scope 1 and 2 emissions were reduced in 2023. However, as 2023 was a stagnant fiscal year with VAT's revenue decreasing by 23%, Scope 1 and 2 emissions per revenue remained fairly consistent. Reductions in emissions are primarily attributable to the transition to renewabale energy in Malaysia, resulting in a reduction of the market-based emissions by 45%. While a variety of initiatives and projects were initiated in 2023 to reduce the companies GHG emissions, their full impact will be realized in 2024.

Breakdown of GHG emissions Scope 1 and 2

GHG Scope 2 – location-based emissions per region[1]

tonnes of CO_2-eq.	2023	2022	2021	Change
Europe	**1,266.26**	**1,370.51**	**1,429.96**	**–8%**
Thereof Switzerland	373.89	445.47	419.99	
Thereof Romania	571.56	915.94	1,000.38	
Asia	**8,903.25**	**11,807.36**	**10,005.55**	**–25%**
Thereof Malaysia	8,328.95	11,274.21	9,427.84	
Rest of the world	**126.96**	**58.59**	**78.05**	**117%**
Total GHG emissions	**10,296.47**	**13,236.46**	**11,513.56**	**–22%**

1 The Scope 2 location-based emissions are calculated based on from the IEA and calculated in accordance with the location-based calculation approach as defined by the GHG Protocol.

GHG Scope 2 – market-based emissions per region[1]

tonnes of CO_2-eq.	2023	2022	2021	Change
Europe	**458.00**	**595.07**	**517.63**	**–23%**
Thereof Switzerland	–	–	–	
Thereof Romania	450.67	584.32	506.74	
Asia	**5,811.03**	**11,716.97**	**9,891.47**	**–50%**
Thereof Malaysia	5,224.91	11,274.21	9,427	
Rest of the world	**81.73**	**39.26**	**48.33**	**108%**
Total GHG emissions	**6,350.76**	**12,351.30**	**10,457.43**	**–49%**

1 The Scope 2 market-based emissions are calculated based on supplier-specific emission factors sourced from the electricity providers at location, and calculated in accordance with the market-based calculation approach as defined by the GHG Protocol.

GHG emissions – location-based

		2023	2220	2021	Change
Scope 1[1]	From direct energy sources (tonnes of CO_2-eq.)	1,067.34	1,219.16	965.56	–12%
Scope 2[2]	Location-based (tonnes of CO_2-eq.)	10,296.47	13,236.46	11,513.56	–22%
Total GHG emissions	(tonnes of CO_2-eq.)	**11,363.81**	**14,455.62**	**12,479.12**	**–21%**
Emission intensity					
Revenues (CHF million)		885.3	1,145.5	901.2	–23%
Scope 1 emissions (tonnes of CO_2-eq.) / revenue (CHF million)		1.21	1.06	1.07	14%
Scope 2 emissions (tonnes of CO_2-eq.) / revenue (CHF million)		11.63	11.56	12.78	-
Total GHG emissions per revenue (tonnes of CO_2-eq.) / revenue (CHF million)		**12.83**	**12.62**	**13.85**	**2%**

1 Scope 1 emissions for all sites VAT has operational control and a direct impact on. All greenhouse gases included (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3).
The Scope 1 emissions are calculated based on DEFRA/BEIS 2021, DEFRA/BEIS 2022 and DEFRA/BEIS 2023 emission factors.
2 The Scope 2 location-based emissions are calculated based on from the International Energy Agency (IEA) and calculated in accordance with the location-based calculation approach as defined by the GHG Protocol.

GHG emissions – market-based

		2023	2022	2021	Change
Scope 1[1]	From direct energy sources (tonnes of CO_2-eq.)	1,067.34	1,219.16	965.56	–12%
Scope 2[2]	Market-based (tonnes of CO_2-eq.)	6,350.76	12,351.30	10,457.43	–49%
Total GHG emissions	(tonnes of CO_2-eq.)	**7,418.10**	**13,570.46**	**11,422.99**	**–45%**
Emission intensity					
Revenues (CHF million)		885.3	1,145.5	901.2	–23%
Scope 1 emissions (tonnes of CO_2-eq.) / revenue (CHF million)		1.21	1.06	1.07	13%
Scope 2 emissions (tonnes of CO_2-eq.) / revenue (CHF million)		7.17	10.78	11.60	–33%
Total GHG emissions per revenue (tonnes of CO_2-eq.) / revenue (CHF million)		**8.38**	**11.85**	**12.68**	**–29%**

1 Scope 1 emissions for all sites VAT has operational control and a direct impact on. All greenhouse gases included (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3).
The Scope 1 emissions are calculated based on DEFRA 2021, DEFRA 2022 and DEFRA/BEIS 2023 emission factors.
2 The Scope 2 market-based emissions are calculated based on supplier-specific emission factors sourced from the electricity providers at location, and calculated in accordance with the market-based calculation approach as defined by the GHG Protocol.

Overall, of the total global Scope 1 and 2 emissions, 95% can be attributed to the three production sites in Switzerland, Romania and Malaysia. In addition, the largest share of Scope 2 emissions is produced by the site in Malaysia. It is expected that in 2024, emissions in Malaysia can be significantly reduced due to the initiatives described earlier.

305-3 Other indirect (Scope 3) GHG emissions

VAT systematically identifies and calculates indirect emissions along the whole value chain. In 2023, VAT refined the calculation methodology thus improving the quality of its Scope 3 emission calculations. Enhancements were made especially in the area upstream and downstream transportation and distribution (Scope 3, Cat. 4 and Cat. 9) to improve the basis for the development of future Scope 3 emission reduction targets.

For 2024, efforts to enhance the purchased goods and services category (Scope 3, Cat. 1) continue, as it remains the most challenging area requiring extensive measures in VAT's supplier cooperation and supply chain management. For 2024, VAT intends to reach a stable data baseline to finalize emission reduction targets for Scope 3.

Through conducting a materiality analysis of the GHG Protocol Scope 3 categories, the following categories were identified as relevant for VAT:
Category 1: Purchased goods and services
Category 2: Emissions from capital goods
Category 3: Emissions from fuel and energy
Category 4: Upstream transportation and distribution
Category 5: Waste generated in operations
Category 6: Business travel
Category 7: Employee commuting (work-home)
Category 9: Downstream transportation and distribution
Topics within Category 11: Use of products and Category 12: End of Life (EoL) treatment of sold products are of downstream significance for VAT.

GHG emissions related to capital goods

	2023	2022	2021
GHG emissions – Category 2: Capital goods[1] (tonnes of CO_2-eq)	18,421	17,781	9,793

1 Calculated based on spend-based data using DEFRA emission factors.

To support future growth, VAT is investing heavily in new production and manufacturing equipment and this is accompanied by increases in emissions. VAT is currently building two new facilities: the innovation center in Haag, Switzerland, which is expected to be completed by the end of 2024, and the second factory in Penang, Malaysia, which was completed in 2023.

GHG emissions related to fuel- and energy-related activities

(not included in Scope 1 or Scope 2)	2023	2022	2021
GHG emissions – Category 3: Fuel- and energy-related activities[1] (tonnes of CO_2-eq)	3,324	4,585	4,148

1 Calculation considers upstream electricity emissions based on data for Scope 1 and 2 calculation (primary data) considering emission factors by DEFRA, Umweltbundesamt, IEA 2020 and Stromreport.

GHG emissions related to business travel

	2023	2022	2021
GHG emissions – Category 6: Business travel[1] (tonnes of CO_2-eq)	1,325	1,277	205

1 This calculation considers business travel by employees in Switzerland only, covering more than 70% of the overall workforce. The Data is based on the provided GHG emissions reports provided by the travel agency and covers only air travel.

GHG emissions related to employee commuting

	2023	2022	2021
GHG emissions – Category 7: Employee commuting[1] (tonnes of CO_2-eq)	1,238	1,431	1,260

1 This calculation considers employee commuting based on our internal mobility concept in Switzerland as well as average commuting distances taken from secondary sources.

All local companies must comply with applicable laws and regulations related to air emissions parameters. Air emissions are carefully monitored by VAT as part of our legal obligations. This topic is managed and controlled directly by local operational facilities in accordance with local regulations and internal guidelines.

Disclosure 305-7: Disclosure of other significant air emissions

VAT vacuum valves are manufactured within controlled clean room environments to ensure the necessary high levels of purity our customers demand. This level of cleanliness and sterility is achieved through a variety of cleaning processes and agents, with ethanol serving as a crucial component. Its rapid evaporation rate enables swift drying of surfaces, contributing significantly to the maintenance of cleanliness and sterility in our manufacturing environment and upholding our high product quality standards.

VOC emissions

	2023	2022	2021
Direct VOC emissions (in kg)	20,010	14,435	10,220
Data coverage (in %)[1]	100%	60%	60%

1 Ethanol is primarily utilized within the production environment, thus the focus here pertains to the production sites.

As a constituent of cleaning agents, VOC emissions are of particular concern due to their contribution to air pollution and associated health risks. Responsible management of these compounds is of paramount importance for worker safety and environmental integrity. Therefore, the reduction of VOC emissions, including those stemming from ethanol usage, is imperative to mitigate these risks and safeguard both human health and environmental quality. VAT is continuously working on reducing ethanol consumption and substituting VOC-based cleaning agents wherever possible. Since 2021, VAT has eliminated the use of acetone. In addition, our facilities are equipped with filtering, ventilation, and extraction systems at relevant workstations.

Energy consumption

3-3 Management of material topic

Energy consumption represents a considerable portion of operational costs for a manufacturing company such as VAT. Failure to manage energy consumption and energy sourcing effectively poses a risk to the company as variations in energy prices directly affect profitability and financial performance. By increasing energy efficiency in production areas and reducing reliance on grid-supplied electricity, such as through the expansion of self-generated solar energy from solar plants, VAT can stabilize energy expenditures, mitigate future price fluctuations, and enhance electrical stability. Prioritizing self-generated and renewable energy sources, along with implementing energy-efficient practices, not only helps VAT achieve emission reduction targets but also ensures compliance with legal requirements.

Due to the country's climatic conditions and VAT's high-purity product requirements, our factory infrastructure in Malaysia requires a comparatively high baseline energy consumption for air conditioning. Thus, in 2023, we initiated a project to upgrade the air conditioning system for our existing factory – Factory 1A. The implementation of new energy-efficient water-cooling chillers required a one-time investment of approximately USD 1 million, covering the necessary chiller, pumps, electrical systems, building automation and construction work to integrate the new system into the existing infrastructure. The implementation process, from planning to full implementation, took about nine months, with the new system going live in September 2023. Thanks to the new system, we anticipate annual energy savings of approximately 1,380,000 kWh, equivalent to a month's worth of energy consumption for the factory. By implementing such initiatives VAT will decrease its electricity consumption, yielding cost savings that promptly recover the initial investments, while at the same time contributing to the company's emission reduction objectives.

302-1 Energy consumption within the organization
302-3 Energy intensity

Energy consumption – production sites **In kWh**	2023	2022	2021	Change
Switzerland	16,866,897	21,494,044	20,008,601	–22%
Romania	3,778,474	4,123,549	3,839,118	–8%
Malaysia	20,458,290	19,302,891	16,872,198	6%
Total Energy consumption – production sites (kWh)	**41,103,661**	**44,920,484**	**40,719,917**	**–8%**
Data coverage (as % of denominator)	>95%	>95%	>95%	>95%
Energy intensity				
Revenues (CHF million)	885.3	1,145.5	901.2	–23%
Energy consumption (kWh) / revenue (CHF million)	46,429.1	39,214.7	45,184.1	18%

Energy consumption decreased year-on-year primarily due to the reduction in production utilization and the resulting energy savings. While many energy reduction initiatives were implemented, the energy demand in Malaysia increased due to the inauguration of a second factory in Malaysia at the end of 2023.

In addition, VAT Malaysia managed to receive access to the Green Energy Tariff (GET), allowing the company to purchase renewable energy backed by Malaysia Renewable Energy Certificate (mREC). Through the combination of various initiatives, the share of renewable energy at the Malaysia site increased from nine percent in January to over 90% in December. Our other sites Switzerland and Romania, operate with a share of 100% and 50% of renewable energy.

Energy consumption per region and energy source In kWh	2023	2022	2021	Change
Switzerland				
Energy consumption – renewable (total)	**14,605,359**	**18,092,630**	**17,059,009**	**–19%**
Self-generated (solar)	113,530	130,160	123,780	
Purchased renewable (green power mix[1])	374,439	345,110	365,254	
Purchased renewable – with guarantee of origin[2] (hydro-power)	14,117,390	17,617,360	16,569,975	
Energy consumption – non-renewable (total)	**2,261,538**	**3,401,414**	**2,949,592**	**–34%**
Heating oil	881,853	1,758,367	–	
Natural gas	1,379,685	1,643,047	2,949,592	
Total Energy consumption Switzerland (kWh)	**16,866,897**	**21,494,044**	**20,008,601**	**22%**

1 At the laboratory sites in Switzerland, electricity is purchased from the local utility provider without a guarantee of origin via a green electricity mix (hydro and solar power).
2 The source of the renewable energy is confirmed by certificates of origin in accordance with Art. 1d and 1e of the Energy Ordinance of 7 December 1998 (SR 730.01) and the DETEC Ordinance of 24 November 2006 on Proof of the Production Type and Origin of Electricity (SR 730.010.1).

Romania				
Energy consumption – renewable (total)	**1,431,424**	**1,640,408**	**1,422,616**	–12%
Purchased electricity (general power mix)[3]	1,431,424	1,640,408	1,422,616	
Energy consumption – non-renewable (total)	**2,347,050**	**2,483,141**	**2,416,502**	6%
Natural gas	525,976	781,916	941,143	
Purchased electricity (general power mix)	1,821,074	1,701,225	1,475,359	
Total Energy consumption Romania (kWh)	**3,778,474**	**4,123,549**	**3,839,118**	–8%

3 Since the energy mix values for 2023 were not available at the time of publication, the breakdown was made in accordance with the energy mix split of 2022. The purchased electricity mix in Romania consisted of 44.01% renewables in 2022, with a proportion of 24.24% hydropower, 15.46% wind power, 3.5% solar and 0.81 other renewables.

Malaysia				
Energy consumption – renewable (total)	**7,037,803**	**3,144,400**	**2,889,386**	**+123%**
Self-generated (renewable – solar power)	2,035,325	2,056,129	1,947,647	
Purchased electricity (general power mix) [4]	-	1,088,271	941,739	
Green Energy Tariff (GET) [5]	5,002,478	–	–	
Energy consumption – non-renewable (total)	**13,420,487**	**16,158,491**	**13,982,812**	**–17%**
Purchased electricity (general power mix)	13,420,487	16,158,491	13,982,812	
Total Energy consumption Malaysia (kWh)	**20,458,290**	**19,302,891**	**16,872,198**	**6%**

4 The purchased electricity mix in Malaysia is estimated at 6.31% renewables in 2022 (5.43% hydro power, 0.88% solar power) and for 2023 the general energy mix was estimated at a 100% non-renewable as the renewable energy is now bundled in the GET.
5 The GET is backed by Malaysia Renewable Energy Certificate (mREC)

"Aligned with VAT Passions, we are committed to making this world safer and cleaner; reducing carbon emissions and confront climate change through renewable energy implementation."

Lee Ooi Ang, Facility Manager, VAT Manufacturing Malaysia Sdn Bhd

Waste generation

3-3 Management of material topic
As a manufacturing company, most waste at VAT is industrial waste, generated at various stages in the production process; material handling, product assembly, and packaging, where excess materials, scrap, or defective components are produced. Excessive waste generation can lead to resource depletion and environmental pollution, which is why VAT considers waste reduction and recycling efforts to be a material topic. Proper waste disposal is crucial to ensure the health and safety of communities and minimize the negative impacts on the environment.

306-1 Waste generation and significant waste-related aspects
306-2 Management of significant waste-related impacts
In 2023, VAT generated 4,533.3 tonnes of waste, with 60% of waste corresponding to scrap metal (aluminum, steel and non-ferrous metals) at its production sites in Switzerland, Malaysia and Romania. While VAT strives to continuously optimize product design to reduce waste, the scrap metal generated is fully recycled.

Most of the waste streams generated are either recycled and reprocessed, or converted to energy in energy-from-waste applications. In principle, VAT strives to use its production assets for as long as possible before they are discarded as waste. In Switzerland, we successfully tested a method to extend lubricant life by using smart devices to measure the amount of particle contamination in the coolant and then filter out excess contaminants so the fluid can continue to be used. This practice enables us to use production materials more efficiently while ensuring product quality. VAT intends to roll out this approach at its other locations. The company has also replaced harmful acetone-based cleaning agents with safer alternatives.

The remaining waste is generated in areas such as shipping and receiving, where packaging materials, pallets, or shipping containers are often discarded, and office waste at its manufacturing, sales and service sites around the world.

VAT has redesigned much of its packaging to reduce the amount of non-recyclable material used. As a result, more than 90% of the company's packaging material is now recyclable. While VAT continues to optimize its packaging concept and develop even more sustainable packaging methods, we have also introduced standardized and reusable shipping trays, in line with circular economy practices. The company initially deployed the trays for use with local parts suppliers in Switzerland, but has since expanded their use to include a number of customers. In addition to eliminating a source of packaging waste, the measure has improved overall supply chain efficiency.

VAT aims to minimize office waste by adopting practices such as paperless documentation, encouraging digital communication and file sharing. Additionally, promoting awareness and educating employees on waste reduction practices encourages their active participation in minimizing office waste and supports the company's overall efforts to create a sustainability culture among employees.

In addition, VAT runs extensive recycling programs for paper, plastic and other recyclable materials such as PET bottles. VAT continuously reduces single-use items like disposable cups and utensils. At its site in Penang, Malaysia, the local team is developing a new recycling concept with an external partner to process leftover food from the cafeteria into fertilizer used on the factory grounds.

The company's local Facility Management and Production teams are responsible for overseeing the waste disposal process, including the collection and monitoring of data. They also monitor the performance of their local waste management partners and carry out supplier audits at least every three years to ensure contractual and legal obligations are being met. In terms of VAT's waste impact in the downstream value chain, vacuum valves typically have a long lifetime and are primarily made of recyclable aluminum.

306-3 Waste generated

Waste generation and disposal **In tonnes**	2023	2022	2021	Change
Switzerland[1]	1,754.2	2,570.4	2,322.3	–32%
Romania	407.5	473.3	430.4	–14%
Malaysia	2,371.7	1,832.4	1,608.0	29%
Total Waste	**4,533.5**	**4,876.0**	**4,360.7**	**–7%**
Waste intensity				
Revenues (CHF million)	885.3	1,145.5	901.2	–23%
Waste (tonnes) / revenue (CHF million)	5.12	4.26	4.84	20%[1]

1 The laboratory sites in Switzerland (Grabs, Zurich) are not included as the waste management is done directly via collective waste -- no detailed information available.

Waste disposal **In tonnes**	2023	2022	2021	Change
Total waste recycled / reused – production sites[2] (tonnes)	**3,019.6**	**3,360.1**	**3,441.8**	**–10%**
Total waste disposed – production sites[2] (tonnes)	**1,513.8**	**1,516.0**	**911.4**	**–**
Waste landfilled	596.5	257.2	45.0	
Waste incinerated with energy recovery	917.4	835.9	866.4	
Waste incinerated without energy recovery	0.0	216.7	0.0	
Data coverage (as % of employees)	**>95%**	**>95%**	**>95%**	

306-4 Waste diverted from disposal
306-5 Waste directed to disposal

Hazardous waste[1] In tonnes	2023	2022	2021	Change
Total hazardous waste recycled / reused	**802.2**	**199.7**	**n/a**	
Total hazardous waste disposed	**847.0**	**1,096.5**	**n/a**	
Hazardous waste landfilled	468.8	0.4		
Hazardous waste incinerated with energy recovery	**378.2**	**486.9**		
Hazardous waste incinerated without energy recovery	0.0	609.2		
Data coverage (as % of employees)	**>95%**	**>95%**		

1 Hazardous waste is defined according to the definition of the Basel Convention – Annex III as any waste which are explosive, flammable, poisonous, infectious, corrosive, toxic, ecotoxic, etc.

Non-hazardous waste In tonnes	2023	2022	2021	Change
Total non-hazardous waste recycled / reused	**2,217.4**	**3,160.4**	**n/a**	
Total non-hazardous waste disposed	**666.8**	**419.5**	**n/a**	
Hazardous waste landfilled	127.7	50.7		
Non-hazardous waste incinerated with energy recovery	539.1	349.0		
Non-hazardous waste incinerated without energy recovery	0.0	19.8		
Data coverage (as % of employees)	**>95%**	**>95%**		

Water consumption

3-3 Management of material topic
Water is crucial for VAT, as our valves require high levels of purity and the manufacturing of our valves rely on large quantities of freshwater for cleaning, rinsing, and cooling purposes, as well as for chemical reactions and wafer fabrication. The quality and availability of water directly impact the efficiency, reliability and overall operability of semiconductor production. Water scarcity, droughts, or other reasons for water supply disruptions would pose significant risks to the company's ability to manufacture its products. Thus, ensuring the availability of ample water is a material concern.

While VAT does not produce in areas facing high water stress, according to the water risk atlas by the World Resource Institute, water scarcity is an increasing problem worldwide. VAT therefore recognizes the crucial significance of water conservation, especially within the semiconductor industry, which traditionally consumes substantial amounts of water. Original Equipment Manufacturers (OEM) face increasing scrutiny for their extensive water consumption as semiconductor fabrication requires significant quantities of water. While VAT's water consumption is minimal compared to semiconductor fabrication plants (fabs), the company faces similar pressure to reduce its water usage within the industry. Implementing responsible water management practices offers a reputational opportunity. Through the continuous implementation of water conservation processes in its facilities and manufacturing processes, VAT aims to minimize its water footprint, decrease operational costs and increase production resilience.

303-1 Interactions with water as a shared resource
The water required for production and other applications is sourced from municipal water supplies and groundwater wells. All sites have the required permits for water extraction and, if no local requirements are available, follow the high company standards according to Swiss regulation related to discharge testing and discharge quality.

In addition to its meticulous cleaning processes to achieve the extremely high levels of product precision demanded by customers, VAT also uses water for a groundwater cooling system at its site in Switzerland, effectively reducing the need for traditional energy-intensive air conditioning systems. It achieves this by circulating groundwater through heat exchangers to absorb excess heat from buildings, which is a more environmentally friendly cooling solution that minimizes the impact on local air quality and reduces GHG emissions.

In 2023, a novel project for the air conditioning was initiated at the Malaysia site, involving the transition from air-cooling to a water-cooling technology system. Rainwater is collected, filtered, and stored in tanks for use in the air conditioning system. During rainy periods, the air conditioning system can be powered for several hours using the collected rainwater. As the project is presently in the testing phase, no further details concerning the quantities collected or the potential extension to other infrastructure areas, such as the toilet flushing system, are available.

303-2 Management of water discharge-related impacts

VAT ensures that its discharged water meets or exceeds the required standards by using advanced wastewater treatment systems and through strict adherence to environmental regulations. Water used for surface treatments in the production process is treated before being discharged to eliminate metal particles.

VAT monitors and assesses the quality and quantity of discharged water on an ongoing basis at all its sites. In addition VAT regularly tests its water treatment processes and collaborates with stakeholders, such as governmental agencies, to continually improve its water discharge practices.

303-5 Water consumption

Water consumption[1]

in m^3	2023	2022	2021	2019	2019
Switzerland	31,406	49,313	45,611	35,638	28,991
Romania	4,193	4,874	5,250	5,010	4,875
Malaysia	72,308	59,894	40,546	24,766	16,829
Total Water consumption (m^3)	**107,907**	**114,081**	**91,407**	**65,414**	**50,695**
Data coverage (as % of employees covered)	>95%	>95%	>95%	>95%	>95%
Water efficiency					
Revenues (CHF million)	885.3	1,145.5	901.2	692.4	570.4
Water (m^3) / revenue (CHF million)	121.8	99.6	101.4	94.5	88.9

1 Water consumption is tracked directly via the water meters. Apart from the official water withdrawal, which is charged, there are no other water withdrawals.

"In facility management, responsible waste water handling is crucial. By implementing innovative solutions, we strive to minimize our environmental footprint while maintaining operational efficiency."

Andreas Fickl, Head of Facility Management

Occupational health and safety

3-3 Management of material topic
VAT considers the health and safety of its employees to be of utmost importance. As a manufacturing company, it recognizes that accidents pose a significant risk. As a signatory to the Swiss Accident Insurance Fund (SUVA) Safety Charter, VAT is committed to ensuring that SUVA's rules – in addition to all of its own safety rules – are upheld in the workplace. VAT requires all supervisors and employees to comply with the following principles at all times and in all places: Stop in case of danger, eliminate danger and only then continue working.

In addition to production-specific risks, the company also acknowledges the rise in other stress and workload-related risks, which also pose a threat to office and administrative personnel. As a rapidly growing company, operating in a cyclical business environment, we aim to place significant emphasis on establishing a work environment that prioritizes the well-being and safety of our workforce. Our objective is to cultivate a culture of safety and well-being, thereby boosting employee morale and productivity as well as ensuring employee retention.

In addition to prioritizing the health and safety of its employees, VAT also places a strong focus on ensuring the safety of its products. Stringent quality control measures and rigorous testing protocols are implemented to guarantee that its vacuum valves meet the highest safety standards. Comprehensive safety instructions for customers are included with all products. By maintaining the safety of its products, VAT aims to instill confidence in its customers, building trust and long-term relationships based on reliability and the well-being of end-users.

403-1 Occupational health and safety management system
VAT maintains and implements a corporate Health and Safety Management System, which applies to all its locations, based on the requirements of the ISO 45001:2018 standard. Within the framework of its management system, VAT promotes a culture of safety awareness by regular communication, employee engagement and participation in safety committees. Each VAT location implements an Environment, Health and Safety (EHS) Management system in accordance with local regulations and legal requirements.

VAT encourages all employees to prioritize occupational health and safety and provides specific mandatory training and equipment, so they have the tools required to work safely. VAT also employs specially trained EHS professionals who conduct regular risk assessments to identify and mitigate potential hazards, in accordance with local standards established by organizations such as SUVA in Switzerland and the Malaysian Department of Occupational Safety and Health (DOSH).

Depending on their location, EHS specialists report either to the Quality department or directly to the production or site management. These specialists maintain VAT's safety training programs for employees and ensure adherence to established protocols for emergency response and incident reporting. VAT requires its employees to adhere to a comprehensive set of policies and guidelines when it comes to health and safety. The Health and Safety Policy, which reflects the latest standards, rules and regulations is available via the VAT website, here.

By implementing robust health and safety measures, VAT aims to safeguard its employees from accidents, injuries, and illness. Our implemented policies extend beyond compliance with regulations.

403-3 Occupational health services
VAT strives to ensure that its employees are not affected by work-related risks by carrying out regular medical examinations, such as eye and hearing examinations. Furthermore, VAT offers voluntary health services, as part of its company benefits. At the Swiss site, vaccinations against influenza are made available to all employees free of charge during working hours. In addition, voluntary health checks are offered on a regular basis, where employees can have their blood pressure or pulse checked.

In addition to our EHS personnel, a significant portion of our production staff are trained by the company as first responders. At our Switzerland site, for instance, the proportion of first responders amounts to 15.5%. This training enhances responsiveness in emergencies. Furthermore, in the work deployment planning, it is ensured that a first responder is present in every work area and for every shift, thus ensuring prompt on-site assistance in case of emergencies. All production locations have first aid equipment and first aid rooms. At our factory in Malaysia, there is also an onsite clinic staffed with a dedicated nurse who provides various health services in additional to emergency medical assistance.

403-5 Worker training on occupational health and safety
VAT conducts EHS training based on comprehensive risk assessments of the company's workplaces. General safety training is mandatory for all employees upon joining the company and provides them with an overview of the most important safety principles, relevant telephone numbers and contact persons, as well as information on personal protective equipment (PPE). This training is provided using video presentations or in a face-to-face classroom environment. All participants are required to pass a test at the conclusion of the training.

Additional training for operating safely on a specific workstation in the production processes – such as milling, assembly or vulcanizing – is provided by the respective supervisor. Specialized training, e.g. on the handling, storing and disposing of chemical waste generated through the production process, is provided by the EHS teams.

All safety-related training is provided free of charge to employees and takes place during working hours. The training is conducted by EHS specialists or process owners. Frequently used individual PPE such as safety shoes, safety goggles or hearing protection is provided free of charge to every employee. Process-specific PPE such as shields or chemical gloves are provided at the respective workstations.

403-6 Promotion of worker health
VAT operates in a fast-moving and demanding global market that can place employees under considerable pressure. Connected with the Employee Assistance Program (EAP), launched in 2022, VAT offered various webinars in 2023 to support employees in areas such as balancing the demands of work and family, dealing with stress, identifying signs of burnout as well as anxiety or depression.

To build healthy habits and promote collaboration across the company, VAT encourages its employees to engage in sport events or join social clubs. In Switzerland, groups of employees regularly come together to participate in corporate running events, which in return are financially supported by the company. In Malaysia, various social clubs have been established by the employees, offering a wide range of sports and leisure activities including badminton, football, table tennis, hiking, and yoga.

403-9 Work-related injuries

VAT strives to avoid all types of occupational accidents and occupational illnesses. In 2023, VAT recorded a total of 32 occupational accidents at its production sites, a decrease of almost 35% compared to the year before. Compared to 2022, the accidents resulted in longer recovery times of 16.2 days on average. The Lost Time Accident (LTA) / 1,000 Full-Time Equivalents (FTE) metric was included in the executive management variable compensation in 2023 and the targeted value of below 14 was successfully achieved. The trend of reducing the LTIFR per 1,000,000 hours was further reaffirmed.

Work-related accidents associated with production activities decreased, while the number of accidents related to trips and falls increased.

Work-related incidents – production sites

	2023	2022	2021
Fatalities (No.)	0	0	0
Lost Time Accidents (No.)[1]	32	49	44
Days lost due to Lost Time Accidents (No.)	517	327	735
Average days lost per Lost Time Accident (No.)	16.2	6.7	16.7
LTA / 1,000 FTEs (Rate)	13.4	16.4	17.3
LTIFR per 1,000,000 hours (Rate)	6.4	10.6	12.9
Occupational illness (No.)	0	0	0
Data coverage (as % of employees covered)	>95%	>95%	>95%

1 Accidents (work-related accidents regardless of severity).

"Ensuring workplace safety extends beyond mere adherence to rules; it's about valuing human lives and ensuring that every worker returns home unharmed each day."

Thomas Berden, Chief Operating Officer (COO)

Talent recruitment and people development

3-3 Management of material topic
In the rapidly evolving semiconductor sector, having the right talent in place is essential for adapting to new challenges, enhancing innovation, productivity and ensuring overall organizational growth. Therefore, the knowledge and expertise of its employees is foundational to VAT's operations, playing a significant role in shaping its performance and competitive standing. Strategic recruitment initiatives and comprehensive employee development programs play an instrumental role in VAT's ability to attract knowledgeable and engaged employees. Leveraging its global reach, VAT endeavors to create a fulfilling work environment for its people across all its operations.

As a forward-thinking and responsible employer VAT is committed to providing not only job opportunities, but also opportunities for career and personal development. Through a range of talent development and training programs, it aims to support employees to reach their full potential. Alongside attractive working conditions and opportunities for further education, VAT aims to foster a culture of appreciation within the organization, aiming to encourage the retention of talented personnel and mitigate the risk of high turnover rates, which can result in the loss of critical knowledge and significant costs associated with the recruitment, hiring, and training processes. Leveraging its global reach, VAT strives to create a fulfilling work environment for its employees in all its operations.

404-1 Average hours of training per year per employee
404-2 Programs for upgrading employee skills and transition assistance programs
VAT has a longstanding tradition of developing programs aimed at upskilling the next generation of workers. After we celebrated the 50th anniversary of the apprenticeship program in Switzerland last year a fourth apprenticeship program for Physics Laboratory Technicians EFZ was launched. In addition, the site in Malaysia has launched its own apprentice training center. VAT Malaysia has chosen to participate in the German-Dual Vocational Training program in precision machining, a collaborative initiative between the Penang Skills Development Center (PSDC), the Malaysian-German Chamber of Commerce (AHK: Auslandshandelskammer), and the Malaysian Department of Skills Development (DSD).

For this first batch of apprentices, candidates were selected both internally from production staff and from an external pool of candidates. The selected apprentices receive on-the-job training combined with vocational education at selected education centers. On successful completion of the three and a half-year program and passing the exams, the apprentices will receive both a precision mechanic certification from the AHK as well as an advanced Skills Diploma in Precision Machining from the DSD. With these programs, we aim to attract talented students while also upskilling the workforce in the communities where we operate.

For more experienced employees, VAT offers both leadership and technical development tracks. The Core Competency Program is intended for technical specialists, while the newly created CultiVATe Leadership Development Journey is designed for employees who either already have, or have the potential for managerial responsibilities. The CultiVATe Program was rolled-out globally in 2023 and will be conducted for the first time in 2024. The program brings together the best elements from other former management and leadership programs at VAT.

By investing in such programs, VAT aims to cultivate a pool of future leaders, foster a culture of continuous learning, encourage talent retention and secure its succession planning for long-term organizational continuity, stability and growth.

Programs for upgrading employee skills

	Training and Internship programs – apprentices and university students	**Professional training programs**
Global	**Global Graduate Elements Program** aimed at university students	**CultiVATe Leadership Development:** duration 6 months **Core Competency Program:** ongoing
Switzerland	**Apprenticeship Training Programs** offered: Designer EFZ[1]: duration 4 years Polymechanic EFZ: duration 4 years Production mechanic EFZ: duration 3 years Physics Laboratory Technician EFZ: duration 4 years	Foundation of Leadership: 1-2 weeks
Malaysia	**Apprenticeship Training Programs** offered: Dual program: precision machining (AHK and DSD): duration 3.5 years	**Supervisor Development Program:** duration 1 month

1 The Federal Certificate of Proficiency (EFZ) is an officially recognized Swiss vocational training degree.

Training and personal development	2023
No. of training (hours) invested- total	24,963
Training per employee[1] (in hours)	9.4
Data coverage (as % of employees covered)	>95%

1 Using the no. of full-time equivalents for the year 2023.

"Our dual apprenticeship initiative with a vocational school integrates German training methods with Malaysia's talent pool, ensuring Swiss standards. This shapes a promising future and fosters a highly skilled workforce."

Asral Falah Ahmad Asnawi, Apprentice Training Center Manager Malaysia

One key pillar of VAT's success is its technology leadership, which is strongly based on the expertise and experience of its employees. To maintain and develop this competitive advantage, VAT established the Core Competency Program in 2018, which includes 14 global, cross-organizational competence communities connecting more than 180 of our experts worldwide. This community is VAT's technical, neural network which tackles daily challenges, drives innovation and shares important technical knowledge across the entire organization.

These core competency communities directly support VAT's technology and market leadership, ranging from production-specific technologies like welding to product-specific learning hubs on vacuum-related design or material and coatings. Employees can develop their expertise across various domains, advancing their technical careers within the company, while the company ensures knowledge transfer between experienced and new employees. Each competence community consists of a Lead Expert or Coordinator, who collaborates closely with the Sponsors, alongside a Core Team of technical experts. Together, they drive an individual competency strategy, according to the unique requirements of their respective technical domains. Lead Experts and Coordinators are appointed on an annual basis and are nominated by the management team every year.

In addition to the learning programs, VAT offers internal e-learning systems which are available to all employees. In 2024, VAT will inaugurate the VAT Learning Academy, an initiative designed to empower our network of Learning Champions across divisions and regions. Through this collaborative platform, we aim to foster a culture of continuous learning and development within our organization. By providing access to timely insights, market trends and aligned channels for learning, we aim to enhance our collective knowledge base and adaptability. Supported by our Learning Management System, we expect to cultivate a dynamic learning environment where our employees can engage in meaningful learning and development experiences.

In addition to these programs, VAT also offers an Employee Assistance Program to provide employees financial support for job-related training from external organizations, as well as opportunities to gain new skills that will help them advance their career at VAT.

404-3 Percentage of employees receiving regular performance and career development reviews

Regular talent reviews are a vital component of our organizational strategy, ensuring that all employees receive a thorough assessment of their skills and performance. With the aim that of 100% of our employees undergoing talent reviews annually, we uphold a commitment to fair and equitable evaluation. These reviews, conducted as part of our annual talent review cycle and succession planning (Series T), commence at the beginning of the year and extend through to Q2, providing ample opportunity for assessments and feedback between the supervisor and the employee regarding alignment with the company's values. By incorporating regular performance and career development discussions, we not only promote employee satisfaction, but also bolster organizational performance. This transparent approach underscores our dedication to monitoring and nurturing the skill sets of our workforce, driving continual growth and success.

Diversity, inclusion and equity

3-3 Management of material topic
VAT is dedicated to enhancing inclusion and diversity, recognizing their crucial role in accessing a broad range of talent, thereby providing a competitive edge. By empowering our employees and cultivating a company culture where every individual can grow and realize their potential, VAT ensures it attracts and retains top talent. It is our belief that different perspectives presented by engaged employees drive creativity and innovation, help VAT better understand its customers and markets, and enhance its appeal as an employer.

405-1 Diversity of governance bodies and employees
VAT's workforce demonstrates diversity across various dimensions, featuring employees from 54 different nationalities. The top three nationalities represented within VAT's workforce are Malaysian (20%), Swiss (16%), and Austrian (14%). In addition, the company cherishes the balanced generational backgrounds, with a diverse mix including 1% baby boomers (born between 1946 and 1964, > 60 years), 35% generation X (born between 1965 and 1980, > 44 years), 46% Millennials (born between 1981 and 1996, > 28 years) and 18% generation Z (born between 1997 and 2012, <27 years). With the longest tenure of employment spanning 49 years, VAT values the loyalty and dedication of its employees, highlighting the company's ability to retain talent and provide long-term career opportunities.

While VAT's current workforce comprises 81% male and 19% female representation, the company is committed to achieving a more balanced gender ratio, ensuring it taps into the full spectrum of talent worldwide, including employees and engineers who are women.

To substantiate VAT's commitment to strengthen diversity and inclusion, the company has set new targets to increase the share of women among new hires to 23% by 2025 and to 25% by 2030. In 2023, VAT achieved a share of 24% female new hires, remaining on track to meet its 2025 goal. VAT also aims to increase the share of women in leadership positions to 25% by 2027 from 19% at the end of 2022. This is the first time VAT has set diversity targets and reflects the growing importance placed by the Board of Directors and executive management on attracting a broader range of perspectives, skills and talent to drive long-term competitive success and create more value for a broader base of stakeholders.

By fostering development opportunities and mentoring for women early in their careers, VAT aims to increase female representation and nurture a pipeline of diverse talent. In 2023, VAT set up its first Employee Resource Group (ERG), called eleVATe Equity, to promote gender equity in the company. The group, which has been directly supported by members of the executive management team, aims to bring gender balance, diversity and inclusion onto VAT's management agenda, act as a peer support group, explore personal and professional development opportunities, and support gender diversity in talent recruitment.

In addition, VAT established a Lean-In Circle for female employees in Malaysia to provide peer mentorship, encourage skill building opportunities and create a space for women to share their experiences and get advice.

One key focus for 2024 will be on enhancing hiring practices to promote fairness and reinforce a bias-free approach across all recruitment processes. This will involve targeted training programs for hiring managers and line managers, aimed at equipping them with the necessary tools and awareness to uphold DE&I principles throughout the hiring journey. By prioritizing DE&I training and fostering an inclusive hiring culture, VAT aims to build a workforce that reflects the diverse talents and perspectives of our global community.

Employee and Board diversity

	2023	2022	2021	Change
Women as percentage of workforce	19.0%	18.5%	17.3%	0.5%
Women as percentage of management	20%	19.25%	18.0%	0.75%
Women on the Board of Directors	37.5 % (3 out of 8)	28.6 % (2 out of 7)	14.3% (1 out of 7)	8.9%

Diversity of employee body

As of December 31, 2023	Executive Board	Senior Management	Management	Professional	Employee	Internship	Apprenticeship	
Female	1	0	8	22	353	2	7	
Male	8	13	32	115	1,660	7	38	**Total**
Total	**9**	**13**	**40**	**137**	**2,013**	**9**	**45**	**2,610**

New diversity targets

To support VAT's commitment to strengthen diversity and inclusion, the company has set new targets to increase the share of women among new hires, to 23% by 2027 and to 25% by 2030. Additionally, VAT aims to increase the share of women in leadership positions to 25% by 2027 from 19% at the end of 2022. This is the first time VAT has set diversity targets and it reflects the growing importance placed by the Board of Directors and executive management on attracting a broader range of perspectives, skills and talent to drive long-term competitive success and create more value for a broader base of stakeholders.

New hires by age group, gender and region

	2023					2022				
Active employees joined	**Age range**			**Gender**		**Age range**			**Gender**	
between Jan 1 to Dec 31, 2023	**<30**	**30–50**	**>50**	**Men**	**Women**	**<30**	**30–50**	**>50**	**Men**	**Women**
Europe	**51**	**111**	**27**	**143**	**46**	**147**	**191**	**27**	**282**	**83**
thereof Switzerland	44	76	13	105	28	117	154	17	234	54
thereof Romania	7	32	12	35	16	29	36	9	45	29
Asia	**90**	**46**	**6**	**108**	**34**	**179**	**159**	**11**	**276**	**73**
thereof Malaysia	88	33	4	97	28	168	120	6	238	56
Rest of the world	**1**	**2**	**1**	**4**	**0**	**1**	**11**	**4**	**12**	**4**
Total					**335**					**730**

Turnover by age group, gender and region

	2023					2022				
	Age range			Gender		Age range			Gender	
between Jan 1 to Dec 31, 2023	<30	30–50	>50	Men	Women	<30	30–50	>50	Men	Women
Europe	**63**	**99**	**50**	**175**	**37**	**50**	**111**	**47**	**169**	**39**
thereof Switzerland	41	61	26	107	21	39	80	31	127	23
thereof Romania	21	37	22	64	16	11	31	15	41	16
Asia	**35**	**62**	**10**	**84**	**23**	**56**	**63**	**6**	**101**	**24**
thereof Malaysia	35	47	3	67	18	52	45	4	86	15
Rest of the world	**–**	**1**	**3**	**4**	**–**	**–**	**9**	**3**	**10**	**2**
Total					**323**					**345**

405-2 Ratio of annual base salary and remuneration of women to men

One way to demonstrate the company's commitment to strengthening diversity and inclusion is to ensure that people are recognized and fairly compensated for their contributions to the company. In 2021, VAT in Switzerland received the Fair-ON-Pay+ certificate, recognizing the company's commitment to ensure equal pay for equal work between men and women, as required by the Swiss Gender Equality Act.

The certificate is valid for four years but requires regular performance reviews to ensure that companies are maintaining their fair pay practices. The certification and maintenance analysis process involves a comprehensive audit of the organization's compensation policies and practices, as well as an analysis of the pay gaps between different groups of employees.

The process calculates the gross wage difference between men and women and attempts to explain the difference on the basis of personal qualification characteristics, job-related factors and gender. The goal is to determine how much of the wage difference between all women and men in a company cannot be explained by objective, non-discriminatory factors and is instead correlated primarily with gender.

In 2022, VAT conducted its first review of its Fair-ON-Pay performance, together with an external partner. The results showed that VAT has continued to prioritize fair compensation practices and made significant improvements in the areas of pay transparency and pay equity. The analysis showed that there are no statistically significant differences between pay levels for men and women, and as a result, VAT received an upgraded certificate to Fair-ON-Pay Advanced in 2023.

VAT believes this certification demonstrates its commitment to fair compensation practices and to creating a working environment in which employees feel their efforts are appreciated and rewarded.

"By empowering our employees and cultivating a company culture where every individual can grow and realize their potential, VAT ensures it attracts and retains top talent."

Mechtild Walser-Ertel, Head of Human Resources

Community and charitable engagement

3-3 Management of material topic
VAT's commitment to social responsibility extends beyond its approximately 2,700 employees worldwide. In addition to offering employment, training, skills transfer, and fostering economic growth, VAT endeavors to make meaningful contributions to the communities where it operates and society at large. As part of our VAT cares program, VAT primarily supports the following two goals, aligned with the SDGs: Quality Education and Good Health and Well-being.

Regarding the goal of Quality Education, VAT particularly supports programs which aim to help young people who aim to go into the field of Science, Technology, Engineering, and Mathematics (STEM). In Malaysia, VAT collaborates with the Penang Skills Development Center (PSDC) to sponsor 30 local students to explore science and technology-related career opportunities, providing hands-on experience and training at VAT facilities in Penang. The program also includes providing course content to selected schools in the area. The program augments the company's ongoing partnership with PSDC which sponsors technical certificate and diploma graduate students with industrial placements, internships and on-the-job training with VAT prior to them joining the company.

In Switzerland, VAT regularly participates in the National Future Day, which takes place annually in November. The aim of this event is to help girls and boys explore fields of work and life areas that are atypical for their gender. With our participation at the National Future Day, we want to encourage girls to consider a technical profession thus promoting early gender equality in career choices and life planning. In 2024, VAT contributes to the educational project Smartfeld as a Platinum sponsor. Through the sponsorship, VAT aims to support this non-profit association promoting creativity, future skills and interest among children and adolescents in the fields of STEM and preparing them for the challenges of the digital age.

In terms of the Good Health and Well-being SDG, VAT supports various medical and healthcare Non-Governmental Organizations (NGOs) which provide humanitarian aid worldwide. In the past, VAT has contributed to organizations such as the International Committee of the Red Cross or Médecins Sans Frontières, raising almost CHF 178,000 for charitable causes since the start of its VAT cares program in 2022.

In 2023, VAT participated in the global Movember campaign, which takes place every year in November, when men around the word grow a moustache, to raise awareness and funds for men's health. The campaign raised awareness on mental health, especially suicide prevention as well as prostate and testicular cancer and encouraged open discussions on these topics. As part of VAT cares, we were able to raise CHF 3,500 for the Movember Foundation, CHF 50 for every employee who participated.

In addition to global activities, local employees are active in initiatives that directly benefit their communities. VAT's site in Malaysia organized a blood drive, encouraging voluntary blood donations, thereby supporting healthcare efforts and potentially saving lives. Through this initiative, VAT reaffirms its commitment to making a positive impact beyond its business operations.

Ethics and integrity

Trust is vital to long-term and sustainable business success. It sets the foundation for strong and productive relationships with employees, customers, suppliers, shareholders, and the communities in which we operate. VAT strives to foster trust, honesty, respect and ethical conduct throughout the organization and along the entire value chain. Hence, Integrity is one of VAT's four Passions, alongside Customer Centricity, Innovation, and Teamwork. These four values were introduced in 2023, replacing previous corporate values. Each of these values is championed by a member of our Executive Team.

By ensuring ethical and integrity practices across all its business activities, VAT mitigates risks associated with legal violations, reputational damage, supply chain disruptions or customer damages due to non-compliance with its ethical and integrity standards.

2-23 Policy commitments
One of the key tools the company uses to promote trust- and respect-based relationships is its Code of Conduct. In 2023, VAT revised its Code of Conduct to provide a clear understanding of VAT's core values and the standards that govern our business. This code is based on a number of international norms and standards, including the Universal Declaration of Human Rights, ILO's International Labor Standards, OECD Guidelines for Multinational Enterprises, and ISO and SA standards. In addition, it is aligned with the statues of the Code of Conduct by the Responsible Business Alliance.

VAT's Code of Conduct lays the groundwork for how VAT treats its customers, suppliers, investors, employees, the communities where it operates, and each other.

The most important elements are:
– Respecting human rights and the personal dignity of each individual
– Committing to the highest levels of health, safety and security in its own operations and those of suppliers and business partners
– Delivering the highest levels of product quality
– Upholding the highest integrity standards, in particular by committing to fair competition and strict compliance with national and international laws and regulations
– Using natural resources sustainably, in a way that reduces negative impacts on the environment.

VAT's senior management team and the company's Board of Directors fully support the Code of Conduct and are committed to embedding its values and principles at the core of our operations. Employees are expected to speak up and report any violation of the policy. Upholding the Code of Conduct is a non-negotiable requirement for all suppliers, and any violation may lead to termination of business relationships. Being accountable, meeting commitments, and open communication ensure VAT can create competitive market value for all stakeholders.

As part of ongoing efforts, a comprehensive training program on the Code of Conduct was created, making it mandatory that all employees complete the Code of Conduct training annually. In addition, and depending on the exposure level of respective job roles, extra training on anti-corruption and bribery was conducted to reinforce responsible practices throughout the organization. Read the full Code of Conduct here.

In addition to the VAT Code of Conduct, VAT established a Human Rights Policy. The human rights policy covers topics such as forced labor and freedom of employment, non-discrimination, freedom of association, prevention of underage labor and the protection of young workers, as well as working conditions and employee well-being. The Human Rights Policy is based on accepted international laws and practices, such as the United Nations Global Compact and the International Labor Organization (ILO).

The policy applies to all VAT entities and employees. All VAT employees, including temporary, outsourced and contract employees are expected to consistently apply the standards and policies laid out in the Human Rights Policy, regardless of their location or role within the company. They are also expected to uphold labor and human rights in all business relationships, including dealings with suppliers, subcontractors, customers, and other partners. Additionally, all VAT entities must ensure that their management of suppliers, service providers, and subcontractors complies with the elements detailed within this procedure. Read the Human Rights Policy here.

2-24 Embedding policy commitments
At VAT, the CEO holds the ultimate responsibility for overseeing and implementing policy commitments for responsible business conduct, including respect for human rights, with day-to-day support provided by the compliance department. To ensure the efficiency of these commitments, regular audits are performed to test policy adherence and identify areas for improvement. In early 2024, a Head of Internal Audit was appointed to assess and evaluate the effectiveness of the organization's internal controls, risk management processes and governance mechanisms.

2-26 Mechanisms for seeking advice and raising concerns
VAT's Code of Conduct aims to uphold the highest integrity standards by committing to fair competition and strict compliance with national and international laws and regulations. The Code of Conduct includes provisions detailing the process for reporting misconduct.

VAT has implemented multiple channels for raising concerns. Employees can choose to discuss their concerns directly with their manager or contact Legal and Compliance for assistance. Support is also available from Human Resources or Internal Audit. External individuals or VAT employees who wish to maintain anonymity or feel uneasy contacting any of the mentioned parties, can use VAT's Compliance Hotline, which offers an online reporting process which is available in multiple languages. Find more information here.

Compliance Hotline
VAT's Code of Conduct lays the groundwork for how VAT treats its customers, suppliers, investors, employees, the communities where it operates, and each other.

- Breaches of the VAT Code of Conduct,
- Actions or behavior that creates a legal or other risk to VAT,
- Improper application of VAT's values in management practices, business conduct and behavior, including inappropriate treatment of employees by the direct managers or any other employees,
- Theft or embezzlement of VAT property or other assets, financial fraud, vendor fraud, acceptance of kickbacks, manipulation of accounts, breaches of internal accounting controls and auditing,
- Conflicts of interest, bribery, facilitation payments, potentially unethical donations, gifts or entertainment provided to business partners or public officials,
- Potential violations of antitrust or fair-trading regulations, espionage or sabotage and violations of information security.

The company commits to protect those reporting misconduct in good faith or who have taken part in investigations – from discrimination or retaliation. Reports about suspected misconduct are evaluated by a VAT manager responsible for monitoring compliance from the company's Compliance Department. Confirmed misconduct may result in disciplinary measures, such as warning letters or termination.

Suspected compliance misconduct and the results of investigations form part of management and audit reports submitted quarterly to VAT executive management, VAT's audit committee and the Board of Directors.

Compliance / regulatory violations

In numbers	2023	2022	2021
Reports received via the compliance hotline	1	3	2
Reports resulting in investigations	1	3	2
Complaints leading to disciplinary measures	–	1	1
Cases resulting in warning letters	–	–	–
Cases resulting in voluntary resignation, re-assignment or termination	–	1	1

2-27 compliance with laws and regulations

The handling of compliance cases involves a thorough evaluation by the compliance department, assessing each case in accordance with internal policies and legal regulations. The compliance officer's evaluation plays a crucial role in the assessment process, providing valuable insights and expertise to determine whether a case is deemed non-compliant. The outcome of the assessment is documented to provide a clear record of the compliance department's evaluation and decision-making process. This approach ensures a fair and comprehensive determination of compliance status for each case.

VAT Group aims to ensure tax compliance with applicable tax laws and regulations and to establish an appropriate coordination of the tax practices followed by the companies of the Group, while assuring the fulfillment of the corporate interest and achieving a long-term business strategy that prevents tax risks. The Strategy Tax Policy sets out VAT Group's approach towards management and control over its tax affairs and sets out the general framework within which VAT Group will operate in connection with tax-related issues. The Policy can be found on our website, here.

VAT Management System

VAT established a robust management system to systematically implement the Code of Conduct and ensure the efficiency of its processes. A certified management system plays a crucial role in ensuring compliant processes. In addition, it enhances transparency and builds trust among stakeholders, showcasing the company's commitment to compliance and quality. By obtaining various management system certifications, VAT demonstrates adherence to industry standards and regulations, establishing a framework for consistent and efficient operations. VAT maintains an externally certified combined Quality and Environmental Management System according to ISO 9001 and 14001 as certified under the ISO scope. VAT has established ISO 9001:2015 and 14001:2015 certification covering eight of its overall 14 national subsidiaries covering more than 95% of employees. Many of the uncertified sites are sales offices, often with fewer than 10 employees and less than 100m^2 space, making certification currently impractical. The scope of the certification is reassessed annually.

Management system certifications according to ISO Standards[1]

	2023	2022	2021
Sites certified ISO 9001: 2015	60%	60%	60%
Sites certified ISO 14001: 2015	60%	60%	60%
No. of sites which were audited according to ISO 9001 and 14001	5	4	4

1 Only production and distribution subsidiaries were taken into account. Holding companies were not included in the calculation, as they do not conduct any business operations.

In addition to these general management certifications, COMVAT, VAT's entity specialized in the development and manufacture of bellows, is certified according to IATF 16949:2016, a production standard of the automotive industry. Regular audits help the company identify and address non-compliance, promoting a culture of continuous improvement and proactive risk management.

Responsible Supplier Management

VAT established a Supplier Code of Conduct to ensure ethical and responsible business practices throughout its supply chain. The code describes VAT's requirement that its suppliers operate in an ethical and responsible manner, in line with VAT's values and commitments. The Supplier Code of Conduct cover areas such as ethical conduct, labor practices such as human rights protection and prohibition of child labor, and compliance with applicable laws and regulations.

VAT updated its Supplier Code of Conduct at the end of 2022 to reflect the latest industry supply chain standards. The roll-out of the new code to all suppliers in Switzerland began at the beginning of 2023 and as of the publication of this report, 79% have acknowledged the new version. Because the topic of sustainable supplier management is becoming more important, VAT is currently revising its supplier contract management and plans to introduce sustainability assessment criteria for its suppliers in 2024.

Sustainable sourcing practices

In %	2023
Supplier Code of Conduct – signed by suppliers (based on spend)	79%

By ensuring ethical and sustainable practices across its supply chain, VAT mitigates risks associated with potential legal violations, reputational damage, and supply chain disruptions due to non-compliance.

VAT's commitment to ethical business practices not only fosters transparent and responsible supplier relationships but also enhances resilience amidst evolving regulatory landscapes and market dynamics. However, challenges such as identifying and verifying suppliers' adherence to ethical standards, as well as implementing effective monitoring mechanisms, remain pertinent. Through robust supplier vetting processes, ongoing monitoring, and collaboration with suppliers, VAT can transform these challenges into opportunities for innovation, resilience, and sustainable growth.

Information security

3-3 Management of material topic

Information security has emerged as a material topic for VAT due to the pervasive and evolving threat that cyberattacks pose to our business. With the increasing reliance on technology and interconnected systems, VAT, like other companies, faces significant risks from data breaches, and theft of sensitive information, resulting in possible financial losses, reputational damage, and legal liabilities as well as disruption of operations. By prioritizing information security measures, VAT puts in place safeguards to protect its assets, customer and employee trust, ensures business continuity, and complies with data protection regulations, ultimately ensuring resilience of its operations in a digital world.

VAT's information security standards are based on the Cybersecurity Skills Framework (ECSF), the guidelines of the German Federal Office for Information Security (BSI) and the American Cybersecurity and Infrastructure Security Agency (CISA). The company enforces local legal requirements while the internal standard is based on the General Data Protection Regulation (GDPR). In 2017, VAT began to implement an Information Security Management System (ISMS), which is aligned with the requirements and best practices of ISO 27001 and applies to all subsidiaries and partners. In 2023, VAT established a dedicated Cyber Defense Team and introduced supplementary policies and guidelines aimed at supporting information security measures within the organization. In addition, VAT has developed a Cyber Third-Party Risk Management (CTPRM) strategy and methodology designed to seamlessly integrate into its supply chain operations.

In 2023, VAT has recognized the emergence of novel risks and opportunities associated with Artificial Intelligence (AI). While AI offers opportunities for efficiency gains and innovation, it also presents challenges and vulnerabilities that must be carefully managed. These risks include emerging threats such as deep fakes for disinformation campaigns or hybrid threats, which have the potential to impact the company's operations and reputation. These newly identified AI risks have prompted VAT to consider and prioritize AI-related threats and vulnerabilities within its operational framework.

As a forward-thinking organization, VAT is committed to proactively addressing these emerging risks through enhanced awareness, education, and strategic planning to ensure the responsible and secure deployment of AI technologies throughout its operations. In November 2023, VAT organized a live demonstration illustrating various hacking techniques, including password cracking, phishing tactics, and the creation of fake websites. This demonstration also showcased the real-time generation of deep fake audio and video content, enhancing awareness and preparedness against emerging cyber threats.

Information and Cyber Security

	2023	2022
Percentage of all operational sites with an ISMS based on ISO 27001	100%	100%
Number of confirmed information security incidents	0	0
Percentage of employees with access to IT systems who have completed IT security trainings[1]	94%	89%
Hours invested into awareness trainings to prevent information security breaches	3,393	2,750

1 All directly employed employees who have access to information systems as part of their daily work are included in the training.

Governance structure

VAT Group is committed to the highest principles of good corporate governance, aimed at ensuring transparency, achieving a balanced relationship between management and control, and safeguarding shareholder interests. VAT Group regularly reviews its corporate governance framework and discloses information on Corporate Governance in accordance with the SIX Swiss Exchange Directive on Information relating to Corporate Governance, the Swiss Code of Best Practice for Corporate Governance, and the corporate governance provisions of the Swiss Code of Obligations. In addition, VAT Group has implemented a Code of Conduct, setting out VAT Group's key principles.

By adhering to the governance principles laid out above, VAT mitigates risks associated with potential legal violations, reputational damage with customers and suppliers and general business disruptions due to non-compliance.

2-9 Governance structure and composition

VAT Group AG's highest governing body is the Board of Directors (BoD). The Board of Directors comprises of highly qualified and eligible individuals. In 2023, the BoD comprised eight members, with no executive BoD members. In 2023, three of the eight BoD (37.5%) members were women. All eight BoD members operate independently, free from conflicts of interest, to ensure effective oversight and governance of the company's operations.

The representation of women on the Board of Directors

As of December 31	2023	2022	2021	2020	2019
Women	3	2	2	1	1
Men	5	5	5	6	6
Total	**8**	**7**	**7**	**7**	**7**

The BoD is entrusted with the ultimate direction of VAT's business and the supervision of those entrusted with VAT's management, the Group Executive Committee (GEC). The BoD represents VAT towards third parties and manages all matters that have not been delegated to another body of VAT Group AG by law, the Articles of Association or by other regulations.

Committee structure of VAT

	Audit Committee (AC)	Nomination and Compensation Committee (NCC)	Technology Committee (TC)
Martin Komischke (Chaiman of the Board of Directors)	–	–	–
Libo Zhang	Member	Chairperson	–
Hermann Gerlinger	–	Member	Chairperson
Urs Leinhäuser	Chairperson	Member	–
Karl Schlegel	–	–	Member
Daniel Lippuner	Member	–	Member
Maria Heriz	–	–	–
Petra Denk	–	–	Member

VAT's BoD has three sub-committees: the Audit Committee (AC), the Nomination and Compensation Committee (NCC) and the Technology Committee (TC). Details on the duties of the BoD, its committee structure, the tenure of each member and additional mandates can be found in the Corporate Governance Section (pages 48-64) of VAT's 2023 annual report. The annual report can be found here or online at https://ir.vatvalve.com.

2-10 Nomination and selection of highest governance body
New BoD members are evaluated and selected by the NCC and subsequently proposed for election to the shareholders at the Annual General Meeting (AGM). In the evaluation process, the BoD looks for candidates who are independent, have specific knowledge of VAT's industries and markets, strong financial backgrounds, proven managerial skills and the highest level of integrity. In addition, the BoD strives to achieve a diversity of cultural backgrounds and gender representation.

Each member of the Board of Directors, including the Chairman, must be elected, and may only be removed by a shareholders' resolution. The maximum term of office is one year. In this context, a year means the period between one ordinary shareholders' meeting and the next or, if a member is elected at an extraordinary shareholders' meeting, between that extraordinary shareholders' meeting and the next ordinary shareholders' meeting. Members are eligible for re-election until the end of their 72nd year of age.

2-11 Chair of the highest governance body
The chair of VAT highest governance body, the Chairman, has no executive role in the company and is considered fully independent.

2-12 Role of the highest governance body in overseeing management impacts
VAT's Board of Directors has the following non-transferable and irrevocable duties:

– ultimately directing VAT Group AG and issuing the necessary directives,
– determining the organization,
– organizing the accounting, the Internal Control System (ICS), the financial control and the financial planning as well as performing a risk assessment (incl. ESG risks),
– appointing and recalling the persons entrusted with the management and representation of VAT Group AG and granting signatory power, ultimately supervising the persons entrusted with the management, in particular with respect to compliance with the law, the Articles of Association, regulations and directives,
– preparing the annual report, as well as the shareholders' meeting and implementing the latter's resolutions,
– preparing the compensation report and the report on non-financial matters pursuant to Article 964c of the Swiss Code of Obligation,
– submitting a petition for a debt-restructuring moratorium and informing the court in the event of over-indebtedness,
– passing resolutions regarding the subsequent payment of capital with respect to non-fully paid-in shares and regarding the amendments to the Articles of Association entailed thereby,
– passing resolutions confirming changes in share capital, preparing the corresponding report and the amendments to the Articles of Association entailed accordingly,
– examining compliance with the legal requirements regarding the appointment, election and the professional qualifications of the auditors,
– executing the agreements pursuant to Articles 12, 36 and 70 of the Swiss Merger Act.

2-13 Delegation of responsibility for managing impacts
The BoD, as the highest governance body, has delegated the execution and management of the operational activities to the GEC.

Details on the roles of the highest governance body in overseeing the management can be found in the Organizational Regulations that are published on VAT's website under Corporate Governance, here.

2-14 Role of highest governance body in sustainability reporting
In 2022, the BoD nominated two of its members to explicitly develop, oversee and steer VAT's strategy in the field of Environment, Social and Governance topics (ESG Council). In addition, one member of the GEC was given responsibility to execute this strategy.

The audit committee, in accordance with Article 964c of the Swiss Code of Obligations, evaluates non-financial aspects to ensure compliance and adherence to regulatory requirements. The BoD approves the annual Sus-

tainability Report prepared by the GEC and monitors the annual progress made by the organization towards its publicly stated ESG goals and ensures full compliance with any rules and regulations concerning ESG.

2-15 Conflict of interests

VAT draws a line between private interests and the interests of the company. Employees must not engage in any activity or accept any task that might be in conflict with VAT's interests. Employees are prohibited from giving preferential treatment to any business associate for private reasons. This applies particularly to immediate family members and other relatives. Furthermore, employees must ensure that none of their decisions or activities could be construed as having been driven by personal interests. All BoD members are required to disclose to the company any mandate they have or intend to accept.

As such, there are no cross-board memberships and no cross-shareholdings with suppliers or other stakeholders. VAT's largest shareholder is a Swiss individual who owns 10% of the company's outstanding shares and is not considered a controlling shareholder.

2-16 Communication of critical concerns

Critical concerns are shared with the BoD by the GEC whenever they occur and / or during the regular BoD meetings and calls. Critical concerns include in particular the company's overall business development, which may or may not influence a variety of stakeholders in a positive or a negative way. Stakeholders include employees, suppliers, customers, communities or the financial community. In addition, any ad hoc development that needs attention is immediately shared with the BoD outside the regular meeting calendar.

During 2023, the Board of Directors and the Committees conducted regular formal meetings and conference calls, as presented below:

Formal meetings and conference calls

	BoD	AC	NCC	Technology Committee
Total number of meetings / calls in 2023	5/6	4/5	4/0	3/0
Usual average duration approx. (in hours) of meetings / calls in 2023	6/1.5	2.5/1	2/0	2/0
Martin Komischke	5/6	–	2/0	–
Libo Zhang	5/6	4/4	4/0	–
Hermann Gerlinger	5/6	–	4/0	3/0
Urs Leinhäuser	5/6	4/5	4/0	–
Karl Schlegel	5/5	–	–	2/0
Daniel Lippuner	5/6	4/5	–	3/0
Maria Heriz	5/6	–	–	–
Petra Denk	4/3			2/0
Internal Audit, PwC	–	4/0	–	–
External Audit (KPMG)	–	4/1	–	–
External Advisors	2/0	0/1	4/0	–

2-17 Collective knowledge of highest governance Body

The Board of Directors engages in continuous learning by actively staying informed about industry trends, best practices and regulatory developments through extensive reading, research, and participation in relevant conferences and seminars. When appropriate, they seek advice from professionals in relevant fields, engage with consultants and establish partnerships with educational institutions as well as industry associations.

More information on the areas of expertise and both past and present industry experience of the members of the Board can be found in the VAT Annual Report 2023 on pages 51 to 53.

2-18 Evaluation of the performance of the highest governance body
VAT's Board of Directors conducts regular self-evaluations, including rating its performance in areas such as strategic guidance, risk management, and management oversight. The last assessment was conducted externally in 2022.

2-19 Remuneration policies
In order to ensure their independence in exercising their supervisory duties, members of the BoD receive a fixed compensation only. This is delivered partially in cash and partially in shares, blocked for a period of three years, to strengthen the alignment to shareholders' interests.

Compensation for the members of the BoD does not contain any performance-related component, nor do they participate in the occupational pension plans of VAT Group. The annual compensation for each BoD member depends on the functions and tasks carried out in the year under review. It consists of an annual fixed basic fee for the BoD chair, a fixed basic fee for BoD members, plus additional fees for assignments to the BoD committees, either as chair or member.

The compensation period relates to the term of office, which starts with the election at the ordinary AGM and ends at the next ordinary AGM. The amount of the fixed basic fee and the fixed committee fees reflect the responsibility and time requirement inherent to the function.

VAT Group's compensation principles for the GEC support the company's business strategy and foster the commitment of all employees to the company's long-term goals. The compensation principles are:

– internal fairness,
– reward for performance,
– focus on sustainable long-term value creation,
– alignment to shareholders' interests,
– market competitiveness,
– simplicity and transparency.

Details of the BoD and the GEC compensation principles and the compensation structure can be found in the VAT Annual Report 2023 on pages 61 to 80.

2-20 Process to determine remuneration
The compensation of the Board is benchmarked every two to three years against the compensation of non-executive Board members of publicly traded companies in Switzerland that are comparable to VAT Group in terms of size and complexity. In 2021, a thorough review was conducted to determine the competitiveness of the Board compensation in terms of structure and overall level. For this purpose, a peer group of Swiss multinational industrial companies listed on the Swiss Stock Exchange (SIX) was selected. The total compensation for the highest governance body is put to a vote each year at the Annual General Meeting in a prospective vote. In addition, the shareholders also have a non-binding retrospective vote on the actual compensation as described in the Compensation Report, which forms an integral part of the VAT Annual Report.

Details on the BoD and the GEC compensation principles and the compensation structure can be found in the VAT Annual Report 2023 on pages 61 to 80.

2-21 Ratio of annual remuneration paid
The ratio of the annual remuneration paid to the highest-paid employee to the average annual remuneration of all employees (excluding the highest-paid employee) based on the average FTEs was 16.

2-30 Collective bargaining agreements
VAT does not have any collective bargaining agreements for VAT Group or any of its entities. VAT refers to the employment law.

About this report

VAT Group AG is a public company listed on the SIX Swiss Exchange (VACN). The entity includes VAT Group AG, VAT Group Ltd and VAT Vakuumventile AG. The company has its headquarters in Haag, Switzerland, with manufacturing sites in Haag (Switzerland), Arad (Romania), and Penang (Malaysia) and further sales and distribution sites in North America (USA), Europe (France, Germany, Luxembourg and UK) and Asia (China, Japan, Singapore, South Korea and Taiwan).

The information published in this report is based on the 2023 calendar year (corresponding to the company's financial reporting year) and covers the whole VAT Group including all its entities unless otherwise stated in the dedicated area. The Sustainability Report covers all entities consolidated in the financial reporting. A full list of VAT's entities is available in the VAT Group Annual Report 2023 on page 125.

The Sustainability Report is prepared annually in accordance with the rules and standards of the Global Reporting Initiative (GRI) and fulfills the reporting requirements of the Counterproposal of the Swiss Responsible Business Initiative on transparency on non-financial matters. This sustainability report was published on April 19, 2024. Restatements for data from 2023, as well as reasons for restatements, are clearly indicated in the relevant areas. Any restatements result from an improvement of the measurement methodology and represent an information enhancement for the reader.

This Sustainability Report and the company's sustainability strategy were created taking into account and involving all relevant stakeholder groups. Representing those who are significantly affected by or affect VAT's products, activities and actions. VAT is in continuous dialogue with all stakeholder groups in formal and informal channels. VAT's most relevant stakeholder groups are: employees, customers, suppliers, media, local communities, the financial community, academia, VAT management, VAT's Board of Directors, and regulators. The formal and informal channels to engage with stakeholders are comprised of activities and programs such as periodic employee surveys, customer surveys, regular management and board meetings and dialogue with customers, investors, and other stakeholders as part of daily business.

The sustainability report was approved by the company's highest governance body, the Board of Directors. However, no external assurance was performed.

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Global Reporting Initiative (GRI) table

This 2023 Annual Sustainability Report has been prepared based on materiality and in accordance with the GRI Standards for the period from January 1 to December 31, 2023. This reference table indicates where to find the relevant information for each disclosure in the report.

GRI Standard	Disclosure	Location	Omission
General Disclosure			
GRI 2:	**General Disclosure 2021**		
	2-1 Organizational details	p.57	
	2-2 Entities included in the organization's sustainability reporting	p.57	
	2-3 Reporting period, frequency and contact point	p.57	
	2-4 Restatements of Information	p.57	
	2-5 External assurance	p.57	
	2-6 Activities, value chain and other business relations	p.10 – 12	
	2-7 Employees	p.13	
	2-8 Workers who are not employees	p.13	
	2-9 Governance structure and composition	p.53	
	2-10 Nomination and selection of the highest governance body	p.54	
	2-11 Chair of the highest governance body	p.54	
	2-12 Role of the highest governance body in overseeing the management of impacts	p.54	
	2-13 Delegation of responsibility for managing impacts	p.54	
	2-14 Role of the highest governance body in sustainability reporting	p.54 – 55	
	2-15 Conflicts of interest	p.55	
	2-16 Communication of critical concerns	p.55	
	2-17 Collective knowledge of the highest governance body	p.55	
	2-18 Evaluation of the performance of the highest governance body	p.56	
	2-19 Remuneration policies for the governance bodies	p.56	
	2-20 Process to determine remuneration	p.56	
	2-21 Annual total compensation ratio	p.56	
	2-22 Statement on sustainable development strategy	p.17 – 23	
	2-23 Policy commitments	p.48 – 49	
	2-24 Embedding policy commitments	p.49	
	2-26 mechanisms for seeking advice and raising concerns	p.49 – 50	
	2-27 compliance with laws and regulations	p.50	
	2-28 membership associations	p.18	
	2-29 Approach to stakeholder engagement	p.57	
	2-30 Collective bargaining agreements	p.56	

GRI Standard	Disclosure	Location	Omission
GRI 3:	**Material Topics 2021**		
	3-1 Process to determine material topics	p. 20 – 21	
	3-2 List of material topics	p.21	
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GRI 305:	**Emissions 2016**		
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Abbreviations

AC	Audit Committee
ADV	Advanced Industrials
AGM	Annual General Meeting
AHK	The Malaysian-German Chamber of Commerce (dt.: Auslandhandelskammern)
AI	Artificial Intelligence
BoD	Board of Directors
BSI	German Federal Office for Information Security
CISA	Cybersecurity and Infrastructure Security Agency
CO2-eq.	CO_2-equivalent
CSRD	Corporate Sustainability Reporting Directive
CTPRM	Cyber Third Party Risk Management
DDTrO	Ordinance on Due Dilligence and Transparency in relations to Minerals and Metals from Conflict-Affected Areas and Child Labor
DOSH	Malaysian Department of Occupational Safety and Health
DSD	Malaysian Department of Skills Development
EAP	Employee Assistance Program
ECSF	Cybersecurity Skills Framework
EES	Employee Engagement Survey
EFZ	Federal Certificate of Proficiency
EHS	Environment, Health and Safety
EoL	End of Life
EPD	Environmental Product Declaration
ERG	Employee Ressource Group
ESG	Environment, Social and Governance
ESRD	European Sustainability Reporting Standards
EUV	Extreme Ultraviolet Lithography
fabs	Semiconductor fabrication plants
FTE	Full-time equivalent
GEC	Group Executive Committee
GET	Green Energy Tariff
GDPR	General Data Protection Regulation
GHG	Greenhouse Gas
GRI	Global Reporting Initative
ICS	Internal Control System
IEA	International Energy Agency
ILO	International Labour Organisation
ISMS	Information Security Management System
LCA	Lifecycle Analysis
LTA	Lost Time Accident
LTIFR	Lost Time Injury Frequency Rate
mREC	Malaysia Renewable Energy Certificate
NCC	Nomination and Compensation Committee
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
OEM	Original Equipment Manufacturer
PPE	Personal Protective Equipment
PSDC	Penang Skills Development Center
RBA	Responsible Business Alliance
SBTi	Science-based Target Initiative
SCC	Semiconductor Climate Consortium
SDGs	Sustainable Development Goals
SIX	Swiss Stock Exchange
STEM	Science, Technology, Engineering and Mathematics
SUVA	Swiss Accident Insurance Fund
TC	Technology Committee
VOC	Volatile Organic Compound
XHV	Extremely high vacuum

5-Year Key financial Figures

In CHF million	2023	2022	2021	2020	2019
Order intake	691.9	1,209.9	1,227.9	724.5	585.0
Order backlog as of December 31	291.6	517.7	461.2	145.3	114.5
Net sales	885.3	1,145.5	901.2	692.4	570.4
Gross profit	546.7	733.7	570.5	430.1	345.4
Gross profit margin	61.8%	64.1%	63.3%	62.1%	60.6%
EBITDA	270.9	400.4	307.9	210.5	148.2
EBITDA margin	30.6%	35.0%	34.2%	30.4%	26.0%
EBIT	228.6	359.4	264.9	169.8	102.5
EBIT margin	25.8%	31.4%	29.4%	24.5%	18.0%
Net income	190.3	306.8	217.4	127.9	70.3
Net income margin	21.5%	26.8%	24.1%	18.5%	12.3%
Basic earnings per share (in CHF)	6.35	10.23	7.25	4.27	2.34
Diluted earnings per share (in CHF)	6.34	10.22	7.24	4.26	2.34
Cash flow from operating activities	256.4	294.0	239.8	166.2	151.9
Capex[1]	69.2	66.2	44.1	19.2	12.1
Capex margin	7.8%	5.8%	4.9%	2.8%	2.1%
Free cash flow[2]	188.8	228.2	195.7	147.0	139.9
Free cash flow margin	21.3%	19.9%	21.7%	21.2%	24.5%
Free cash flow conversion rate[3]	69.7	57.0%	63.6%	69.8%	94.4%
Free cash flow to equity[4]	181.8	224.6	192.0	143.0	135.4

As of December 31 in CHF million	2023	2022	2021	2020	2019
Total assets	1,168.5	1,274.8	1,064.9	989.1	966.5
Total liabilities	411.3	494.5	430.5	444.5	448.3
Equity	757.3	780.3	634.4	544.6	518.2
Net debt	63.2	36.8	79.7	128.5	144.3
Net debt / EBITDA	0.2	0.1	0.3	0.6	0.9
Invested capital[5]	243.5	642.6	463.9	411.1	350.0
NOPAT[6]	207.4	317.0	235.5	155.6	99.0
Return on invested capital (ROIC)	33.4%	57.3%	53.8%	40.6%	28.8%
Dividend per share (in CHF)[7]	6.25	6.25	5.50	4.50	4.00
Payout ratio[8]	103.1%	83.5%	85.9%	94.4%	88.6%
Number of employees[9]	2,666	2,991	2,540	2,041	1,810

[1] Capex: acquisitions of subsidiaries net of cash, purchases of property, plant and equipment, and intangibleassets and proceeds from sale of property, plant and equipment.
[2] Free cash flow: cash flow from operating activities minus cash flow from investing activities.
[3] Free cash flow conversion rate: free cash flow as a percentage of the EBITDA.
[4] Free cash flow to equity: free cash flow less interest paid.
[5] Invested capital is defined as total assets less non-current liabilities.
[6] Net operating profit less adjusted taxes (NOPAT) is calculated as EBITDA minus depreciation and amortization plus finance income less taxes at the average Group rate of 15.9% (previous 16.1%)
[7] 2022 dividend confirmed at the AGM on May 16,2023
[8] Percentage of free cash flow to equity proposed to be paid out as dividend.
[9] Number of employees expressed as full-time equivalents (FTE)

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Forward-looking statements
Forward-looking statements contained herein are qualified in their entirety as there are certain factors that could cause results to differ materially from those anticipated. Any statements contained herein that are not statements of historical fact (including statements containing the words "believes," "plans," "anticipates," "expects," "estimates" and similar expressions) should be considered to be forward-looking statements. Forward-looking statements involve inherent known and unknown risks, uncertainties and contingencies because they relate to events and depend on circumstances that may or may not occur in the future and may cause the actual results, performance or achievements of the company to be materially different from those expressed or implied by such forward-looking statements. Many of these risks and uncertainties relate to factors that are beyond the company's ability to control or estimate precisely, such as future market conditions, currency fluctuations, the behavior of other market participants, the performance, security and reliability of the company's information technology systems, political, economic and regulatory changes in the countries in which the company operates or in economic or technological trends or conditions. As a result, investors are cautioned not to place undue reliance on such forward-looking statements.

Except as otherwise required by law, VAT disclaims any intention or obligation to update any forward-looking statements as a result of developments occurring after the date of this report.

OUTLOOK 2024:

Further integrating ESG principles into our business strategy, operational processes and company culture will remain a key management priority in 2024. VAT will focus on implementing improvement programs to address our declared targets on climate protection, sustainable resource use, and increased employee diversity, while we also analyze the benefits and impacts of our products throughout their lifecycle.

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