



TOMRA

Our Path to Net Zero



Net-zero – a challenge and opportunity

The latest climate science from the IPCC—described by the UN as “code red for humanity”—shows it is still possible to limit global temperature rise to 1.5°C, but we are dangerously close to that threshold. Recognizing this urgent need for action, **TOMRA has set ambitious science-based targets to achieve net-zero emissions by 2050**. Climate change, driven by human-induced greenhouse gas (GHG) emissions, poses significant risks to ecosystems, human health, and economies worldwide.

Halving our emissions by 2030 and achieving global net-zero emissions by 2050 is vital to mitigate the worst impacts of climate change and secure a livable and sustainable future for all. Net-zero means that any GHG emissions emitted by human activities are balanced by an equal amount being taken out of the atmosphere. This goal, enshrined in the Paris Agreement, requires immediate and sustained action to reduce emissions across all sectors. As global temperatures continue to rise, we face increasingly severe weather events, rising sea levels, and disruptions to food and water supplies, which threaten the very fabric of our societies.

The pathway we choose to achieve net-zero is equally important as the target date itself. Different emissions trajectories can lead to vastly different climate outcomes, even if they technically meet the net-zero deadline. For instance, pathways that prioritize early action on emissions reductions can significantly limit the total warming compared to those that delay action. With global average surface temperature already having risen by 1.2°C above pre-industrial levels, we experience more frequent and severe extreme weather events every year¹. Even minor increases in temperature can have profound implications for how livable planet Earth will remain. Each additional 0.1°C of warming is estimated to expose an additional 140 million people to dangerous heat².

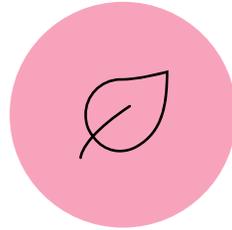
As a technology and solutions provider for the circular economy, TOMRA's business model is already driving significant climate impact by enabling avoided emissions from the collection and recovery of materials for recycling. We consider this our environmental handprint. **Our goal is to grow and maximize this handprint while at the same time minimizing our environmental footprint** – across our entire value chain. Our new science-based targets and commitment to reach net-zero emissions set a clear direction for how to achieve that goal.

1) [IPCC](#) 2) [Nature Sustainability](#)

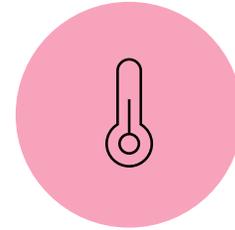
Why are we taking this step?



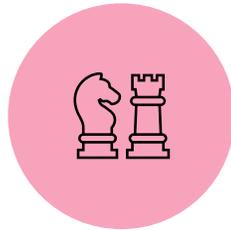
To utilize resources more efficiently and do “more and better with less” is an **integral part of TOMRA’s vision and mission**



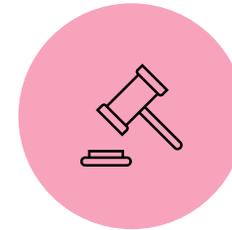
Sustainability and decarbonization are key business drivers for TOMRA. **It’s what we expect from our customers, and we must ‘walk the talk’**



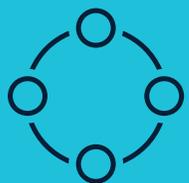
On a path for 2.7°C, the world needs ambitious corporate climate action, and we have a **moral duty to act**



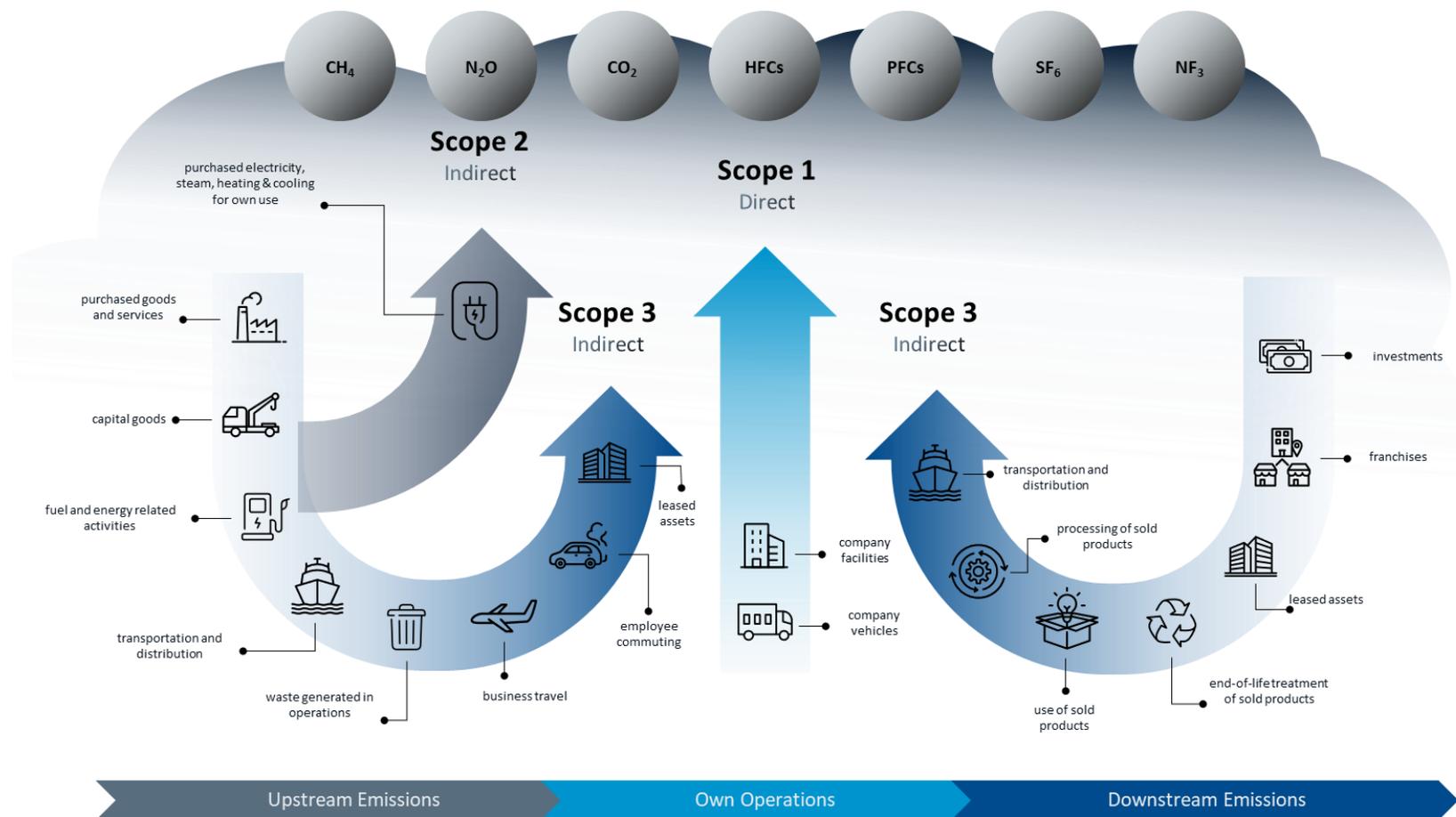
We believe that becoming a net-zero company will generate significant **long-term value and strategic advantage**



We face **increasing stakeholder expectations** for TOMRA to develop a net-zero transition plan, which will become a **legal requirement** for corporate reporting by 2025



This requires reducing emissions across our value chain

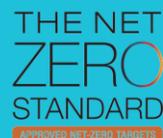


And our new Science-Based Targets set the goal and direction

Emissions from own operations
(scope 1 and 2)

Reduce Scope 1 and 2
emissions by **55% by 2033**

Reduce Scope 1 and 2
emissions by **90% by 2050**



Emissions from our value chain
(scope 3)

Reduce Scope 3 emissions
intensity* by **62% by 2033**

Reduce Scope 3 emissions
intensity* by **97% by 2050**

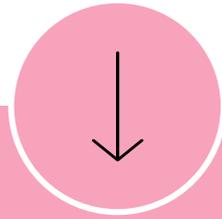
** Annual GHG emissions / mEUR value added*

Our Net Zero Program Focuses on Three Pillars



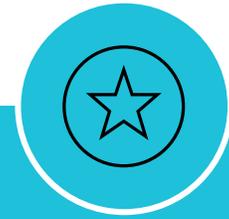
Understanding our emissions

Quality GHG data and tooling provide fundamental building blocks that allow us to focus on the areas where we have the most impact and assess the effectiveness of our emission reduction initiatives. We aim to develop data-driven decision-making capabilities on our GHG data, leveraging advanced analytics and tools to further enhance our understanding of our emissions, reduction potential, and trends.



Reducing our emissions

Reducing our emissions is our top priority as we work towards our science-based targets and achieving net-zero emissions by 2050. We will continuously identify and implement emission reduction initiatives across our entire value chain. This includes prioritizing R&D and investing in low-emission technologies, promoting climate action in all collaborations across our value chain, and decoupling financial growth from emissions growth.



Incentivizing net-zero ambition

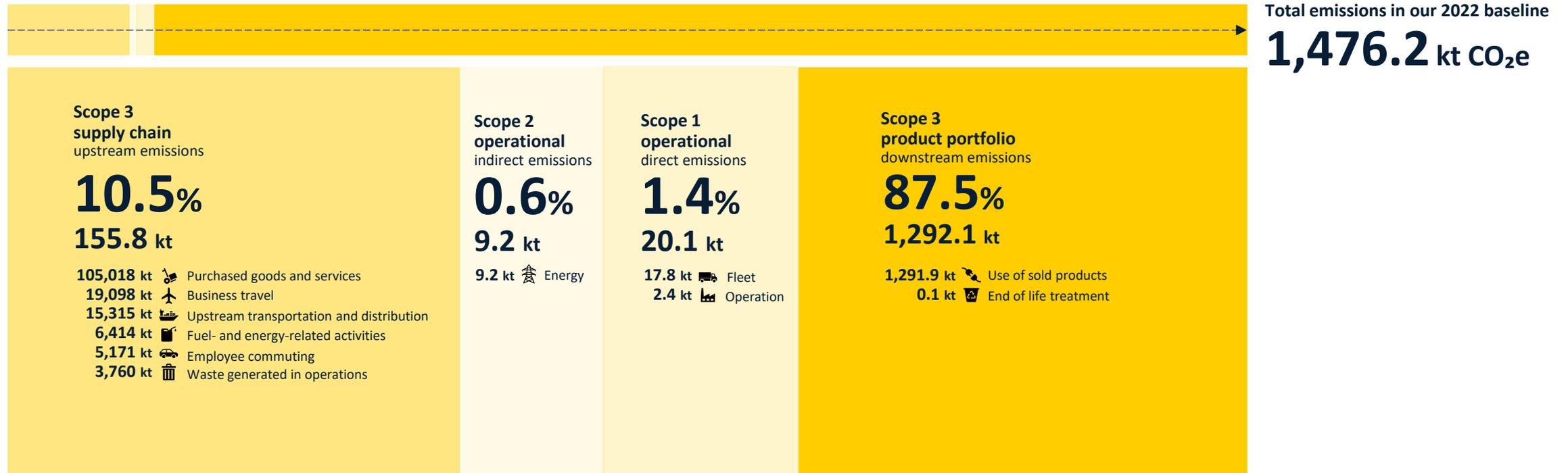
Even the best initiatives will fail if the organization is not properly incentivized to implement them. To ensure progress toward our targets it is important to incentivize and foster change at all levels of the organization. Examples include KPIs, policy, internal carbon pricing, and integration of sustainability metrics into performance evaluations and reward systems.



Understanding our emissions

Identifying the sources of our emissions enables us to prioritize reductions where we can make the most meaningful progress on our path to net-zero.

As TOMRA decarbonizes its value chain, the data and methodology that drive our climate work will continue to evolve and improve. Going forward, we will continue to focus on increasing accuracy and granularity of our data. In our 2022 baseline year, our products' use-phase (scope 3 downstream emissions) accounts for **87.5%** of our total value chain emissions, thus also presenting the greatest opportunity for reduction. Emissions from our supply chain (scope 3 upstream emissions) is the second biggest emissions hot-spot, comprising **10.5%** of our total footprint. In total, **our scope 3 emissions are nearly 50 times** higher than the combined scope 1 and scope 2 emissions from own operations, which only account for 2% of our total footprint. The graphic below provides a detailed breakdown of TOMRA's emissions across various emission categories.



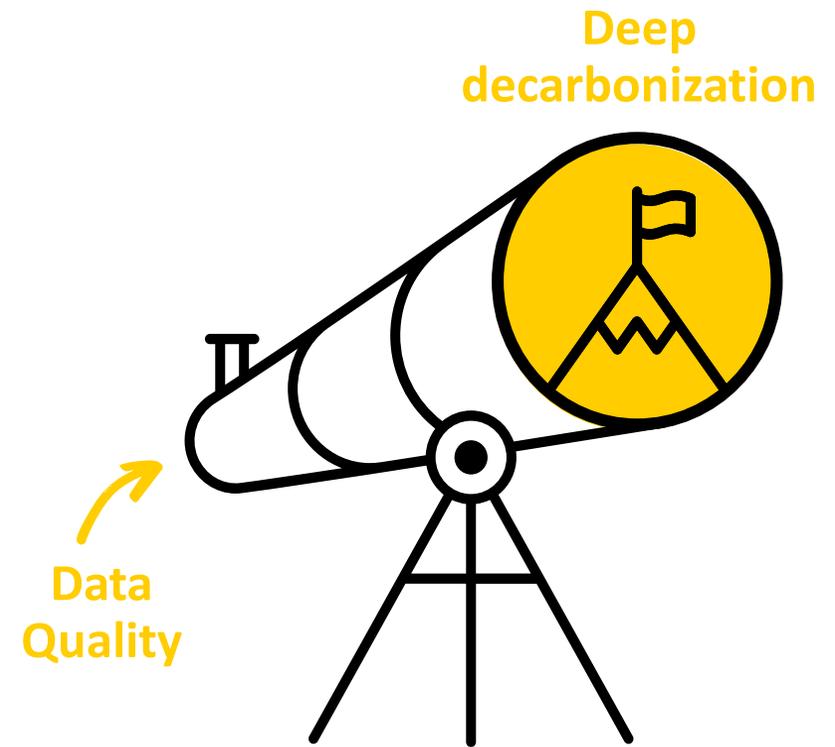


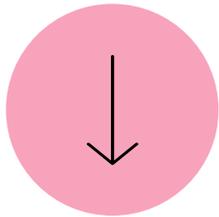
Data quality and management is critical for effective decarbonization

Effective GHG data management is essential for tracking progress and guiding emission reduction. TOMRA is dedicated to enhancing our GHG data collection and reporting processes to ensure accuracy and reliability, recognizing that quality data will remain a challenge for years to come. We aim to improve the completeness and representativeness of our emissions data, which is vital for our initiatives' success.

To advance our data-driven decision-making capabilities, we will **leverage data analytics and tools to deepen our understanding of emissions trends and reduction potential.** By continuously working to improve data quality, we aspire to shift from reactive insights to proactive strategies using predictive analytics, scenario modeling, and "what-if" analyses. This will enable us to simulate various scenarios and evaluate the impacts of different decarbonization measures, ultimately accelerating TOMRA's decarbonization journey.

To achieve these objectives, **TOMRA has initiated a comprehensive scope 3 data improvement project,** focusing on data quality enhancements, refining data collection methods and tools, and establishing robust governance structures for effective decarbonization management.





Reducing our emissions

The pathway we chose to net-zero is as important as the target date itself.

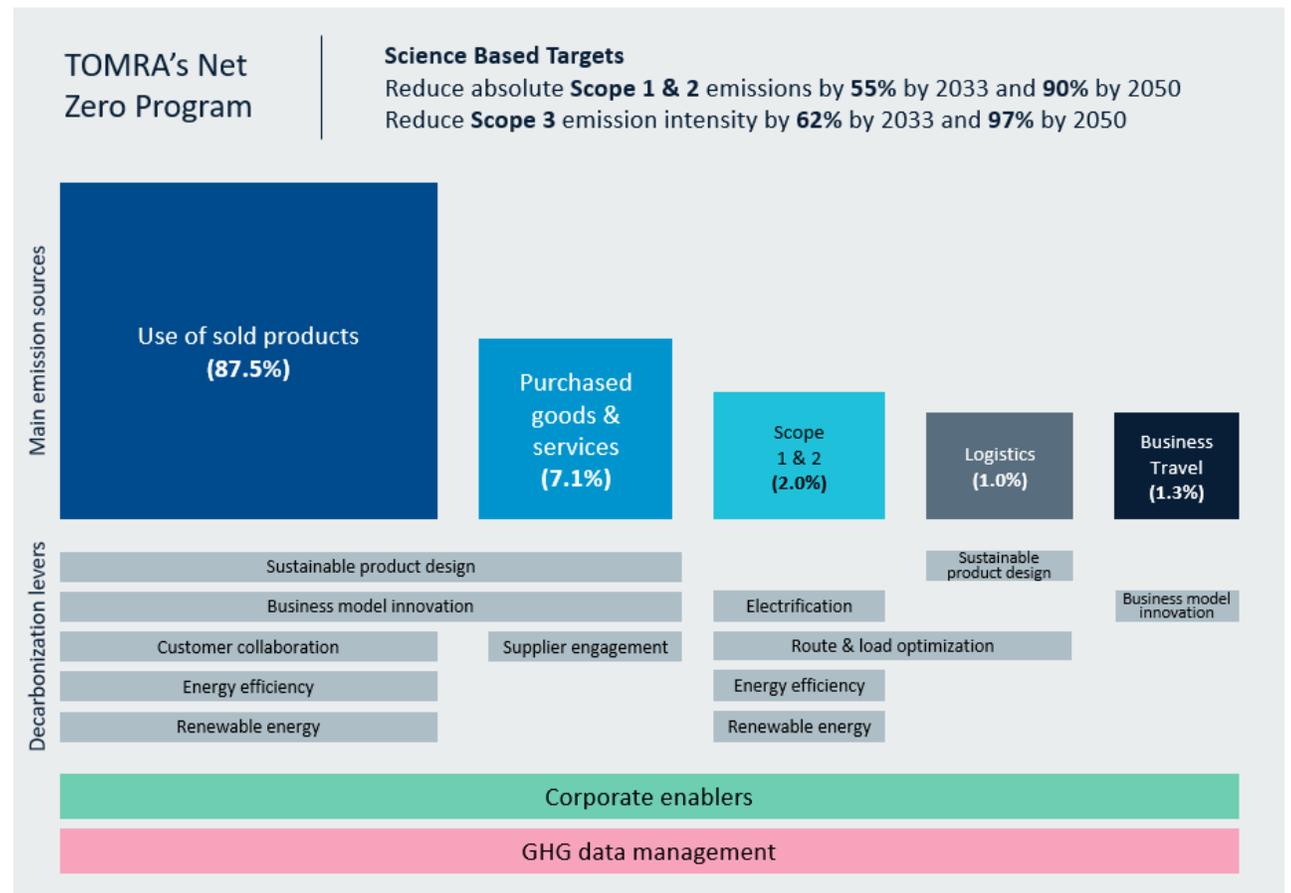
Failure to design for emission reduction today will lock in high-carbon intensive business tomorrow. Rapid decarbonization is our best chance to limit the worst impacts of climate change and ensuring long-term competitiveness.

To set direction, **TOMRA has committed to reach net-zero GHG emissions across the value chain by 2050**. The Science Based Targets initiative (SBTi) has validated that our scope 1, 2 and 3 emissions reduction targets are in line with a 1.5°C trajectory. SBTi is the most credible way to verify that corporate climate targets are aligned with the Paris Agreement.

To meet our targets, TOMRA has developed a comprehensive decarbonization roadmap outlining different emission reduction pathways, milestones, and decarbonization levers. A decarbonization lever refers to a category of tools and mechanisms available to us for reducing emissions. For each lever, we have identified key projects—referred to as decarbonization initiatives—and analyzed their potential for emission reduction, operational feasibility, and financial implications.

TOMRA's Net Zero Program covers **12 distinct decarbonization levers**, totaling **over 30 decarbonization initiatives** targeting multiple emissions sources. When combined with dedicated corporate enablers and data-driven GHG data management, this structured approach maximizes our potential for rapid decarbonization.

The following slides detail how we plan to apply these levers to our primary emission hot-spots: Use of sold products, purchased goods and services, scope 1 and 2 emissions, and business travel. Together, these five emission sources account for ~99% of our 2022 GHG baseline.





Use of sold products

The use of sold products is by far the largest emission source for TOMRA, accounting for 87.5% of our 2022 baseline. These emissions stem from the energy consumption of our advanced sensor-based sorting equipment for food and recycling.

Two of the most important levers to address these emissions, where we also have the highest agency, are **sustainable product design** and **energy efficiency**. We aim to develop innovative, energy-efficient products that minimize use-phase energy consumption. By embedding sustainability in the product design and development process, we strive to reduce the overall energy demand from our solutions.

To fully decarbonize our products' use-phase emissions, we must also focus on interventions during the actual use phase. This involves active **customer collaboration** to promote **renewable energy** and **energy-efficient practices** in their operations. We offer expert guidance on optimizing our sorting and recycling technologies to maximize environmental benefits. Additionally, we support customers in transitioning to cleaner energy alternatives, reducing their carbon footprints and increasing renewable energy adoption.

We're also exploring **innovative business models** to incentivize emission reductions. One example is the throughput model, where TOMRA retains ownership and operational control of the machines. Moving forward, we will also explore partnerships with renewable energy providers and consider financial incentives to customers who transition to renewable energy sources.

Sustainable product design

Customer collaboration

Business model innovation

Renewable energy

Energy efficiency



Purchased goods and services

Sustainable product design

Business model innovation

Supplier engagement

Purchased goods and services represent the second-largest source of emissions for TOMRA, contributing 7.1% of our 2022 baseline. To address these emissions and advance our goal of becoming a fully circular company, we are embedding sustainability into our product design and development processes. By focusing on **sustainable product design**, we aim to enhance the circularity of our machines and minimize their environmental impact throughout their life cycle. In 2022, we made the commitment to using at least 90% sustainable materials in new products and ensuring that at least 50% of our products are circular at end of life by 2030.

Achieving these ambitious goals requires effective management of impacts across the entire product value chain and life cycle. Building on insights from life cycle assessments conducted in 2022 for core products across TOMRA's main divisions, we have launched several initiatives in the past two years and plan to pilot new solutions to deepen our understanding of product circularity and sustainability.

Additionally, diligent **supplier engagement** is fundamental to reducing emissions associated with the goods and services we procure. We actively engage with our suppliers to encourage the adoption of sustainable low-carbon practices and will gradually introduce more stringent sustainability criteria for supplier selection while providing guidance to support their transition. We are also exploring **new innovative business model** that incentivize material sustainability and circularity, such as the throughput model, modular design, and refurbishment initiatives.

A person wearing a blue TOMRA uniform is seen from behind, working at a laptop in a recycling facility. The background shows a complex industrial structure with conveyor belts and machinery. The text "Scope 1 and 2" is overlaid in white on the left side of the image.

Scope 1 and 2

Renewable energy

Electrification

Energy efficiency

Route & load optimization

Our direct emissions in Scope 1 and 2 constitute 2.0% of TOMRA's total baseline emissions for 2022. This category represents the area where we have the greatest ability to implement effective reduction initiatives. Key strategies for reducing these emissions include electrification, enhancing energy efficiency, optimizing transport routes and loading, and transitioning to renewable energy sources.

In pursuit of **energy efficiency**, we have launched programs across our operations aimed at reducing energy consumption in both manufacturing and office facilities. These initiatives involve upgrading equipment, optimizing processes, and implementing energy management systems. In 2022, we also set targets to source 100% of our electricity from **renewable sources** by 2030 and to reduce our operational transport emissions by 80%.

In Scope 1, **electrification** initiatives—such as transitioning our company car fleet to electric vehicles—present substantial opportunities for emission reductions. Implementing **load and route optimization** for our vehicles also further enhances our ability to lower emissions by considering factors such as fuel type, driving patterns, and vehicle age.



Business travel and Logistics

Sustainable product design

Business model innovation

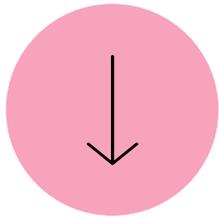
Route & load optimization

Business travel accounts for 1.0% of TOMRA's 2022 GHG baseline. Emission reductions in this category are primarily driven by **business model innovations**. Firstly, by reviewing and optimizing our operating model, TOMRA can significantly decrease business travel emissions through strategic changes in organizational structure and location, as well as by promoting remote work, virtual meetings, and efficient travel practices. Additionally, the implementation of remote servicing technologies reduces the need for service technicians to travel for repairs, further minimizing emissions.

Secondly, rethinking how we conduct business allows us to minimize the necessity for travel, thereby lowering our carbon footprint. Furthermore, **we have strong agency over this emission category through our corporate enablers and policies**. Effective measures to consider include implementing internal carbon pricing and related corporate strategies that foster sustainable travel behaviors.

Logistics also constitutes 1.0% of our emissions, encompassing all third-party transportation and distribution services purchased by TOMRA, both upstream and downstream. This category benefits from many of the same decarbonization initiatives as in scope 1. For example, **load and route optimization** can be implemented without altering the existing fleet, enhancing efficiency while reducing emissions. Additionally, we are investigating factors such as electric vehicle transition, fuel types, driving patterns, and vehicle age to further decrease our logistics-related emissions.

Sustainable product design can positively impact emissions from logistics services. For instance, adopting modular designs and improving product longevity can reduce the need for frequent transportation of goods.



Meeting our targets

Towards net-zero growth

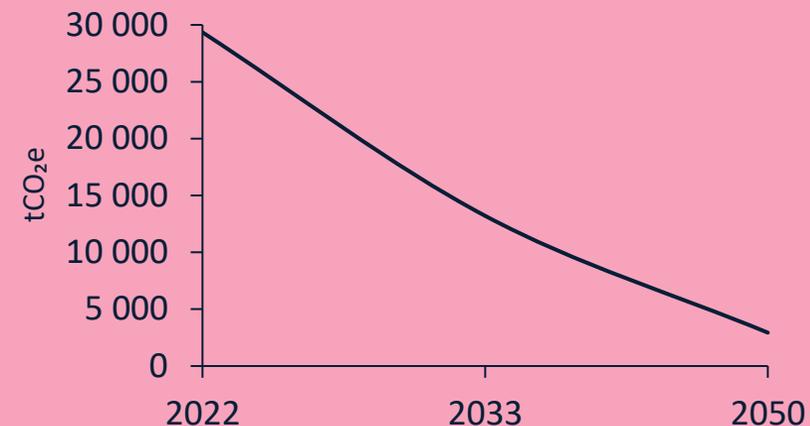
We are dedicated to managing the environmental impact of our business in a responsible manner, **actively working to decouple our growth from emissions**. Our absolute targets for scope 1 and 2 emissions aim for a 55% reduction by 2033 and 90% reduction by 2050. Through absolute emission reductions we will reduce the direct impact of our operations, with clear accountability. Many of the decarbonization levers and initiatives required to meet these targets are also drivers of operational efficiency.

TOMRA has an ambitious growth strategy, aiming to double in size over the next five years, while at the same time reducing our emissions in line with a 1.5°C-aligned trajectory. **To support this growth sustainably we have set economic intensity targets for our scope 3 emissions**, aiming to reduce GHG emissions per million EUR value added by 62% by 2033 and 97% by 2050. By measuring emissions relative to economic output, we can maintain a clear understanding of our emissions efficiency as we expand operations, also allowing for adaptability in a dynamic business environment.

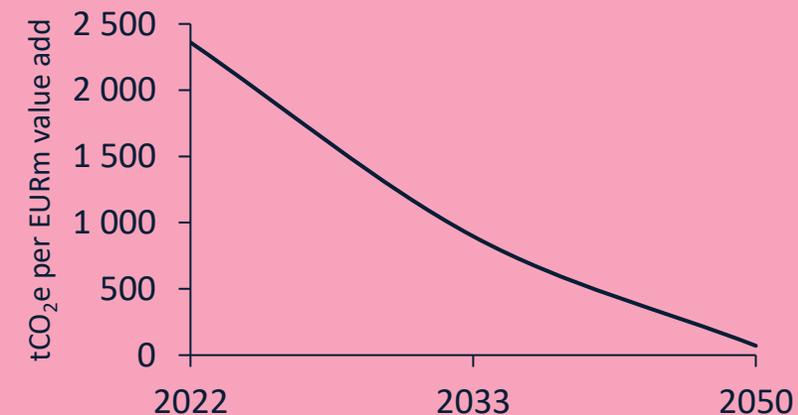
While we have already identified more than 30 promising decarbonization initiatives across TOMRA's value chain, **we still face a 30% emission reduction gap to meet our 2033 targets and an additional 19% to meet our 2050 targets**. To close this gap, we must work to both identify additional decarbonization initiative and further enhance the impact of initiatives that we have already identified. By setting ambitious interim milestones and improving our GHG data capabilities, we are confident that we can effectively bridge the emission reduction gap and make significant strides toward achieving our 2033 and 2050 emissions reduction targets.

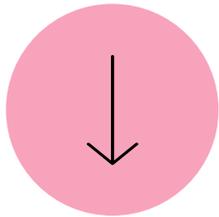
With our current decarbonization plan and emissions reduction pathway, we are on track to hitting our scope 1 and 2 emissions reductions targets, thanks to improved energy efficiency across our operations, a transition to renewable energy sources and the electrification of our vehicle fleet. See the next page for a detailed breakdown of our current decarbonization plans and pathway.

Absolute emissions (scope 1-2)



Emission intensity (scope 3)



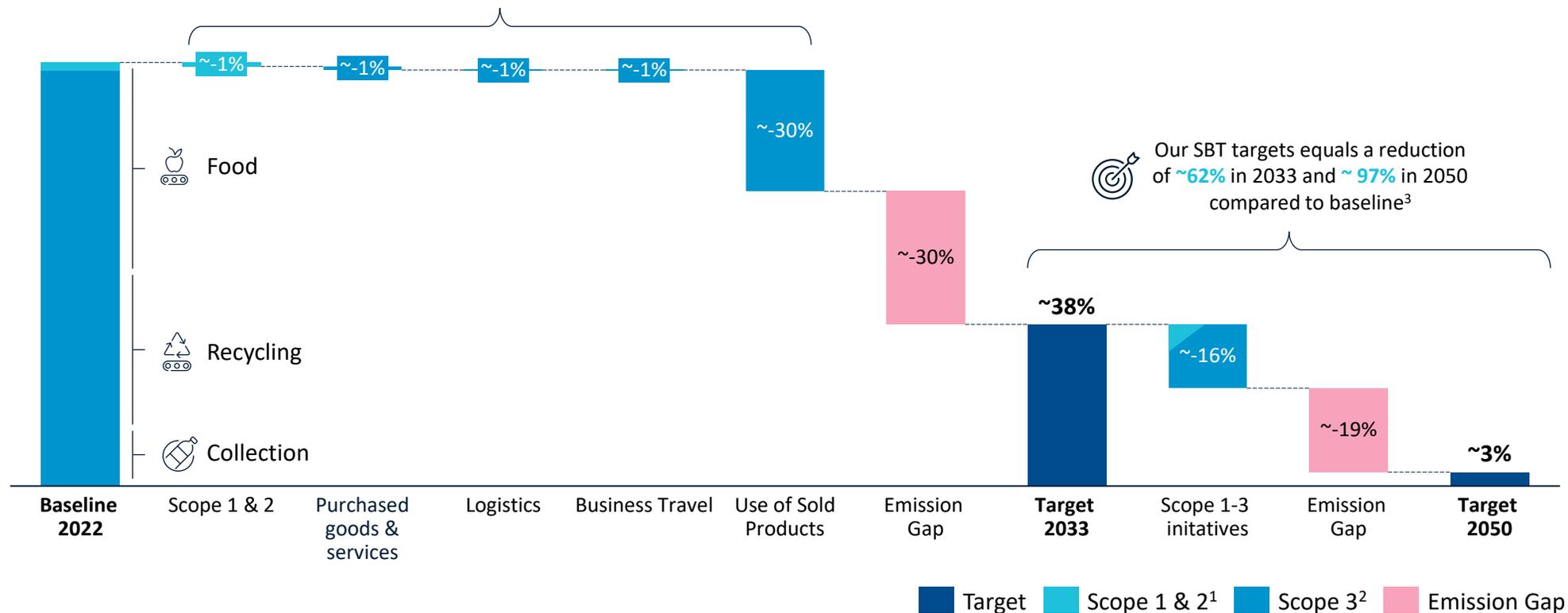


Meeting our targets

Towards net-zero growth

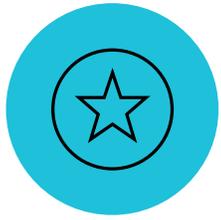
TOMRA's Path to Net Zero

Clear plans to **reduce direct emissions** while still allowing us to grow ~15% annually



Note: Illustrative, figures are early estimates, tCO2e per EURm value added

1) Absolute reduction of GHG emission, 2) GHG intensity reduction per EURm value added, 3) Target reduction percentages when holding baseline level constant to illustrate GHG intensity reduction for Scope 3 at current baseline level – For instance Scope 3 emissions could be unchanged in 2050, but the GHG per EURm value added will be reduced by 62% in 2033 and 97% in 2050 for Scope 3 following an increase in value added



Incentivizing net-zero ambition

TOMRA recognizes the critical importance of aligning employee incentives with our climate goals. In 2023, we introduced people and planet performance indicators as part of our quarterly business reviews across all divisions. These **indicators are directly linked to the variable compensation** of our divisional leadership teams, promoting conscious action and commitment to implementing our transition plan throughout the organization. Further developing these KPIs and our carbon-linked remuneration scheme will be important to drive the necessary action, time and investments for decarbonization initiatives.

To strengthen our commitment, we are also in a process of introducing **TOMRA Group and division-level policies to guide decision-making toward low-carbon business practices**, as such making decarbonization a priority and a reality. Through these initiatives, we aim to create a robust framework that not only drives emissions reductions but also fosters climate awareness and culture throughout the organization.

In addition, **we are investigating the viability of introducing internal carbon pricing** as a mechanism to further incentivize decarbonization. An internal price on carbon could support and accelerate our decarbonization efforts in several ways:

Raise awareness: Linking GHG emissions to a monetary impact would likely elevate focus within business divisions on their carbon footprint and strengthen ownership of the decarbonization agenda.

Encourage low-GHG activities: Incorporating an internal carbon price into business planning could help divisions identify and prioritize the most cost-effective low-carbon strategies and investments

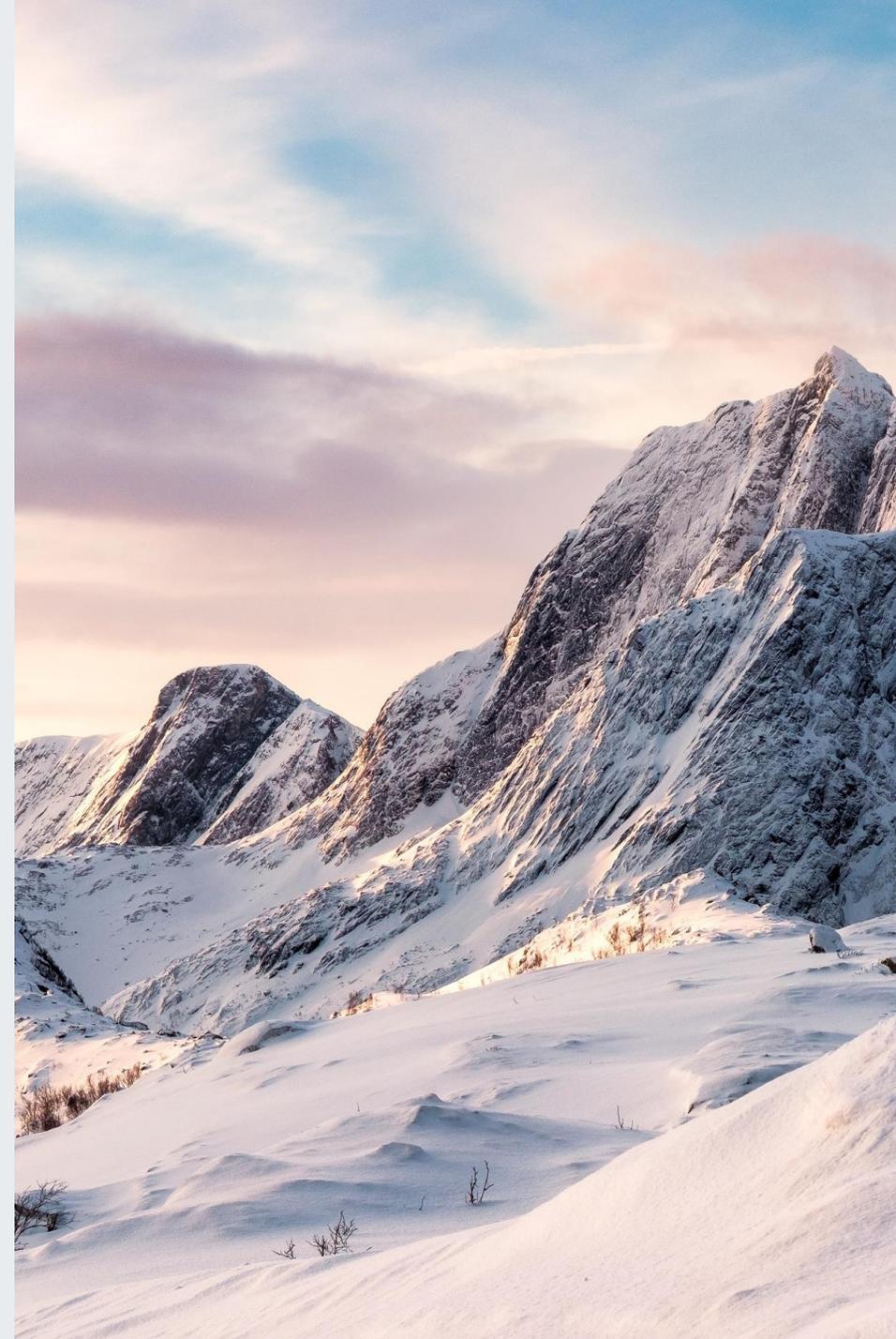
Finance sustainability initiatives: Funds collected from an internal carbon pricing scheme could be used to finance emission reduction initiatives across TOMRA Group, directly supporting our net-zero target.

Looking ahead

“ At TOMRA, we are committed to sustainability through the development of solutions for resource optimization and circularity, but we are also on our own journey toward net-zero.. As we decarbonize our operations, transparency and accountability will remain at the forefront of our efforts. We recognize that this journey will present challenges, and our strategies must evolve to identify the most impactful climate solutions grounded in the latest scientific insights.

Reaching net-zero requires transformational, systems-level change. While the challenges ahead may seem daunting, there are proven systems and technologies that enable circularity and enhance resource productivity while minimizing emissions. We will continue to push for these systems to be applied at greater scale, maximizing the positive impact of our products and solutions on the environment and society while minimizing our own footprint.

Tove Andersen – President and CEO TOMRA Systems ASA





TOMRA

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