

# Briefing on “Sustainability (Environment)”

December 21, 2022

Yamato Holdings Co., Ltd.



# **1. Overview of “Sustainable Management”**

# 1. Our aspiration

Sustainable corporate value enhancement, through Yamato's  
"Contribution to realizing a rich and prosperous society"

## Management Philosophy

Yamato helps enrich our society  
by enhancing our social infrastructure,  
creating more convenient services  
for evolving lifestyles and industries, and  
developing innovative logistics and distribution  
systems.

## 2. Change in the business environment

### Drastic and sudden changes in the environment surrounding Yamato's business



Diversification of customer needs



Rapid growth of EC market



Declining population & decaying regional infrastructure



Decline of working population



Climate change and resource scarcity

### 3. Yamato Group's materiality

Based on risks and opportunities in our business, Yamato has identified its material issues which will contribute to establishing a sustainable society and enhancing Yamato Group's corporate value

#### Step 1

Refine Choices for Material Issues

Based on international frameworks such as the GRI Guidelines, SASB standards, ISO26000 and the SDGs (Sustainable Development Goals), and ESG survey items that investors consider to be highly important, we considered risks and opportunities in our business using actual data, and narrowed down candidate material issues

#### Step2

Hold Stakeholder Dialogue  
(Implemented in Nov. 2019)

We invited experts from universities, international institutions, and securities companies and received their opinions on material issues and the expected role of the Yamato Group in solving environmental and social issues.

#### Step3

Identify Material Issues  
(in Jan. 2020)

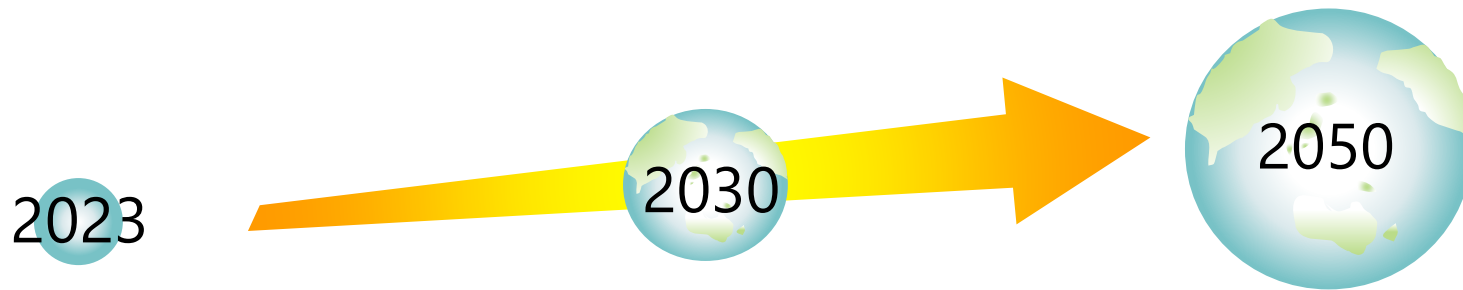
We identified material issues and announced our Transformation Plan "YAMATO NEXT100" as a grand design for our management over the medium to long term



## 4. Management embedded with sustainability

Yamato has, in its "YAMATO NEXT100" grand design for mid-to-long term management, outlined the environmental and social vision, and declared its goal of achieving climate neutrality in 2050

~ Yamato embedded "Environment" and "Society" in its management plan, and is promoting sustainability initiatives



### "Sustainable Medium-term Plans 2023"

Outlined action plan for each material issues, as well as interim goals for FY2023 (March 2024), and is promoting sustainable initiatives

### Mid-term targets

48% reduction in GHG emissions from FY March 2021

- Introduce 20,000 EVs
- Increase usage of renewable energy-derived electricity to 70% of the total
- Introduce 810 solar power generation facilities
- Reduce use of dry ice to zero

### Environmental Vision

Connect. Deliver the future via green logistics.

### Long term targets

Virtually zero emissions\*

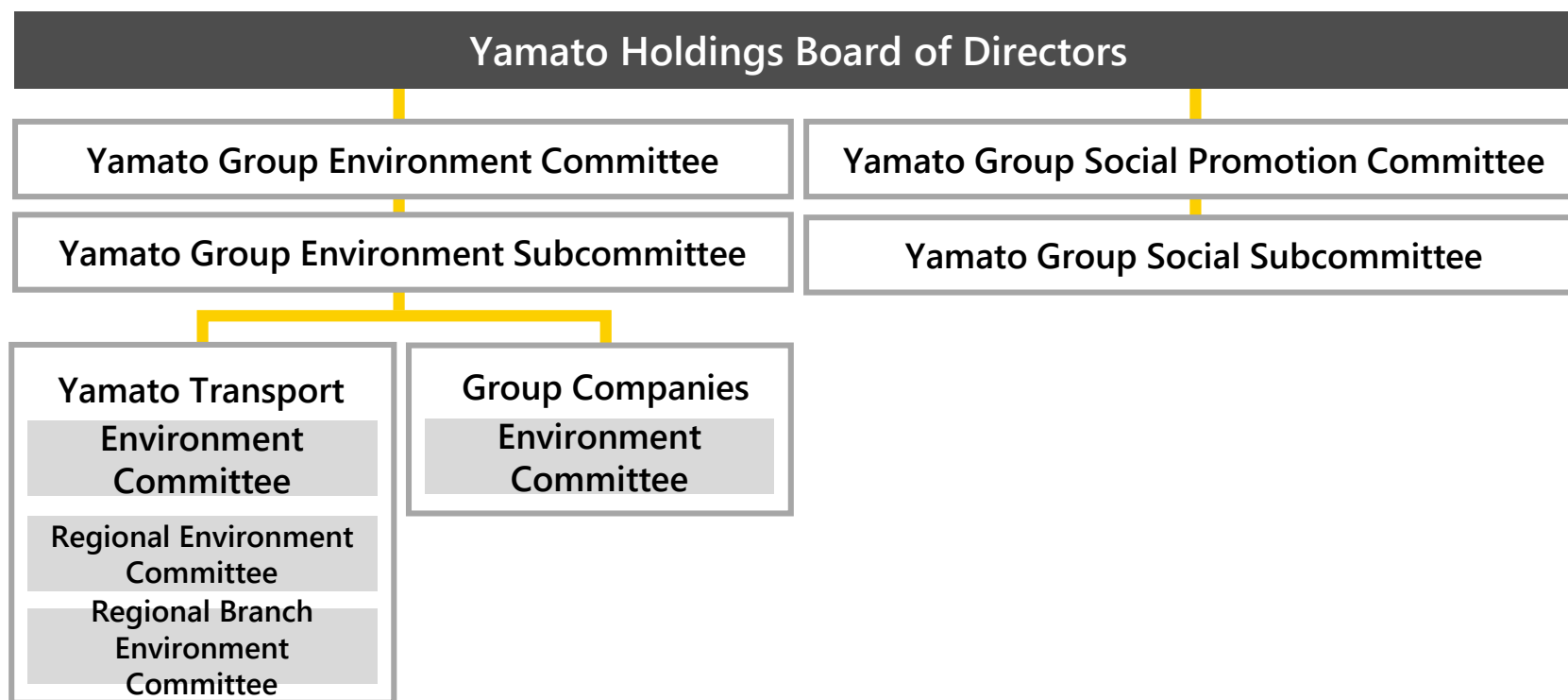
\*Scope 1 and Scope 2

### Social Vision

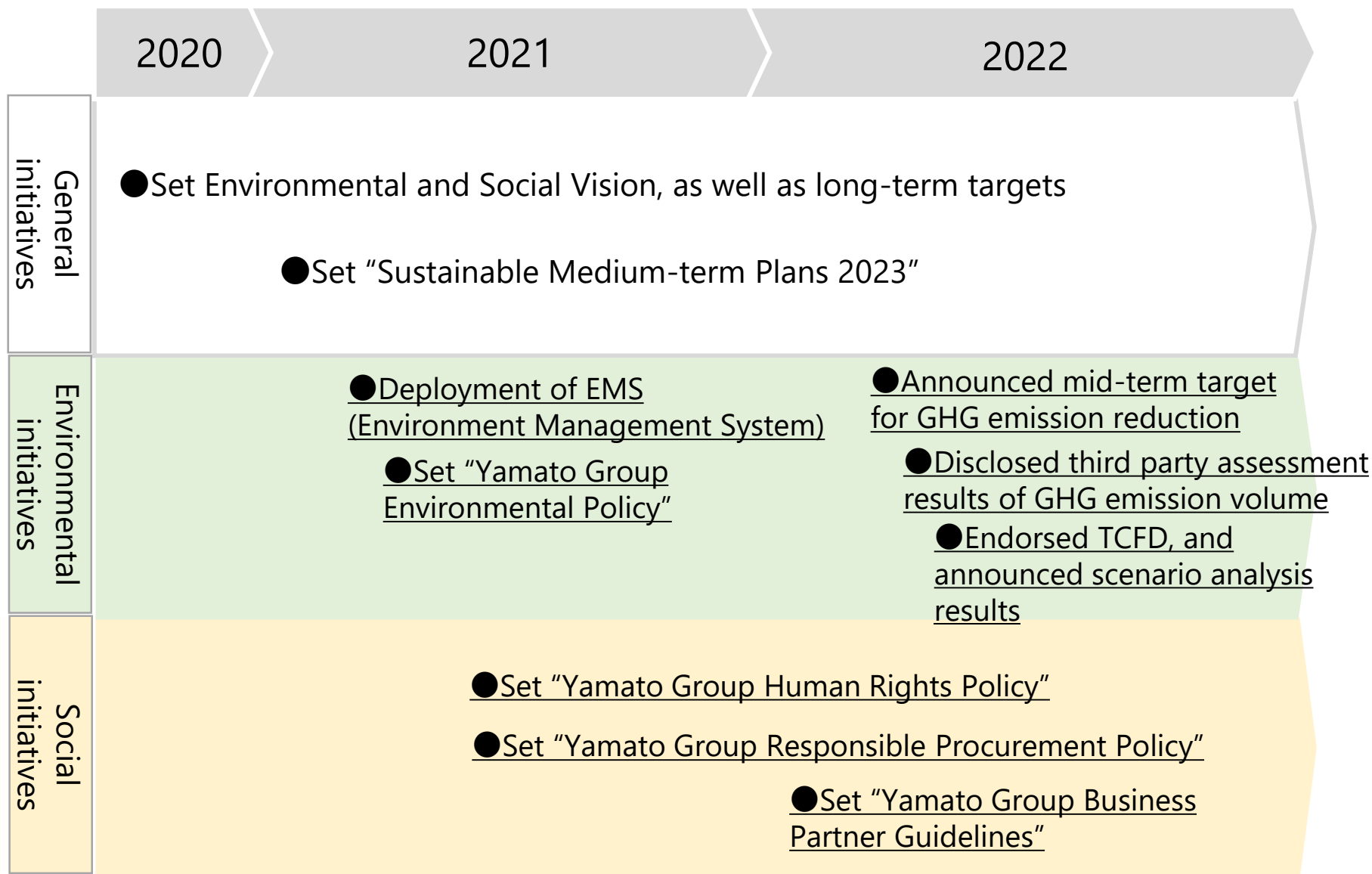
Through co-creation and fair business activities, help create a society that "leaves no one behind"

## 5. Organizational structure to promote sustainability

Conduct “Yamato Group Environment Committee” and “Yamato Group Social Promotion Committee”, with President as Chairperson and Directors of Yamato Transport (Senior and Executive Officers, etc.) and Presidents of our major Group companies as members, to promote sustainable initiatives



## 6. Key initiatives related to sustainability





## **2. Initiatives Based on the Recommendation of the TCFD**

## 7. Initiatives Based on the Recommendation of the TCFD

### (1) Governance

Environmental management structure with the "Yamato Group Environment Committee" as the decision-making body, under the supervision of the Board of Directors

### (2) Strategy

Yamato Transport's risks and opportunities specified as of today

**Climate  
change  
initiatives**

### (3) Risk management

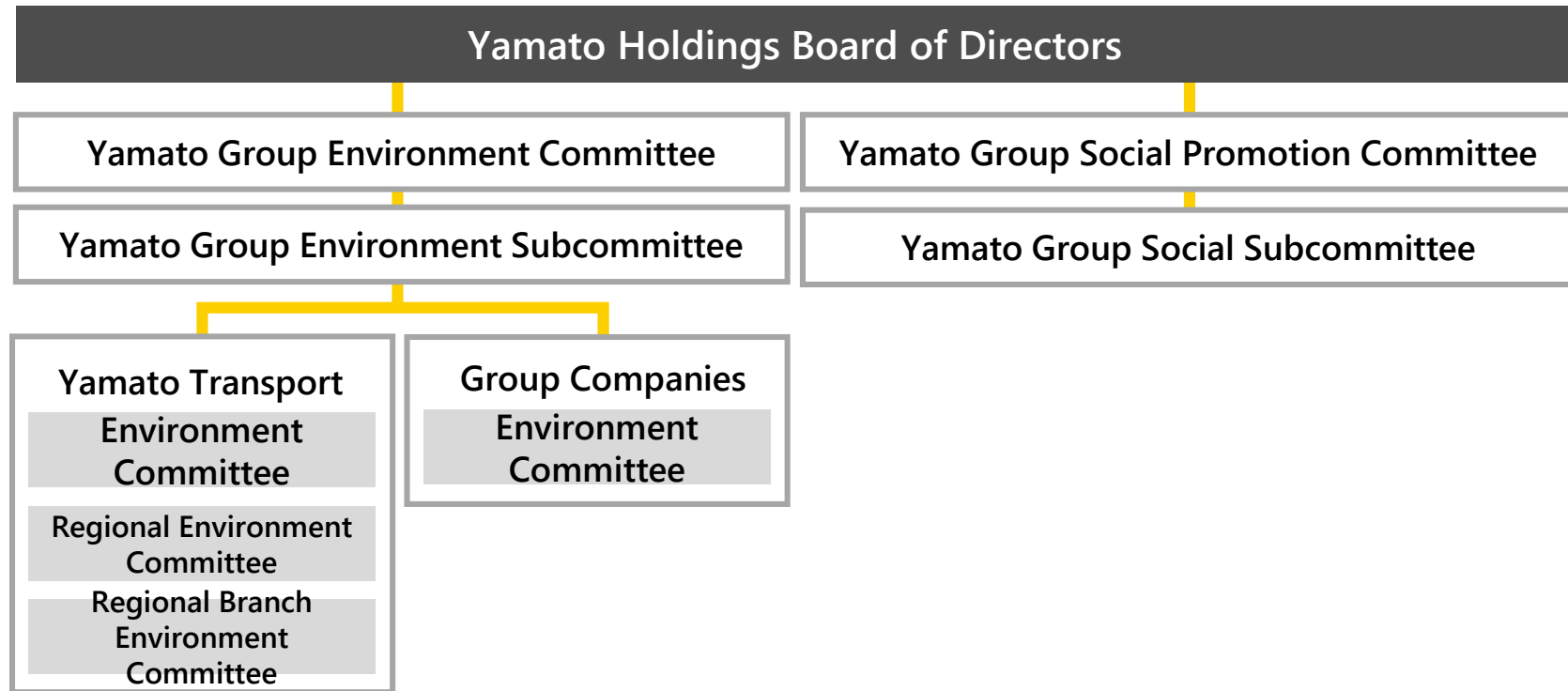
Manage and address climate change-related risks

### (4) Metrics and goals

Metrics and goals for managing climate change-related regulations and their implications

# 8. Governance

## ■ Sustainability (Environment) Promotion Structure



## ■ Compensation of Directors and Audit & Supervisory Board Members

Medium- to long-term performance-linked, share-based compensation (variable compensation) introduced in FY2022/3

Performance benchmarks

ROE, total shareholder return, and ESG indicators (greenhouse gas emissions)

# 9. Strategy -Assessment of Risk Importance (Transition risk)

Assumed time period: short term (up to 2023), medium term (up to 2030), and long term (after 2030)

Level of importance: high (annual financial impact of over ¥10 billion), medium (between ¥1 billion and ¥10 billion), and low (less than ¥1 billion)

Risk Classification				Risk	Opportunity	Level of Importance
Major category	Core category	Subcategory	Assumed time period			
Transition risk	Policy and Legal	Carbon Price	Medium term	<ul style="list-style-type: none"> <li>Reduction in revenues due to inability to reflect carbon tax in price</li> </ul>	<ul style="list-style-type: none"> <li>Increase in revenues through sale of low-carbon logistics as high added value</li> </ul>	High
		Reinforcement of mandatory emissions reporting	Medium term	<ul style="list-style-type: none"> <li>Decrease in revenues after loss of customer trust if errors are detected in our reporting</li> <li>Increase in system development costs and personnel expenses in response to requirement by clients for precise GHG emissions</li> </ul>	—	Low
	Technology	Increase in expectation to introduce new technology and provide high-value-added services	Medium term	<ul style="list-style-type: none"> <li>Decrease in revenues due to delay in popularizing methods of transportation and materials that reduce GHG emissions following transition to a low-carbon society</li> </ul>	<ul style="list-style-type: none"> <li>Increase in revenues by being selected as a partner by customers through introduction of methods of transportation that reduce GHG emissions following transition to a low-carbon society</li> </ul>	Low
		Demand for realizing low-carbon transportation	Medium term	<ul style="list-style-type: none"> <li>Increase in costs following introduction of low-carbon vehicles and equipment</li> </ul>	<ul style="list-style-type: none"> <li>Decrease in procurement costs due to transition from use of fossil fuels to electricity by trucks if low-carbon transportation, such as EVs, is actively introduced</li> </ul>	Medium
	Market	Changes in energy mix	Medium term	<ul style="list-style-type: none"> <li>Increase in cost of energy used by vehicles and facilities as a result of rising fuel and energy prices due to popularization of energy conservation</li> </ul>	<ul style="list-style-type: none"> <li>Increase in energy self-sufficiency and decrease in energy costs due to introduction of renewable energy generators and power generation equipment and to promotion of energy-saving activities</li> </ul>	Medium
		Increase in environmental awareness of consumers corporate clients and regular customers	Medium term	<ul style="list-style-type: none"> <li>Decrease in revenues due to avoidance of Yamato services if the Company's efforts to reduce GHG emissions throughout supply chains of customer companies and organizations are insufficient as well as to increased awareness of climate change and ethical consumption by consumers</li> </ul>	<ul style="list-style-type: none"> <li>Increase in revenues due to Yamato services being selected worldwide, particularly within the European Union, where environmental awareness is high, and by customer companies and organizations—whose entire supply chains have seen reductions in GHG emissions—as well as a heightening of awareness regarding climate change and ethical consumption by consumers if their needs can be met</li> <li>Reduction of working hours and related costs through enhancement of delivery efficiency as a result of a drop in people being away from home at the time of delivery</li> </ul>	High
		Criticism of industrial sectors	Medium term	<ul style="list-style-type: none"> <li>Reduction in revenues if low-carbon transportation cannot be realized, since there are high expectations for transportation as Scope 3 for other industries</li> </ul>	—	Low
	Reputation	The impact on fundraising	Medium term	<ul style="list-style-type: none"> <li>Difficulties with fundraising if Yamato business is not classified as sustainable</li> </ul>	<ul style="list-style-type: none"> <li>Increase in case of fundraising as a result of diversification of financing following transition to a low-carbon society</li> <li>Realization of stock price stability and expansion of investment as making a high reputation on the environmental initiatives</li> </ul>	Low

# 10. Strategy -Assessment of Risk Importance (Physical risk)

Assumed time period: short term (up to 2023), medium term (up to 2030), and long term (after 2030)

Level of importance: high (annual financial impact of over ¥10 billion), medium (between ¥1 billion and ¥10 billion), and low (less than ¥1 billion)

Major category	Risk Classification			Risk	Opportunity	Level of Importance
	Core category	Subcategory	Assumed time period			
Physical risks	Acute	Increased severity and frequency of abnormal weather	Short term	<ul style="list-style-type: none"> <li>Decrease in revenues as the frequency of abnormal weather increases and causes numerous cases where operations are suspended due to damage to employees, delays in recovery at afflicted facilities, and power and fuel supply shortages</li> <li>Decrease in revenues if our customers cannot ship packages as a result of damage to customer facilities or products</li> <li>Increase in damage to and loss of logistics facilities, equipment, and freight, as well as the associated repair costs</li> </ul>	<ul style="list-style-type: none"> <li>Increase in revenues by enhancing our natural disaster response capability following a rise in demand from customers who worry about the increasing severity of natural disasters in the future</li> <li>Reduction in loss of business opportunities and costs related to recovery by quickly relocating facilities in places with a low risk of damage</li> </ul>	Medium
			Medium term	<ul style="list-style-type: none"> <li>Decrease in revenues by reducing shipping volume from customers suffering severe impacts from climate change and water risks</li> <li>Increase in response costs after delivery delays arise due to road infrastructure being cut off because of flooding</li> </ul>	—	Low
		Rising sea levels	Long term	<ul style="list-style-type: none"> <li>Increase in costs due to water damage response costs and the impact of rising insurance rates at logistics facilities positioned in coastal areas following a rise in sea levels</li> </ul>	—	Low
	Chronic	Rise in average temperatures	Long term	<ul style="list-style-type: none"> <li>Increase in the number of employees suffering from poor health, such as heatstroke, due to rising average temperatures, as well as a difficulty in personnel recruitment in addition to higher employee turnover leading to an increase in costs, such as personnel expenses and recruitment costs</li> <li>Increase in heating and lighting expenses as a result of high energy consumption costs related to temperature control in logistics facilities due to rising average temperatures</li> <li>Decrease in revenues from delivery of fresh produce due to inability to harvest local products</li> </ul>	—	Low

# 11. Strategy -Evaluation of Business Impact and Direction of Countermeasures ①

## ■ Financial impact\* due to introduction of a carbon tax

\*For Yamato Transport

### Evaluation of Business Impact

Business impact\* related to calculations if a carbon tax is fully introduced, assuming no measures are taken after the current Sustainable Medium-Term Plan 2023

**2030: ¥13.3 billion**

**2050: ¥25.6 billion**

\*Estimated using carbon tax prices

\$130 per ton (2030)

\$250 per ton (2050)

Note:

We determine the business impact by referencing energy-related indexes, such as the carbon pricing published in the World Energy Outlook by the IEA.

### Direction of Countermeasures

- Implementation of measures to achieve targets for reducing GHG emissions by 2030 (48% reduction compared with FY2021/3)

→ Introduction of 20,000 low-carbon vehicles (mainly EVs), installation of 810 solar power generation equipment, etc.

<Expected result (in 2030)>

**Reduction of business impact due to introduction of carbon tax (¥6.1 billion decrease)**

- Implementation of measures to achieve targets for climate neutrality by 2050

→ Introduction of low-carbon vehicles, including EVs with cartridge batteries, further installation of solar power generation equipment, reinforcement of other measures, etc.

<Expected result (in 2050)>

**Elimination of business impact due to introduction of carbon tax**

To realize the above effects, aim for proactive capital expenditures in low-carbon transition and examine the introduction of internal carbon pricing.

## 12. Strategy -Evaluation of Business Impact and Direction of Countermeasures ②

- Financial impact\* assessment regarding decreasing revenues and increasing repair costs for facilities and equipment due to abnormal weather and disasters

\*For Yamato Transport

### Evaluation of Business Impact

Business impact\* of decreased sales due to abnormal weather, such as heavy rain resulting from increasingly severe typhoons and linear rainbands, and repair costs for damaged facilities and equipment

**2030: ¥1.9 billion**

**2050: ¥3.8 billion**

\*Calculated by referencing past disasters

Note:

To understand changes in trends, we reference data, including the frequency of flooding, published by the Japanese Ministry of Land, Infrastructure, Transport and Tourism; the Ministry of Education, Culture, Sports, Science and Technology; and the Japan Meteorological Agency in light of climate change.

### Direction of Countermeasures

- Opening of stores by utilizing hazard maps and periodic reviews of our business continuity planning manual
- Examination of disclosing information on efforts to adapt to climate change internally and to our business partners
- Commencement of testing for use of renewable energy and EVs with cartridge batteries that enhance resilience

Continual reevaluation of business impact going forward while adding extra prerequisites, such as enhancing predictions for location and scale of occurrences of incidents, and continuous examination of countermeasures



# 13. Risk Management / Indicators and Targets

## ■ Risk Management

Climate change-related initiatives for the entire Yamato Group

- Manage environmental issues and risks, including climate change, under Yamato Group Environment Committee and Yamato Group Environment Subcommittee
- Discuss and resolve important matters at the Board of Directors

## ■ Indicators and Targets

< Indicators >

**Transition risks** : Referencing energy-related indexes, such as the carbon pricing published in the World Energy Outlook by the IEA.

**Physical risks** : Referencing data, including the frequency of flooding, published by the Japanese Ministry of Land, Infrastructure, Transport and Tourism; the Ministry of Education, Culture, Sports, Science and Technology; and the Japan Meteorological Agency in light of climate change.

< Targets >

### Targets for reducing GHG\* emissions

\* In-house emissions (Scope 1 and Scope 2)

Short Term: 10% decrease by 2023 compared with FY2021/3

Medium Term: 48% decrease by 2030 compared with FY2021/3

Long Term: Virtually zero emissions (Climate neutrality) by 2050

### Targets for percentage of electricity generated via renewable energy sources

Short Term: 30% by 2023

Medium Term: 70% by 2030



**3. Initiatives to make “Green Delivery” a reality  
~Solving social issues through collaboration~**

# 14. Initiatives to achieve Green Delivery

## < Long-term Target >

**Achieve Climate neutrality in 2050**  
**Virtually zero for Yamato's own GHG emissions**

## < Mid-term Target >

**48% reduction in GHG emissions in 2030**  
**(vs FY March 2021)**

## < Focus initiatives >

**Introduction of  
EVs**

**Utilize renewable  
energy**

**Reduce use of  
dry ice and  
fluorocarbon gas**

## < Basic initiatives >

**Energy saving**  
(Renew equipment /  
facilities, switch to LED, etc.)

**Make it possible to  
"see" electricity use**

**Study new  
technologies, and  
improve operational  
efficiency**

## 15. Key initiatives towards 2030

**Introduce 20,000 EVs**

**Promote use of renewable energy**

(70% of electricity usage to come from renewable energy sources)

**Introduce 810 solar power generation (PV) facilities** (On-site and off-site power generation)

Integrate EV introduction and use of renewable energy  
(= self-sufficiency of electricity)

**Modify operations to achieve zero use of dry ice**

## 16. Social issues related to the Yamato's initiatives

### ➤ Introduction of EVs and establishing charging infrastructure

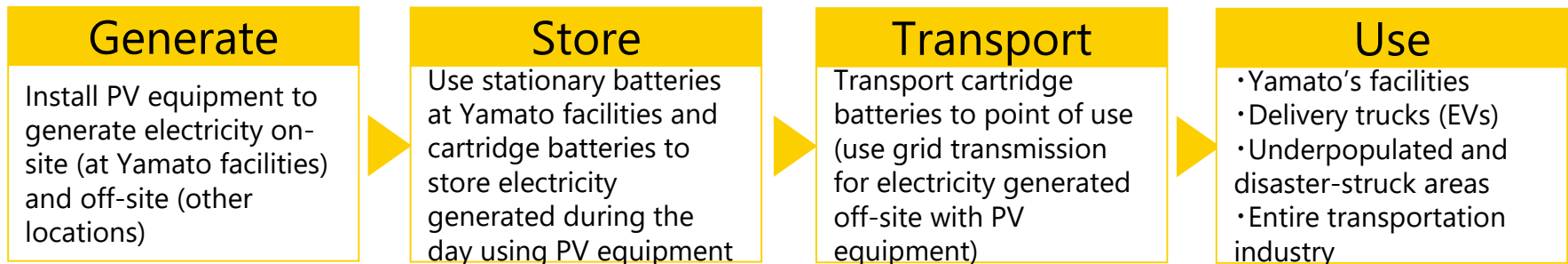
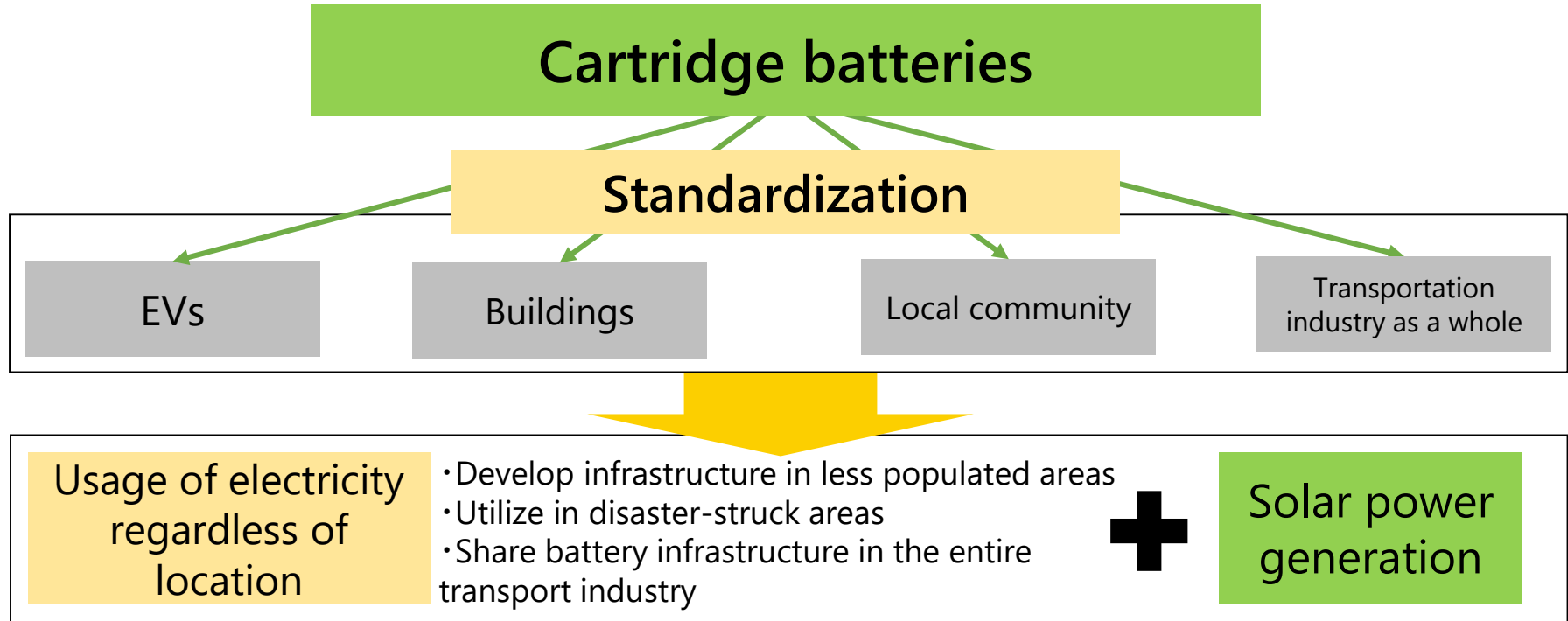
- **Usage and charging of commercial vehicles takes place at the same time**  
Since both commercial vehicle use and solar power generation take place during the daytime, a way to “operate” and “charge” in parallel must be devised
- **Increased capex burden in relation to EVs and charging infrastructure**  
Heavy burden for mid-sized and small transportation companies when introducing EVs and establishing charging infrastructure, which could also affect the larger transportation companies

### ➤ Use of electricity generated from renewable sources

- **Shortage of electricity from renewable sources**  
Not enough supply to address sharply rising demand for renewable energy
- **Lack of grid capacity**  
Renewable energy-derived electricity needs to be transmitted via the grid, which is already near capacity, while there are concerns about increasing capacity in an era of population decline

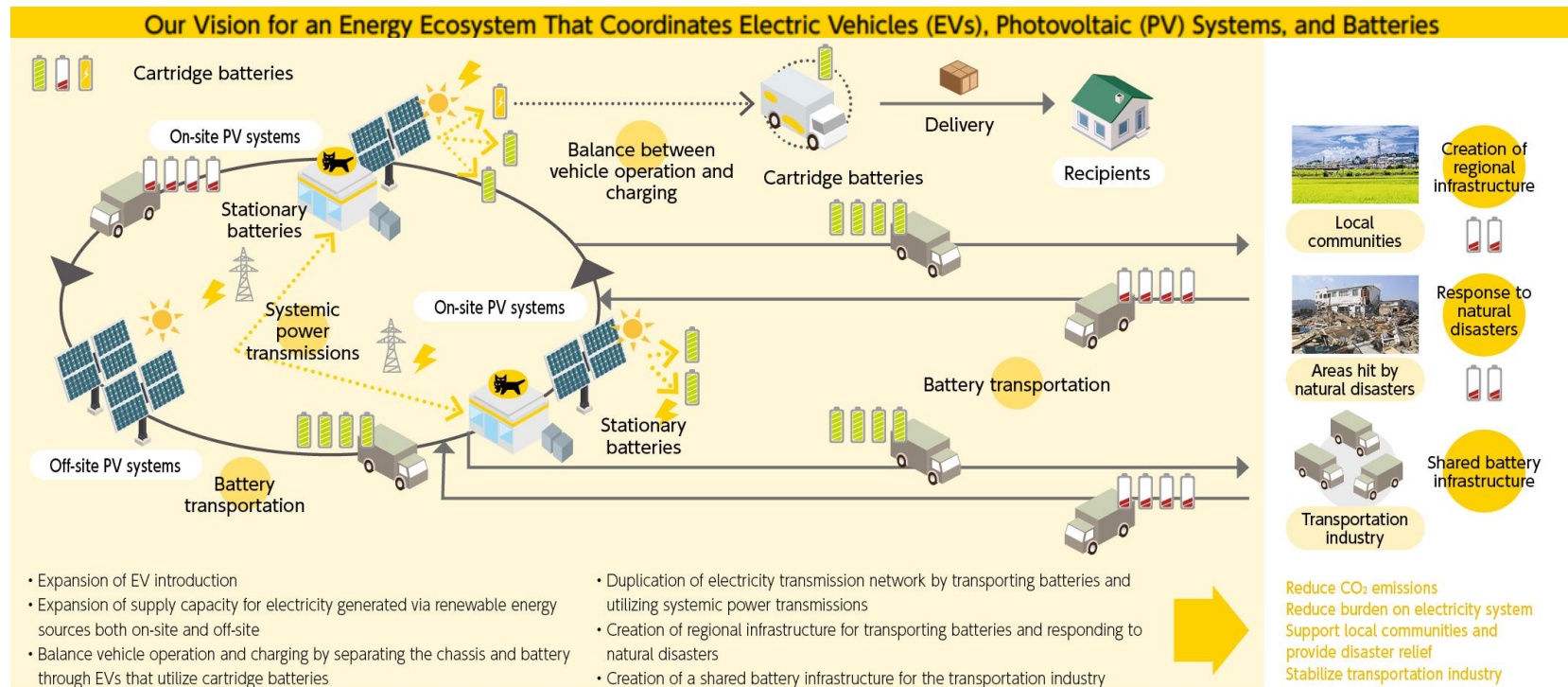
# 17. Solutions for social issues

Develop new style of energy management to “Generate, store, transport and use” clean electricity, using cartridge-type batteries



# 18. Introduction & Operation of EVs to Realize Green Delivery Demonstration Projects utilizing the Green Innovation Fund

Period / Area	FY March 31, 2023 to FY March 31, 2031 (Scheduled) / Gunma Prefecture
Details of Demonstration	Optimization of EV Operations, Development of System to Standardize Charging and Development of System for Flexible Inter-Base Power Distribution
KPI	<ul style="list-style-type: none"> <li>• 200 EVs within the prefecture by FY2024/3</li> <li>• Transform all vehicles into EVs within the prefecture and reduce 5,000 t CO2 emissions generated by vehicles by FY2027/3</li> <li>• Transform all vehicles into EVs with cartridge batteries and reduce 7,500 t CO2 emissions generated by vehicles by FY2031/3</li> </ul>



# 19. Considerations to standardize and commercialize cartridge batteries

## ■ Challenges in introducing commercial battery EVs (BEV)

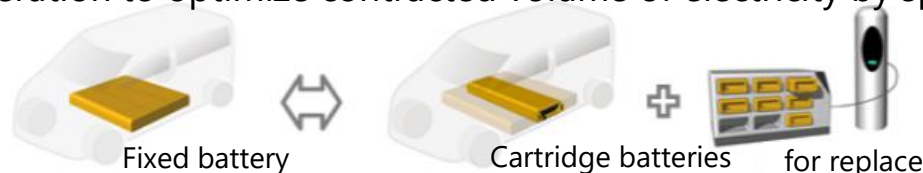
- Longer charging time compared to filling gas and diesel vehicles
- Longer downtime in logistics (hours of non-operation vehicles and parcels), due to concentration of charging timing
- Higher peak of electricity use at facility, due to timing of charging being concentrated during hours when vehicles are not in operation

## ■ Initiatives

- **Began studies to standardize and commercialize removable and portable cartridge batteries as part of energy management with CJPT\***

< Details of Study and Expected Results >

- ① Decrease in costs of introducing EVs: Reduce vehicle costs by equipping them with batteries sufficient for distance traveled
- ② Decrease in burden of charging for drivers: Reduce workload by shortening charging times and simplifying operation
- ③ Decrease in logistics downtime: No interruptions during pickup and delivery operations since vehicles do not need to stop for long while charging their batteries
- ④ Standardization of demand for electricity: Charge replacement batteries even when vehicles are in operation to optimize contracted volume of electricity by spreading out charging time



\*CJPT (Commercial Japan Partnership Technologies Corporation) is a company that plans and develops CASE (connected, autonomous, shared & service, and electric) technology for commercial vehicles and which is funded by four car manufacturers

**Aim to contribute to resilience of local communities through the supply of electric energy, by promoting use of commercial battery EVs (BEV) and green electricity, as well as delivering cartridge batteries to areas hit by disasters and areas where it is difficult to maintain electricity infrastructure**

## 20. Example of initiative to reduce dry ice usage

Introduce transportation material that does not use dry ice, thereby reducing GHG emissions, improving quality and optimizing costs

- Introduced equipment and materials to allow ultra low temperature (minus 75°C ) transportation of medicine
- Jointly developed with Denso mobile-type “Freezer for vehicles” that runs on electricity, to be used when picking up and deliver parcels for *Cool TA-Q-BIN*
- Developed insulation and cold storage material for air freight containers, used in trunk-route transportation of *Cool TA-Q-BIN*

### Ultra low temperature transportation of medicine

Equipment and materials for ultra low temperature transportation at minus 75°C (equivalent to using dry ice)



### *Cool* (temperature-controlled) *TA-Q-BIN*

Last-mile

*“Mobico”*, Mobile-type freezer for vehicles



Trunk-route transportation

Insulation and cold storage material for air freight containers





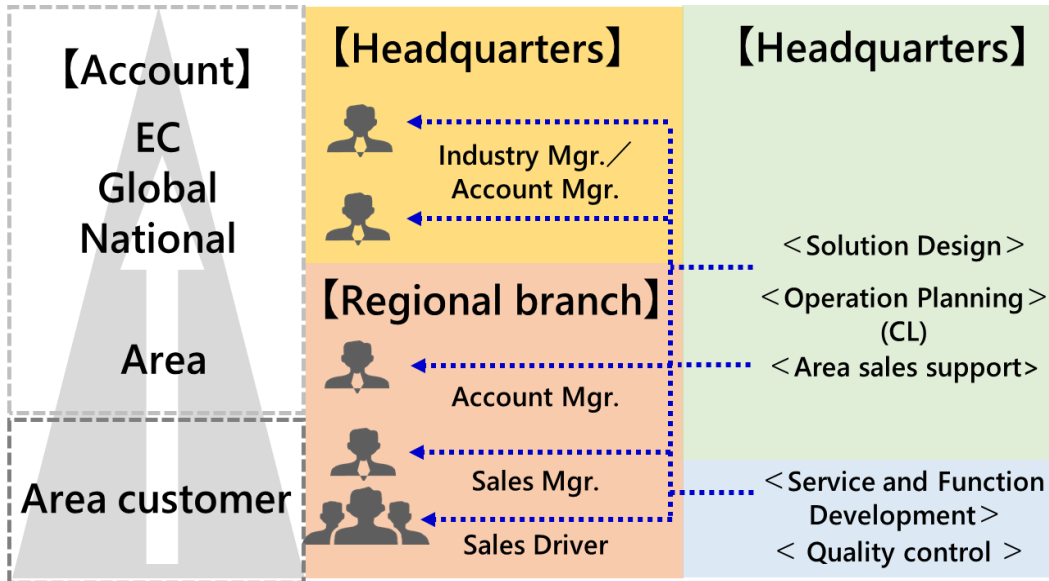
## **4. Initiatives to provide value to corporate clients engaging in climate change**

# 21. Value Provision for Corporate Clients

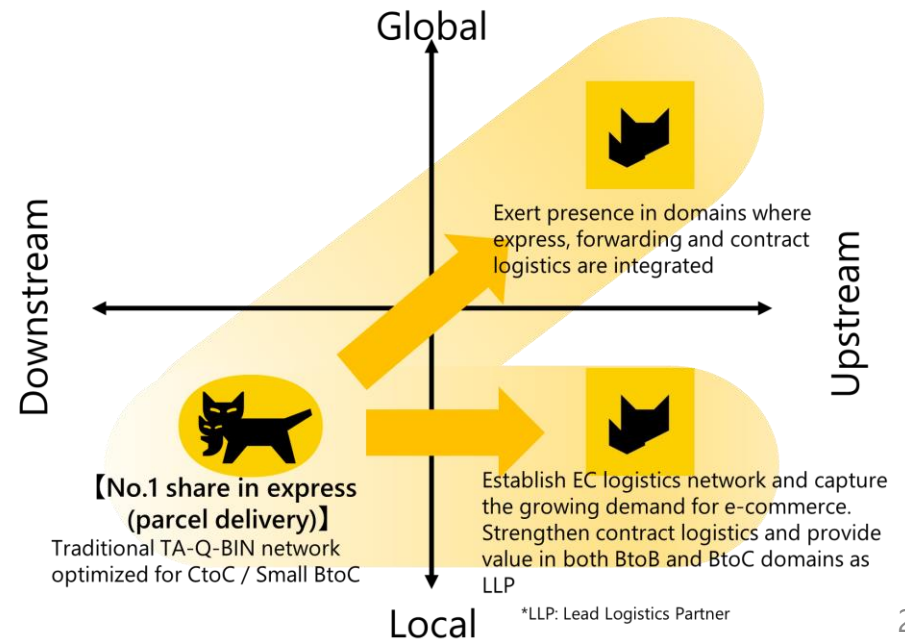
Promoting comprehensive value provision on an “End To End” basis, from the upstream to downstream of corporate clients’ businesses, by positioning as opportunities the expansion of e-commerce in all industries as well as changes in the supply chain

→ contributing to the improvement of customers’ corporate value and the enhancement of customer value through provision of solutions for innovating the supply chains and business processes of these customers

## ■ Corporate sales structure of One YAMATO



## ■ Starting point and mid-to-long term positioning through “One YAMATO 2023”



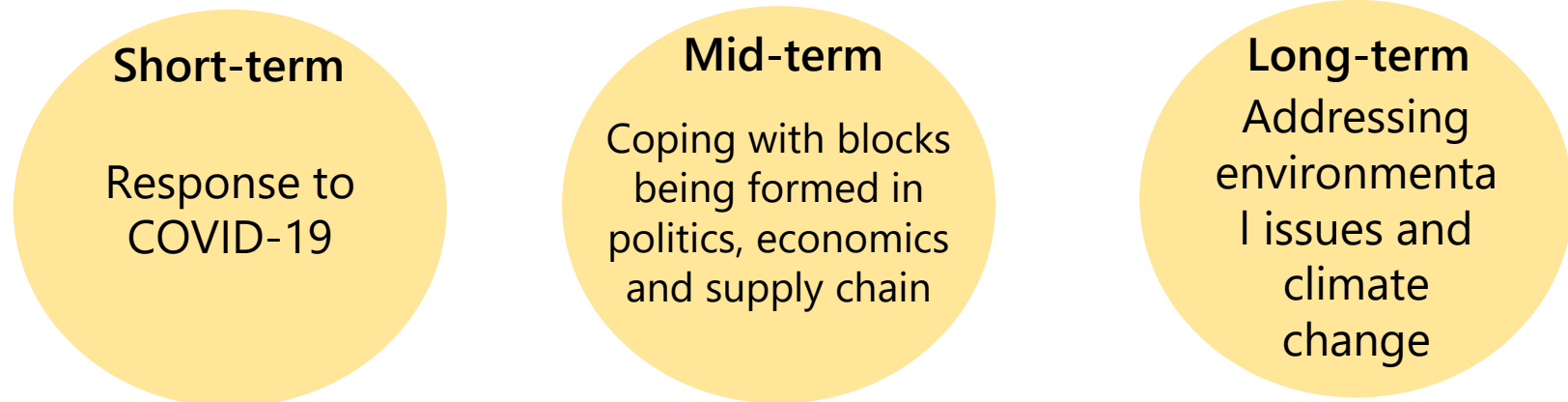
## 22. Issues faced by clients in supply chain management (SCM)

Risks heightening, with the globalization of clients' supply chains  
→ "Supply chain resilience" becoming ever more important in SCM

### ■ Risks related to supply chain resilience

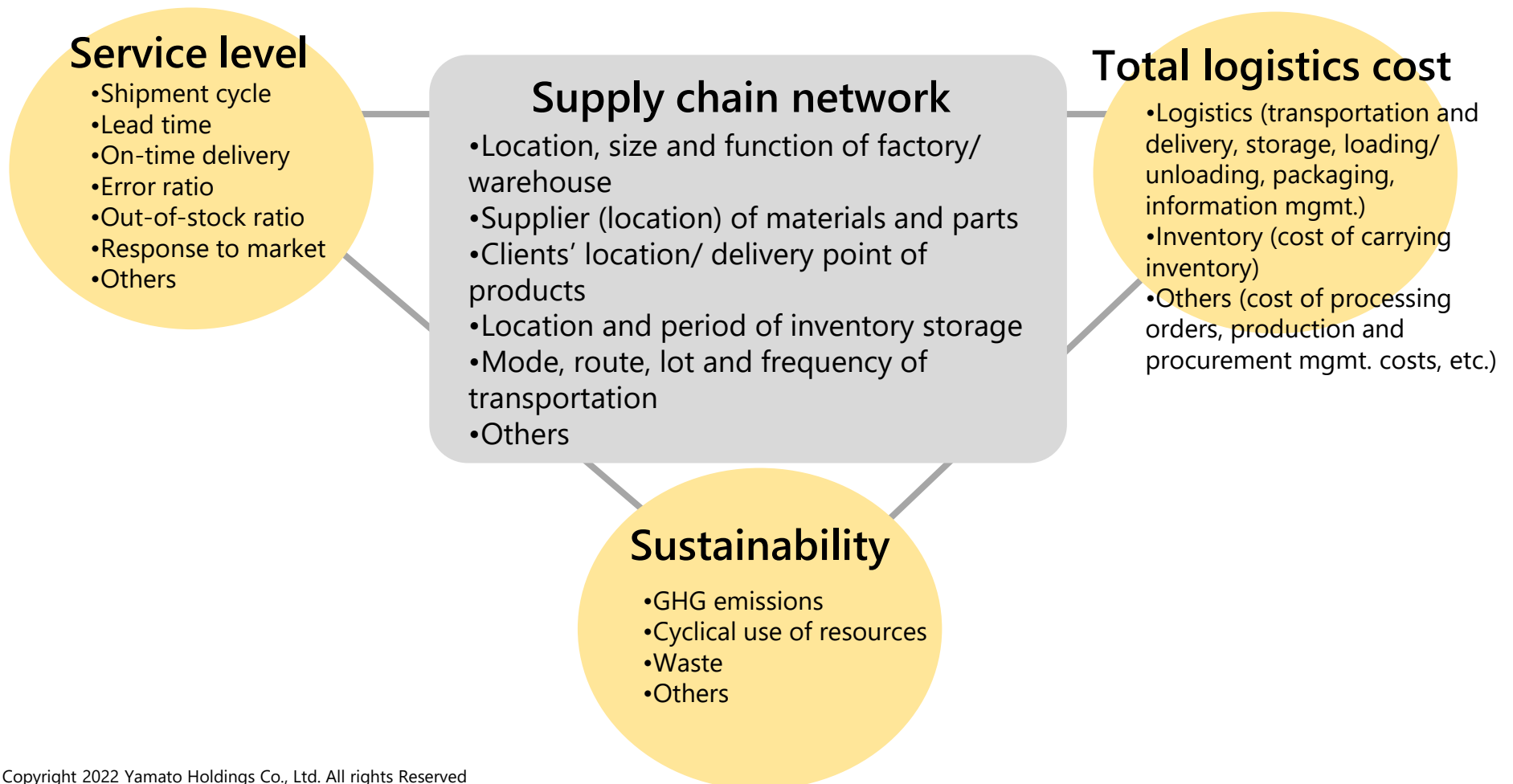
Natural risks	Climate change, natural disasters, pandemics
Political risks	Protectionism in trade, political tensions, wars
Economic risks	Changes in industrial structure, rise in fuel prices, currency fluctuations
Social risks	Decline in population and labor force, changes in consumption trends, human rights issues
Criminal risks	Terrorism, cyber attacks, destructive activity

### ■ Key issues



## 23. Supply chain optimization

- Maintain and improve service level, while lowering total logistics cost  
→ Contribute to reducing clients' GHG emissions by avoiding waste in logistics and inventory
- At the same time, promote energy shift in transportation, simplify and reuse transportation and packaging materials, etc.



## 24. Example of initiative with client ① 【Nihon Michelin Tire】

**As Lead Logistics Partner that achieves the sustainable growth of corporate clients, Yamato Transport is supporting supply chain innovation and optimization of logistics operation globally, contributing to better management for clients**

→ By innovating the overall supply chain and optimizing logistics and inventory control, Michelin and Yamato will collaborate and aim to lower total logistics cost, enhance Michelin's value proposition to its customers, and realize sustainable and environment-friendly logistics by visualizing and reducing GHG emissions

※ Sep. 2022 : Begin partial operations  
Jan. 2023 : Full-fledged operations (plan)

### 【Achievements expected with Yamato managing the entire logistics structure of Michelin】

- **Consolidate the approx. 20 warehouses into 5, and visualize & optimize inventory control in each facility**  
Resolve the uneven distribution of inventory, and reduce transportation between facilities, while making use of the middle-mile network for corporate clients etc. to achieve shorter and more stable delivery lead times and lower GHG emissions (Michelin's Scope 3 emissions)
- **Use Warehouse Management System to track the production year of all tires in the inventory, thereby minimizing waste loss**  
By managing the production year of each and every tire in the inventory, and shipping out tires that are closer to the expiration date first, minimize waste loss due to expiration (lower the environmental burden)
- **Track orders using the Transport Management System**  
Visualize the delivery status of each client's order, and provide prompt responses through the Michelin Call Center, as well as merge (bundle) separate products in the transportation process at Yamato Group's facilities and on its Transportation and Delivery network, thereby enhancing the value proposition to Michelin's customers

→ The scope of the project will be expanded to the more up-stream parts of the supply chain, not only in Japan but globally, thereby considering the optimization of Michelin's logistics and inventory control, including production management and shipment coordination overseas



Under its corporate vision of "100% Sustainable", Michelin values People, Profit & the Planet, and has committed to manufacture tires with 100% sustainable materials by 2050. Michelin is working on decarbonization initiatives globally, including promoting the use of sailing cargo ships on the Atlantic, plantation of natural rubber in Southeast Asia, and the optimization of forest preservation management.

## 25. Example of initiative with client ② 【Adastria】

### Yamato Transport signed logistics partnership contract, to make Adastria's supply chain more sustainable

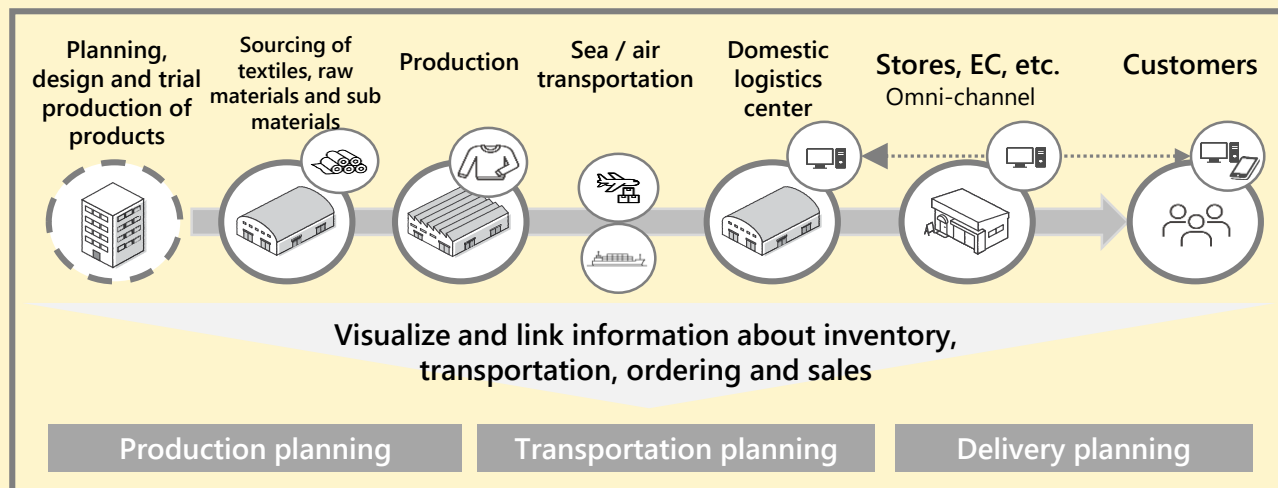
→By reviewing the logistics and inventory operations in Adastria's supply chain both in Japan and overseas, from the sourcing of raw materials to production and omni-channel sales, reduce GHG emissions and establish a logistics structure that is more effective for management (1<sup>st</sup> step)

→Utilize Adastria's expertise on fashion supply chains, and Yamato Transport's logistics infrastructure and expertise in Japan and overseas, and collaborate with other companies to realize and expand Sustainable Fashion\*

\*Initiative to become sustainable now and in the future, in the process covering the production, wearing and disposal of clothing, and paying consideration to the earth's environment including the ecosystem, and the people and society involved

### 【Initiatives to achieve Sustainable Fashion】

- Establish production and logistics structure that matches the demand
- Sustainable operation reform, GHG emission reduction, etc.



**A D A S T R I A**  
*Play fashion!*

Adastria's mission is "Play fashion!", seeking to make more enjoyable the lives of everyone through fashion. Adastria aims to create an open community of people and information, and become a "Good Community Co-Creation Company" that brings new values.

Based on its sustainability policy of "Bring the joy of fashion to the future", the company is engaged in various initiatives, including inventory control and reuse to bring to zero waste incineration of apparel inventory, and establishing fair and ethical procurement activities.

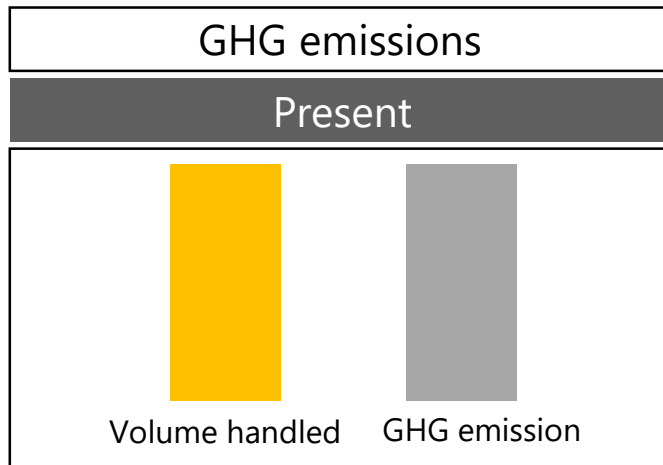
## 26. Challenges in making clients' GHG emissions more visible

Challenges exist for clients (corporate clients) and/or logistics companies, in making GHG emissions in the supply chain more visible

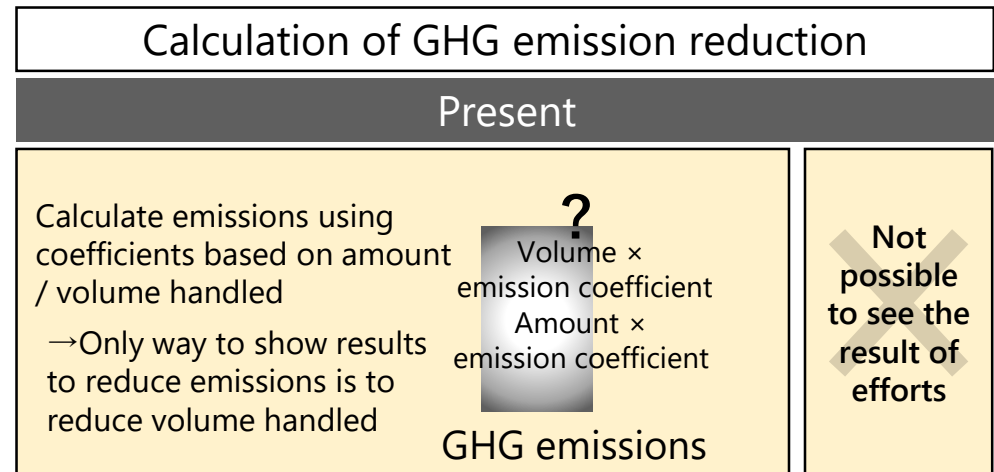
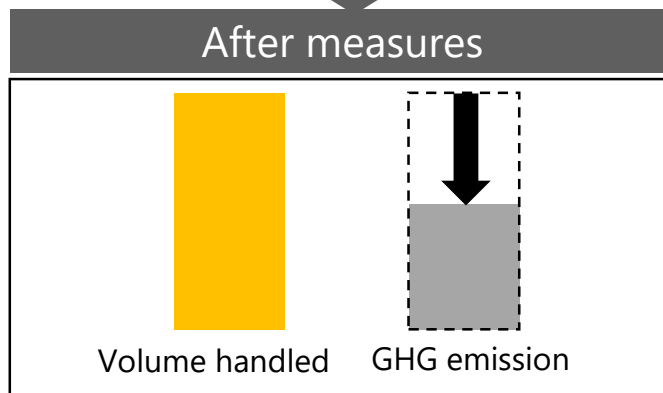
Clients' challenges	Logistics companies' challenges	Challenges for both
<ul style="list-style-type: none"><li>• When calculating Scope 3 emissions, it is preferable to obtain data from each counterparty in the supply chain, but data is currently not collected from logistics companies</li><li>• The most common way of calculating emissions from logistics is a simplified method using formulas / coefficients, based on the amount spent etc., which is not accurate and makes it hard to see the effects of efforts to reduce emissions</li></ul>	<ul style="list-style-type: none"><li>• Have calculated own emissions, but not calculated / measured each client's emissions</li><li>• When proposing supply chain reforms to clients, not been able to quantify and show efforts to reduce own emissions</li></ul>	<ul style="list-style-type: none"><li>• Because there is no global standard in the logistics industry regarding the scope for calculating emissions, each company uses different standards for the calculations, making it hard to appropriately assess in the market competition</li></ul>

## 27. Initiatives to visualize clients' GHG emissions

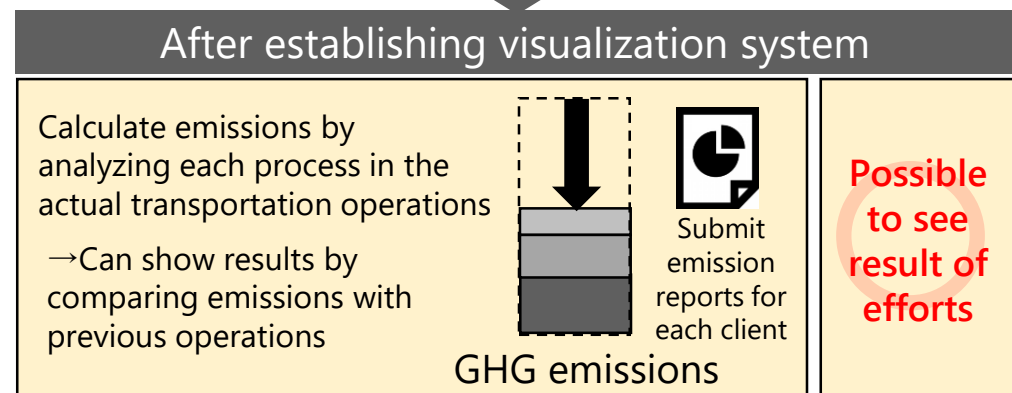
Achieve the establishment of "GHG emission visualization system", based on the new international standard (ISO14083) for calculating logistics GHG emissions, and make it possible to actually see reduction efforts → Collaboration with DPD Group of France which is focused on progressive environment-related measures



Reduce emissions (EV, PV, etc.)



Establish an ISO-based visualization system





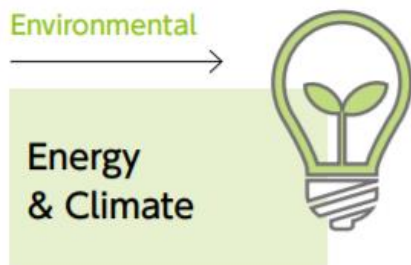
## Summary

Promote sustainable management, in order to  
“contribution to realizing a rich and prosperous  
society”

**Achieve sustainable corporate  
value enhancement, and  
realize a sustainable society**



# Ref. Sustainable Medium-Term Plans 2023 Progress 【Energy & Climate】



## Mitigate climate change

Risk

Opportunity

Overview

Reduce greenhouse gas emissions by using electricity generated via renewable energy sources, enhancing transportation efficiency, and reducing the use of dry ice, etc.

FY 2024/3

Targets

- Reduce GHG emissions 10% \*1 compared with FY2021/3
- Reduce GHG emission intensity by 10% \*1\*2 compared with FY2021/3
- Achieve 30% usage rate \*3 of electricity generated via renewable energy sources

FY 2022/3

Progress

- GHG emissions 2% decrease compared with FY2021/3
- GHG emission intensity 2% decrease compared with FY2021/3
- Electricity generated via renewable energy sources 11% usage rate

Examples of Initiatives

- Development and verification of EVs
- Visualize the operational status of vehicles and reduce inefficient routes
- Implementation a modal shift
- Consolidation of touch points and installation of LED lights (495 facilities)
- Establishment of a department (Green Innovation Development Department) to promote the development and introduction of vehicles and equipment that contribute to reducing greenhouse gas emissions

# Ref. Sustainable Medium-Term Plans 2023 Progress 【Atmosphere】

Environmental



Atmosphere



## Clean up the skies (prevent air pollution)

Risk

Overview

Pursue transportation that reduces the effects of air pollutants emitted by vehicles and cleans up skies in local communities

FY 2024/3

Targets

- Reduce NOx and PM emissions from vehicle 25% \*4 compared with FY2021/3
- Introduce vehicles that emit fewer air pollutants

FY 2022/3

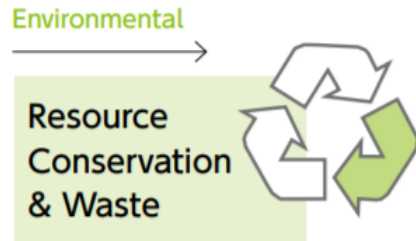
Progress

- NOx emissions: 9% decrease
- PM emissions: 3% decrease
- 3,200 vehicles introduced

Examples of  
Initiatives

- Holding of discussions and implementation of technical checks on automated mobility with suppliers that contribute to low-carbon transportation and the prevention of air pollution

# Ref. Sustainable Medium-Term Plans 2023 Progress 【Resource Conservation & Waste】



## Promote resource conservation and reduce waste

Risk

Opportunity

Overview

Drastically reduce our environmental burden and promote the use of technology and creation of opportunities for minimizing environmental impact

FY 2024/3  
Targets

- Use renewable resources and recycled materials for paper material 55%\*5
- Reduce landfill disposal rate (final disposal rate) 5% or less\*6
- Provide products utilizing recycled materials and resource saving materials

FY 2022/3  
Progress

- Renewable resources and recycled materials for paper material 52%
- Landfill disposal rate 10%
- Identification of target materials and partial switch to resources that utilize recycled materials

Examples of Initiatives

- Use of renewable resources and recycled materials for containers and packaging materials
- Launch of studies into the development of materials for reuse and common reusable materials

# Ref. Sustainable Medium-Term Plans 2023 Progress 【Resilience of Companies & Society】

Environmental



Resilience of  
Companies  
& Society



## Support a society that combats environmental changes

Risk

Opportunity

Overview

Collaborate with diverse partners to increase the resilience of stakeholders and local communities and create environmental value

FY 2024/3

Targets

- Advance green logistics in collaboration with our business partners
- Collaborate with society to improve environmental resilience (verify and share information about mitigating climate change)
- Provide environmentally friendly products and services<sup>\*7</sup>

FY 2022/3

Progress

- Determination of methods for understanding GHG emissions of our partners
- Launch of discussions aimed at the collaborative development of cartridge batteries and sharing of disaster forecasts based on data from the Japan Meteorological Agency with our partners
- Determination of evaluation methods and standards for the environmental burden and effects of services and products

Examples of  
Initiatives

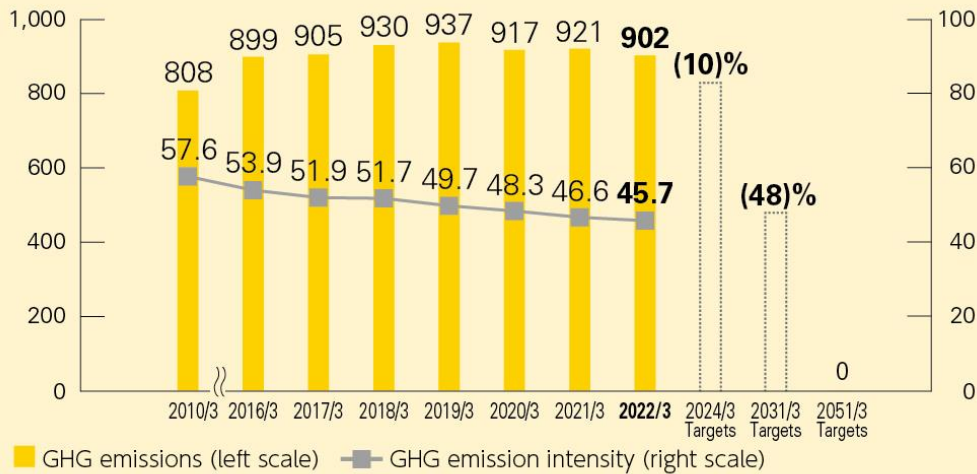
- Addition of function for collecting data on greenhouse gas calculations to an application for understanding the operational status of transportation partners

# Ref. Yamato Group's GHG emissions / breakdown

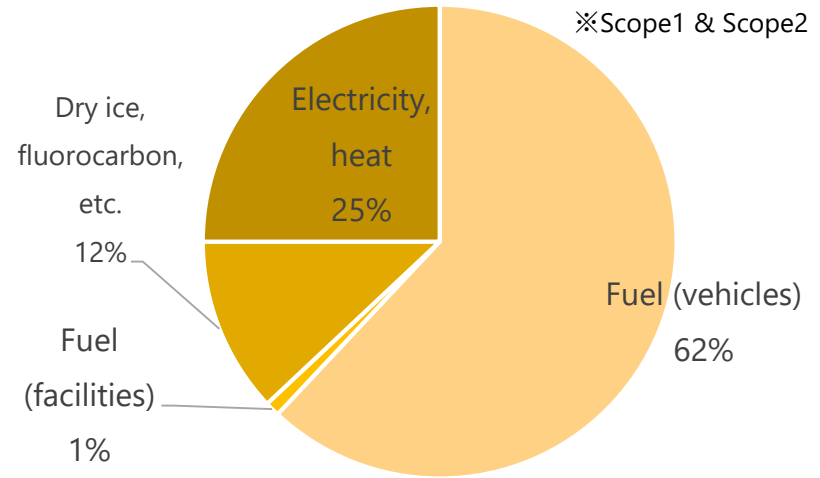
## GHG Emissions / GHG Emission Intensity

(Thousand tCO<sub>2</sub>e)

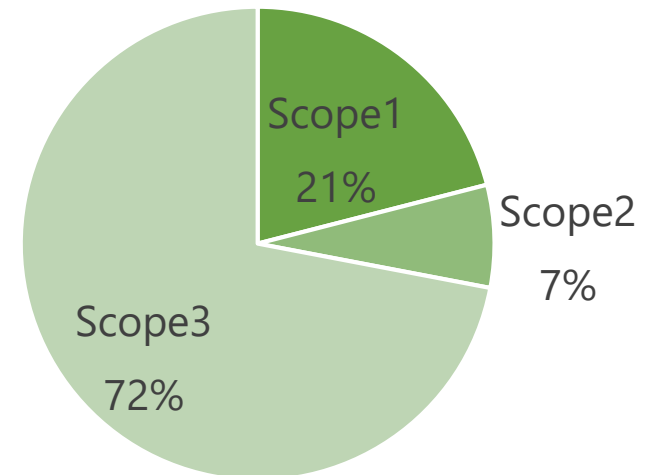
(tCO<sub>2</sub>e/operating revenues of ¥100 million)



## GHG by source of emission



## GHG emission by Scope



## Ref. ISO14083

■ International voting is ongoing, towards issuance of international standard ISO14083 (As of Dec 20, 2022)

<b>Name of standard</b>	ISO 14083 Greenhouse gases — Quantification and reporting of greenhouse gas emissions arising from transport chain operations
<b>Date of issuance</b>	2023 (scheduled)
<b>Objective</b>	Requirements / guidance for calculation and reporting of GHG emissions from passenger and cargo transportation
<b>Transportation mode subject to the standard</b>	Covers all transportation modes, including road, sea, air, water (rivers, etc.), rail, pipelines and cable cars. Also includes discharge from logistics facilities

## Ref. Collaboration with DPD Group in the environmental domain

In July 2022, Yamato Holdings and France's DPD group, which has the largest delivery network in Europe, signed a basic agreement with the aim of cooperating in the environmental domain, such as by examining common global standards for calculating GHG emissions.

### < Details of Agreement >

#### ● Examination of Common Global Standards for Calculating GHG Emissions to achieve sustainable logistics

Visualization of corporate GHG emissions across the entire supply chain by standardizing basic calculations utilized by individual logistics companies

#### ● Sharing of Knowledge in the Environmental Domain

Sharing of information in four fields below and promoting of environmental initiatives

- ① Climate change mitigation
- ② Air pollution prevention
- ③ Resource-recycling promotion
- ④ Resilience improvement for society and companies

**We will collaborate and carry out initiatives in the environmental domain to realize a sustainable society and green logistics.**



## Ref. External certifications and assessments

(As of Dec 20, 2022)

Organization	Metric, name, etc.	Yamato HD's certification
MSCI	MSCI Japan Empowering Women (WIN) Select Index	Included in the index 6.675 (Max 10)
FTSE	FTSE 4 Good Index Series FTSE Blossom Japan Index FTSE Blossom Japan Sector Relative Index	Included in the index 4.0 (Max 5)
S&P	S&P/JPX Carbon Efficient Index	Included in the index
SOMPO Asset Management	SOMPO Sustainability Index	Included in the index
CDP		Climate change B (A~D)

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