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sustainable entrepreneurship

At Aalberts, we are passionate people, who engineer mission-critical technologies for a clean, smart and responsible future. So it should be no surprise that sustainability has been a concern of ours since 1975.

Day in, day out, our strong team of entrepreneurs is focused on achieving our objectives as sustainably as possible. From creating technologies that enable our customers to enhance their own businesses and get the planet back into good shape, to ensuring our own operations are as clean, green, and waste-free as possible. We are there, relentlessly doing our bit. Because that's 'the Aalberts way'.

We believe there is no magic technology or machine that will save the planet overnight. But there are many inventions that are being made or have yet to be even imagined that can cut down waste, introduce efficiencies, and contribute to a greener society.

We have been on this pathway since day one and are pretty sure that, working with our customers and partners, we will continue to break new ground. And every step forward we take, we get more efficient

ourselves and share this knowledge and practices throughout the entire organisation. Our partners and customers know that the mission-critical technologies we develop are clean, green and non-polluting throughout their lifecycle.

The climate agenda needs a company that just gets on with it and gets things done. The trust in us from our stakeholders deserves nothing less.

our impact



Aalberts embraces the principles of ESG, reflecting a commitment to minimising our environmental footprint, taking social responsibility by fostering a workplace culture that promotes talent development, diversity & inclusion (see page 36) and upholding a high standard of governance and business integrity (see page 63).

We have strategically aligned our operations with ESG principles, embedding them in decision-making processes, risk management and innovation.

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our impact

To create shared value for all our stakeholders, sustainable entrepreneurship is fully embedded in our strategy, accelerating our unique positions with high growth potential and sustainable impact.

We identify three megatrends that are shaping our future: urbanisation, energy & resource scarcity and internet of things (see page 11). These megatrends are bringing a shift towards co-development, connectivity and integration in the Aalberts playing field, providing

opportunities for growth, while they may also pose transition risks to our business (see our risk paragraph on page 67).

In our end markets eco-friendly buildings and sustainable transportation for example, the EU Green Deal with the expected renovation wave and the focus on a carbon neutral economy in 2050 and the US Inflation Reduction Act with the focus on reducing carbon emissions by roughly 40% in 2030, offer us many opportunities.

Our sustainable entrepreneurship strategy focuses on realising social and environmental impact in all four end markets and demonstrates our commitment to take responsibility. Our social and environmental impact is reflected in our SDG rate: already 70% of our revenue contributes to those subgoals of the Sustainable Development Goals that are material to us.



SDG impact 70% of revenue

we engineer mission-critical technologies enabling a clean, smart and responsible future



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hygienic distribution of water



more efficient use and sustainable water management are critical in addressing the growing demand for water, threats to water security and the increasing frequency and severity of droughts and floods resulting from climate change. Currently, 2.2 billion people lack safely managed drinking water. Aalberts contributes to the hygienic distribution of water in eco-friendly buildings, as we engineer solutions for safe drinking water, water quality improvement and water efficiency.

impact 16% of total revenue

contributes to SDG6 and its relevant subgoals: clean water and sanitation



SDG 6.1: we engineer solutions for safe drinking water.

Each year, Aalberts integrated piping systems delivers millions meters of pipes and connections for the hygienic distribution of drinking, potable and wastewater in eco-friendly buildings. We offer customers a single sourced

and complete integrated piping solution. This is how we contribute to the access to safe drinking water for all.



SDG 6.3: we improve water quality with our technologies.

A high potable water quality begins with the planning and selection of the right material. Chemical substances must not be present in concentrations that are harmful for human health. We address such topics

by offering lead-free piping systems, for example using lead-free alloy or by using other materials such as composite. We engineer our valves to be cavity free: they are continuously flushed to avoid stagnant water in valve and growth of bacteria. Our piping systems have all major national and international quality certifications, approvals (e.g., NSF/ANSI, KIWA, DVGW) and quality for green building rating systems (e.g., LEED, DGNB and BREEAM). Also, we offer technologies to protect and improve water quality including filtration, purification and softening.



SDG 6.4: we create water efficiency in eco-friendly buildings.

Our solutions ensure clean water and sanitation for millions of households worldwide and focus on efficient water use and water savings. For example, the Airfix vessel, an expansion vessel for domestic hot water saves up to

1,200 litres of drinking water per household per year when installed.

creating energy savings



climate change and urbanisation reinforce the need for more energy efficient, comfortable and healthy buildings and smart, sustainable transportation. Roughly half of the energy use in buildings globally is used for space heating installations. Aalberts contributes to the creation of energy savings in eco-friendly buildings and sustainable transportation, as we engineer technologies for heating and cooling systems, facilitate renewable energy installations and provide improved energy efficiency.

impact 32% of total revenue

contributes to SDG7 and its relevant subgoals: affordable and clean energy



SDG 7.1: we engineer technologies for heating and cooling systems.

Aalberts hydronic flow control and Aalberts integrated piping systems engineer a wide range of mission-critical building technologies that can be combined with heat pumps. When installed, our tailor-made solutions enable the transition to low carbon energy systems (e.g., valve, connection, fastening and piping technology) and provide improved energy efficiency (e.g., pump groups, buffer tanks and underfloor heating) in heating and cooling systems in residential, commercial and industrial buildings.



SDG 7.2: we make renewable energy installations possible.

Aalberts empowers the energy transition by providing solutions needed for renewable energy systems, such as solar panels and hydrogen installations. Aalberts manufactures expansion vessels for solar powered installations and thermal batteries for domestic water, powered by solar. Also, our fittings and piping

systems have a very high temperature resistance and are therefore suitable for use in solar installations.



SDG 7.3: we provide improved energy efficiency.

Aalberts hydronic flow control provides improved energy efficiency in eco-friendly buildings through hardware and digital products and services. Our VacuStream for example, is a pumpless degasser that protects sealed

water systems from corrosion, dirt and failure and removes gases from the system with expected energy savings up to 15%. Also, digital products and services such as intelligent thermostats, smart radiator heads and remote services can make heating and cooling in eco-friendly buildings more energy efficient by up to 15%. Lastly, we engineer products that enable e-mobility and provide energy efficiency in maritime transport.

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acceleration of technological breakthroughs



With the advent of super-fast 5G networks, internet of things will further accelerate technological breakthroughs for smart homes, autonomous driving and industry 4.0. Breakthrough innovation is necessary to address large-scale challenges and embrace digital solutions. Aalberts contributes to the acceleration of technological breakthroughs in semicon efficiency, as we facilitate the growth of sustainable industries and accelerate technological breakthroughs.

impact 13% of total revenue

contributes to SDG9 and its relevant subgoals: industry, innovation and infrastructure



SDG 9.4: we facilitate the growth of sustainable industries.

Aalberts advanced mechatronics delivers leading-edge innovative, tailor-made and future-proof technologies, enabling the roadmaps and manufacturing challenges of high-end customers. With our

technologies and innovations, we are part of the high-tech infrastructure needed for technological breakthroughs. These breakthroughs enable the manufacturing of low-carbon technologies and the world's shift towards decarbonisation.



SDG 9.5: we accelerate technological breakthroughs.

Aalberts accelerates technological breakthroughs. From mechatronic systems, to motion and fluid control in high-end machines and process installations, environmental control solutions, ultra-high purity liquid and

gas supply systems and ultra large and accurate machining. We continuously focus on long-term innovation and disciplined investments in R&D. Also, R&D enables us to reuse the installed base end-of-life modules and support responsible usage of materials for the semiconductor industry.

lifetime extension and lightweight materials



climate change and resource scarcity reinforce the need for solutions that improve energy efficiency, lower waste and make materials more lightweight and durable. These solutions are crucial for the transition to more sustainable transport by land, sea or air. Aalberts contributes to the lifetime extension and lightweight materials in sustainable transportation and industrial niches, as we extend material lifetime and minimise (hazardous) waste.

impact 9% of total revenue

contributes to SDG12 and its relevant subgoals: sustainable consumption and production



SDG 12.2: we extend material lifetime and engineer solutions for lightweight materials.

Aalberts surface technologies partners with leading industrial customers in sustainable transportation worldwide to develop, produce and finish functional and highly durable surface designs of metals through sophisticated heat and surface treatments. We also develop and produce high-tech, lightweight aluminium and magnesium components that are both strong and light. The improved strength and stiffness of the materials improves product quality and reliability, while extending the lifetime of the manufactured parts (due to increased corrosion protection) and reducing the material footprint. They are of great importance for sustainable transportation in the automotive, e-mobility and aerospace industries.



SDG 12.4: we minimise hazardous waste.

Aalberts surface technologies develops and applies alternatives for hazardous substances, for example IVD coatings as substitute for chrome and cadmium coatings.



less waste.

SDG 12.5: we minimise waste with our solutions.

Aalberts engineers a 'fit to last' strategy and applies lifetime, quality and reliability improvements to our products. By extending the lifetime of materials. Aalberts reduces the need to replace products. Also, we aim to prevent the use of natural resources. Thanks to Aalberts' sophisticated heat and surface treatments, coatings enable lightweight products to be as strong as untreated materialintensive products. Lightweight materials require less natural resources and result in



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hygienic distribution

of water by developing composite fittings with a corrosion resistance like plastics and the mechanical strength comparable to metals



creating energy

savings with our balancing valves which are used for balancing the heating and cooling systems, resulting in reduction of energy costs



aalberts.com/SDG6 7





acceleration of technological

breakthroughs by enabling reuse of endof-life modules and upgrading them to the latest standards, leading to an even better sub-module than what was delivered in the first place







lifetime extension and lightweight materials

through developing coating services which provides an environmentally friendly solution to minimise fine-dust pollution for the e-mobility market

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our own commitment

At Aalberts, engineering solutions enabling a clean, smart and responsible future, goes hand in hand with a responsible way of doing business and addressing the risk of climate change. We nurture sustainable entrepreneurship in a safe and clean working environment with room for personal growth, enhancing our strong reputation and track record of sustainable, profitable growth.

net zero carbon roadmap

Aalberts is committed to be net zero carbon by 2050, or earlier. In line with our material topics presented in our materiality matrix on page 19 we report on emissions from our own operations and our supply chain. We measure, manage and monitor energy use, CO₂ emissions and energy and CO₂ intensity. In 2023 Aalberts has reached its target to decrease its CO₂ intensity with 30% by 2026, taking 2018 as a base year. In 2023 Aalberts performed a spend-based analysis of scope 3 emissions to gain insights into the carbon footprint of the organisation. The spend-based analysis shows the most important scope 3 upstream categories for Aalberts, such as purchased goods and waste. Aalberts started to measure, manage and monitor raw materials and waste in detail. For more information on our scope 3 emissions, please see page 53.

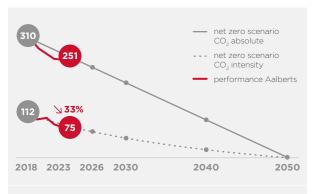
Sustainable entrepreneurship and the opportunities and risks of climate change are regularly on the agenda of the Executive Team and the business teams leadership. Opportunities and risks are included in the innovation roadmaps of the various business teams to create technological innovation with sustainable impact. Sustainable entrepreneurship plays a role in co-development with customers and adaptation to fast-changing circumstances and addresses the transitional risks of climate change. Environmental, social and governance topics are recurring items on the agenda for the annual strategy meetings of the business teams.

The strategic long-term improvement plans related to these topics are discussed with the Management Board and Executive Team. Sustainable entrepreneurship, including the Aalberts commitments and objectives, is integrated in the strategy Aalberts 'accelerates unique positioning'.

Sustainable entrepreneurship and social and environmental performance are embedded and executed by our HSR & sustainability network, driving health & safety, risk and sustainability performance. This network is chaired by the CEO and the director sustainable entrepreneurship. Each business team is represented by its COO or an equivalent position.

All business teams have developed a long-term strategic HSR & sustainability improvement plan, including clear targets per business team. The improvement plans must cover the social and environmental Aalberts KPIs. Performance and progress of the sustainability improvement plans are monitored via quarterly HSR & sustainability meetings throughout the year and more frequently where necessary. Best practices, such as performing Life Cycle Assessments (LCAs) and creating Environmental Product Declarations (EPDs) are shared throughout the businesses via webinars and through other means. Ongoing interactions with and between the group companies enable fast-learning and adaptation.





2018

- start measurement scope 1+2 emissions (base year)
- focus on energy efficiency and renewable energy use

2021

- target setting CO₂ intensity -30% by 2026 (scope 1+2)
- o commit to be net zero by 2050 or earlier

2023

- on target: CO₂ intensity realised -33% (scope 1+2)
- start disclosure scope 3 emissions (partly)

2023-2026

- continue efforts on CO₂ intensity reduction (scope 1+2)
- extend disclosure scope 3 emissions, including target setting

026-2050

- continue efforts on reduction scope 1+2 emissions
- continue disclosure and reduction scope 3 emissions

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Risk management is included in the HSR & sustainability improvement plans. Besides property and safety risks, physical climate risks related to extreme weather conditions to our operations are addressed. Aalberts recognises that increased severity and frequency of extreme weather events such as extreme precipitation or hurricanes can affect our operations and supply chain. Therefore, a climate risk and vulnerability assessment was carried out for the majority of our sites, assessing the acute and chronic physical risks and their potential financial implications using three climate scenarios over the short-term (2030) and the long-term (2050). The Intergovernmental Panel on Climate Change (IPCCC) warming scenarios RPC 2.6, RPC 6.0 and RPC 8.5 were utilised. The acute physical risks analysed were extreme precipitation and wind & the chronic physical risks analysed were temperature rise, drought and sea level rise. Financial implications relate to direct damage to property value and business interruption. The results show that climate risks such as extreme precipitation and sea-level rise that can cause flooding pose the biggest risk for our locations. The assessment enables us to strengthen our climate resilience. Our business teams evaluate these risks regularly in cooperation with our property risk insurer and follow up physical and human element climaterelated recommendations. These consist of engineering and technological solutions, such as implementing flood emergency plans or physical flood protection in areas with flooding or heavy rainfall risk or roof securement in hurricane zones. In addition to climate change adaptation policies (e.g., flood emergency plans), physical climate change risks and climate adaptation measures are integrated in the business continuity plans of our business teams.

Many of our group companies have their environmental management systems certified in accordance with the ISO 14001 standard, while our German companies also have certification in accordance with the ISO 50001 standard. A few of our group companies conform their sustainable management behaviours to the ISO 26000 standard

energy efficiency and CO₂ reduction

Energy use, energy intensity, CO₂ emissions and CO₂ intensity are KPIs for all our sites and locations. Energy and CO₂ efficiency action plans are integrated in the sustainability improvement plans of the business teams covering all locations of Aalberts. Where applicable, those energy efficiency plans are in line with the energy efficiency directive and requirements of ISO 14001 and ISO 50001 certifications. Action plans contain activities such as the use of excess heat for the heating or cooling of buildings, monitoring and reducing energy peaks and motion detector lights and reducing air leakages in CNC machines. As a result, increased energy efficiency has been realised at various group companies in 2023 and CO₂ intensity reduced.

Following our strategy, energy use and CO_2 emissions are part of our business decisions. This applies to medium-term investments, such as LED lightning and for long-term investments, such as equipment, solar panels or new sustainable buildings. For example, we build a DGNB certified factory with a future-proof design, including solar panels, charging stations for electrical vehicles and the use of excess heat from machining in the final surface treatment processes, in Assens, Denmark. This approach reduces both emissions and energy costs. Considering the worldwide transition to a carbon neutral economy, related legislation and (future) CO_2 taxes in the countries we operate, reducing CO_2 is also important from an opportunity and risk perspective.

We stimulate increasing the use and own generation of renewable energy, but believe that the most sustainable long-term solution for the planet and our company is energy efficiency. We focus on working as energy efficient as possible, by improving processes and looking for new energy efficient solutions. The group companies work towards targets set for their business team, enabling us to reduce our CO₂ emissions in line with the Paris Agreement.

reduce water use

Due to climate change, droughts have become more extreme and unpredictable, which may lead to water becoming a scarce resource in certain areas causing risk for society. Although Aalberts' operations do not require significant amounts of water for production or processes, we can play a role in mitigating this risk by optimising water management in such areas. With help of the WRI Aqueduct tool, we have assessed our operational sites on water withdrawal availability. The assessment performed in 2022 shows that approximately 20% of our operational sites is either located in 'high' or 'extremely high' water stressed regions. The analysis enables Aalberts to proactively act on the risks related to water-stressed areas which is part of business continuity management.

Aalberts seeks to promote responsible use of water throughout the company. Efficient water management is a KPI for all our operational locations. Our water management policy focuses on reducing water withdrawal and increasing water recycling. These measures contribute to reducing our water use intensity.

For instance, one way to increase our water recycling is through the installation of closed-loop water systems for cooling processes. This also prevents the discharge of legionella and avoids treatment of water with chemicals. These closed water circuits save up to 80% of water use. Another example is the use and recycling of rainwater for use in CNC production and other internal processes.

To minimise our impact, we remove solids, pollutants and organic matter from the water before it is discharged back to the source. This way, the water withdrawn holds the same or a higher level of water quality before it enters back into the water cycle. Particularly in water-stressed regions, there is a high focus on responsible use of water and there are many initiatives in place for water recycling and treatment to mitigate risks, like own water treatments stations.

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As a manufacturing company we are aware of our responsibility to use natural resources as efficient as possible. We see the circular economy as an opportunity, and we strive to make a material difference by looking at material differently. Our aim is to provide high-quality technologies while minimising the use of natural resources and maximising the value of the resources we do use. Through responsible material use at the design phase, prolonging the lifespan of materials during product use and meaningful recovery of materials at the end of life, our circular economy strategy covers the entire value chain.

responsible material use

Aalberts acknowledges that circularity starts with reducing the use of natural resources. Through performing LCAs and innovating product design, we seek to eliminate redundant materials and reduce the weight of our products. LCAs are performed for many of our products and processes, in accordance with standardised and internationally recognised methods (ISO 14040 and ISO 14044 standards), resulting in EPDs. Where possible, we work with our suppliers to improve our data. If we cannot reduce our absolute natural resource use, we use LCAs to determine whether we can substitute materials with environmentally-friendly alternatives, such as recycled materials or materials with an environmentally-friendly production process, such as green steel. We use data to innovate and realise further (environmental) savings. Responsible material use has a large impact on our scope 3 CO₂ footprint (category 1: purchased goods and services). In order to monitor and manage the responsible use of materials, we started measuring raw materials and waste data for our locations on Aalberts level in 2023, reference is made to page 54.

prolonged lifespan of materials

Aalberts engineers technologies that are made to last. We maximise the value of the resources by prolonging the lifespan of materials. We anticipate on lifetime extension by integrating circular principles in product

design and reducing the need for replacements. By designing our products for durability, reusability and recycling, we ensure that materials are used as long as possible. For instance, in eco-friendly buildings, the Flexcon Premium expansion vessel is designed for durability ensuring an extremely long service life of 15 years and our metering products include components that are reusable. Besides product design, we extend lifetime of materials during the use phase. In semicon efficiency, we collaborate with our customers to repair, refurbish and remanufacture our products to prevent materials from becoming waste.

meaningful material recovery

Aalberts is committed to improve its waste management and recover the materials as meaningful as possible. Monitoring the generation of waste by following the flow of materials and products throughout the production process helps to understand the flow of waste within the organisation. An overview of this waste flow and its causes, helps identifying opportunities for waste prevention and for adopting circularity measures. Waste flows are mapped at production and service locations and waste reduction programmes are in place and addressed in the sustainability improvement plans prepared by the business teams. Aalberts' focus is to reduce waste and to reuse and recycle as much as possible, so minimum waste ends up in incineration or landfill. At our production locations scrap, for example brass, is separated and sent to a recycling company or melted down in our own foundries as a raw material for reuse in our production process. For some of our processes chemical use is unavoidable. Where applicable, action plans for reduction or elimination of hazardous substances, such as CMR substances are in place. We develop and apply alternatives for hazardous substances, for example IVD coatings as substitute for chrome and cadmium coatings.

reduce packaging

Packaging is part of the LCAs performed and a focus point in the sustainability improvement plans of the business teams where it is a material topic.

Business teams have joined sector initiatives to learn from peers and accelerate progress in the supply chain. Many projects are initiated to reduce, replace or eliminate packaging. Think of more eco-friendly packaging such as cardboard, biodegradable foil and plastics, carton & pet tape, removing or using a smaller foil or bag, or the replacement of user manuals by QR codes. Reducing packaging is part of our circular design strategy to responsibly use natural resources.

biodiversity

A responsible way of doing business includes an awareness of our surroundings. Healthy ecosystems and biodiversity are a prerequisite for a clean future. The Integrated Biodiversity Assessment Tool (IBAT) as performed in 2022, shows that approximately 10% of our operational sites are in a 1-kilometer radius proximity of a Key Biodiversity Area. Although the biodiversity impact of our sites is limited, Aalberts seeks to mitigate the risk of biodiversity loss by reducing energy and CO₂ emissions and the use of natural resources. For new locations we strive to actively work with the natural environment around the buildings to create space around the buildings where the local plant and animal could thrive. For example at our location in Almere where we have several green spaces and biodiversity friendly initiatives like a sedum roof, insect hotels and kestrel boxes. Aalberts did not receive any fines or sanctions related to environmental issues in 2023.

our recognition			
ESG rating	2018	2023	Δ
CDP	B-	В	7
MSCI	BBB	А	7
CSA (S&P)1	86%	93%	7
Sustainalytics ²	21.13	23.15	7

¹ percentile

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² medium risk as of 2019