DMG MORI

AKTIENGESELLSCHAFT

DMG MORI – Climate-Related Financial Disclosure based on TCFD-Recommendations

DMG MORI AKTIENGESELLSCHAFT (hereinafter referred to as DMG MORI AG) intends to proactively disclose climate-related risks and opportunities in accordance with the recommendations of the *Task Force on Climate-Related Financial Disclosures* (TCFD) and hereby expresses its support for the recommendations. Together with DMG MORI COMPANY LIMITED (hereinafter referred to as DMG MORI CO LTD), we take action – with full commitment! The following information focus especially on DMG MORI AG. DMG MORI CO LTD's disclosure of climate-related opportunities and risks in accordance with the recommendations of TCFD can be accessed here: DMG MORI CO LTD TCFD-Disclosure

The essential features of TCFD:

The Financial Stability Board (FSB) initiated an industry-led working group in December 2015 with the support of G20 members. It was supposed to develop recommendations for consistent disclosure of climate-related information.

In June 2017, the TCFD proposed a disclosure framework for climate-related information in its final report. The TCFD's four recommendations are as follows:

1. **Governance:** Governance disclosure regarding climate-related risks and opportunities.
2. **Strategy:** Disclosure of actual and potential impacts of climate-related risks and opportunities on business, strategy and financial planning – if this information is material.
3. **Risk management:** Disclosure of how climate-related risks are identified, assessed and managed.
4. **Metrics & Targets:** Disclosure of metrics and targets that are used for evaluation and management of relevant climate-related risks and opportunities – if this information is material.

Governance

The overall responsibility for climate-relevant topics throughout the DMG MORI AG Group lies with the Chairman of the Executive Board Christian Thönes. In financial year 2021, DMG MORI AG initiated the "*Sustainability Promotion Department*" under the leadership of Dr. Maurice Eschweiler, Chief Representative. It is responsible for assessing the risks and opportunities of climate change as well as for planning, implementing and monitoring the corresponding countermeasures (see Figure 1 as well as section Opportunities and Risks). The "*Sustainability Promotion Department*" reports regularly to the "*Sustainability Circle*", consisting of representatives of relevant specialist departments as well as the Chief Representative, and also assumes a monitoring role. The Sustainability Circle reports important issues to the extended management team consisting of Christian Thönes, Dr. Maurice Eschweiler and Dr. Patrick Vogt as Chief Compliance Officer and member of the Sustainability Circle. They regularly assess and manage climate-related opportunities and risks.

The Executive Board is regularly informed by the management team about climate-related issues, including the calculation results of the company's CO_2 emissions. It also decides on the approval of plans to reduce CO_2 emissions and on important investments in this context. It informs the Supervisory Board about this once a year. Table 1 shows the roles of the organizational units presented. In addition, progress is published in the annual Sustainability Report for all stakeholders.

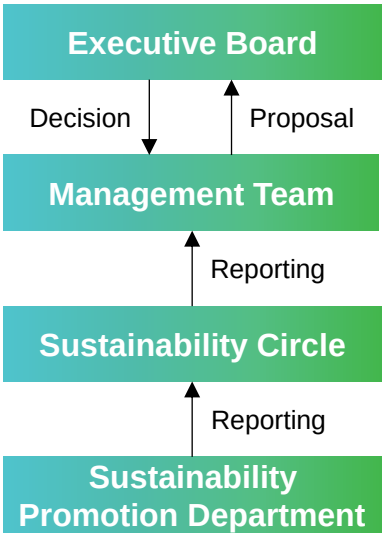

Figure 1: *Climate-related governance structure*

Table 1: *Role of climate-related organizational units*

Organizational unit	Role	Frequency to discuss and report climate-related matters
Executive Board	Both assessing and managing climate-related risks and opportunities; deciding on necessary investments	At least quarterly & as important matters arise
Management Team	Both assessing and managing climate-related risks and opportunities	At least quarterly & as important matters arise
Sustainability Circle	Implementing and monitoring group-wide climate-related measures	At least quarterly & as important matters arise
Sustainability Promotion Department	Implementing and monitoring group-wide climate-related measures	Once per month & as important matters arise

Strategy

At DMG MORI, sustainability and technology leadership go hand in hand. This also applies to protecting the climate and the environment. We pursue the digital transformation to smart factories with our strategic future fields Automation, Digitization, and Sustainability. Climate-relevant sustainability in machine tools focuses on resource management, energy efficiency, and emissions minimization.

To protect the climate and environment in the best possible way we pursue a 360° approach: We take action along all stages of our value chain. From the upstream processes of the supply chain, through our own production to the operation of our machines by our customers. All our innovations and decisions have one common goal: to prevent the waste of resources – for us and our partners. Our initiatives on climate-related topics are divided into three areas:

– **GREENMACHINE**: climate neutral manufacturing of all DMG MORI machines
– **GREENMODE**: energy and carbon efficient machine operation
– **GREENTECH**: Technology Excellence for green technologies

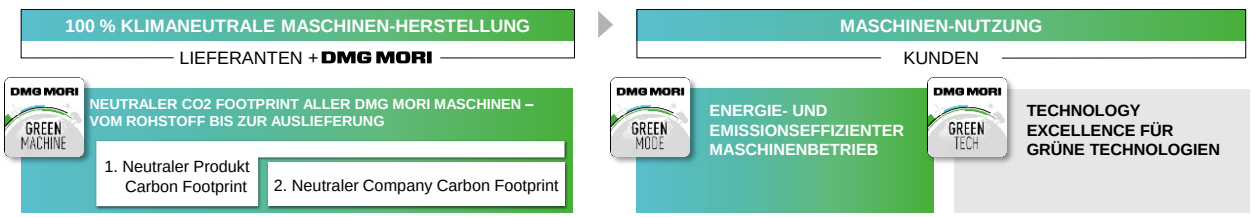

Figure 2: 360° approach for the protection of climate and environment

Our “Company Carbon Footprint” as well as our “Product Carbon Footprint” are already climate neutral. This means: Customers worldwide receive machines from DMG MORI that are produced in a completely climate-neutral manner. This is achieved through our triad “*Avoid – Reduce – Compensate*”. We avoid and reduce emissions wherever possible. The remaining, currently unavoidable CO2 emissions are offset by investments in sustainable, certified, and internationally recognized climate protection projects (Gold Standard, Verified Carbon Standard, UN Certified Emission Reduction).

Our targets reflect our self-image: We want to play our part in limiting global warming to below 1.5 °C above pre-industrial levels, as envisaged by the Paris Agreement. Hence, we have joined the “*Science Based Targets initiative”* and aligned our targets with the UN’s “*Business Ambition for 1.5 °C”*.

Our high-tech machine tools themselves help to reduce environmental impact to a minimum. Process integration, such as 5-axis machines and mill-turn centers reduce the consumption of various resources, including electrical energy, by replacing multiple machine tools with a single machine. In addition, the superior machining accuracy and geometric and volumetric precision offered by our company contributes to the effective use of resources: The connection between parts is optimized by improving the coefficient of friction, resulting in reduced energy loss during product use and longer product life. With integrated automation and digitization solutions, we maximize resource management in our plants and at our customers' sites - from production planning and preparation to machining, measurement and maintenance. Our machine tools also contribute to waste prevention with a lifetime of 15 years or more. In addition, the improvement of our **GREENMODE** contributes to the cumulative reduction of electricity consumption over the long service life of the machine.

Opportunities and Risks

With regard to climate-related opportunities and risks in our core business with machine tools, we have examined transition opportunities and risks arising from changes in policies, regulations or social demands from customers and other stakeholders, as well as physical risks caused by natural disasters and rising temperatures. Tables 2 and 3 present the opportunities and risks identified.

Risk management

Active risk management is part of the daily routine at DMG MORI. It is used for early risk identification, assessment and active minimization across all organizational levels. Among other things, it covers compliance and sustainability risks, including climate-related risks. In the case of climate-related risks, we focus in particular on medium-term risks. Short- and long-term risks are continuously identified, assessed and reported to the "*Sustainability Circle*" by the "*Climate Neutrality Promotion Office*" and the Compliance department. In urgent cases, these are reported directly to Dr. Maurice Eschweiler. The Executive Board discusses and decides on climate-relevant issues at least once per quarter and if these could have a significant impact on the business.

Metrics and targets:

Since 2017, DMG MORI has quantified group-wide greenhouse gas (GHG) emissions for scope 1 and 2. Since 2019, the group-wide CO_2 balance has been enlarged by scope 3 upstream GHG emissions. Table 4 presents the GHG emission figures for 2019 and 2020. Because around 77% of DMG MORI's CO_2 emissions depend on purchased production materials and components from suppliers, scope 3 category 1, the group's total GHG emissions are significantly influenced by production volume.

Targets:

1. *DMG MORI AG commits to reduce absolute GHG emissions in scope 1 and 2 by 46.2% until 2030 – using 2019 as a base year.*
2. *DMG MORI AG commits to reduce absolute GHG emissions in scope 3 by 13.5% until 2030.*
3. *DMG MORI AG aims to achieve a science-based net zero emissions reduction target in the long term by 2050 at the latest.*

These targets were reviewed and approved by the "Science Based Targets" initiative.

Further information on our sustainability activities and measures to achieve the defined targets can be found in detail in the current Sustainability Report:

Financial Reports – DMG MORI AKTIENGESELLSCHAFT

Table 2a: *Climate-related risks at DMG MORI*

Risk type	Climate-related risk	Potential financial impact	Time horizon	Likelihood	Magnitude of impact	Specific description	CDP 2021
Transition risk	Carbon pricing mechanism by emerging regulation	Increased direct costs	Medium-term	Very likely	Low	In general, the emissions by electricity and internal combustion processes like fuels are targeted by carbon pricing mechanisms. The regulation thus may affect DMG MORI's GHG emissions of scope 1, 2 and 3.	Yes
	Enhanced emissions-reporting obligations by emerging regulation	Increased indirect costs	Medium-term	Very likely	Low	The current development shows that current regulations for DMG MORI are continuously updated and extended, e.g., the EU Non-Financial Reporting Directive.	Yes
	Mandates on and regulation of existing products and services by emerging regulation	Increased indirect costs	Medium-term	More likely than not	Low	DMG MORI operates in different industries, like aerospace, medical, die and mold, as well as automotive. Within each industry but also from a state level, mandates on and regulations of our machines and services are relevant to comply with. From a sustainability point-of-view, this can be on, e.g., the share of recycled material, the recyclability of our products, or the energy efficiency.	Yes
	Transitioning to lower emissions technology	Decreased revenues due to reduced demand for products and services	Medium-term	Very likely	Medium-high	Especially the automotive industry faces an adaption from vehicles with internal combustion engine towards electric engines. This has a tremendous effect on the vehicle itself, because of a massive reduction of parts. Combustion engines consist of 1,000-2,000 parts, whereas electric engines only require 100-200 parts. In addition, the complexity is reduced.	Yes
	Changing customer behavior	Decreased revenues due to reduced demand for products and services	Medium-term	Very likely	High	Customers' increased demand for sustainable products and services is generated by the customers' preference in purchasing climate-neutral machines with low energy consumption in operation. The trend towards sustainability as one of the relevant decision factors in the selection process for an investment has already begun.	Yes

Table 2b (continuation): *Climate-related risks at DMG MORI*

Risk type	Climate-related risk	Potential financial impact	Time horizon	Likelihood	Magnitude of impact	Specific description	CDP 2021
Transition risk	Increased cost of raw materials	Increased direct costs	Medium-term	Virtually certain	Medium-high	DMG MORI has globally distributed suppliers with a main supplier location in Europe. Other main suppliers are located in Asia. The cost for raw material varies due to different market dynamics and its increase cannot fully be predicted nor compensated. Due to further regulations on raw material production, like increased price of electricity for an electric arc furnace to produce steel, the cost for raw materials is expected to increase. Raw material costs are also affected by the circumstances/environment of their production. For instance, extreme weather events like floods may increase the price for raw material also.	Yes
Physical risk	Increased severity and frequency of extreme weather events such as cyclones and floods	Decreased revenues due to reduced production capacity	Medium-term	Virtually certain	Medium-high	DMG MORI has globally distributed suppliers with a main supplier location in Europe. Other main suppliers are located in Asia. Due to global warming, extreme weather events are expected to be more likely. Suppliers being affected by e.g. a flood may not be able to deliver on time anymore due to the reduced production capacity. This may cause reduced production capacities or even a production stop also at DMG MORI factories. Generally, DMG MORI can also be affected by extreme weather events and stop the supply chain in delivering products.	Yes
	Rising mean temperatures	Increased indirect costs	Medium-term	More likely than not	Medium-low	Global warming also may affect DMG MORI and our factory locations and sales & service locations. State-individual regulations on the acceptable maximum working temperature in offices and production shall be complied with.	Yes

Table 3: *Climate-related opportunities at DMG MORI*

Opportunity type	Climate-related opportunity	Potential financial impact	Time horizon	Likelihood	Magnitude of impact	Specific description	CDP 2021
Transition opportunity	Use of lower-emission sources of energy	Increased revenues resulting from increased demand for products and services	Medium-term	Very likely	Medium-high	To limit global temperature increase to 1.5 °C above pre-industrial levels, 49 % of the energy produced must be generated by renewable sources. Market-known scenario analysis show potential of wind power & hydro power in the next decades.	Yes
	Use of new technologies as energy source	Increased revenues resulting from increased demand for products and services	Medium-term	Very likely	Medium-high	The use of new technologies like e-mobility or hydrogen generates new sales potential for DMG MORI machines.	Yes
	Development and/or expansion of low emission goods and services	Increased revenues resulting from increased demand for products and services	Medium-term	Very likely	Medium-high	Our mission is to empower our customers in manufacturing and digitization. Our integrated automation and end-to-end digitization solutions extend the company's core business with turning and milling machines, Advanced Technologies (Ultrasonic, Lasertec) and Additive Manufacturing.	Yes
	Ability to diversify business activities	Increased revenues resulting from increased demand for products and services	Medium-term	Virtually certain	Medium	At DMG MORI, sustainability and technological leadership are in harmony. Thus, innovations like CELOS, our APP-based control and operating environment that integrates our digital products into one interface, drive this ability and contribute to a reduction of total emissions at the customers' site.	Yes
	Use of public-sector incentives	Increased revenues resulting from increased demand for products and services	Medium-term	Virtually certain	Medium-low	With the strategic triad of automation, digitization and sustainability DMG MORI expands its core business of machine tools. The resulting manufacturing solutions combine high productivity with energy-efficiency. This opens up access to many state subsidy programs for our customers.	Yes

Table 4: *Group-wide CO_2 balance of DMG MORI*

[t CO_2]	2020	2019	Change against previous year	
Scope 1	**19,304**	**23,712**	**-4,408**	**-19%**
Internal combustion processes	6,548	7,776	-1,228	-15%
Business Trips with own vehicle	12,756	15,936	-3,180	-19%
Scope 2	**8,785**	**24,793**	**-16,008**	**-65%**
External energy supply	8,785	24,793	-16,008	-65%
Scope 3	**230,405**	**385,559**	**-155,154**	**-40%**
Category 1: Purchase of production material	201,406	340,361	-138,955	-41%
Category 3: Fuels and energy	7,631	9,511	-1,880	-20%
Category 4: Transports	10,554	17,864	-7,310	-41%
Category 5: Waste	154	189	-35	-19%
Category 6: Business Trips	1,164	5,174	-4,010	-78%
Category 7: Employee commuting	10,410	12,460	-2,050	-16%

Source: DMG MORI Sustainability Report 2020

Table 5: *CDP index*

TCFD element	Required information	Reference CDP 2021
Governance Disclose the organization's governance around climate related risks and opportunities.	a) Describe the board's oversight of climate-related risks and opportunities.	C1.1
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	C1.2, C1.3
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	C2.1, C2.3, C2.3a, C2.4, C2.4a
	b) Describe the impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning.	C2.3, C2.3a, C2.4, C2.4a, C3.1
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2 degrees Celsius or lower scenario.	C3.1
Risk Management Disclose how the organization identifies, assesses, and manages climate-related risks.	a) Describe the organization's processes for identifying and assessing climate-related risks.	C2.1
	b) Describe the organization's processes for managing climate-related risks.	C2.1, C2.3
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	C2.1
Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process.	C2.1, C2.3, C2.3a, C2.4, C2.4a, C6.10
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	C4.3, C4.3b, C6.1, C6.2, C6.3, C6.5
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	C4.2, C4.2a, C4.2c, C6.10