

Information Disclosure
Based on the Recommendations of the Task Force
on Climate-related Financial Disclosures (TCFD) (Update)

Issue: March 18, 2022
Update: March 17, 2023
Update: April 23, 2024

PIOLAX, INC.

Major updates

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Introduction

Piolax discloses information on climate change-related risks and opportunities based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), as the information can be incorporated into the management strategies for sustainable growth and medium- to long-term development and also be effectively utilized in stakeholder engagement.

Requirements of TCFD Recommendations

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

• Source: Final Report, Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

Governance

[Recommended disclosures]

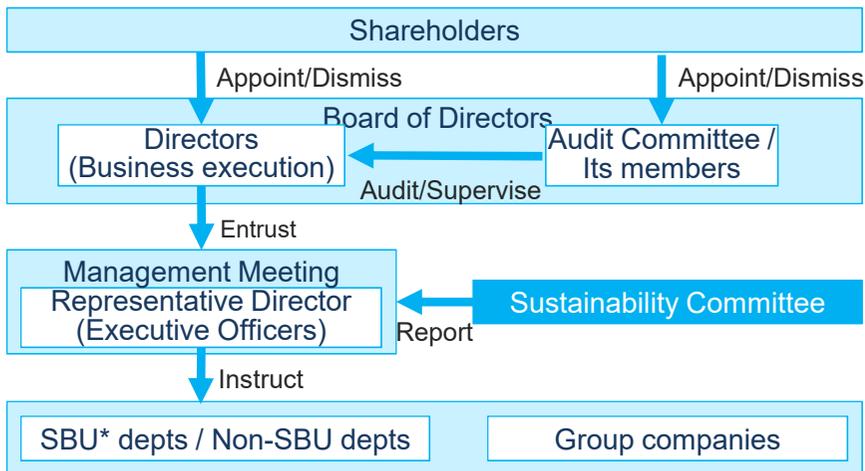
- Board's oversight
- Management's role in assessment and management

Governance on Climate Change

In December 2021, we established Sustainability Committee to deliberate sustainability issues including climate change measures. The committee is chaired by the Representative Director and consists of directors and other members, and meets four times a year.

To respond to risks and opportunities posed by climate change, company-wide policies, targets, and specific measures are deliberated at Sustainability Committee, then discussed at the Management Meeting about the relationship and consistency with management strategies, and finally determined by the Board of Directors. The Representative Director participates in discussions at the Management Meeting and executes measures determined by the Board of Directors across the Group.

Governance Related to Climate Change



* SBU: Strategic Business Unit

Overview of Sustainability Committee

Committee members	Chairperson: Representative Director Members: Elected from among Directors and appointed by the chairperson
Secretariat	Corporate Planning Group, Management and Planning Dept.
Frequency	Meeting: Four times a year (and as needed) Report to the Board of Directors: Twice a year
Main agenda	Respond to the TCFD. Identify all company-wide risks and opportunities through committee and project activities. Review materiality and portfolio. Discuss sustainable management targets.
Other	Subcommittees on sustainability have been established.

Strategy

[Recommended disclosures]

- Risks and opportunities identified over the short, medium, and long term
- Impact on businesses, strategy, and financial planning
- Resilience of the organization's strategy under different climate-related scenarios, including a 1.5°C scenario

1. Progress in Strategy Implementation / Business Environment

Progress in Strategy Implementation

- To deal with CASE*, once-in-a-hundred-years transformation of the automotive industry, and global warming by climate change, we have identified risks and opportunities for our mainstay automotive parts business with a time frame up to 2050 focusing on the domestic business. We have also announced our targets for carbon neutrality by 2050.
- We started analysis at our medical device subsidiary in FY2023. We are determined to contribute to society through the development of medical devices for minimally invasive treatment, while increasing efforts to reduce climate change risks throughout the Group.

Business Environment (Automotive parts)

1.5°C scenario	Efforts for carbon neutrality and resource circulation are requested by stakeholders including customers, and carbon tax and regulations on fuel efficiency and exhaust emissions are tightened. In the automobile-related business, the transition to CASE, notably electrification, is accelerated and response to it becomes urgent.
4°C scenario	Since disasters (wind and flood damage) occur frequently due to extreme weather posed by temperature rise and coasts erode with the rising sea level, implementing a business continuity plan including the supply chain becomes urgently necessary while actions for carbon neutrality, resource circulation and automobile structural reform are taken in a limited manner.

Business Environment (Medical devices)

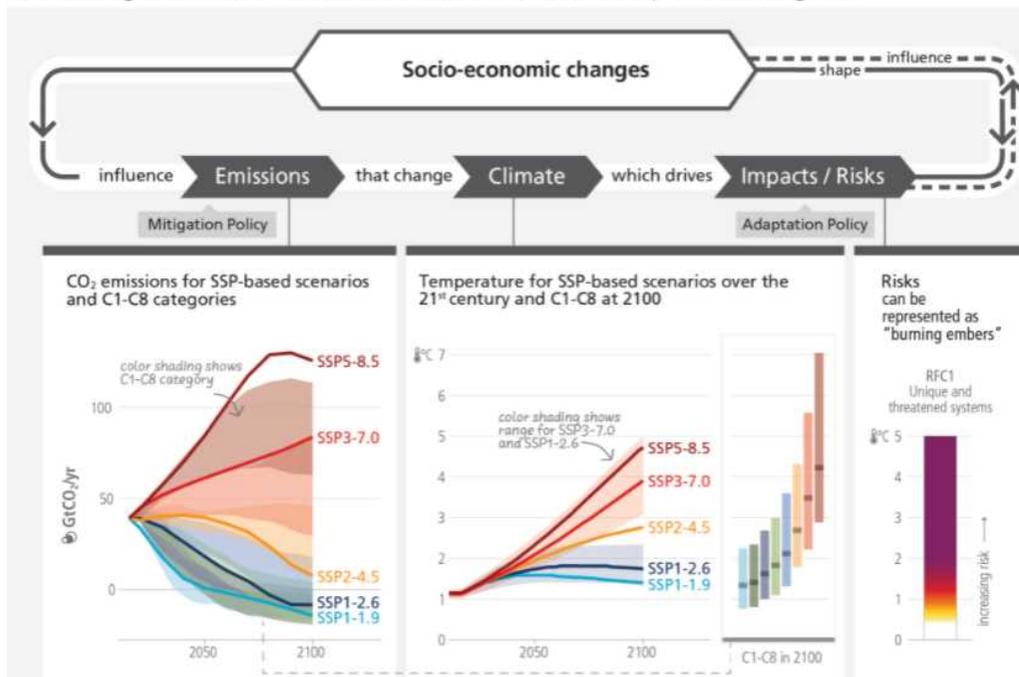
Scenario common to 1.5°C and 4°C	In the medical device business, where human lives are at stake, stable product supply is the most important mission, and it is essential to be prepared for supply chain disruptions due to disasters caused by abnormal weather. In order to deliver products directly to medical facilities, it is imperative to develop eco-friendly, high-value-added products.
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* CASE・・・Connected, Autonomous, Shared, Electric

Scenario Settings and Time Frame

- Climate change-related analysis is based on the SSP1-1.9 and SSP5-8.5*¹ in the “Sixth Assessment Report” of IPCC*² (Fig. 1) with reference to the IEA WEO 2022 Report.
- The trend of electrification, a typical example of CASE, is surveyed. (Fig. 2 on the next page)
- Time frame: The time when impacts of risks and opportunities come to the surface is defined in three stages.
 - Short term: 2026 [Three years from 2024]
 - Medium term: 2033 [as the 100th anniversary of the company’s founding, as well as 2030 for achieving the SDGs]
 - Long term: 2050 [for carbon neutrality (to limit warming to 1.5°C)]

Fig. 1
a) AR6 integrated assessment framework on future climate, impacts and mitigation



Category in WGIII	Category description	GHG emissions scenarios (SSPx-y*) in WGI & WGII	RCPy** in WGI & WGII
C1	limit warming to 1.5°C (>50%) with no or limited overshoot	Very low (SSP1-1.9)	
C2	return warming to 1.5°C (>50%) after a high overshoot		
C3	limit warming to 2°C (>67%)	Low (SSP1-2.6)	RCP2.6
C4	limit warming to 2°C (>50%)		
C5	limit warming to 2.5°C (>50%)		
C6	limit warming to 3°C (>50%)	Intermediate (SSP2-4.5)	RCP 4.5
C7	limit warming to 4°C (>50%)	High (SSP3-7.0)	
C8	exceed warming of 4°C (>50%)	Very high (SSP5-8.5)	RCP 8.5

*1 SSP x-y: Shared Socioeconomic Pathways

*2 IPCC: Intergovernmental Panel on Climate Change

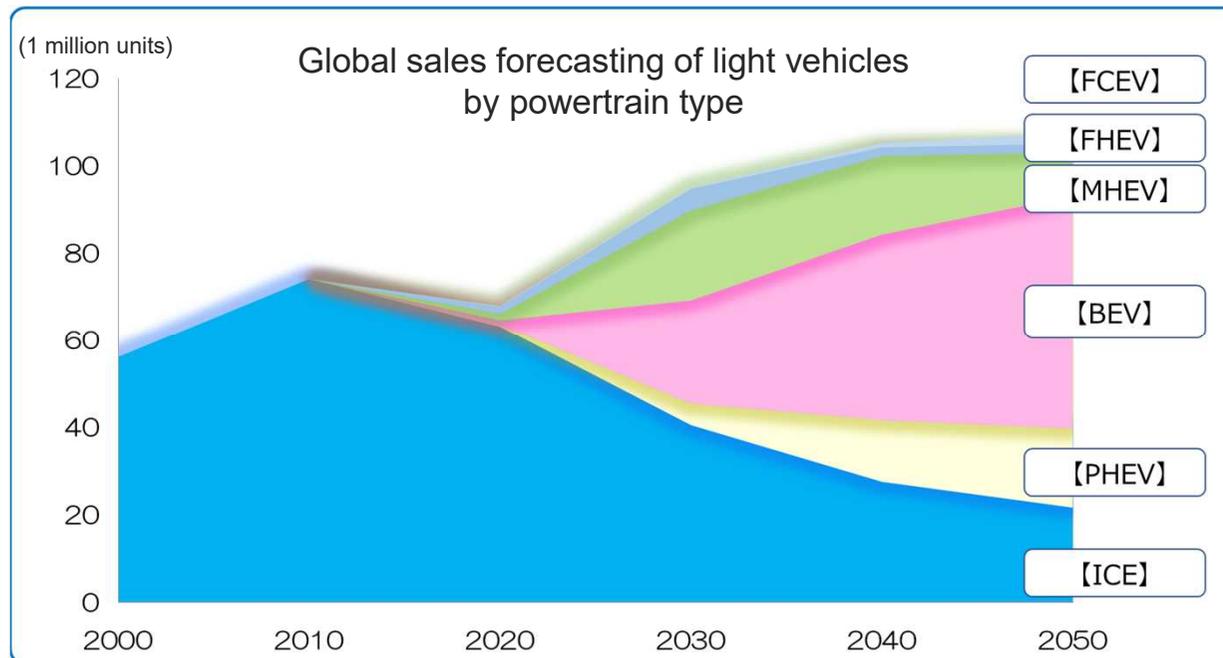
x: 5 SSPs (1: Sustainability, 2: Middle of the road, 3: Regional rivalry, 4: Inequality, 5: Fossil-fueled development

Y: Radiative forcing in around 2100 (W/m²)

Prediction of Automobile Electrification

- The proportion of production volume by powertrain type was calculated on a medium- to long-term basis and used to identify risks and opportunities for the transition of our automobile-related business unit (fasteners, powertrain parts, fuel system parts, opening and closing mechanism parts).

Fig. 2



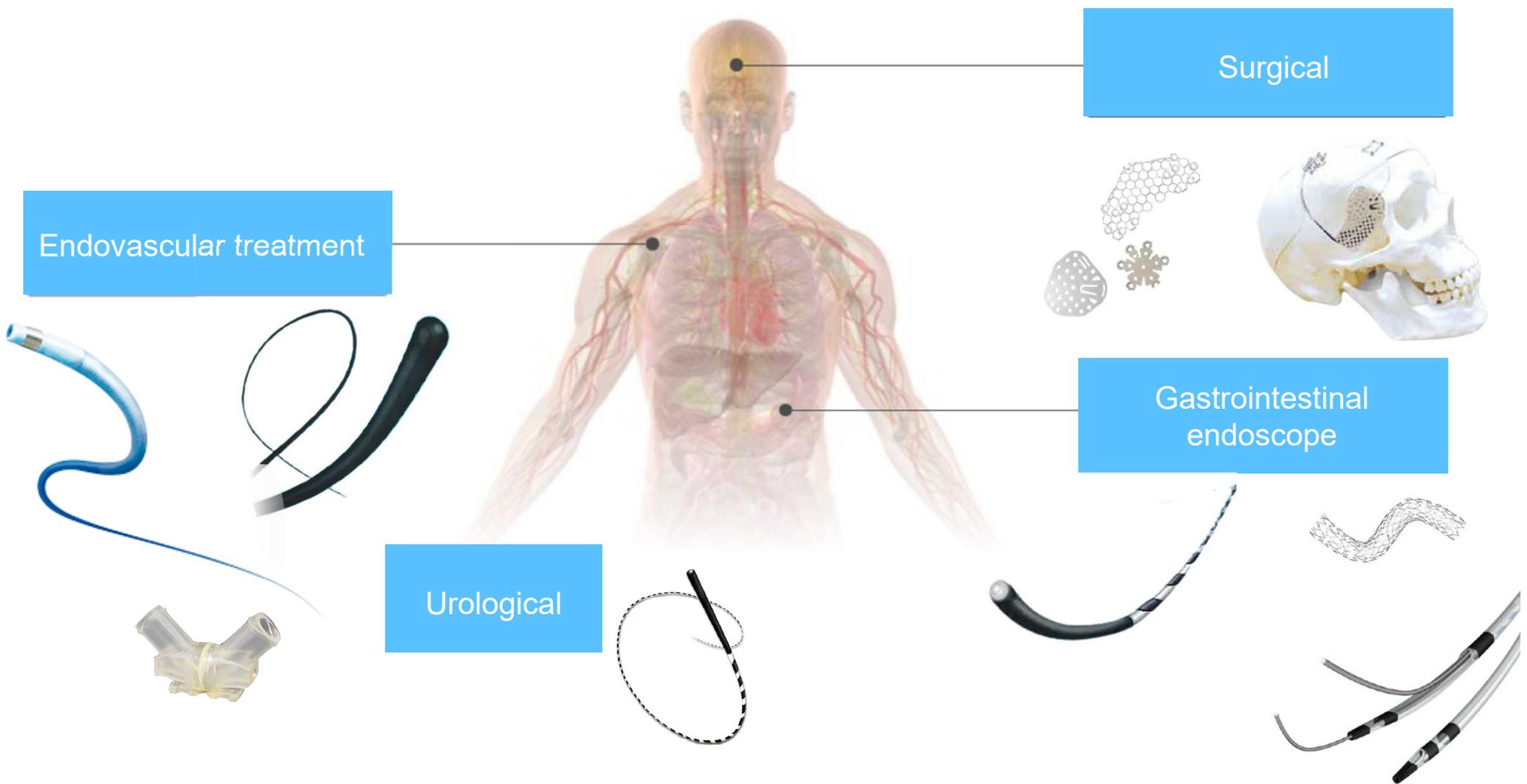
FCEV: Fuel cell electric vehicle
 FHEV: Hybrid-Full
 MHEV: Hybrid-Mild
 PHEV: Plug-in hybrid electric vehicle
 BEV: Battery electric vehicle
 ICE: Internal combustion engine

Footnote #1: This graph is based on the update of March 2022, IHS Markit Global Engine Forecast.

Footnote #2: PHEV data is created by Piolax, based on IHS Markit data.

Footnote #3: Numbers from 2033 onwards is created by Piolax, based on IHS Markit data.

Business Domain of Medical Device



2. Risks and Opportunities (Transition Risks and Opportunities - 1) [Transition Risks]



[Automotive parts]

Procurement	Impact/ Time frame		Manufacturing and Logistics	Impact/ Time frame		Development and Sales	Impact/ Time frame				
<ul style="list-style-type: none"> Higher raw materials and transport prices with carbon tax and energy transition at suppliers 	1.5°C	Large	Medium to long term (China: short to medium)	<ul style="list-style-type: none"> Rise in capital investment and improvement cost related to manufacturing process decarbonization 	1.5°C	Medium to large	Short to medium	<ul style="list-style-type: none"> Review of product development and sales strategies in response to rapid electrification 	1.5°C	Large	Medium to long (China: short to medium)
<ul style="list-style-type: none"> Loss of market due to non-eco raw materials 				<ul style="list-style-type: none"> Rise in energy cost with review of heat sources for manufacturing process decarbonization and use of green electricity 				<ul style="list-style-type: none"> Drop in orders for existing products with increased electrification 			
<ul style="list-style-type: none"> Drop in demand for materials for existing products with increased electrification, rise in material cost and difficulty in procurement 				<ul style="list-style-type: none"> Rise in wastewater and waste treatment costs with stricter environment-related regulations (U.S., China) Increased response costs due to strengthened or changed government environmental policies 				<ul style="list-style-type: none"> Rise in new product development cost and capital investment to address CASE Drop in sales with reduced new car sales due to domestic population decrease and spread of MaaS 			
						Large	Medium to long			Large (China: medium)	Medium to long

Degree of impact

Large: A failure to respond has a great impact on the survival and growth of the company and its businesses.

Medium: A failure to respond poses a limited impact and does not affect the survival and growth of the company and its businesses.

2. Risks and Opportunities (Transition Risks and Opportunities - 2) [Transition Risks]



[Medical devices]

Procurement	Impact/ Time frame			Manufacturing and Logistics	Impact/ Time frame			Development and Sales	Impact/ Time frame		
<ul style="list-style-type: none"> Soaring raw material and transportation prices due to the introduction of carbon taxes and energy conversion at suppliers 	1.5°C	Large	Medium to long term	<ul style="list-style-type: none"> Increased capital investment and improvement costs related to decarbonization of manufacturing processes 	1.5°C	Large	Short to medium	<ul style="list-style-type: none"> Increase in R&D and commercialization costs for a recycling-oriented society 	1.5°C	Large	Medium to long
<ul style="list-style-type: none"> Increased costs associated with purchasing restrictions and securing procurement routes due to restrictions on raw materials used 				<ul style="list-style-type: none"> Increased cost of reforming hydrophilic treatment due to set targets for reducing chemical use 				<ul style="list-style-type: none"> Review of sales strategies to meet customer demands for environmental responsiveness 			
<ul style="list-style-type: none"> Material cost increase and procurement difficulties due to raw material change in response to resource recycling 				<ul style="list-style-type: none"> Damage to brand image due to delays in climate change action 				Medium			

Degree of impact (on our medical device business, not on the entire Group)

Large: A failure to respond has a great impact on the survival and growth of the company and its businesses.

Medium: A failure to respond poses a limited impact and does not affect the survival and growth of the company and its businesses.

2. Risks and Opportunities (Transition Risks and Opportunities -3) [Opportunities and Measures]



[Automotive parts]

	Procurement	Manufacturing and Logistics	Development and Sales
Opportunities	<ul style="list-style-type: none"> Review raw materials (change to eco-friendly or recycled materials), suppliers, product designs, and others to strengthen our response to decarbonization and resource recycling, thereby differentiating ourselves from our competitors. <p>(U.S., China)</p> <ul style="list-style-type: none"> Increase local procurement of raw materials to strengthen competitiveness. (Realize cost reduction and stable procurement.) 	<ul style="list-style-type: none"> Accelerate efforts to improve productivity through factory automation and decarbonize domestic facilities. 	<ul style="list-style-type: none"> Promote and accelerate co-creation activities with customers to increase sales of products for CASE. <p>(U.S., China)</p> <ul style="list-style-type: none"> Strengthen sales expansion to non-Japanese OEMs and increase market share focusing on fastener parts, etc., which are less affected by electrification
Measures	<ul style="list-style-type: none"> Resin material: Use of bioplastics Metal material: Replacement with low-CO2 materials Cost reduction through procurement of locally produced goods Reduction of energy used for transport Purchase of decarbonized energy sources 	<ul style="list-style-type: none"> Moka Plant renewal to improve productivity Thorough energy conservation Reduction of energy consumption by replacing utility system Improvement of thermal efficiency of injection molding machine Gas replacement in heat treatment furnace (LPG → LNG) <p>[Reference]</p> <ul style="list-style-type: none"> P20: Moka Plant renewal plan P25: Roadmap for carbon neutrality by 2050 	<ul style="list-style-type: none"> Development and sales of new products for CASE Increase of existing market share mainly in fuel and powertrain system components (Short-term response to demand for ICE vehicles) <p>[Reference]</p> <ul style="list-style-type: none"> P19: Actions for CASE

2. Risks and Opportunities (Transition Risks and Opportunities -4) [Opportunities and Measures]



[Medical devices]

	Procurement	Manufacturing and Logistics	Development and Sales
Opportunities	<ul style="list-style-type: none"> Review raw materials (change to eco-friendly or recycled materials), suppliers, and others to strengthen our response to decarbonization and resource recycling, thereby differentiating ourselves from our competitors. 	<ul style="list-style-type: none"> Shift operations and manufacturing sites to more eco-friendly practices quickly to improve competitiveness. 	<ul style="list-style-type: none"> Develop and market eco-friendly products that capture the growing environmental awareness of customers, thereby improving competitiveness and differentiating ourselves from our competitors.
Measures	<ul style="list-style-type: none"> Select and secure manufacturers to sustainably procure raw materials and supplies for eco-friendly products. 	<ul style="list-style-type: none"> Shift to renewable energy. Create synergies through co-creation activities with companies that lead the way in environmental responsiveness. 	<ul style="list-style-type: none"> Promote the development and design of packing materials that reduce waste (smaller, thinner, optimized shape) and new products that do not use regulated materials. Develop innovative products that, for example, can shorten procedure time and reduce the burden on patients as well as energy consumption in the medical setting. Develop high value-added products that contribute to "standardize procedures," which directly relates to the success rate of surgery.

2. Risks and Opportunities (Physical Risks and Opportunities -1) [Risks and Measures]



[Automotive parts]

	Chronic Risk	Impact/ Time frame		Acute Risk	Impact/ Time frame			
Physical risks	<ul style="list-style-type: none"> Rise in air conditioning cost with temperature rise and health hazards to employees 	4°C	Medium (China: medium to large)	Long term (Mexico: short)	<ul style="list-style-type: none"> Delays in responding to increased disruptions in the transportation process Impact on plant operations due to supply chain disruptions caused by increased natural disasters 	4°C	Medium (U.S.: large)	Short to medium
	<ul style="list-style-type: none"> Degradation of raw material and product quality with temperature and humidity rise 				<ul style="list-style-type: none"> Decrease in orders due to delay in responding to changes in performance requirements from automakers as a result of rising temperatures Market shrinking and decrease in orders due to new pandemic-related behavioral restrictions 			
	<ul style="list-style-type: none"> Shutdown of operations and vessels due to inundation of coastal sites by rising sea levels 				<ul style="list-style-type: none"> Delay in reviewing procured materials in response to performance requirements from automakers due to rising temperatures 			
	<ul style="list-style-type: none"> Suspension of operations due to decrease in available water resources caused by rapid drop (or depletion) of groundwater level 				<ul style="list-style-type: none"> Increased procurement/logistics costs due to increased natural disasters Shutdown of plants and warehouses due to abnormal weather and increase in repair cost Destabilization of energy supply due to abnormal weather 			
Measures	<ul style="list-style-type: none"> Infrastructure development to strengthen plant and warehouse resilience Improvement of work and material storage environment through thermal management (room temperature and humidity) Introduction of water circulation system through water management Review of risk assessment with BCP database including supply chain 			<ul style="list-style-type: none"> Reduction of inventory cost through increased use of locally produced goods Stable procurement through supply chain diversification and raw material standardization Infrastructure development to strengthen plant and warehouse resilience (U.S., China) Promote local production and consumption, and enhance cooperation with business partners in view of geopolitical risks. 				

2. Risks and Opportunities (Physical Risks and Opportunities -2) [Risks and Measures]

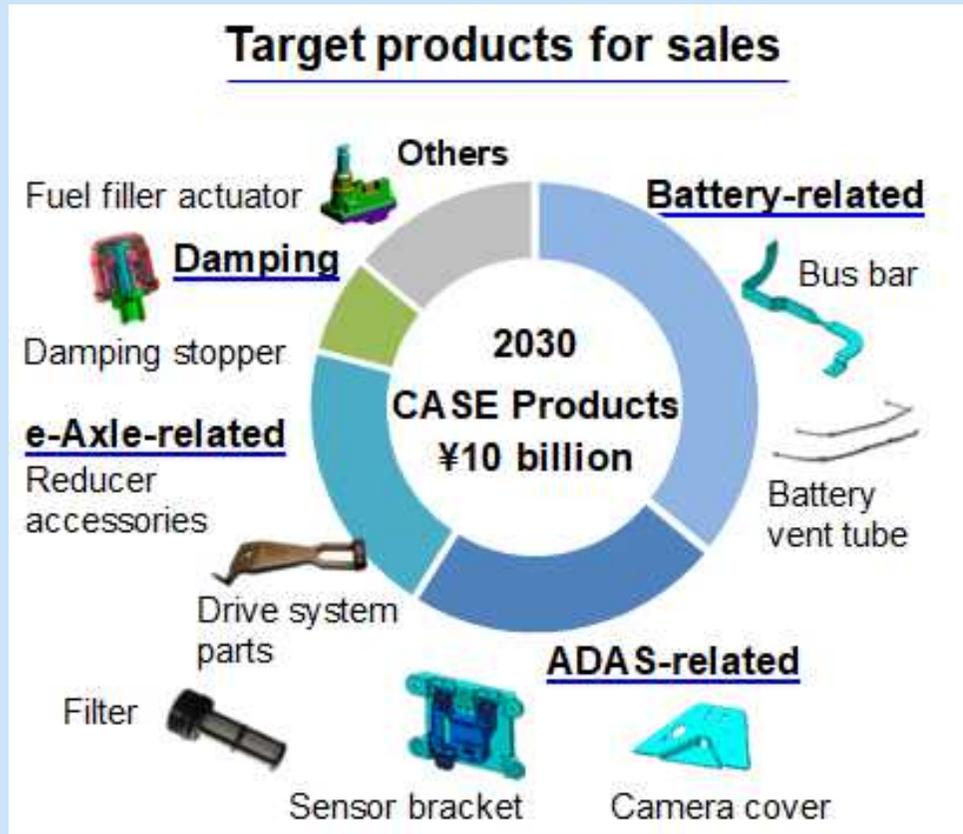


[Medical devices]

	Chronic Risk	Impact/ Time frame			Acute Risk	Impact/ Time frame		
Physical risks	<ul style="list-style-type: none"> Rise in air conditioning cost with temperature rise and health hazards to employees Degradation of raw material and product quality with temperature and humidity rise 	4 °C	Medium	Long term	<ul style="list-style-type: none"> Delays in responding to increased disruptions in the transportation process Impact on plant operations due to supply chain disruptions and traffic infrastructure disruptions as well as difficulty in securing labor force, caused by increased natural disasters 	4 °C	Large	Short to medium
					<ul style="list-style-type: none"> Market shrinking and decrease in orders due to new pandemic-related behavioral restrictions 			
			<ul style="list-style-type: none"> Increased procurement/logistics costs due to increased natural disasters 		Middle to large			
			<ul style="list-style-type: none"> Shutdown of plants and warehouses due to abnormal weather and increase in repair cost Destabilization of energy supply due to abnormal weather 				Medium to long	
Measures	<ul style="list-style-type: none"> Infrastructure development to strengthen plant and warehouse resilience Maintenance of work environment through thermal management 				<ul style="list-style-type: none"> Reduction of inventory cost through increased use of locally produced goods Stable procurement through supply chain diversification and raw material standardization Infrastructure maintenance and improvement to strengthen the resilience of plants and warehouses, including private power generation Formulation, maintenance, and management of BCP (including its training) Strengthen logistics in product transportation (improve efficiency, consider alternative routes in case of disaster and secure them in advance) 			
					[Ref.] <ul style="list-style-type: none"> P.20 Disaster risk preparedness 			

3. Measures to Address Risks and Opportunities

Initiatives for CASE Response: Strengthen Co-creation Activities with Customers



We foresee a risk of decline or loss of orders for existing products as the electrification of vehicles advances and the need for internal combustion engines decreases.

On the other hand, this major change also provides new business opportunities, so we set up e-Products Development Department dedicated to developing and expanding sales of CASE products in April 2022. Products that we are focusing on are as follows.

- **Battery-related products** for electrification
- **ADAS-related** sensor/camera peripherals for autonomous driving
- Products related to **e-Axle** (EV drive motor system) which accelerates EV shift
- **Vibration control products** to secure quietness inside vehicles

3. Measures to Address Risks and Opportunities

Construction of New Moka Plant

[Response to physical risks]

- Moka Plant (Tochigi Prefecture), our core plant in Japan, will be renewed through FY2030. It will improve our productivity through factory automation and enhance our resilience.

【Response to transition risks】

- The plant will produce CASE products we are focusing on.
- The plant will promote infrastructure development toward carbon neutrality by 2050 (see P24).
- Phase I construction completed in December 2023



Solar panels on new Moka Plant

[Schedule]

- Phase I
April 2024: Official operation
- Phase II
FY2024: Start of construction
FY2025: Operation

3. Measures to Address Risks and Opportunities



Construction of New Global Head Office

Sustainable office to present the Piolax corporate brand to the world

- ZEB Ready* certification expected.
- Fully automatic louvers on windows to reduce outside light and adjust light level and room temperature.
- Parking space for EVs which provide power in case of emergency.

[Schedule]

Start of construction: FY2024 → Completion: FY2025



Image of new Head Office

Efforts for Carbon Neutrality

- Moka and Fuji Plants have started to introduced CO2-free power since April 2023, so has our medical device subsidiary since October of the same year. This will be spread to other group companies.
- Self-supply of renewable energy by solar panels started at our U.K. base in 2017, followed by Thailand in 2020 and the new Moka Plant in 2024.
- Carbon offsetting through overseas green power certificates is to be considered.



*ZEB Ready: buildings that achieve a reduction in primary energy consumption of 50% or more from the standard primary energy consumption through energy conservation

Risk Management

[Recommended disclosures]

- Corporate processes for identification and assessment
- Explanation of risk management
- Integration of climate-related risk management into overall risk management

Identification, Assessment and Management of Risks

- Sustainability Committee will handle company-wide integrated management of various risks and opportunities, including climate change. We will identify risks and opportunities that could affect our group's business activities, develop an action plan based on the assessment of their importance, and monitor the progress.
- The risks and opportunities related to climate change are considered to have a particularly large impact on our group's business activities. Therefore, we will consider a medium- to long-term action plan, also continuously review it based on external evaluations, and strive to manage it appropriately. In FY2022, subcommittees were set up under Sustainability Committee to work on individual themes. We will enhance our organizational response to sustainability-related risks, including climate change risks.

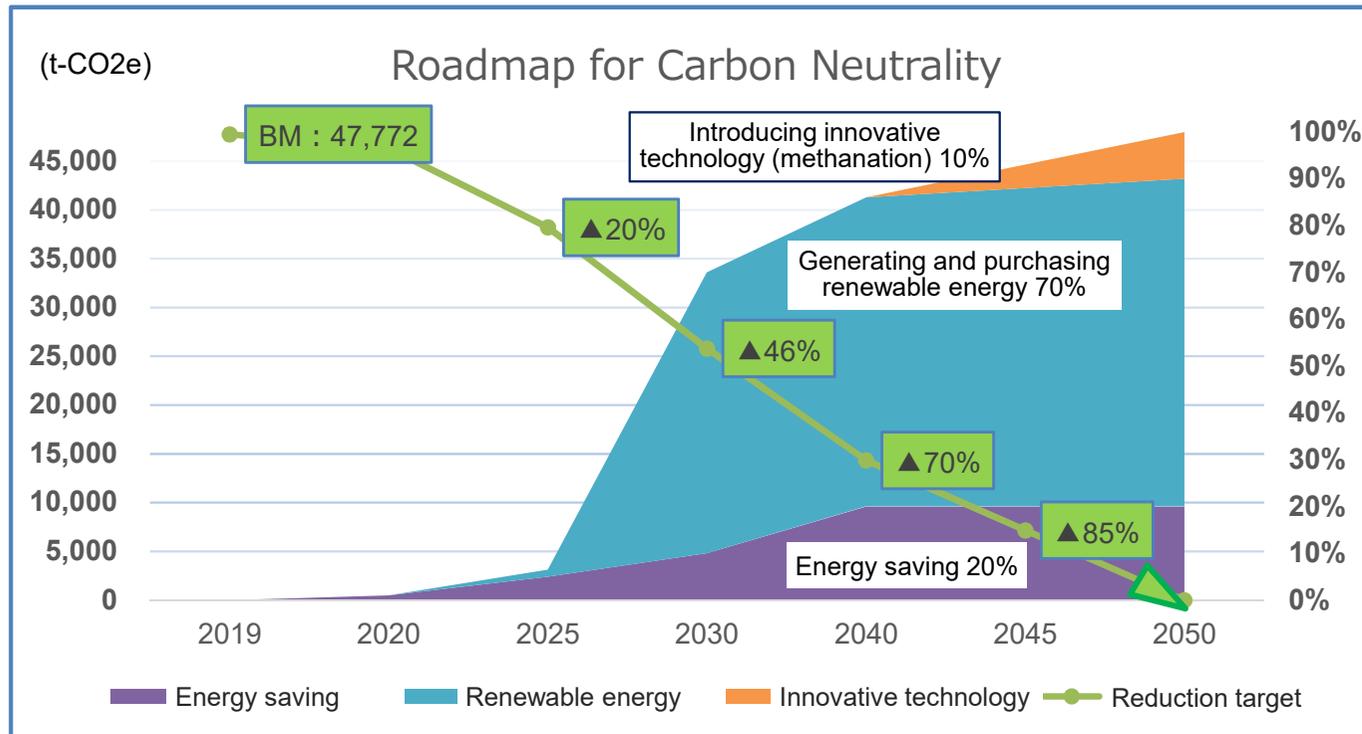
Metrics and Targets

[Recommended disclosures]

- Criteria used for assessment
- GHG Protocol Scope 1 to 3 emissions and related risks: citing data from the Sustainability Report
- Management targets and performance

Efforts to Achieve Carbon Neutrality

- To achieve carbon neutrality in our business areas of Scope 1 and Scope 2 based on the GHG Protocol, the Piolax Group sets the amount in 2019 as the benchmark and aims to achieve a 46% reduction by 2030 and a 100% reduction by 2050.
- Regarding Scope 3 of the supply chain area, we will continue to consider efforts for reduction.



Carbon neutrality in Scope 1 and Scope 2 of our business areas will be achieved through the combination of energy conservation, renewable energy, and innovative technologies.

[Measures to achieve the targets]

- Zero CO₂ emission plan for Scope 2
- 2030: domestic business area
- 2040: overseas business area
- To calculate the effect of capital investment for necessary resources, internal carbon pricing is used to judge the effect with consideration to CO₂ reduction effect.

Statement of Support for the TCFD Recommendations

Our declaration that we will disclose information on our response to climate change in accordance with the guidelines of the TCFD recommendations.

Support for the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

PIOLAX, INC. supports the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB) at the request of the G20.

We believe that the analysis of risks and opportunities posed by climate change and the achievement of set goals will be effective in solving issues on the ongoing global warming, and thus express our support for the recommendations of the TCFD.

We will reduce greenhouse gas emissions in our own business areas as well as in the supply chain area to contribute to the realization of sustainable society. Based on the TCFD declaration, we will continue to analyze and address risks and opportunities that climate change poses to our business, and strive to improve information disclosure.

March 18, 2022
Yukihiko Shimazu
President
PIOLAX, INC.



The future outlook described in this document is based on the information currently available.
Due to various factors, actual results may be different from the expectations.