Sustainability

Marel's 2022 climate-related financial disclosures (TCFD) status update

Marel's TCFD journey

Marel committed to integrating the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in 2020 and has started climate risk reporting in 2021. As a founding member of the Nordic CEOs for a Sustainable Future, Marel supports the implementation of the recommendations by the TCFD. Now in its second year, Marel has built greater awareness internally and among its stakeholders, to understand the impact of climate on the company, its operations, customers and the overall value chain.

Key changes to 2022 analysis, methodology and approach:

- Extended coverage by including physical climate risks in our analysis for the first time in 2022. We aim to better understand the impacts of changes in physical environment on Marel's operations under different climate scenarios.
- Incorporated latest available climate science data to align analysis with efforts to limit global warming to 1.5°C.
- Increased scope 3 coverage supported through validated science-based targets.
- Enhanced target setting supported by Marel's first corporate sustainability program implemented in 2022.
- Improved climate scenario analysis by aligning scenarios with The Network for Greening the Financial System.

Main findings from 2022 analysis:

- Earlier identified risks and opportunities are still relevant, although the estimated timing and likelihood has been accelerated and brought forward in light of the importance of climate change to Marel and it's stakeholders. Marel's analysis is showing the likely magnitude of impact under a 1.5°C and 2.5°C scenario.
- Impacts of climate change, such as flooding, heat waves and droughts have become more noticeable and therefore undeniable, making the assessment of physical risk causes a necessity going forward.
- Heightened momentum around climate-related financial disclosures supported by internal and external stakeholders, reporting regulations and standards. Implementation of the TCFD recommendations supports Marel's overall sustainability ambitions and strengthens our double materiality assessment that is ongoing at the time of publishing this report.

Summary table

	2022 achievements	Short-term priorities	Longer-term goals
Governance	• Increased internal awareness on climate related risks and opportunities throughout the organization, engaging with internal and external stakeholders. This includes half-yearly board strategy sessions, audit committee briefings, quarterly business review meetings with the Executive Board and global training sessions for ESG KPI owners. • Close collaboration with Internal Audit on further aligning climate risk processes and non-financial disclosure	• Increased structural attention on climate related impacts within the Board of Directors including structured decision-making and follow up on identified climate issues	• Further integrate the impact of climate change in corporate governance and oversight
Strategy	• Revisited climate scenarios and models used in 2021 to test for relevance and latest climate science recommendations • Analyzed physical risks for the first time • Further strengthened the process and ESG data quality by moving to an internal quarterly reporting process for ESG • Fully mapped out all material categories under scope 3	• Further assess potential business implications of climate related risks and opportunities on Marel's operations • Further align the findings and recommendations from climate related risks and opportunities with the business strategy and financial planning	• Further integrate climate impact into Marel's strategy and operations by improving the view on climate risks and opportunities and aiming to minimize climate impact with the majority of Marel's equipment solutions
Risk management	• Sustainability is one of five risk categories at Marel • Identified and prioritized the most material risks and opportunities to future-proof Marel • Strengthened process around supplier engagement including environmental compliance supported by a new Responsible Sourcing team	• Integrate climate risk into Marel's overall risk framework • Continue initial analysis on climate related risk causes and opportunity triggers with the aim to externally disclose the most material ones	• Further integrate climate risk into the overall risk management framework
Metric & Targets	• Launch of first Sustainability Program, including three environmental 2026 targets related to: carbon emissions, recycling of waste and the use of renewable electricity • 2030 decarbonization near-term targets for scope 1, 2, and 3 approved by SBTi in November 2022 • Extended scope of the innovation scorecard to further elevate sustainability in new product developments	• Embed periodic reporting on material risks and opportunities • Improve disclosure on Marel's Scope 3 greenhouse gas emissions (GHG) and targets to reduce GHG • Further improve Marel's innovation scorecard to elevate sustainability in new developments	• Disclose and report on forward-looking climate related metrics and actual performance against goals

Timeline of climate action

2015
Joined the **UN Global Compact** as a signatory

2016
Approved a **CSR guidance policy** as compass for sustainable development

2017
Joined the **UN Global Compact** as a participant

Launched the Sustainability Scorecard to the product development process

Launched the Sustainability Scorecard to guide the product development process

2018
Founding member of the **Nordic CEOs for a Sustainable Future** coalition

2019
Certified as a **NASDAQ ESG transparency partner**

Introduced a **Sustainable procurement pillar**

Conducted **first full life cycle analysis**

2020
Integrating sustainability and finance by securing a new EUR **700m sustainability linked syndicated credit facility**

Conducted a comprehensive **materiality analysis with over 160 stakeholders**

Established a **Sustainability Team as part of the CEO's office**

Established a **Sustainability and ESG Committee**

Established a **Responsible Supply Chain risk management**

Finalized **life cycle analysis** of four core retail and food service solutions

Adopted a **Green Energy Procurement Policy**

Announced commitment to integrate the recommendations by the **TCFD**

Announced commitment to the **Science-Based Targets initiative**

Announced commitment to be **carbon neutral** well before 2050

2021
Launches **supplier sustainability program** involving EcoVadis

Life cycle analysis of seven core retail and food service solutions

100% of all new innovations passed **Marel's sustainability innovation scorecard**

Increased renewable electricity for Marel's manufacturing facilities to 61% (from 53% in 2020)

Commitment to becoming **net zero by 2040**

First climate stress testing to assess potential impacts on Marel's business under two scenarios

Gained further insights into product related purchased goods emissions (**scope 3**)

Sustainability included as one of five key risks for Marel

Launch of **Marel's first sustainability program**, including environmental targets related to carbon emissions, recycling of waste, and use of renewable electricity

2022
Reporting on Marel's first **Sustainability Program**

Validated **science-based targets**

Established **Responsible Sourcing team**

Circularity integrated as part of the **Sustainability Innovation Scorecard 2.0**

2026
Expected completion of first **Sustainability Program**

2030
Expected delivery on our **science-based target commitment**

2040
Goal to reach **Net zero** by 2040

Governance

Responsible governance is set with a clear objective of ingraining environmental, social, and governance (ESG) guidelines into all of Marel's business planning and operations. Throughout 2022 the company continued to increase internal awareness on climate-related risks and opportunities throughout the organization, engaging with internal and external stakeholders. A short-term priority is to increase structural attention to climate-related impacts within the Board of Directors including structured decision making and follow up on identified climate issues.

Board-level oversight of climate-related issues within Marel:
The Board reviews and agrees on Marel's sustainability roadmap that includes climate-related issues such as Marel's net zero commitment, setting science-based targets and climate-related disclosure. The Board of Directors oversees implementation and reviews performance of objectives, such as the sustainability program, the sustainability linked financing, and the ESG short-term incentive plans for management remuneration introduced in 2021 which includes an emission intensity target for scope 1, scope 2 and scope 3 (business travel and waste categories).

Marel's sustainability ambitions and climate-related actions are becoming more integrated into its business strategy. Regular Board meetings where climate related topics are discussed are held over the course of the year, including quarterly meetings coinciding with the publication of financial results, two strategy sessions, and an operational planning meeting for the coming year. The board is informed through the Sustainability Team and the CEO.

Management's role in assessing and managing climate-related risks and opportunities:
The Sustainability Team was established in 2020 within the corporate CEO's office to set the sustainability strategy, coordinate and monitor ESG targets and metrics, and support Marel to navigate the climate-related opportunities and risks. The CEO and CFO quarterly receive an update on key sustainability KPIs in the business review meetings.

Throughout the value chain, Marel encourages and promotes the most efficient use of resources to minimize environmental impact and prioritize environmental protection in food processing. Sustainability is at the heart of everything we do and part of our DNA. This translates into climate-related actions and targets for which Marel's Executive Board is accountable for. The CEO is responsible for the work and results of the Executive Board as described in Marel's Corporate Governance Statement.

The Sustainability and ESG Committee, a sub-committee of the Executive Board, is responsible for tracking the developments in climate risk management. The interdisciplinary committee makes recommendations to the Executive Board for proactive board oversight and governance on climate-related risks and opportunities.

Sustainability governance structure

Strategy

Climate change related risks and opportunities are critical for Marel to manage, both internally and for its customers. To manage climate-related risks and opportunities in the food value chain, Marel needs to assist customers with using fewer natural resources, while minimizing the CO2 footprint during food production.

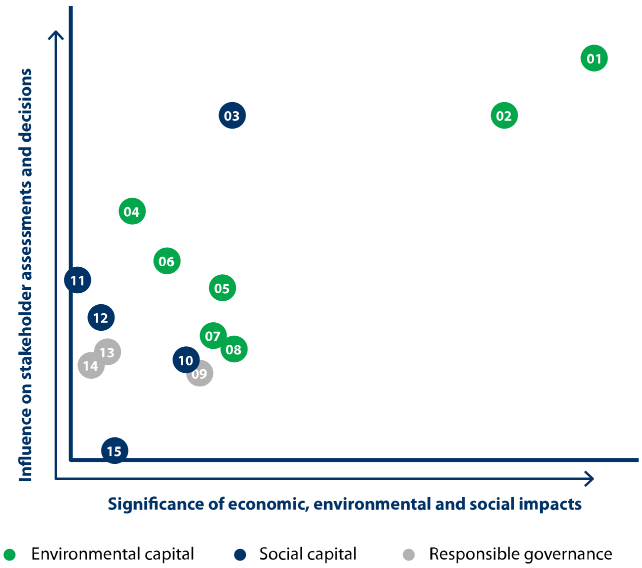
ESG materiality matrix

In order for Marel to build resilience against the impacts of climate change and capture value from the opportunities that arise from climate change, Marel needs to understand the view of its internal and external stakeholders.

Through conversations with key internal and external stakeholders in 2020, Marel has gained significant insights and identified 15 material topics. This stakeholder group included more than 160 individual stakeholders representing most affected stakeholders (customers, suppliers, employees), and to a lesser extent users of sustainability reporting (investors, NGOs).

The identified 15 key material topics remain valid for 2022 and will be reviewed during 2023 in light of their financial and impact materiality to provide a double materiality perspective going forward. In light of a post-Covid environment we are likely to see a higher focus on climate change, as well as supply chain disruptions and talent attraction and retention moving up on the materiality spectrum. In 2023 Marel will engage with stakeholders to understand how they may be impacted by climate-related risks and opportunities, drawing in internal and external experts as needed. The outcome of this analysis will be communicated alongside Marel's full-year 2023 Consolidated Financial Statements.

Top 15 ESG topics based on a comprehensive stakeholder materiality analysis[1]



Rank	Material topics
1	Food waste reduction
2	Traceability & food safety
3	Animal wellbeing
4	Circular products & solutions
5	Environmental & safety impact
6	Emission, energy use & water
7	Sustainable protein
8	Sustainable innovation
9	Localized customer service
10	Responsible supply chain
11	Occupational health & safety
12	Talent attraction and retention
13	Flexibility & economic performance
14	Compliance & risk management
15	Diversity & inclusion

Notes: Company information. [1] Stakeholder materiality analysis conducted among more than 160 individual stakeholders in 2020. Conclusions on the main top 15 ESG topics is considered valid for 2022 and reflective of current materiality when it comes to the main ESG topics relevant for Marel (x-axis) and its stakeholders (y-axis).

Climate-related risk and opportunity triggers

During 2021, an assessment exercise was conducted based on the long-list TCFD model whereby 25 risk causes and 17 opportunity triggers were examined in light of likelihood and impact. Those risk causes and opportunity triggers were then further assessed in a double heat map.

Transition risks include policy and legal risks, risks arising from changing demand, availability of resources, and shift in consumer preferences, among others. Marel has also identified certain physical acute and chronic risks from rising temperatures and impacts on marine ecosystems.

Material opportunities and risks from climate change

Selected risk causes and opportunity triggers deemed most relevant for Marel.

Identifier	Primary climate-related risk driver	Time horizon[1]	Likelihood	Magnitude of impact		Likely potential financial impact[2]
				1.5°C scenario	2.5°C scenario	
Policy and Legal (Transition risk)	Emerging regulations on limitation of greenhouse gas emissions	Short-term	Likely	High	Low	Increased operating/compliance costs
Market (Transition risk)	Increased cost of raw materials	Short-term	Likely	High	Medium	Reduced profitability
Chronic (Physical risk)	Rising temperature	Long-term	Likely	Low	High	Increased operating costs
Energy sources (Opportunity)	Use of new technologies	Medium-term	Very likely	High	Medium	Increased revenues and increased profits
Products and services (Opportunity)	Development of new products or services through R&D and innovation	Medium-term	Very likely	High	Medium	Increased revenues and increased profitability
Market (Opportunity)	Access to new markets	Medium-term	Likely	High	Medium	Higher revenues

Notes: Company information. [1] Short-term <3yrs, Medium-term 3-10yrs, Long-term >10yrs. [2] Potential financial impact both positive and negative cannot yet be fully assessed and is likely to be integrated into Marel's day-to-day operations. Mitigating actions are being assessed and will be used going forward to align with Marel's business strategy to minimize negative effects and maximize the opportunities, where possible, from climate change on Marel's operation.

Climate scenario analysis

Scenarios help Marel test its business resilience against a range of plausible climate futures in the face of broad uncertainty. Climate scenarios are not about predicting the future, but instead can help Marel identify and evaluate the likely climate-related risks and opportunities.

In 2021 Marel analyzed climate-related risks and opportunity triggers to estimate the impact on the company's value chain for the first time by conducting a qualitative assessment. This assessment paired the Intergovernmental Panel on Climate Change's (IPCC) Representative Concentration Pathways (RCPs) with Shared Socioeconomic Pathways (SSPs). Please refer to 2021 TCFD disclosure for further information.

In 2022 Marel transitioned from using RCP/SSP scenarios to The Network for Greening the Financial System (NGFS) climate scenarios. The NGFS is a group of central banks and supervisors committed to sharing best practices and contributing to the development of climate and environment-related risk management to support the transition toward a sustainable economy. The scenarios by the NGFS are built on the same Integrated Assessment Models as the RCP/SSP pathways. This enabled Marel to retain the know-how obtained from the climate scenario analysis conducted in 2021, while offering higher quality data and reflecting latest economic and climate data covering a range of physical as well as transition risks.

To align with the TCFD's recommendations of analyzing a below 2°C and above 2°C scenario, Marel has chosen two from the designed six scenarios developed by the NGFS: the 'Divergent Net Zero' and the 'Nationally Determined Contributions' (NDCs) scenarios. These scenarios share similar socioeconomic assumptions. They assume a continuation of current economic and population trends, though accounting for socio-economic changes caused by the Covid pandemic. These two scenarios offer portraits of two opposite worlds. The 'Divergent Net Zero' carries high transitionary risks while the 'NDCs' scenario has high physical risks. This allowed Marel to analyze the most relevant, material risks and opportunities in seemingly different futures to assess Marel's resilience (please see table summary above).

Divergent Net Zero scenario: This scenario differentiates itself from the Net Zero 2050 by assuming that climate policies are more stringent in the transportation and building sector. This mimics a situation where the failure to coordinate stringent policy across sectors results in higher costs. The emissions are in line with the climate goal, giving at least a 50% chance of limiting global warming to below 1.5°C. This leads to considerably higher transition risks, but overall physical risks are low.

Nationally Determined Contributions (NDCs) scenario: This scenario assumes that the moderate and heterogenous climate ambition reflected in the NDCs at the beginning of 2021 continues over the 21st century (low transition risks). Emissions decline but nonetheless to 2.5°C of warming. This is associated with moderate to severe physical risks. Transition risks are relatively low.

Through the lenses of the above-mentioned scenarios, material risks and opportunities have been analyzed to estimate their likelihood and impact on Marel's business. Refer to the 'Material opportunities and risks' table for different impacts of each risk and opportunity in two different scenarios. As part of our commitment towards TCFD, Marel aims to review its climate impact assessment annually in line with global efforts toward limiting global warming.

Risk management

Taking risks is an integral part of any business activity. By carefully balancing Marel's objectives against the risks the company is prepared to take, Marel strives to conduct business operations in a socially responsible and sustainable manner. In 2020, Marel started incorporating climate risk as part of its internal control framework. Sustainability is one of five risk categories.

The process for identifying and assessing climate related risks is integrated into Marel's overall risk management process.

The Board of Directors oversees the risk management process, approving the risk appetite and evaluating the key risks on an annual basis, or more frequently in the event of unexpected changes to the risk environment. This serves to ensure that risk exposure remains consistent with Marel's strategy, business and regulatory environment, and stakeholder requirements.
Marel's climate risk assessment is part of a robust risk management process that consists of five steps:

1. Risk appetite sets out the amount of risk the company is willing to accept in pursuit of value.
2. Risk assessment involves mechanisms and analysis to identify risks. Risks are ranked by the likelihood of their occurrence and the magnitude of their impact.
3. Risk treatment is the process of selecting and implementing measures to minimize the probability of identified risks materializing and to alleviate their potential effects.
4. Monitoring is the process of evaluating the effectiveness of actions taken to mitigate the identified key risks. Mitigation efforts can be deployed at business unit level or companywide, depending on the nature of risk and estimated impact.
5. Communication involves informing the Board, top management, risk managers, and other stakeholders on risk on a recurring basis. This serves to ensure that risk exposure and management remains consistent with Marel's strategy, business and regulatory environment, and stakeholder requirements.

Marel has five key risk categories:
Strategic, operations, financial reporting, compliance, and sustainability. The sustainability risk encompasses climate risk, referring to the risk arising from the interaction between hazard, vulnerability, and exposure related to climate change impacts

Risk categories

Strategic	Strategic risk	Risk that affects Marel's strategic ambitions, including economic and political developments
	Business risk	Risk related to customers, competition, government policy, etc.
	Reputational risk	Risk of damage to Marel's brand and reputation, resulting from actions that could be perceived as inappropriate, unethical, or inconsistent with Marel's values
Operations	Operational risk	Risk related to inadequate internal processes, people, and systems
Financial reporting	Financial reporting risk	Risk related to treasury and accounting, including finance, market, and credit risk
	Market risk	Risk related to financial markets, including FX and interest rate risks
	Credit risk	Risk that relates to credit quality of our customers and other business partners
Complicance	Compliance risk	Risk arising from failure to comply with laws and regulations, including internal standards and policies
Sustainability	Climate risk	Risk arising from the interaction between hazard, vulnerability, and exposure related to climate change impacts

As described in the 2021 Annual Report Risk Management chapter, management has identified certain key risks to our business. Of these, five key risks were identified and are described in more detail here.

Metrics and targets

Marel is on an ongoing journey tracking and reporting its carbon footprint in line with the Greenhouse Gas (GHG) Protocol. As of 2022, Marel reported on its emissions in scope 1, 2, and 3 (calculated in line with the GHG Protocol methodology) and several emission intensity metrics.

The GHG emissions inventory covers all relevant GHG emissions, from all relevant sources and subsidiaries. A breakdown of energy consumption and category breakdown of scope 1, 2 and 3 has been reported on in 2022. The GHG inventory is composed exclusively of fossil-based emissions, and no biogenic emissions have been reported alongside the GHG inventory.

Marel's GHG inventory (2022)

GHG emissions[1]			
Emissions category (in tCO_2e)	2022	2021	Δ YoY in %
Scope 1: heat - natural gas	3,193	3,252	-2%
Scope 1: company cars	4,121	4,311	-4%
Scope 2: heat - district heating	260	267	-3%
Scope 2: electricity (market-based)	3,990	7,061	-43%
Scope 2: electricity (location-based)	7,333	8,487	-14%
Scope 3: waste	289	308	-6%
Scope 3: business travel by air	6,341	3,430	85%
Scope 3: purchased goods and services	81,014	109,529	-26%
Scope 3: use of sold products	294,244	317,534	-7%
Total tCO_2e	393,452	445,691	-12%

Carbon emission intensity			
tCO_2e per average FTE	51.1	63.0	-19%
tCO_2e per EUR 1,000 of revenues	0.25	0.33	-24%

Energy consumption			
In GWh	2022	2021	Δ YoY in %
Total energy consumption (scope 1+2)	62.61	73.18	-14%
Electricity consumption	30.26	35.56	-15%
There of from renewable energy	21.59	18.70	15%
There of from non-renewable energy	8.67	16.86	-49%
Natural gas	17.50	17.75	-1%
Heat – district heating	1.58	1.62	-2%
Fuel	13.27	18.25	-27%

Waste			
Total waste generated (in tonnes)	4,651.6	5,047.5	-8%
There of recycled	3,299.3	3,326.2	-1%
Reporting manufacturing sites covered	15	15	n/a

Water			
Total water consumption (in m^3)	40,190	43,659	-8%
Reporting sites covered	15	15	n/a

Notes: [1] Please see the ESG Explanatory Note and Nasdaq ESG metrics for further details. Scope 3 for 2021 and 2022 has been adjusted based on expanded scope 3 categories validated by the Science Based Targets initiative.

The SBTi has assessed Marel's submission and approved the following targets in November 2022:

- Marel commits to reduce absolute scope 1 and 2 GHG emissions 42% by 2030 from the 2021 base year.
- Marel commits to reduce absolute scope 3 GHG emissions from purchased goods and services, waste generated in operations, business travel, and use of sold products 25% by 2030 from the 2021 base year.

The SBTi's Target Validation Team has classified Marel's scope 1 and 2 target ambition and has determined that it is in line with a 1.5°C trajectory. An approach to classify the ambition of scope 3 targets is still in development by SBTi.

Marel's 2022 carbon footprint

The following core initiatives have already been started to ensure we are on track towards our 2030 targets:

- Continuously improve supply chain sustainability and engage with suppliers to define improvements to reduce greenhouse gas emissions from Marel's products during production, the use phase, and end-of-life. Design systems and solutions with the environment in mind. Since 2018, Marel has conducted life cycle analysis on a number of its key products to better understand the full environmental impact associated with its solutions. Since 2017, Marel has employed a Sustainability Innovation Scorecard, a process framework to evaluate new products from a sustainability standpoint. With the newly introduced Sustainability Scorecard 2.0 in 2022 circular design has been added as a new category.
- Keep focus on sustainable purposeful travel. During 2021, Marel introduced a new Global Travel Policy with the emphasis on well-planned and purposeful travel. Employee well-being and reducing Marel's carbon footprint are priorities and the basis for how Marel will travel in the future.
- Further improve Marel's waste management system. In several manufacturing locations, Marel is already conducting waste scans and setting up continuous improvement plans.

Sustainability Program

As part of Marel's [sustainability program](), Marel is committed to becoming net zero by 2040. In 2021, Marel launched its 2026 medium-term sustainability program to support its 2040 long-term climate ambitions. The program includes three environmental targets, focusing on reaching net zero carbon emissions, waste reduction and increasing the use of renewable electricity. The sustainability program includes targets on not just environmental but also on social and governance parameters. Examples of our mitigation actions can be read in the 2022 ESG Report [add link] and on Marel's website.

Marel's progress on meeting the 2026 and 2030 targets:

Environmental

Focused on	2026 target[1]	2030 target[2]	2040 target	Our progress made in 2022
Reach net zero carbon emissions	**20%** carbon emissions[1] reductions	Reduce absolute Scope 1 and 2 GHG emissions by **42%** Reduce absolute Scope 3 GHG emissions by **25%**	**Net zero** commitment (across the value chain)	Reduction of **34%** vs 2019 baseline Absolute reduction of **12%** vs 2021 baseline Full carbon emission Scope 3 GHG mapping **Validated science-based target**
Waste reduction	Increase waste recycling to **90%**			Recycling of waste at **71%**
Use of renewable electricity	Powering **>85%** manufacturing facilities on renewable electricity			Powering **81%** of manufacturing facilities on renewable electricity (2021: 61%)

Notes: 1 Sustainability program 2022-2026. Includes Scope 1, Scope 2 and business air travel from Scope 3 emission intensity from a 2019 base year. 2 Validated science-based target, from a 2021 base year.

Forward looking statement

This report has been produced by Marel's Sustainability team reflecting current views and estimates. The next update will be published alongside Marel's full-year 2023 Consolidated Financial Statements in February 2024. For questions and feedback please contact: Sustainability@marel.com.

FORWARD-LOOKING STATEMENTS

Statements in this report that are not based on historical facts are forward-looking statements. Although such statements are based on management's current estimates and expectations, forward-looking statements are inherently uncertain. We therefore caution the reader that there are a variety of factors that could cause business conditions and results to differ materially from what is contained in our forward-looking statements, and that we do not undertake to update any forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement.