



Climate transition plan

Accelerating sustainability for net-zero 2035



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A wide-angle landscape photograph of a mountain range during the golden hour. The sky is a gradient of warm colors from light orange to pale yellow. The mountains are silhouetted against the bright sky, with some peaks showing snow or light-colored rock. In the foreground, a dark, rocky cliff face is visible on the left. A small, bright light source, possibly a meteor or a star, is visible in the upper left sky. The word "Welcome" is written in a clean, white, sans-serif font across the middle of the image.

Welcome



Moving the world into tomorrow

At ASM, sustainability is a vital part of our strategy and the driving force behind our efforts to transition toward a low carbon semiconductor industry. We proudly supply groundbreaking semiconductor wafer-processing equipment and solutions to our customers to enable a smart, connected, and equitable world.

This is why we're introducing ASM's first Climate Transition Plan – a strategic blueprint with the goal of achieving our net-zero targets. This comprehensive plan outlines our robust climate targets and lays out the roadmap for achieving our climate goals.

In 2021, we announced our goal of reaching net-zero by 2035. We set out on a path to decarbonize, by increasing share of electricity from renewable sources to 76% in 2021 and 2022, compared to 10% in 2020, with the target to achieve 100% renewable electricity across ASM global operations by 2024.

2023 marked a significant milestone for ASM, as we became the first company in the semiconductor sector to receive verification by the Science Based Targets initiative (SBTi) for our net-zero science-based target by 2035 which is the most ambitious target designation available through the SBTi process.

Our targets and determined path to decarbonization are in response to the urgent findings of the latest Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6), highlighting the dire consequences of surpassing 1.5°C of global warming.

As we step up our investments in sustainability, our Climate Transition Plan ensures we understand the climate dependencies and opportunities on our path to the net-zero target, and that we equip ourselves to mitigate foreseeable risks along the way. This report, aligned with leading bodies, standards, and emerging legislations, will further disclose our decarbonization plans.

Through a forward-thinking approach, we continue to prioritize and strengthen our collaboration with the value chain and beyond to not only stay ahead of what's next, but also play an integral role in shaping the world of tomorrow.





“

From ambition to action, the management board supports and champions ASM’s Climate Transition Plan. With clear vision and resolute leadership, we embrace this transformative journey, so that the company can deliver meaningful climate impact and leave a legacy of positive change for generations to come. It is a big and daunting task. Change, however, is in our DNA and a big part of our journey. There is not a moment to waste and we look forward to you joining us.

”



Benjamin Loh
President and Chief Executive Officer

“

Our climate ambitions center around our industry-leading 2035 net-zero target, and our priorities for building resilience to climate-related risks and opportunities. We intend to use this plan as a living document that steers and communicates the delivery of our net-zero targets and climate adaptation plans. It is expected to evolve over time as we progress toward our goal and continuously strive to engage and lead on related topics and metrics.

”



John Golightly
VP Global Head Sustainability

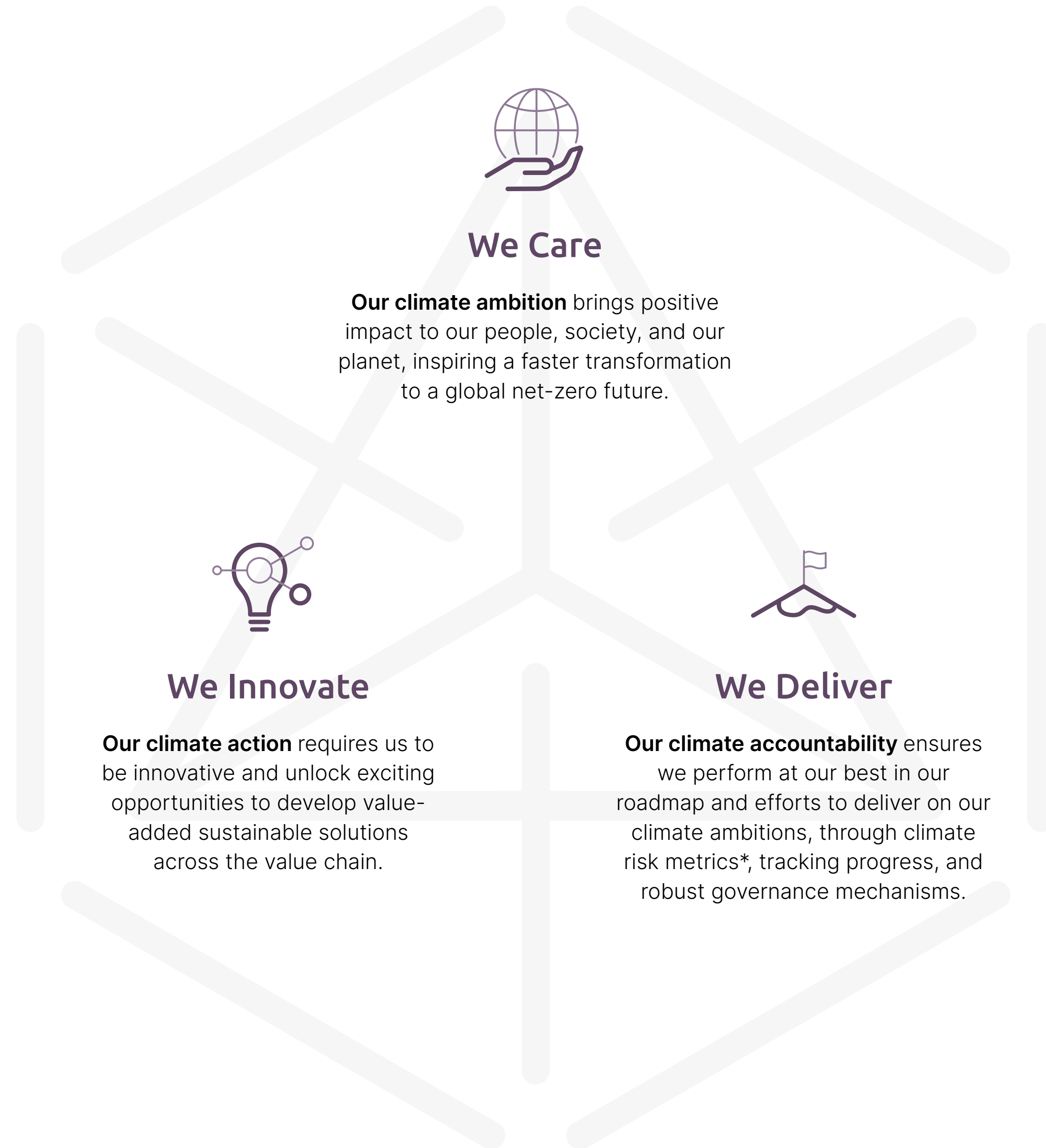


Interconnected actions

Forming the foundation of our transformation journey.

This first version of our **Climate Transition Plan** serves as our roadmap, outlining the critical strategies required to contribute to and expedite the global transition to a net-zero economy.

Structured around three core climate pillars, these strategies embody our company values and acknowledge how our actions affect the well-being of the planet.



*Our material climate-related risks and opportunities are in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and EU Corporate Sustainability Reporting Directive (CSRD).



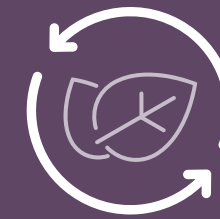
2023 highlights

We recognize the significant work ahead of us in achieving this ambition and understand there is no time to waste.

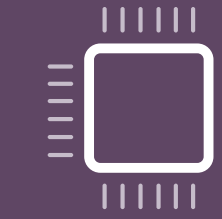
With more than 50 years of innovation and excellence at our fingertips, we set the stage for a purpose-driven strategy that propels us forward with clarity and transparency.



Became the first in the semiconductor sector to have **approved near and long-term science-based emissions reduction targets** with the Science Based Targets initiative (SBTi) Net-Zero Standard.



Joined the RE100 to assist in the achievement of net-zero by 2035, with a target to source 100% renewable electricity across ASM global operations from 2024.



Formed and joined the Semiconductor Climate Consortium (SCC) as a founding member and elected as Chair of the SCC's Governing Council.



Joined Intel, Applied Materials, Google and HP as founding sponsors of Catalyze, a pioneering initiative aimed at advancing the adoption of renewable electricity throughout the global semiconductor value chain.



Received 'A-' sustainability rating for CDP Climate Score.



Pursuing LEED Gold minimum rating for new facilities in Scottsdale, Arizona and Dongtan, South Korea.

A woman with her hair in a bun is carrying a young girl with two braids on her back. They are both looking out over a field of wind turbines at sunset. The scene is bathed in warm, golden light. The text 'Climate ambition' is overlaid on the left side of the image.

Climate
ambition



What does climate success look like?

ASM is a leading provider of advanced technologies in the semiconductor equipment market.

We stay ahead of what's next by innovating, collaborating, and enabling new potentials for the communities, industries, and societies we are a part of.



Our SBTi verified targets are among the most ambitious in our industry

Net-zero

across all scopes by 2035



To reach net-zero, we will decarbonize across Scope 1, 2 and 3 and transition to renewable energy across our value chain.



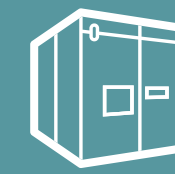
Scope 1 & 2
Our operations

- ▶ Energy efficiency across our operations
- ▶ Electrify and transition to viable alternatives
- ▶ Full transition to renewable energy



Scope 3
Our supply chain

- ▶ Develop low carbon procurement strategy
- ▶ Enable access to renewable energy through supplier engagement



Scope 3
Our products

- ▶ Drive product innovation in energy efficiency, process chemistries, and supporting equipments
- ▶ Customer engagement

We scale impact by collaborating across our value chain through industry-leading engagement programs.





Our science-based targets

In August 2023, our ambitious science-based emissions reduction targets were approved by the Science Based Targets initiative (SBTi). These cover the full scope of our business operations and value chain.



Renewable energy target

Intrinsic to achieving our SBTs, we aim to source 100% of our electricity needs from renewable sources across ASM global operations from 2024.

Near-term targets

Reduce absolute Scope 1 and 2 GHG emissions

50.4%

by 2032 from a 2021 base year.

Reduce Scope 3 GHG emissions

58.2%

per EUR of value-added gross profits within the same timeframe.

Long-term targets

Reduce absolute Scope 1 and 2 GHG emissions

90%

by 2035 from a 2021 base year.

Reduce Scope 3 GHG emissions

97%

per EUR of value-added gross profits within the same timeframe.

Reach net-zero target

Reach net-zero GHG emissions across the value chain



by 2035

The strategy is to prioritize direct emissions for decarbonization and neutralizing all residual emissions.*

*As per [SBTi Net-Zero Standard](#): after a company has achieved its long-term target and cut emissions by more than 90%, it must use permanent carbon removal and storage to counterbalance the final 10% or more of residual emissions that cannot be eliminated.



Current progress

Focus Area	Climate Target	Target Year	Progress as of 2023 and Actions Taken
 <p>Decarbonize our operations Scope 1 & 2</p>	100% renewable electricity for global operations	2024	<ul style="list-style-type: none"> Sourced 100% of electricity from renewable sources for key sites in Finland, Japan, the Netherlands, Singapore, and the United States through the purchase of EACs and RECs. Achieving up to 90% renewable electricity for global operational footprint through the expansion of RE strategies and related purchases in 2023, covering additional geographies including field office sites and South Korea.
	50.4% reduction in absolute Scope 1 and 2 GHG emissions	2032	<ul style="list-style-type: none"> 10% reduction for 2023 in Scope 1 and 2 emissions from 2021 base year.* 4.7% reduction for 2023 in water usage from 2021 base year.*
	90% reduction in absolute Scope 1 and 2 GHG emissions	2035	<ul style="list-style-type: none"> Completed energy audits for our top five sites to identify energy efficiency optimization, retrofit opportunities, and conservation actions.
	Reach net-zero GHG emissions across the value chain	2035	<ul style="list-style-type: none"> Formed a Global Environmental team in 2023, focused on net-zero, climate-related actions, and other environmental initiatives. Pursuing LEED Gold minimum rating for the new state-of-the-art facilities in Dongtan, South Korea and in Scottsdale, Arizona. Our Arizona facility is also pursuing 80% reclaimed water on site.
 <p>Decarbonize our supply chain & products Scope 3</p>	58.2% reduction of Scope 3 GHG emissions per EUR of value added	2032	<ul style="list-style-type: none"> 88% of critical & strategic suppliers reporting CDP climate data collected in 2023, to identify areas of opportunity for climate action, mitigation, and collaboration. 109% increase in packaging materials reuse through our crating reuse program in 2022, to reduce the consumption of resources, with continuing expansion into 2023. Strengthened our product sustainability group in 2023 to drive ASM tool energy efficiencies and footprint reduction.
	97% reduction of Scope 3 GHG emissions per EUR of value added	2035	<p>To achieve net-zero upstream Scope 3 GHG emissions, value chain engagement is critical.</p> <ul style="list-style-type: none"> Accelerate sector-wide action through the Semiconductor Climate Consortium (SCC). Collaborate with working groups within SCC to develop robust methodologies for refined Scope 3 measurement and identify innovation needed to unlock pathway to net-zero.
	Reach net-zero GHG emissions across the value chain	2035	<ul style="list-style-type: none"> Partner with major players in the semiconductor hyperscale space through the Catalyze program, a pioneering initiative that is aimed at advancing adoption of renewable electricity throughout the global semiconductor value chain.

*Despite significant growth in the business during this period.

A large white wind turbine stands on a rocky hilltop. The background features a range of mountains under a sunset sky with soft orange and blue tones. The text 'Climate action' is overlaid on the left side of the image.

Climate
action



Understanding our Greenhouse Gas (GHG) footprint

To effectively address our emissions sources, we must understand our base year GHG emissions and how they evolve within our operations and across our value chain over time.

The base year GHG footprint for our net-zero target was established as 2021 calendar year, verified by the SBTi. This provides a solid foundation for measuring the impact and trajectory of our decarbonization efforts.

Scope 3 is the driver of our GHG footprint, accounting for 99% of our overall emissions. Within Scope 3, our most significant emission sources are use of sold products (category 11) and purchased goods and services (category 1).

In the 2021 calendar year, use of sold products accounted for 72% of our estimated GHG emissions and purchased goods and services made up 23%. We are focusing our decarbonization actions in high-emission hotspots as we engage with our suppliers and customers. It is critical to deepen our understanding and improve our measurement of these emission sources.

We continue to examine how the Scope 3 emissions, and in particular categories 3.1 and 3.11 breakdown by region, material, and product to drive innovation towards achieving net-zero by 2035. We will report 2023 figures for Scope 1 and 2, and 2022 for Scope 3. For the most recent year GHG accounting figures, see our [annual report](#).



Scope 1

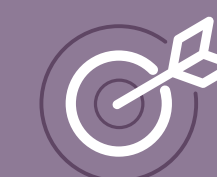
1.3

kt CO₂e

0.1% of 2021 GHG emissions

What does this mean?

Direct emissions from sources at company-owned and controlled facilities and on-site activities; this includes fuel combustion in boilers, generators, abatement equipment, mobile vehicles, fugitive emissions of refrigerants, and other gas emissions from our manufacturing processes.



Scope 2 (market-based*)

8.4

kt CO₂e

0.5% of 2021 GHG emissions

What does this mean?

Indirect emissions from utility-purchased electricity, steam, heat or cooling in our facilities.



Scope 3

1,834.0

kt CO₂e

>99% of 2021 GHG emissions

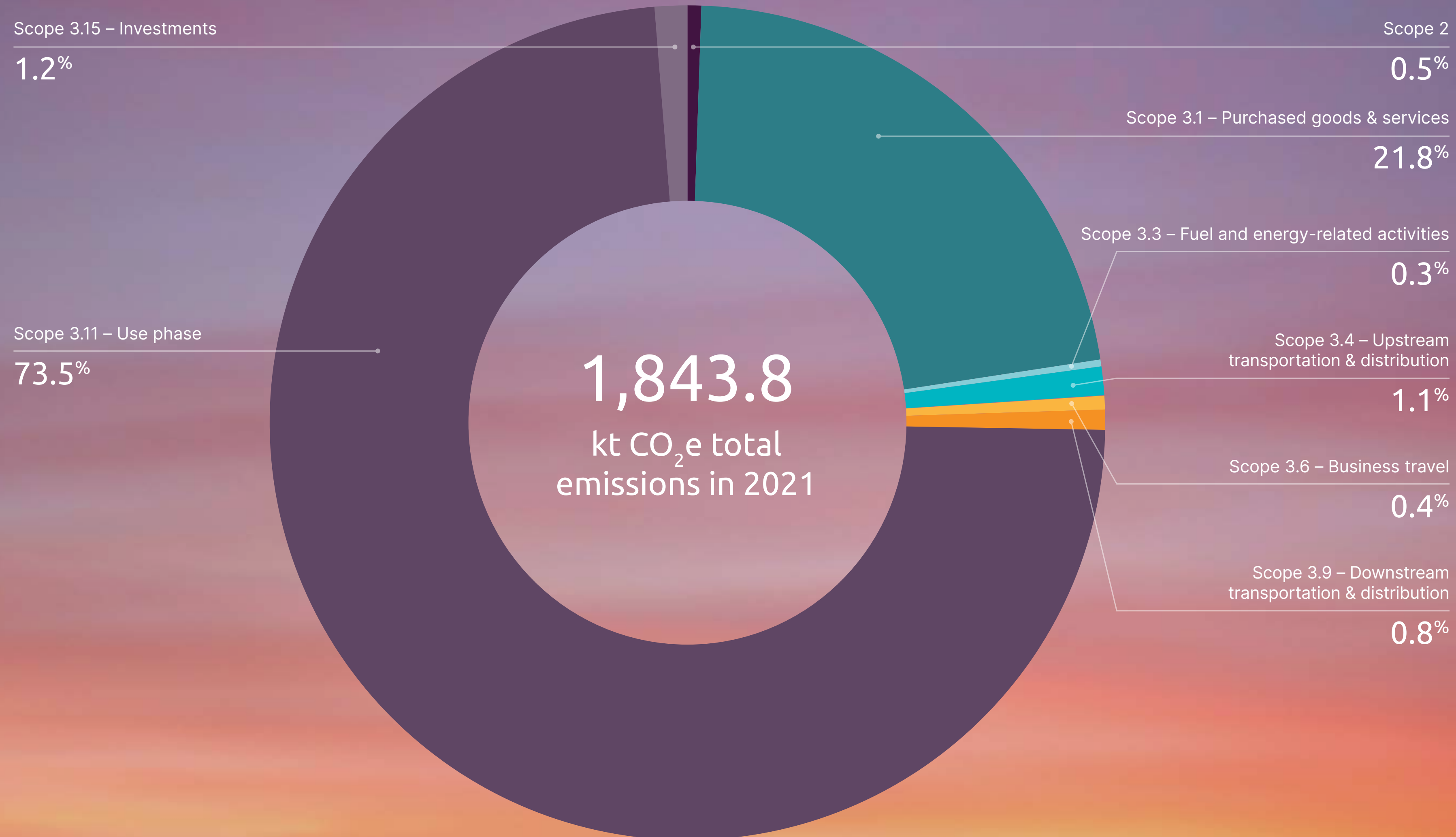
What does this mean?

Indirect emissions beyond our operations and across our value chain, including emissions from our suppliers and customers.

*Market-based method reflects emission associated with choices a consumer makes regarding electricity supplier/product.



2021 GHG emissions categories



*2021 was established as the base year GHG footprint for our net-zero target.



How we plan to reach our net-zero target

Since announcing ASM's 2035 net-zero target, we have assessed our available decarbonization levers to develop our reduction pathway. We realize the significant work ahead of us in achieving our near and long term goals, especially recognizing the necessity for advanced innovation and intensified actions to reduce our footprint over time.

Our net-zero roadmap is based on a set of intervention measures and actions across our value chain.

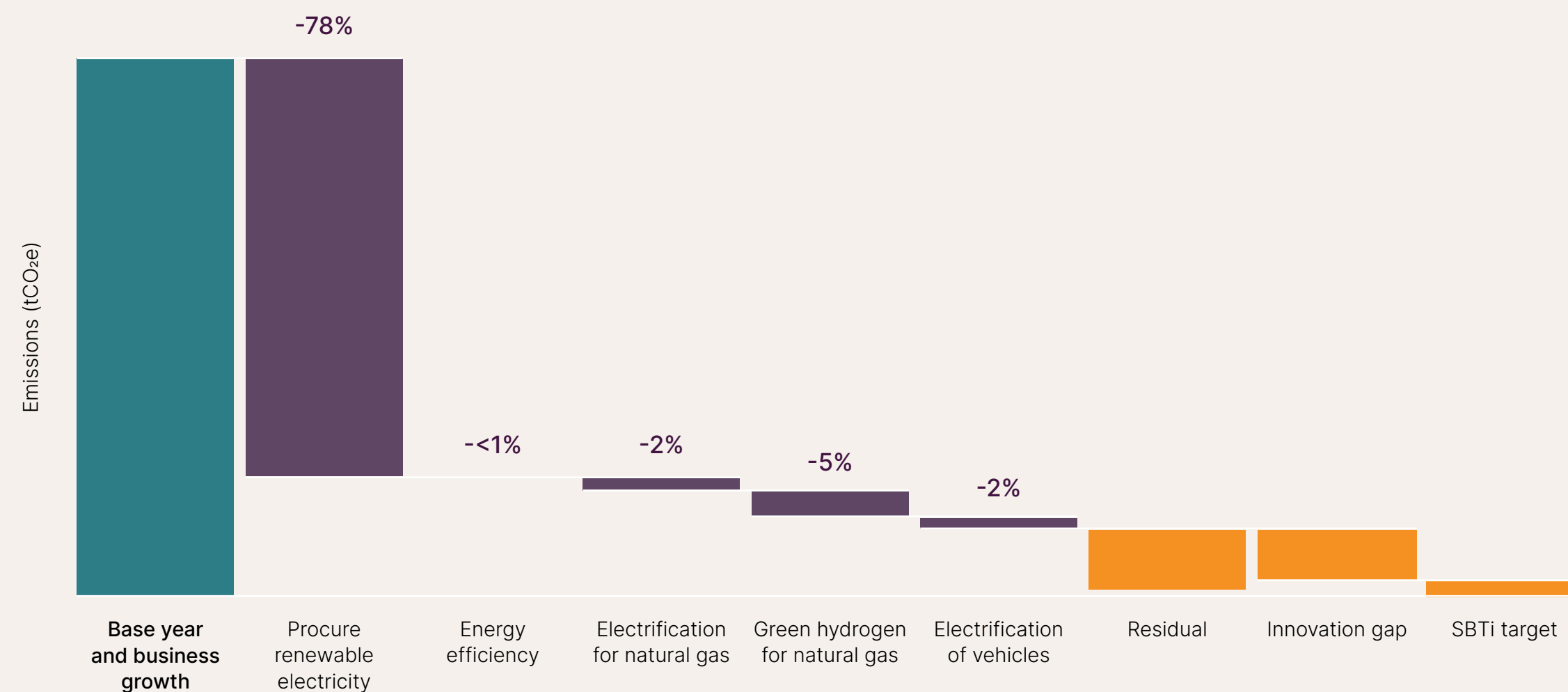
While reducing emissions within our operations is most directly within our control, our emissions hotspots in Scope 3 require prioritization of action throughout our value chain. A significant portion of the targeted reduction in Scope 3 emissions can be realized as our value chain partners, customers, and suppliers transition to renewable energy sources.

As we monitor ways to address areas of opportunities that will take more time, innovation, or development, we will accelerate prioritized actions through new technological solutions and additional GHG reduction interventions. By demonstrating transparency in our progress, we can set an example for others to follow.

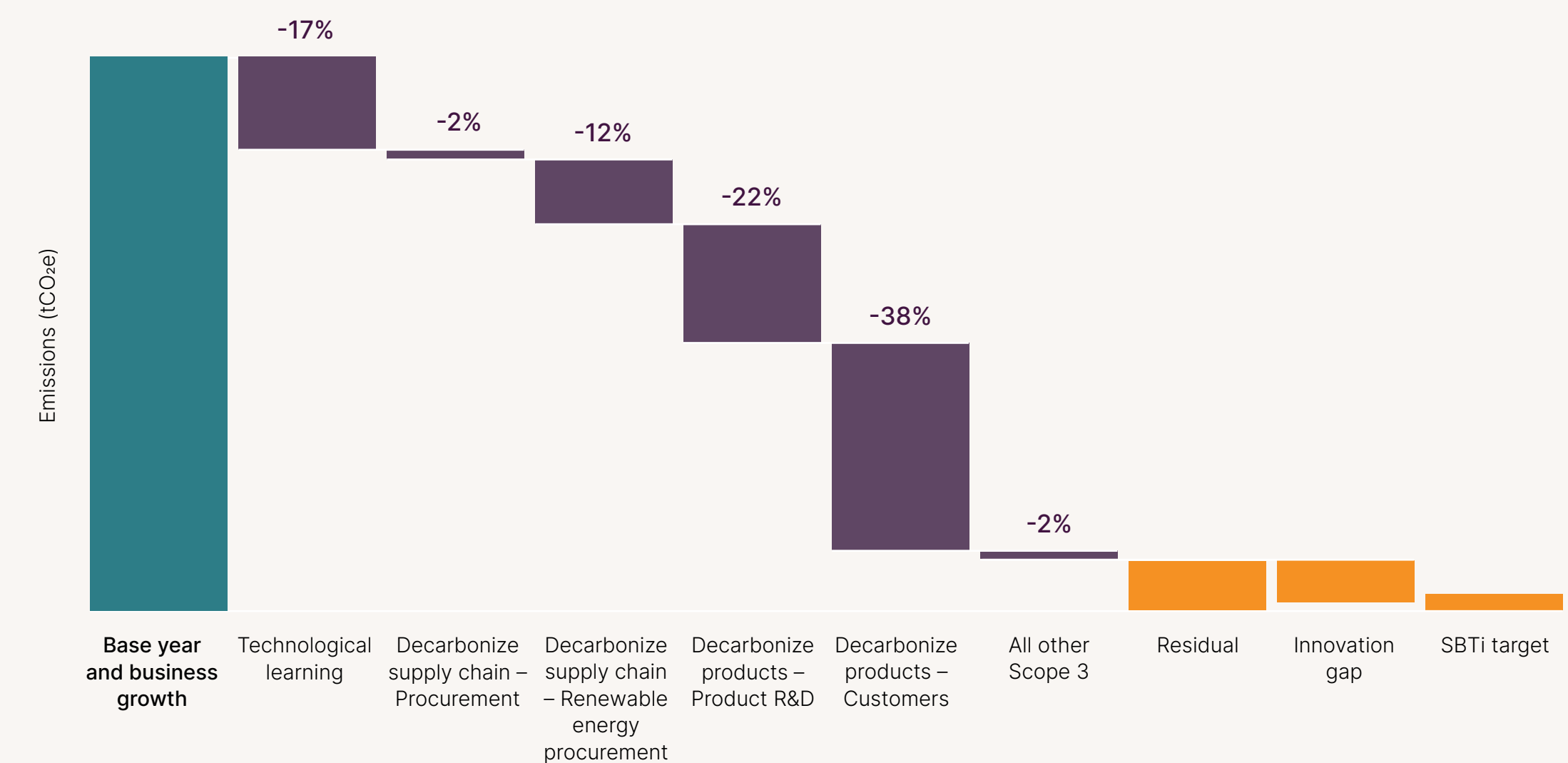
We will also continue to engage with our external stakeholders, taking a leadership role in initiatives like SCC, Catalyze, and others. Acknowledging that both suppliers and customers account for more than 90% of our footprint, we understand that engagement is just the beginning.

Our success hinges on their actions, as we depend on their commitment to decarbonize. Our collective transformation requires a unified effort from suppliers, customers, and the entire value chain, collaborating to decarbonize and enhance the overall footprint of the sector.

Interventions for Scope 1 and 2

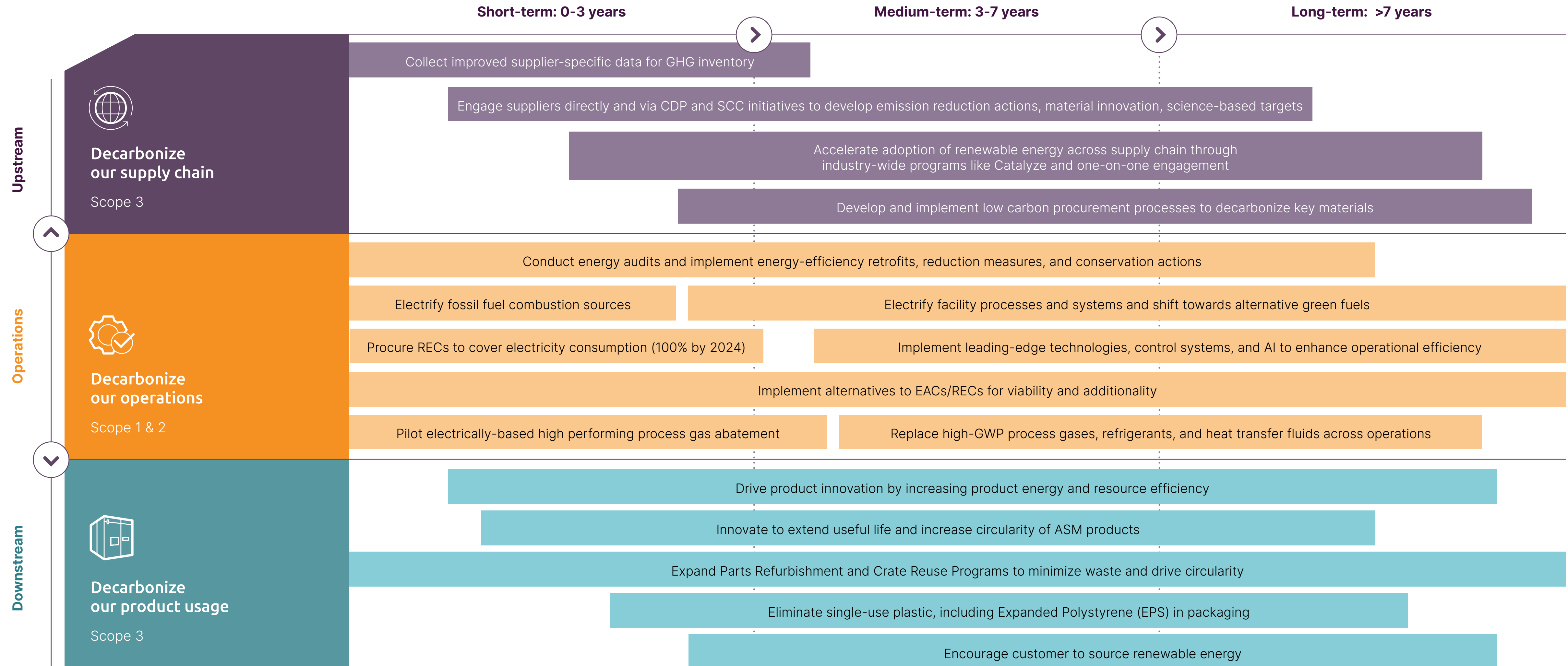


Interventions for Scope 3





Our decarbonization roadmap





Upstream actions

Near-term: 0-3 years

Medium-term: 3-7 years

Long-term: >7 years



Decarbonize our supply chain

Scope 3

	Near-term: 0-3 years	Medium-term: 3-7 years	Long-term: >7 years
Collect improved data from suppliers	<ul style="list-style-type: none"> ▶ Continue to improve disclosure rates and quality through CDP Supply Chain platform to help suppliers understand their carbon footprint and identify reduction opportunities. ▶ Update ASM contract language to align with RBA contracting stipulations and add reference to our supplier code of conduct, with the intention to encourage the tracking, documenting, and publicly reporting of corporate-wide greenhouse gas reduction targets, upstream emission hotspots, and critical intervention levers. 	<ul style="list-style-type: none"> ▶ Continue to partner with suppliers and Tier 1 manufacturers to collect and incorporate supplier-specific emissions data (target at least 80% data) in Scope 3 GHG inventory. ▶ Expand proportion of suppliers reporting through CDP. 	<ul style="list-style-type: none"> ▶ Continue to evolve GHG accounting methods should evolve to align with leading frameworks and industry best practices.
Engage suppliers to develop emission-reducing actions	<ul style="list-style-type: none"> ▶ Engage with suppliers to understand their ongoing GHG reduction efforts via one-on-one engagement, CDP disclosure, SCC activities, and Catalyze. 	<ul style="list-style-type: none"> ▶ Continue engagement and partnership with critical and strategic suppliers to develop targets and decarbonization roadmaps aligned to ASM's 2035 net-zero target. 	<ul style="list-style-type: none"> ▶ Support suppliers with one-on-one engagement and SCC initiatives to implement roadmaps and measure and report on impact.
Increase the use of renewable energy throughout the supply chain	<ul style="list-style-type: none"> ▶ Develop educational materials to help suppliers navigate through renewable energy sourcing and implementation options. ▶ Investigate SCC collaboration for cohort or consortium PPA/vPPA throughout our value chain and for key geographies. ▶ Leverage Catalyze to drive widespread adoption of renewable electricity. 	<ul style="list-style-type: none"> ▶ Continue to engage with suppliers and industry-wide programs such as Catalyze to support implementation of energy efficiency measures and transition to renewable energy. 	<ul style="list-style-type: none"> ▶ Require suppliers to procure renewable energy for their operations associated with ASM's allocated emissions.
Develop and implement low carbon procurement strategy	<ul style="list-style-type: none"> ▶ Define useful life of ASM equipment and source components to last the defined useful life, or include on maintenance schedule to ensure ease of change and possible refurbishments. 	<ul style="list-style-type: none"> ▶ Develop emissions-based criteria for inclusion in supplier sourcing and selection strategies. ▶ Incorporate emissions-based criteria into procurement policies for key materials and other identified hotspots. 	<ul style="list-style-type: none"> ▶ Expand procurement policy to cover the entire supply chain.



Operational actions

Near-term: 0-3 years

Medium-term: 3-7 years

Long-term: >7 years



Decarbonize our operations

Scope 1 & 2

	Near-term: 0-3 years	Medium-term: 3-7 years	Long-term: >7 years
Implement energy efficiency and reduction measures across our owned and operated sites	<ul style="list-style-type: none"> ▶ Energy audits for top energy use sites to optimize efficiency, identify retrofit opportunities, and implement conservation measures. ▶ Utilize the highest green building standards (e.g., LEED Gold or higher) to build leading-edge energy efficient buildings for new site development. 	<ul style="list-style-type: none"> ▶ Implement energy efficiency by retrofitting and optimizing gas-powered appliances used in our processes. ▶ Continue to utilize highest green building standards (e.g., LEED Gold or higher) for new sites. ▶ Explore and implement leading-edge technologies, control systems, and AI to enhance operational efficiency. 	<ul style="list-style-type: none"> ▶ Electrify facility processes and systems to reduce fossil fuel consumption. ▶ Operate and maintain our real estate portfolio to the highest efficiency performance standards. ▶ Continue to monitor the development of future AI and advanced technologies for increased efficiency.
Electrify where possible and switch to low carbon/low emissions fuels	<ul style="list-style-type: none"> ▶ Identify and prioritize electrification of fossil fuel combustion sources, including fleet vehicles, gas-powered appliances, heating sources, abatement processes, and more. ▶ Finalize and publish Global Electric Vehicle policy for transition to electric vehicles. 	<ul style="list-style-type: none"> ▶ Reduce dependence on fossil fuels by taking a proactive approach to alternative sources such as biomethane, green hydrogen, based on feasibility and availability. 	<ul style="list-style-type: none"> ▶ Continue to implement electrification and other alternative fuel opportunities.
Procure renewable energy for our global operations	<ul style="list-style-type: none"> ▶ Purchase RE100-approved EACs/RECs or equivalent alternatives to cover 100% of electricity consumption by 2024. ▶ Investigate opportunities to partner with SCC or throughout the value chain on PPA/vPPA options. 	<ul style="list-style-type: none"> ▶ Transition to more accessible, cost competitive, and reliable renewable energy where feasible. ▶ Invest in generation of alternative energy sources at or near ASM facilities to reduce reliance on procuring RECs/EACs. 	<ul style="list-style-type: none"> ▶ Continue to procure renewable energy and implement alternatives to EACs/RECs.
Reduce and/or replace non-electric energy sources or other GHG gasses within operations	<ul style="list-style-type: none"> ▶ Investigate and invest in R&D to replace high-GWP process gases, refrigerants, and heat transfer fluids utilized in operations. ▶ Investigate and pilot electrically-based high performing process gas abatement. 	<ul style="list-style-type: none"> ▶ Continue to invest in R&D to replace high-GWP gases and pilot low-GHG alternatives at selected sites. 	<ul style="list-style-type: none"> ▶ Scale low-GWP alternatives and fuel switches across operations.

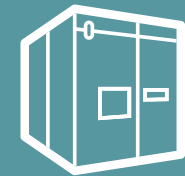


Downstream actions

Near-term: 0-3 years

Medium-term: 3-7 years

Long-term: >7 years



Decarbonize our product usage

Scope 3

Innovate products and enhance product energy and resource efficiency

- ▶ Maximise energy savings and product efficiency with innovative design and advanced data science techniques.

- ▶ Continue to invest in R&D to adopt alternative materials and reduce the energy and resource intensity of ASM products.

- ▶ Implement product improvements and continue to innovate.

Innovate and implement solutions to reduce downstream life-cycle impacts of our products and waste generation

- ▶ Invest in R&D to extend useful lives and increase circularity of ASM products by focusing on upgrades, refurbishment, repair, and reuse.
- ▶ Build on the existing crate reuse program to improve the reusability of shipping crates and engage with suppliers, contract manufacturers and customers to encourage the adoption of the reuse process.

- ▶ Develop a robust tool and parts refurbishment program to maximize the utility of products for downstream customers.
- ▶ Eliminate single-use plastic, including materials such as Expanded Polystyrene (EPS) in our product packaging.

- ▶ Continue to invest in R&D to increase the circularity of ASM products, reduce waste in packaging, and engage with supplier and customers to improve adoption of circular product/packaging practices.

Analyze customer renewable adoption, engage, and encourage sourcing of renewable energy

- ▶ Engage with customers through industry initiatives, such as SCC, and one-on-one engagement to support procurement of renewable energy.
- ▶ Collaborate through SCC to develop methodology to incorporate customers' publicly disclosed renewable energy usage in GHG accounting, and align with leading accounting frameworks.

- ▶ Implement mechanisms to encourage customers to operate ASM products using renewable energy.

- ▶ Continue to support customer renewable energy journeys as needed.



Tackling Scope 1 and 2 GHG emissions

We are implementing robust intervention measures and changes that are within our organization's direct control (Scope 1 and 2), to reduce our carbon footprint to as close to zero as possible, including:

- ▶ reducing our energy and replace fuels use through innovative decarbonization solutions.
- ▶ evaluating and incorporate leading edge efficiencies into the design of new (green) facilities.
- ▶ moving away from fossil fuels by electrifying our operations and monitoring advancement in equipment and facility designs.
- ▶ procuring and producing renewable energy for our electricity usage.
- ▶ reducing and abating process greenhouse gases used in our operations, including N₂O (nitrous oxide), NF₃ (nitrogen trifluoride), and SF₆ (sulfur hexafluoride); and work toward viable replacements.

We recognise that many of the challenges we face don't have straightforward or currently known solutions.

We have dedicated resources to pathfind innovative and sustainable solutions for the harder, longer-term issues within our Scope 1 and 2 emissions.

This ensures we are able to continuously refine and adapt to new technologies along our emission reduction journey.

We do this through:



Energy efficiency across operations



Electrification and transition to viable fuel and process gas alternatives



Full transition to renewable energy



Energy efficiency across operations

Reduce energy consumption in processes and buildings

Processes

In 2023, we conducted a comprehensive energy audit across our top five sites, that make up 95% of total energy usage for ASM (Phoenix, Japan, South Korea, Singapore, and the Netherlands). This audit was designed to identify key areas for energy reduction and conservation actions to use less energy, and establish a baseline from which to budget for 2024 and beyond.

We have identified promising technologies and crucial conservation behaviors that can support us to reduce energy consumption in our Scope 1 categories. For example, implementing a smart Building Management System and meters allows for better monitoring and adjustment of usage, make informed decisions for effective reduction strategies, and carry out energy-efficient retrofits, including variable dynamic controls for HVAC and chilled water systems. Our strategic investments will also target areas with substantial impact for ASM, including Electric Vehicles (EVs), green hydrogen, and biomethane.

Buildings

Our energy efficiency work extends to the optimization of our building portfolio, by incorporating stringent sustainability requirements and expanding our Green Building Program. This approach ensures our properties remain at the forefront of climate resilience and high performing buildings. To support this critical process, ASM has enlisted specialized expertise to optimize the decarbonization of green buildings and operations.

Accelerating ASM's Green Building Program

Expansion of North American headquarters in Scottsdale

ASM is investing €300 million to develop a new state-of-the-art site on more than 20 acres (8.5 hectares) in Scottsdale, Arizona. The construction aims for a LEED Gold minimum rating, aligning with our commitment to sustainability. This includes investing in renewable energy sources, such as onsite electricity generation through solar and a water recycling facility. In particular, we are improving the reclaimed water system, striving for over 80% reclaimed water usage in the new facility. Building on the achievements of our existing Arizona facility, which achieved a 60% reduction in absolute water consumption from 2017 to 2022, despite significant business growth, we are setting the stage for an even more sustainable future.



Award-winning Green Building: Singapore BCA Green Mark Gold+ certification achieved in 2021

In line with our 2021 net-zero ambition setting, we took immediate action to reduce our carbon footprint in new facilities and built our new Singapore Woodlands facility to the Singapore BCA Green Mark Gold+ certification in 2021. The facility features:

- ▶ High performance glass: Grey Low-E glass is used to reduce heat gain through fenestrations.
- ▶ Efficient air-conditioning system: Water cooled chilled water system shall achieve an efficiency of 0.60 kW/RT.
- ▶ Enhanced overall thermal performance: Achieving an ETTV less than 20.07 W/m².
- ▶ Efficient lighting: Energy efficient lightings complete with motion sensors for staircases and toilets to reduce energy usage.
- ▶ Efficient vertical transport: Use of lights with VVVF and sleep mode.



Electrify and transition to viable fuel and process gas alternatives

Phase out fossil fuel dependency

Electrification

Electrification is a cornerstone of our strategy to transition away from carbon-intensive energy sources. Electrifying our equipment, we not only reduce our direct emissions, but also lay the groundwork for seamless integration of renewable energy sources.

Transition to alternative fuels and chemicals

We are closely monitoring innovative advancements in markets for alternative fuels and exploring the potential to further integrate these into our operations.

In 2023, we finalized an initiative that identified alternative fuels for our process gas abatement and other fossil fuel equipment in six key markets (the United States, Japan, South Korea, Singapore, Finland, and the Netherlands).

The mapping identified opportunities to reduce our dependence on fossil fuels, with proactive shifts towards alternative sources, like biomethane and green hydrogen. Through our new SONORA platform, we are beginning to transition to low or no GWP process gases like F2 to reduce the operational emissions footprint, greatly reducing the process emissions from ASM toolsets both internally and for customers.



Electrifying Tomorrow: Innovative Facility Systems

As a forward-looking measure, we will embark on the electrification of facility systems to reduce fuel consumption wherever possible. This includes the exploration and implementation of cutting-edge energy-efficient technologies, advanced control systems, and harnessing the potential of Artificial Intelligence (AI) to enhance our operational efficiency.



Full transition to renewable electricity

100% renewable electricity across ASM global operations from 2024

In 2022, the emissions associated with the electricity purchased for our global operations accounted for 93% of our market-based Scope 2 indirect emissions and is therefore a major focus for improvement in reducing our Scope 2 footprint.

Our ambitious 2024 target to source 100% renewable electricity for all global operations will be executed through two phases (refer to Figure 1):

- **From 2021 onwards:** Source 100% of electricity from renewable sources for key sites in Finland, Japan, the Netherlands, Singapore, and the United States.
- **From 2024 onwards:** Source 100% of electricity from renewable sources for the remainder of our global operations.

As a member of RE100, we continuously assess opportunities to accelerate the transition to 100% renewable energy in our global operations.

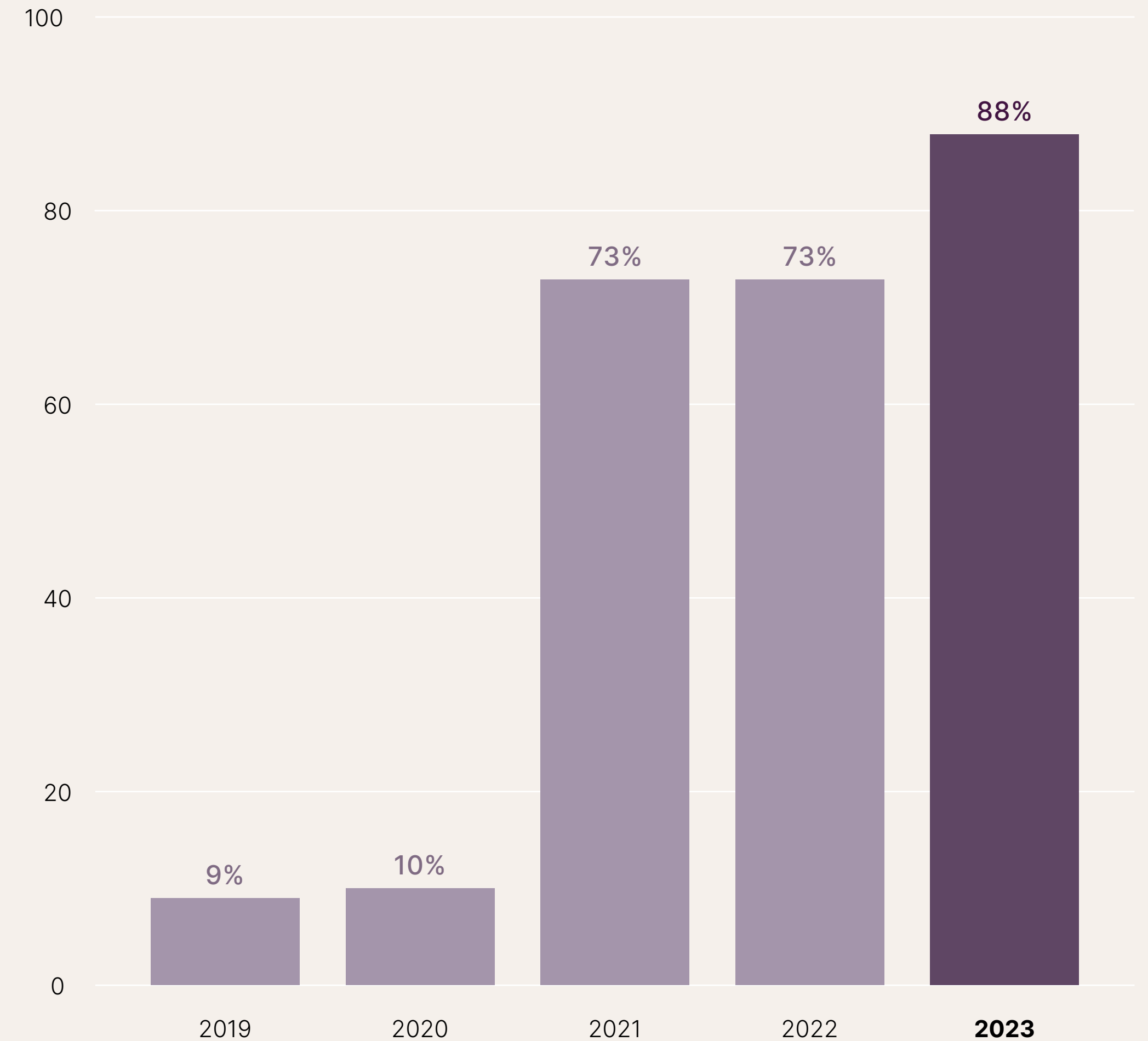
Our first on-site solar installation was completed in December 2023, in Singapore. This installation is expected to generate over 500 MWh/yr electricity.

Conducting a thorough analysis to pursue the best renewable purchasing solutions, our procurement of renewable electricity from 2021 through 2023 were predominantly from high quality Energy Attribute Certificates (EACs) or Renewable Energy Credits (RECs) sourced regionally that bring additionality to the market. In cases where EACs/RECs were difficult to obtain, we opt for green premiums. Importantly, our procurements to date align with RE100 requirements.

Moving forward, we will continue to purchase high quality EACs and RECs or equivalent alternatives. However, with the evolving market dynamics shifting towards longer-term contracts such as power purchase agreements (PPAs/virtual PPAs), we will assess and refine our ongoing strategies to adapt to changing conditions. To complement this, we have begun to install on-site generation of electricity at some of our key sites and will build this into the design of new sites where feasible.

Electricity from renewable sources (in %)

Primary manufacturing and engineering sites



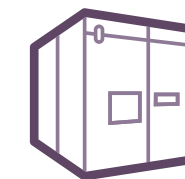


Tackling Scope 3 GHG emissions

With a majority of our total emissions falling under Scope 3, our ability to meet our reduction goals is dependent on our supply chain and customer’s decarbonization successes.

We recognize the importance of collaborating and partnering across our value chain to achieve our decarbonization goals for our supply chain and our products (Scope 3). This will accelerate and meaningfully address global climate challenges that the world is facing today.

We do this by:



Decarbonizing products

We recognize that the highest GHG impact across our Scope 1, 2, and 3 emissions is represented by our customers’ use of our products. Even with improvements in our product efficiencies, electricity is still required to operate them. Therefore, our long-term success is dependent on our customer’s adoption of renewable energy.

Promoting sustainable innovation in our products and guiding our customers’ transition to renewable energy will be critical in driving decarbonization within our customer base.



Decarbonizing supply chain

A significant portion of our Scope 3 GHG emissions is attributed to our supply chain. Our supply partners and their data are key to improve our understanding and reduce environmental impact.

Empowering and influencing our suppliers to contribute meaningfully to ASM’s sustainable supply chain objectives stand as a cornerstone in our strategy. We are equally dependent on our suppliers to adopt renewable energy, and we will use our leverage as their customer to influence and support their success.



Decarbonize products through innovation

Increase product energy efficiency and innovation

Energy-efficient enabling materials

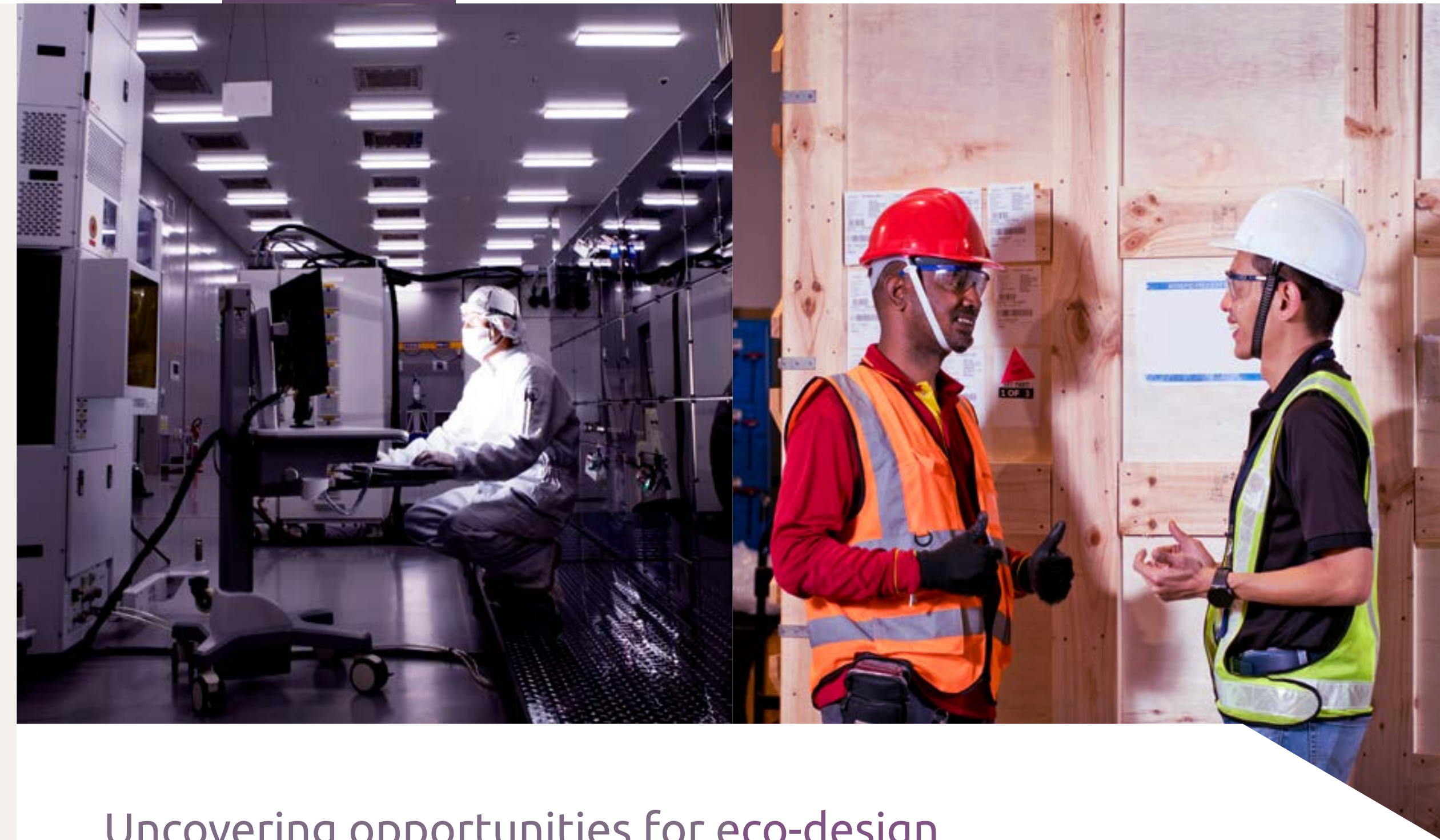
Our greatest impact lies in the technologies that we enable. By developing materials and processes that enhance the energy efficiency of transistors, memory elements, and interconnects, we contribute to reducing power consumption per computing operation beyond our own footprint. ASM's continuous research into innovative materials such as phase-change and ferroelectric materials is expected to further revolutionize sustainable semiconductor technologies, such as memory devices and AI architectures.

Innovative product design and development

We persist in maximizing energy savings and product efficiency through innovative design and advanced data science techniques.

We have achieved notable breakthroughs in our chemical processes, reducing consumption and abatement requirements. We have successfully identified ways to accelerate the heating process through reduced reactor volumes, while simultaneously scaling back leakage. As an example, our new SONORA platform achieved a 15–40% reduction in thermal energy per wafer, showcasing our capability to enhance throughput and energy efficiency, and lower cost of ownership.

By persistently innovating in product design and process efficiency, we aim to set new standards in product sustainability within our industry.



Uncovering opportunities for eco-design in partnership with our value chain

Expanding ASM's Parts Refurbishment Program

ASM Parts Refurbishment Program demonstrates our active efforts to minimize resource consumption and champion responsible waste management.

The Program is designed to maximize the utility of our products and extend the useful life of materials to the greatest extent possible, for the benefit of our customers. Through the repair, refurbishment, and direct reuse of existing parts, we substantially diminish the need for new materials during the product's lifespan.

Minimizing the footprint of transporting equipment

The secure transportation of our equipment relies on the use of durable packaging, particularly crates. Our Crate Reuse Program minimizes the need for single-use packaging and remains an instrumental initiative in advancing our objective to decrease the consumption of raw materials, emissions, and overall footprint linked to the transportation of tools and parts across the value chain.



Decarbonize product use through customer engagement

Encourage customer decarbonization efforts

We believe in the collective capacity of our value chain to tackle our climate challenge. As such, we value and foster partnerships with our customers based on a mutual commitment to sustainability.

Our approach to customer engagement is centered around encouraging higher adoption of renewable energy sources and driving reductions in high Global Warming Potential (GWP) process gases and fossil fuels.

We engage in the following ways:

Indirect

Collaborating with customers through SCC at the working group and consortium level, along with other industry-wide initiatives.

Direct

Active customer engagement to accelerate decarbonization, through participation in programs like Catalyze, where we can influence the adoption of renewable electricity throughout the global semiconductor value chain.

Passive

Engaging indirectly with customers through public disclosure benchmarking (e.g., CDP) to educate and inspire action from our decarbonization strategy.



Driving sustainability together: ASM's innovative approach to customer-centric carbon footprint reduction

The achievement of ASM's climate goals is intricately linked with our customers' decarbonization efforts and adoption of renewable energy.

Our role in multiple industry associations, notably the SCC and in programs like Catalyze*, enables us to work in close collaboration across our value chain and to expedite the semiconductor industry's shift towards low-carbon energy alternatives.

Encouraging, incentivizing, and motivating our customers to procure renewable energy throughout the entire lifespan of the product is of paramount importance. Many of our larger customers are already advancing toward this objective, setting ambitious goals and making strides toward achieving 100% reliance on renewable energy.

*See [Page 31](#) for more information.



Develop a low carbon procurement strategy



Sustainable procurement strategies

We actively engage with suppliers to determine the true carbon footprint of the product parts and services we procure. This data is invaluable for shaping the future of our sourcing strategies. With these insights, we will establish sustainable procurement policies and processes, advocating for the procurement of materials with low emission intensity. This includes a specific focus on key elements, such as aluminum, copper, steel, and alternatives with recycled content.

Our policies will be developed to include requirements for manufacturing and the sourcing low-carbon products according to a standardized taxonomy and methodology. Initially, this approach will be piloted with critical and strategic suppliers, concentrating on the most emissions-intensive materials. Our aim is to expand this procurement policy to cover the entire supply chain by 2035. Suppliers who actively collaborate and align with ASM in addressing climate impact will find sustained compatibility with our business values and practices over time.

ASM's 2023 Supplier Day: Building, recognizing, and rewarding supply chain excellence

Our 2023 annual Supplier Day was well attended by more than 80 suppliers representing 13 countries. We kicked off our Catalyze program with our supply partners at this event. In the presence of our guests, we were thrilled to outline the ways we plan to help drive forward their sustainable strategies and expedite the semiconductor industry transition towards renewable electricity.

Celebrating sustainability leadership

In 2021, ASM introduced our excellence in sustainability award (PRISM) to acknowledge and celebrate industry members who exemplify leadership in environmental and social initiatives. The aim of PRISM is to set a new standard and inspire all suppliers to elevate their sustainability efforts.

Our 2023 PRISM Award Winners, representing a carefully selected group of our most critical suppliers, stand out as trailblazers in carbon emissions reduction and have made significant commitments to achieve science-based targets with the SBTi:

BizLink Technology – for ESG leadership in social and climate (Committed)

Celestica International – for ESG leadership in social and climate (Approved: 1.5^o)

UWC Berhad – for collaboration for social impact



Engage with suppliers

Inspire sustainable practice adoption

We aim to inspire, guide, and empower our suppliers towards adopting more sustainable practices to assist us in achieving our ambitious 2035 net-zero target.

Through direct one-on-one engagement, as well as sponsoring partnered programs, our goal is to develop joint partnerships on GHG and climate goals, determine renewable energy options for suppliers, assist them in goal setting, and engage in overall information sharing.

Our dedication to promoting responsible business practices and sustainability within the industry is exemplified by our membership in the Responsible Business Alliance (RBA), the world's largest industry coalition dedicated to responsible business conduct in global supply chains. In 2022, all of our critical and strategic suppliers committed to the RBA's Code of Conduct, which ensures full compliance with local laws, rules, and regulations, and expectations to disclose relevant GHG emissions.

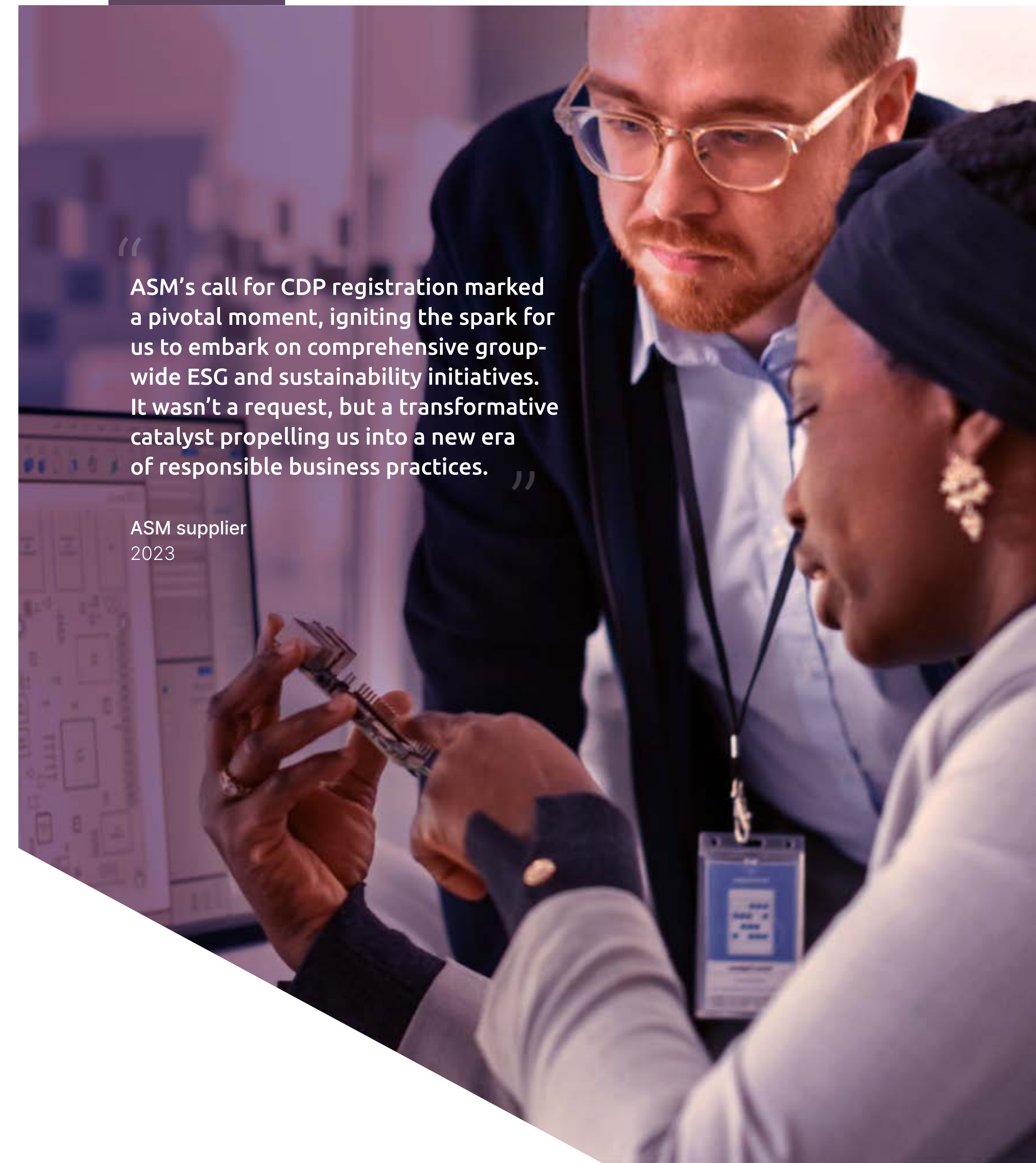
This is a great first step in demonstrating our suppliers' commitment to sustainability, including making a positive impact in GHG emissions tracking, goals, and transparency. We will continue to support our suppliers in realizing their goals via engagement programs, such as Catalyze.

All key suppliers are required to report annually via the CDP Climate Change Questionnaire and are invited to attend educational webinars in conjunction with CDP. Our commitment to supplier engagement led us to join CDP's Supply Chain Leadership program in early 2022 to strengthen supplier outreach. As of 2023, 88% of our vital suppliers disclosed their information to CDP, reflecting the data from the 2022 calendar year.

Looking ahead, we will forge even stronger partnerships with our suppliers, so we can improve knowledge sharing, establish GHG reduction targets, and co-create comprehensive decarbonization roadmaps.

In a recent SEMI Semiconductor Climate Consortium study*, it was reported that over 80% of emissions in the semiconductor industry come from electricity consumption, predominantly powered by third-party sources for manufacturing and semiconductor operation.

Accelerating the replacement of fossil fuel energy with low-carbon energy alternatives presents a viable and increasingly compelling solution to mitigate this substantial source of greenhouse gases.



“**ASM’s call for CDP registration marked a pivotal moment, igniting the spark for us to embark on comprehensive group-wide ESG and sustainability initiatives. It wasn’t a request, but a transformative catalyst propelling us into a new era of responsible business practices.**”

ASM supplier
2023



Industry leadership

Broadly engaging with the semiconductor industry underscores every aspect of our transition to our net-zero target.

It is essential for us to share crucial information, standardize approaches and methodologies, and collaborate on decarbonization opportunities that extend beyond our immediate operations and value chain.

Our involvement with various industry groups serves as a testament to our commitment to collective progress and sustainable transformation. Most notably, we hold active roles in the **Semiconductor Climate Consortium (SCC)** and **Catalyze Renewable Electricity procurement program**, in addition to:

Semiconductor Industry Association (SIA)

In 2022, we joined the Semiconductor Industry Association (SIA). As a leading advocate for the industry, SIA is dedicated to fostering sector growth by uniting semiconductor companies, addressing shared challenges, and fortifying U.S. leadership in semiconductor manufacturing, design, and research. By actively collaborating with the government and key industry stakeholders, SIA advocates for policies and regulations that boost innovation, stimulate business, and enhance international competitiveness. Our membership highlights our commitment to contributing to the advancement and prosperity of the semiconductor industry in collaboration with key partners.

Responsible Business Alliance (RBA)

As a dedicated member actively engaged in the Responsible Business Alliance (RBA), we closely monitor and participate in the alliance's initiatives. Notably, the RBA has partnered with the Alliance for Water Stewardship (AWS), underscoring a collective commitment to raise awareness and drive action on water-related issues within Information Communication Technology (ICT) companies and other stakeholders in microelectronics supply chains. Aligned with corporate water-stewardship principles, our engagement emphasizes our dedication to responsible business practices and sustainability within the industry.

Global research collaborations

Since 1990, we have cultivated a strategic partnership with imec (Interuniversity Microelectronics Center), alongside key universities and industry collaborators, to collectively propel research and development within the semiconductor industry.

An instrumental component of this collaboration is our support for the imec Sustainable Semiconductor Technologies and Systems (SSTS) research program. This initiative, championed by ASM, is dedicated to reducing the carbon footprint of the semiconductor industry. This collaboration remains a cornerstone in our commitment to advancing decarbonization within ASM and contributing to sustainability across the broader semiconductor landscape.

RE100

In May 2023, we joined RE100 as a strategic step towards realizing our net-zero 2035 targets and achieving 100% renewable electricity by 2024. RE100, the corporate renewable energy initiative, serves as an ideal partner for our commitment to sustainability, aligning with our core values of caring for both society and the planet. This alliance demonstrates our dedication to fostering the widespread adoption of renewable electricity within our operations and furthering our environmental stewardship.

CDP

Elevating our commitment to sustainability, we joined the CDP supply-chain program at the Lead level, aiming to promote transparency in sustainability reporting. To enhance visibility and comprehensively understand our supply chain's greenhouse gas (GHG) emissions, starting from 2022, we mandate all critical and strategic suppliers to annually complete the CDP Climate Change disclosure.

SESHA

As the President-Elect holding a board seat in SESHSA, a dynamic multi-industry association dedicated to advancing health, safety, sustainability, and environmental practices, we take pride in our role. As a Diamond sponsor of SESHSA's activities, we actively pursue opportunities for innovation aimed at reducing safety risks and enhancing safety performance within our industry. This commitment marks our dedication to fostering a culture of safety, sustainability, and continuous improvement across the board.



Semiconductor Climate Consortium (SCC)

Collaboration with SEMI and the semiconductor industry

We actively participate in SEMI, the industry association uniting companies in the electronics design and manufacturing supply chain.

In 2021, SEMI initiated a sustainability advisory council (SAC) to form a position and collaborate on sustainability issues affecting its members, with ASM being one of the initial members. Through the SAC, ASM identified the value of collaboration for climate, and formed a working group that led to the formation of the Semiconductor Climate Consortium (SCC). The SCC is now a member-led organization of companies committed to aggressive climate action, and is supported by SEMI. ASM joined as a Founding Member, and has been active since the consortium's inception and was elected the inaugural Chair of the SCC's governing council.

We are working with the SCC to align critical methodologies and standards across the industry, particularly in the realm of GHG accounting and other climate-related topics, including:

- ▶ Engaging key customers, leading manufacturing equipment suppliers, and other value chain partners to accelerate decarbonization progress and align on crucial methods for measuring product-related metrics, including lifetime and energy use.
- ▶ Accelerating progress in supply chain decarbonization, leveraging the advancements of key suppliers who are also SCC members.
- ▶ Facilitating energy access in difficult-to-source regions, supporting members and the value chain in gaining access to clean energy.
- ▶ Enabling alignment within the industry value chain on methodologies, fostering information sharing, and identifying opportunities for joint efforts.



“
Past methods of engaging our value chain are insufficient given the needed scale and limited time available. Together through the SCC, we strive to achieve impact and scale well beyond our individual efforts in response to the climate change.”

John Golightly
VP Global Head Sustainability
and SCC Chairperson



Catalyze

The first-of-its-kind program to increasing renewable energy use within supply chain

In 2023, ASM became a founding sponsor of Catalyze, alongside Intel, Applied Materials, Google, and HP.

Catalyze represents a pioneering initiative designed to drive the widespread adoption of renewable electricity across the global semiconductor value chain.

Catalyze is poised to enhance the global availability of renewable electricity by accelerating the deployment of renewable projects through collaborative long-term sourcing agreements. The program also facilitates the pooling of energy needs, offering companies without the capacity to engage in utility-scale power purchase agreements (PPAs) market access. Its initial focus centers on empowering suppliers within specific markets in the semiconductor value chain where renewable energy faces limited availability. The long-term ambition is to extend its reach globally, aligning with specific interest and renewable energy market opportunities. Catalyze represents a collective step towards a more sustainable future, exemplifying industry leadership in the pursuit of renewable energy.



The Catalyze program:

- ▶ **Amplifies collective impact:** By consolidating energy purchasing power throughout the semiconductor value chain, Catalyze accelerates the implementation of renewable energy projects, fostering a united front for sustainable progress.
- ▶ **Encourages inclusive supplier participation:** Recognizing that some suppliers may lack individual capacity, Catalyze offers them an opportunity to engage in the market for utility-scale power purchase agreements (PPAs), ensuring widespread supplier inclusion.
- ▶ **Strives for universal accessibility:** Open to any company within the IT supply landscape that supplies to a Catalyze sponsor, the program promotes universal accessibility, fostering a collaborative approach across the industry.
- ▶ **Promotes regional renewable energy adoption:** Catalyze raises awareness about the availability of renewable energy in specific global regions where the semiconductor value chain operates, driving targeted efforts to harness clean energy sources.
- ▶ **Delivers education and digital initiatives:** Leveraging various educational and digital technology platforms, Catalyze engages in impactful initiatives to encourage measurable actions in supply chain decarbonization, furthering the industry's dedication to sustainability.



Climate accountability



How we are tracking progress

The importance of holding ourselves accountable to the transition toward a 1.5°C pathway means we have drawn upon leading Climate Transition Plan frameworks, including the Carbon Disclosure Project (CDP) and the Transition Plan Taskforce (TPT) Consultation Disclosure Framework, to shape this document.

GHG metrics and targets

Our science-based targets, in alignment with the Paris Agreement and verified by the Science-Based Targets initiative (SBTi), guide our journey towards our net-zero targets by 2035. Achieving these targets entails following emission reduction pathways in accordance with the 1.5°C trajectory, alongside neutralizing residual emissions, as per the SBTi guidelines.

We track progress by annual calculations of our greenhouse gas (GHG) footprint and measurements of emissions changes against our SBTi-approved reduction pathways. In our commitment to the highest standards and starting in 2022, we obtain limited assurance for our emissions across all three scopes, ensuring transparency and accountability in our pursuit of environmental sustainability.

Remuneration

At ASM, we evaluate performance in alignment with annual Key Performance Indicators (KPIs) established to support our six corporate priorities, notably to 'Accelerate Sustainability'. Each fiscal period, achievement of challenging milestones across our operations activates remuneration through a structured short-term incentive (STI) plan. As reported in recent Annual Reports, the STI plan has included objectives aligned with ASM's decarbonization targets. Climate targets related to the STI plan are specific to the Management Board.

Governance

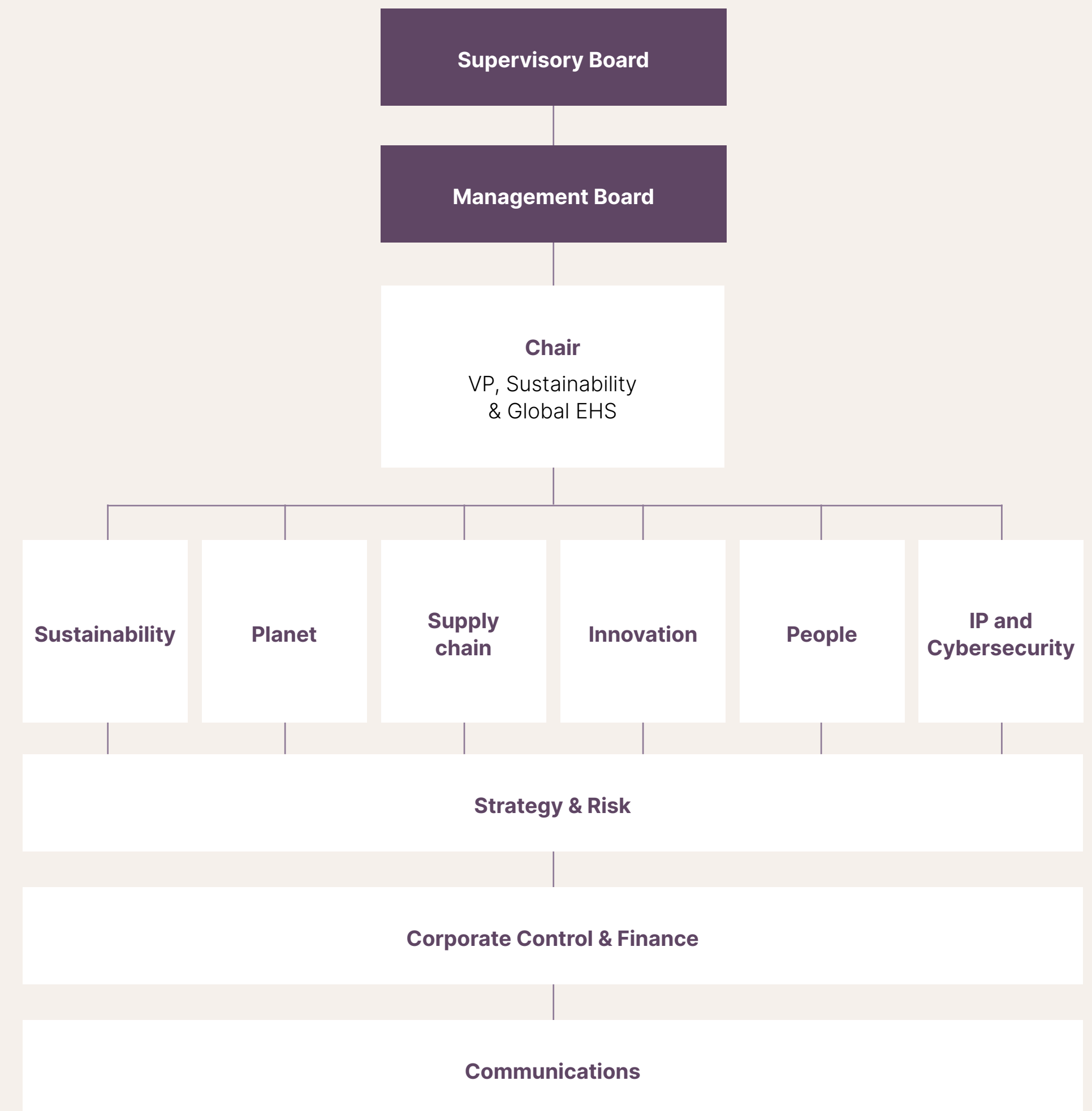
Our governance model features a two-tier board structure comprising three members in the Management Board and six in the Supervisory Board. In 2022, we established an Executive Committee to collaborate with the Management Board in steering and executing ASM's overarching strategy.

The Management Board holds ultimate responsibility and approval authority for our sustainability, ESG, and environmental strategy, encompassing all climate-related considerations and disclosures.

Oversight of climate-related matters is the Sustainability Leadership Council (SLC), a high-level committee consisting of senior leaders within the organization. This structure ensures comprehensive governance, strategic oversight, and effective management of sustainability initiatives and environmental strategies at ASM.

Governance for sustainable impact

ASM's Sustainability Leadership Council (SLC) Structure





Climate adaptation risk & opportunity assessment

We identify, assess, prioritize, manage, and integrate climate risks into enterprise risk management (ERM) through our global Climate Adaptation Risk and Opportunity Assessment (CAROA) process*.

The CAROA outlines our approach for identifying, assessing, prioritising, and managing our climate risks and opportunities across four steps:

01.

Identification and monitoring

We review our longlist of climate risks and opportunities (R&O) on an annual basis based on internal/external changes (e.g. business expansion, updates to climate scenarios etc.). This process involves identifying whether new R&Os need to be added to the longlist, or determining whether existing climate-related R&O topics need to be assessed further.

02.

Assessment

We prioritize climate risks and opportunities from the longlist and assess these using a hotspot climate scenario analysis. Subsequently, we conduct further assessments climate risks and opportunities further as needed and quantify their potential impacts on our business.

03.

Prioritization

We prioritize climate risks and opportunities based on materiality considerations and integrate risks with the highest potential business impact into enterprise risk management on this basis.

04.

Action planning and execution

We define and act on appropriate actions to manage material climate risks and opportunities.

*Our CAROA process is in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and EU Corporate Sustainability Reporting Directive (CSRD).



Climate risks & opportunities

Our climate risk assessment considered both physical climate risks under a high impact (>4°C) scenario and transition risks and opportunities under a low carbon (<2°C) transition scenario for our operations and value chain.

We analyzed these climate risks and opportunities across three time horizons: short term (1-5 years), medium term (5-15 years), and long term (15-30 years) using the Intergovernmental Panel on Climate Change (IPCC)'s Shared Socioeconomic Pathway (SSP) 5 – 8.5 scenario* for physical risks and transition scenarios defined by the International Energy Agency (IEA) for transition risks and opportunities.

*Or equivalent.

Physical risks & opportunities		Transition risks & opportunities			
Acute	Chronic	Policy	Market	Technology	Reputation
<p>Projected increases in extreme temperatures could lead to unfavourable working conditions for our high talent workforce. Heatwaves may raise cooling costs for manufacturing and other sites.</p> <p>We've also identified that changing intensity and/or frequency of single impact hazards such as flooding and tropical cyclones could lead to supply chain disruptions.</p>	<p>Certain operational sites are projected to be under a greater risk of sea level rise and coastal erosion.</p> <p>Projected change in water availability could potentially lead to water restrictions impacting operations.</p>	<p>Emerging carbon pricing mechanisms, stricter regulations on the reporting and reduction of fluorinated GHG emissions, and mandatory compliance relating to measuring and reporting on GHG emissions could potentially result in higher operating and/or compliance costs.</p>	<p>Potential increases in demand for low carbon products and technology, as well as changes in supply and demand for renewable energy procurement present risks and opportunities for our business.</p>	<p>The adoption of low-carbon technologies in the semiconductor sector could lead to higher operating costs.</p>	<p>Stakeholder expectations related to climate-related disclosures and increased stakeholder scrutiny of our progress towards our decarbonization goals could potentially lead to reputational impacts.</p>
Mitigation and adaptation responses					
<p>Our initial focus has been on reducing water consumption across operations facing water scarcity and minimizing its impact to biodiversity. We are now reviewing the results of the climate risk analysis to identify additional mitigation and adaptation measures to build climate resilience to other physical risk hazards across our operations and supply chain.</p>		<p>Similar to decreasing water demand, our site-wide energy audits will advise on how we can decrease our electricity demand and accelerate the development of our energy efficiency investment roadmap, such as new LEED buildings to minimize our dependency on energy.</p>		<p>We are building resilience to transition risks through our commitment to decarbonizing our full value chain, tracking emerging technologies, monitoring relevant policies and reporting on progress on our climate journey externally.</p>	

A person in silhouette stands on a rock in a vast, mountainous landscape during sunset. The sun is low on the horizon, casting a warm, golden glow over the scene. The person is looking towards the right, where the sun is setting. The landscape features rolling hills and mountains, with the foreground covered in grass. The overall mood is contemplative and serene.

Looking
ahead



Climate resilience for a net-zero economy

Recognizing the complexity of challenges in the semiconductor industry's climate roadmap, ASM acknowledges that no one company alone can tackle them all.

The journey toward net-zero GHG emissions presents one of the most intricate challenges for our industry. Leveraging our unique position, we aim to foster collaboration across the entire value chain. By setting a bold target for 2035, we are paving the way for a future where the entire technology industry achieves global net-zero.

With 99% of our total emissions falling under Scope 3, the accelerated adoption of renewable electricity throughout our value chain emerges as a crucial step forward. We take pride in the impact we have made in embedding sustainability into our value chain in recent years.

These initiatives include founding membership in the Semiconductor Climate Consortium, our founding sponsorship of the pioneering Catalyze program, and active participation in the CDP Supply Chain Program.

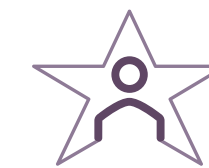
As we work towards reaching our target of net-zero GHG emissions across our value chain by 2035, we will continue to prioritize direct emissions for decarbonization and neutralize residual emissions* by financing carbon removal, mitigation, and storage projects to reach our net-zero target. We will also follow the SBTi's Beyond Value Chain Mitigation (BVCM) guidance and invest in additional mitigation outside our value chains to contribute towards reaching societal net-zero.

This is an evolving journey.



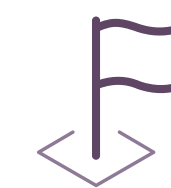
We pledge

to listen attentively to our customers and partners.



We aspire

to activate a broader adoption of net-zero values within our spheres of influence, as we unveil our Climate Transition Plan – a foundational step toward achieving net-zero.



We are confident

that our tangible actions will drive transformative change for the climate in the years to come.

*As per **SBTi Net-Zero Standard**: after a company has reduced emissions by at least 90% through their long-term science-based targets, it must use permanent carbon removal and storage to neutralize the final 10% of residual emissions to reach net-zero emissions.



Glossary



Acronyms

Acronym	Definition
AWS	Alliance for Water Stewardship
BVCM	Beyond Value Chain Mitigation
CAROA	Climate Adaptation Risk and Opportunity Assessment
CDP	Carbon Disclosure Project
CSRD	EU Corporate Sustainability Reporting Directive
EAC	Energy Attribute Credit
ESG	Environmental, Social, and Governance
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
GWP	Global Warming Potential
HTFs	Heat Transfer Fluid
IPCC	Intergovernmental Panel on Climate Change
KPI	Key Performance Indicator
LCA	Life Cycle Assessment
MB	Management Board
PCW	Process Cooling Water
PG&S	Purchased Goods and Services
PFAS	Per – and Polyfluoroalkyl Substances
PPA	Power Purchase Agreement

Acronym	Definition
RBA	Responsible Business Alliance
RE	Renewable Energy
REC	Renewable Energy Certificate
RCP	Representative Concentration Pathway
R&D	Research and Development
SAF	Sustainable Aviation Fuel
SBT	Science-Based Target
SBTi	Science Based Targets Initiative
SB	Supervisory Board
SCC	Semiconductor Climate Consortium
SDS	Sustainable Development Scenario
SIA	Semiconductor Industry Association
SLC	Sustainability Leadership Council
STEPS	Stated Policies Scenario
STI	Short-Term Incentive
TCFD	Task Force on Climate-related Financial Disclosures
TPT	Transition Plan Taskforce
vPPA	Virtual Power Purchase Agreement



ESG / sustainability definitions

Indicator	Definition
CDP	CDP is a not-for-profit charity operates a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.
Climate adaptation	Adjustments in company processes, practices, and structures to mitigate priority risks moderate potential damages or to benefit from opportunities associated with climate change.
Climate change	Climate change is a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates. These changes have a broad range of observed effects upon the earth.
Critical and strategic suppliers	Suppliers that are determined to be critical or strategic to our business either because the business spends, or critical components or critical materials, or strategic technical partnership.
Data normalization (as a function of R&D spend)	Total power or water purchases divided by total number of millions of dollars in R&D spend during that calendar year.
EAC	Energy Attribute Credit represents a unit of energy produced from renewable sources, and contributes to supporting and growing the renewable energy markets in the geographic regions it is purchased.



Ahead of what's next

Feedback and questions

Please feel free to contact us if you have any feedback on or questions about our Climate Transition Plan: [**investor.relations@asm.com**](mailto:investor.relations@asm.com)

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