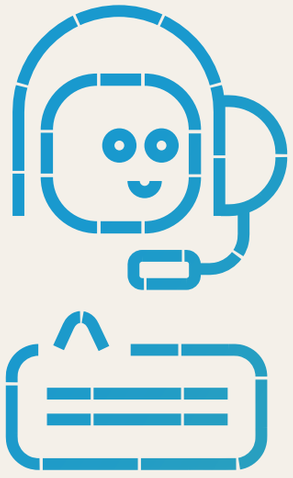
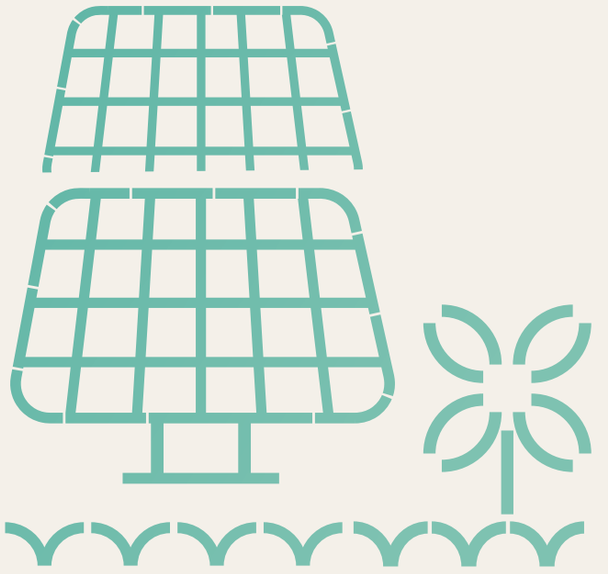
momo.com Inc.







# 2024

Task Force on Climate-related Financial Disclosures

# TCFD Report

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# 1 Preface

## 1.1 Message from Management

## Chairman's Message

According to the U.S. National Oceanic and Atmospheric Administration (NOAA), 2024 recorded the highest temperature in meteorological history—1.29°C above the 20th-century average. Meanwhile, the World Economic Forum's Global Risks Report 2025 highlights that environmental risks continue to dominate long-term threat rankings, with extreme weather, ecosystem degradation, and biodiversity loss receiving heightened attention. Moreover, Taiwan has officially implemented a carbon fee system in January 2025, signaling that the net-zero transition is imperative both on the global and local scales. Facing severe and urgent transformation challenges, responding to global climate adaptation and mitigation needs is a critical issue that momo must deeply consider as part of its sustainable business strategy.

### Climate change: The core challenge to corporatesustainability competitiveness

We are acutely aware that climate change poses systemic risks to both the global and Taiwanese societies. As a result, businesses who ignore the pressure to transform in response to climate risks may lose the legitimacy to engage with the future. In response, momo has reinitiated the Task Force on Climate-related Financial Disclosures (TCFD) framework in 2024 to identify climate risks and opportunities within the retail value chain. Based on the identification of climate-related issues, corresponding strategies, action plans, and targets have been developed.

We have incorporated considerations of climate impact into our overall business strategy, covering warehousing, logistics, packaging, and daily operations. In low-carbon warehousing, momo integrates green building concepts, solar power systems, energy-saving design, and flood prevention. In 2024, the Southern Distribution Center officially launched. For package and logistics, momo continues to leverage data and technology to scale up circular package and consolidated delivery, demonstrating our core sustainability capabilities.

### A responder to climate risks and a driver of climate net-zero transition

momo officially enters its 20th anniversary with a new brand slogan, "momo more and more," showcasing our innovative, leading position and reflecting a deepened commitment to sustainability. We fully understand that the e-commerce retail industry must align with Taiwan's local cultural context to embed sustainability into everyday practices. Hence, we also believe that merely responding to climate risks is not enough to complete momo's overall net-zero transition pathway. Since 2023, momo has launched momo Green Life Members program to encourage consumers to participate in a sustainable online shopping journey, granting consumers the "Sustainable Consumer Choices". Furthermore, we will continue to expand the number and categories of Green Life products, selecting high-quality products that are environmentally friendly and certified with labels such as cruelty-free. Through targeted advocacy and promotion, we aim to raise consumer awareness of green consumption.

In the value chain, suppliers are also important stakeholders. Consequently, to strengthen negotiations with suppliers, momo carries out initiatives like promoting reusable logistics boxes and node removal. In 2024, momo launched our first supplier ESG self-assessment to evaluate and understand environmental issues, empowering green shared-value partners. From choosing a product, to packaging it, to delivering an order, these actions drive collective decisions and expand sustainability efforts across the entire e-commerce ecosystem.

In an era of intensifying climate change, a shift in industrial paradigms is gradually taking place. Driven by "technology" and "sustainability," momo will continue to lead as Taiwan's top local e-commerce brand and set the benchmark for digital sustainable retail. Through our core competencies, momo demonstrates deep care for the environment and society in every step of the consumer order process.

Chairman

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# President's Message

"Net zero carbon emissions" has become a global consensus. In the retail industry, both the rise of consumer sustainability awareness, and the integration of sustainable values into purchasing behavior, are symbols of social progress. In 2019, momo launched the "Sustainable Living Blueprint" project, aiming to become leading green E-commerce pioneer. Seizing the opportunities presented by climate change, the Company is committed to achieving excellence in sustainable management. Every two years, we conduct a review of climate risks and opportunities within the operational value chain, assessing the potential financial impacts of significant climate issues in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) framework.

Grounded in the "Sustainable Living Blueprint," momo approaches environmental impact through the entire value chain and has developed six key environmental strategies: "momo Green Life Members," "Green Partners," "Low-Carbon warehousing," "Green Logistics," "Environmentally Friendly Packaging," and "Green Operations." These initiatives are jointly driven by responsible departments to implement climate resilience management. This enables an interconnected low-carbon shopping journey—from product listing, warehouse stocking, and consumer ordering to packaging and logistics delivery.

## Integrating diverse resources to drive sustainable transformation from supply to consumption

As of 2024, momo Green Life Members have reached nearly 700,000. Through this membership program, momo promotes circular package, consolidated delivery, and sustainable products in momo Green Life Collection. These efforts enhance consumer awareness and recognition of sustainable consumption, encouraging more people to choose low-carbon services and products. Looking ahead to 2025, we will implement the momo ECO Points reward system and a Carbon Reduction Dashboard, encouraging consumers to join momo in practicing sustainable consumption.

momo continues to deepen collaboration with suppliers. In 2024, we launched the momo ESG Academy to share carbon reduction topics aligned with its core business, strengthening the sustainability awareness and capabilities of 88 suppliers. momo also partnered with major retail channels to promote reusable bag recycling. By encouraging repeated use of packaging and reducing waste at the source, over 15,000 recycling stations were established across Taiwan by the end of 2024, enabling consumers to conveniently return reusable bags and helping build a circular package ecosystem with green partners.

## Driving sustainable development through internal green transition processes

In 2024, momo officially launched its Southern Distribution Center, designed with green building principles and equipped with a solar power system that generates approximately 1.3 million kWh of green electricity annually. Combined with automated equipment, the facility enables intelligent, low-carbon warehousing. Following our green procurement policy, momo prioritizes purchasing or leasing products with energy-saving and eco-label certifications. The total green procurement amount in 2024 reached NT$640 million.

Furthermore, in 2024, momo introduced commercial electric three-wheeled scooters to reduce reliance on fuel-powered delivery vehicles, achieving a carbon reduction benefit of 50 metric tons of $CO_2$ equivalent. Technology also supports carbon reduction efforts: AI systems are used to plan optimal delivery routes, minimizing transportation-related carbon footprints.
In line with packaging reduction trends, AI algorithms recommend the most suitable packaging materials for each order, reducing the use of cardboard boxes and cushioning materials. By 2024, the average packaging weight per item has decreased by 26.5% compared to the baseline year of 2019.

Amid the growing momentum of climate change and the net-zero trend, momo will continue to link low-carbon transformation with lifestyle transformation at the strategic level. By implementing initiatives across multiple dimensions, momo aims to enhance our climate resilience—an essential yet often unseen competitive advantage—and fulfill our commitment to society as Taiwan's leading e-commerce brand.

President

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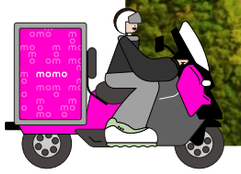
# 1.2 momo Profile

momo.com Inc. (hereinafter momo), a leading online retailer listed on the Taiwan Stock Exchange, is a member of the Fubon Group, headquartered in Neihu District, Taipei. momo's main business activities include online shopping, TV shopping, and catalog sales (discontinued in December 2024 due to sustainability considerations). The number of registered members has exceeded 10 million. The new brand slogan of momo, "momo more and more," embodies the mission of offering quality products at great value with excellent service. The Company aims to deliver a comprehensive shopping experience that is diverse, fast, high-quality, and cost-effective—positioning itself as the top virtual shopping platform for both consumers and suppliers.


| | |
|---|---|
| Company Name | momo.com Inc. |
| Date of Establishment | September 27, 2004 |
| Headquarters | 4F No. 96 Zhouzi St. Neihu District, Taipei City, Taiwan |
| Paid-in Capital | NT$ 2,523,574,050 |
| Stock Code | 8454 |
| Employees | 3,744 (as of the end of 2024) |
| Product Services | Online shopping, TV shopping, and catalogs (to be discontinued in December 2024) |
| Management Team | Chairman Daniel M.Tsai / President Jeff Ku |

# 1.3 Environmental Sustainability Milestones

Low-Carbon Building | Green Logistics | Green Life Member | Environmentally Friendly Packaging | Green Partnership | Green Operations

**2024**

- Launched the Southern Distribution Center with a 3,700-ping (approx. 12,200 m²) rooftop solar installation, designated under the low-carbon building category
- Organized the momo ESG Academy to raise awareness of sustainable supply chains and share carbon management trends, as well as free resources, with suppliers; the total number of suppliers participated was 88 (Green Partnership)

**2023**

- Published Taiwan's first e-commerce TCFD report, identifying climate-related risks and opportunities (Green Operations)
- Obtained ISO 14067 Carbon Footprint Certificate and the Ministry of Environment's Carbon Footprint Label (Green Operations)
- Planned packaging reduction and eco-friendly initiatives, recognized by the Ministry of Environment with the "Reduced Online Shopping Packaging Logo 2.0" (Environmentally Friendly Packaging)
- Promoted the Green Life Members program to build green marketing and guide consumers toward a sustainable online shopping journey (Green Life Member)

**2022**

- Upgraded the Sustainable Development Management Committee to a functional committee under the Board of Directors (Green Operations)
- momo Green Life Collection saw a 42% uplift in performance, with over 5,000 items available for sale (Green Life Member)
- Introduced three-wheeled commercial electric scooters to reduce transportation carbon emissions (Green Logistics)
- Collaborated with the Tzu Chi Environmental Protection Education Center to promote the recycled carton project (Environmentally Friendly Packaging)

**2020**

- Introduced the TCFD framework for climate-related financial impact assessment (Green Operations)
- Pioneered using reusable bags, which can be reused up to 25 times, in the industry (Environmentally Friendly Packaging)

**2016**

- Established the CSR Committee and voluntarily compiled the first Corporate Social Responsibility (CSR) Report (Green Operations)
- Completed "ISO 14064-1 GHG Inventory" verification and continued to pass verification every year thereafter (Green Operations)

**2017**

- Inaugurated the Northern Distribution Center with a 4,500-ping (approx. 14,900 m²) solar power system on the roof (Low-Carbon Building)

**2018**

- Initiated "node-removal" transportation model and worked with suppliers and logistics service providers to reduce mileage and carbon emissions (Green Logistics)

**2019**

- Obtained the "ISO 14001 Environmental Management System" certificate and pass the retest every year thereafter (Green Operations)
- Launched "momo Green Life Collection" on the e-commerce platform to promote consumer awareness of green consumption (Green Life Member)
- Participated in the "Online Shopping Packaging Reduction Guidelines" organized by the Ministry of Environment and received the "Reduced Online Shopping Packaging Logo" (Environmentally Friendly Packaging)
- Developed momo's "Sustainable Living Blueprint," with a focus on the 12 UN Sustainable Development Goals (SDGs) and defined 5 strategic dimensions of sustainability (Green Operations)

# 1.4 Glory and Recognition


- Awarded the Gold Award for Excellence in Resource Circulation by the Ministry of Environment
- Received the Silver Prize at the 6th National Enterprise Environmental Protection Awards, by the Ministry of Environment, for the third time
- Awarded the Excellence in Green Procurement Award – Private Enterprises and Organizations by the Ministry of Environment
- Ranked 7th in the "2023 Taipei City Green Procurement Program for Private Enterprises and Organizations", organized by the Department of Environmental Protection, Taipei City Government
- Awarded Gold in the "2024 Taiwan Sustainability Action Awards (SDG 13)" by the Taiwan Institute for Sustainable Energy for the “momo Green Life members” program
- Ranked No.1 in the Digital Cloud Industry in Business Weekly's "Top 100 Carbon Competitiveness Companies in 2024"
- Received the Gold Award in the "Sustainable Logistics Operations category of the ESG Logistics Sustainability Awards" from the Global Logistics and Commerce Council of Taiwan
- TCSA Taiwan Corporate Sustainability Awards - Climate Leadership Award (Single Performance Category)

# 2 Preparation of the Report

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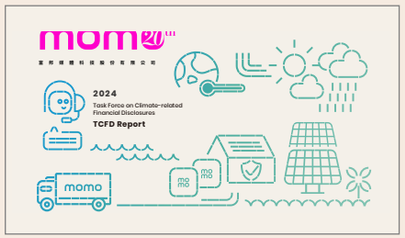



## 2.1 Basis of the Report

Recommendations of the Task Force on Climate-related Financial Disclosures (hereinafter referred to as TCFD).

## 2.2 Purpose of the Report

momo places great importance on the impact of climate change on its operations and stakeholders, as well as its responsibility to uphold environmental sustainability. This report is prepared in accordance with the TCFD framework to outline the climate-related risks and opportunities identified by momo, along with corresponding management actions. It aims to strengthen communication with stakeholders and demonstrate momo's firm commitment to sustainable operations.

## 2.3 Reporting Scope and Period

This report centers around momo, whose disclosure period runs from January 1, 2024, through December 31, 2024. If cited without additional notes, information accessed is between January 1, 2024, and December 31, 2024.

# 3 TCFD Disclosure Items

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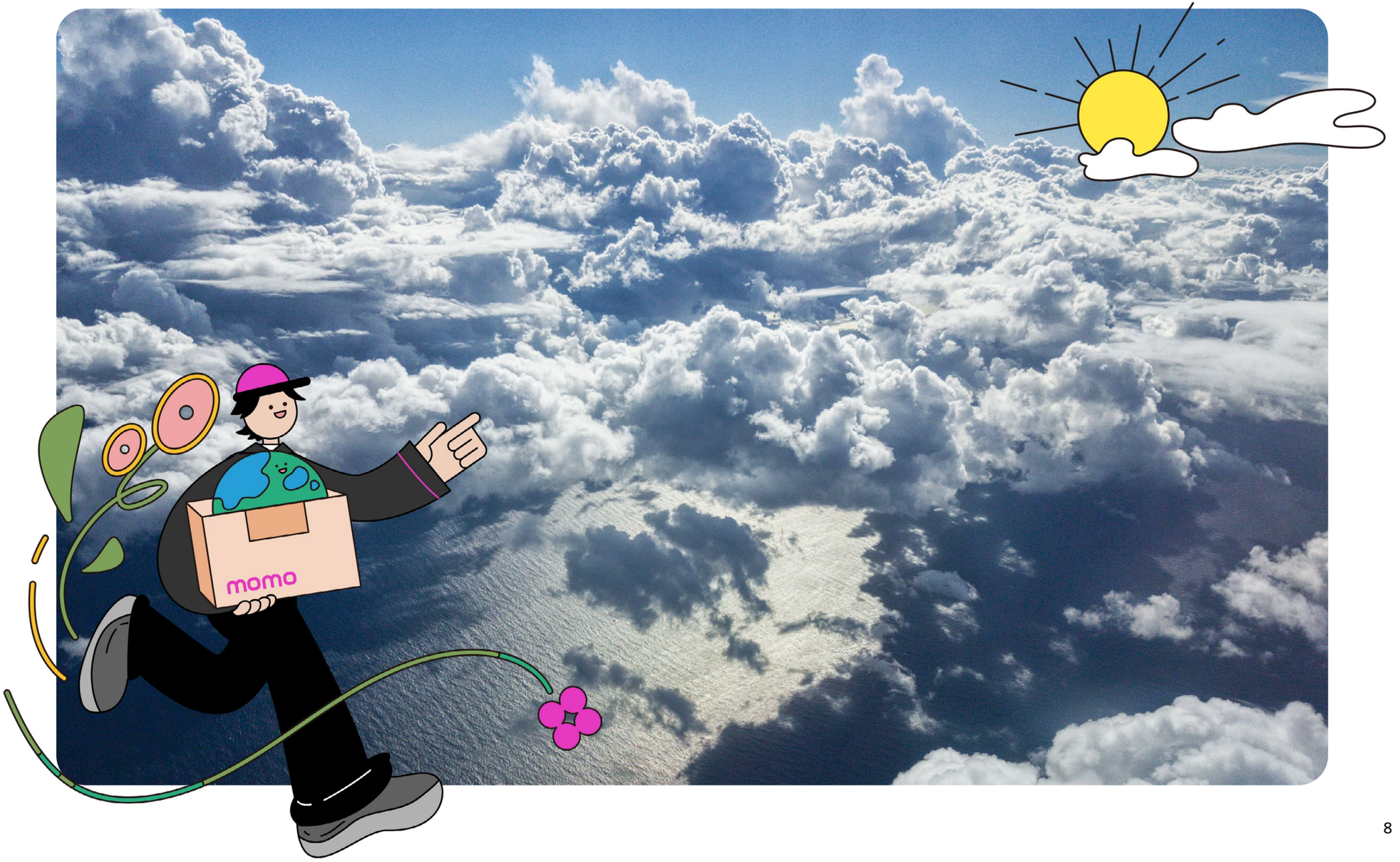


# 3.1 Governance

## 3.1.1 Climate governance framework and management's responsibilities

In October 2016, momo established a "Corporate Social Responsibility Committee", which was renamed the "Sustainable Development Management Committee" in 2022, following a report to the Board of Directors. The Company formulated the "Sustainable Development Management Committee Charter" to identify risks and opportunities with respect to governance, social and environmental issues, closely integrating operational and core resources, formulating sustainability strategies and executing various ESG-related action projects. Additionally, momo has adhered to the "Sustainable Development Best Practice Principles" as our guiding principle for long-term sustainable initiatives, integrating sustainable development into the Company's management policies and operational activities.

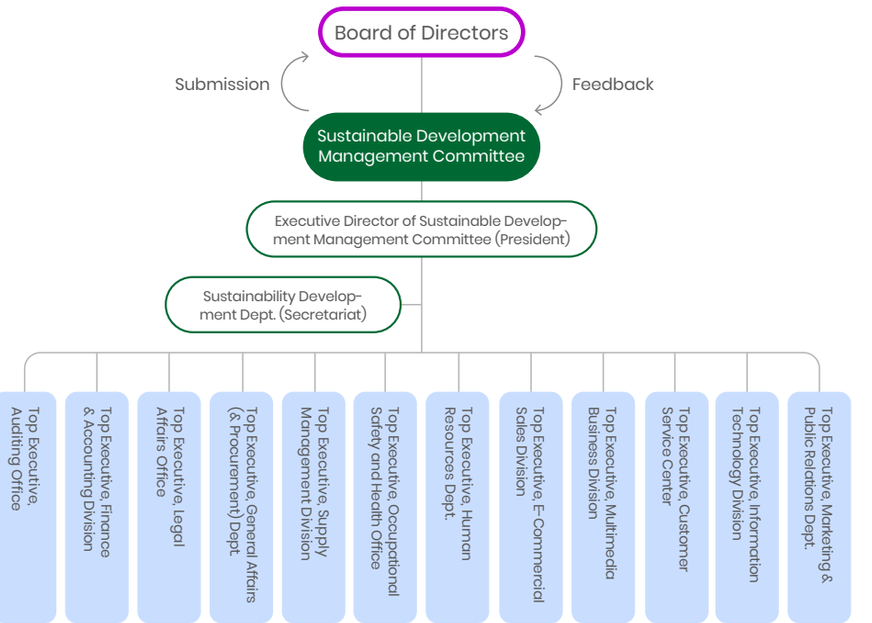
To step up sustainable operation and management, on July 27, 2022, the 7th Board of Directors resolved to elevate the Sustainable Development Management Committee to a functional committee under the Board of Directors. At the first meeting of the 8th Board of Directors held on May 19, 2023, three independent directors and two directors were appointed as members of the 2nd Sustainable Development Management Committee. The members mutually elected Chairman Daniel M. Tsai to serve as convener and meeting chairperson. The Committee shall convene at least twice annually, and the executive director meetings shall be held at least twice annually as well. Every six months, the effectiveness of sustainable governance strategies and the execution of annual development plans shall be reported to the Board of Directors. The Secretariat is the Sustainability Development Department under the Finance & Accounting Division, responsible for coordinating and promoting cross-departmental ESG projects and tracking their effectiveness.

momo established the Environmental Management Committee, which convenes quarterly meetings to regularly monitor environmental performance based on the environmental management indicators approved by the Sustainable Development Management Committee. We obtained ISO 14001 environmental management system certification for the first time from the Taiwan branch of British Standards Institution (BSI) in 2019. Subsequently, we have been undergoing annual re-evaluations to maintain the effective operation of the environmental management system.

Through the aforementioned hierarchical regulatory and supervisory climate governance structure, momo actively addresses the significant risks and opportunities associated with climate change. To support the Paris Agreement and Taiwan's net-zero target and policies for 2050, momo, as the leading e-commerce company in Taiwan, is committed to advancing toward the 2050 net-zero goal and pledges not to invest in the fossil fuel industry. Concurrently, momo commits to engaging in communication and negotiation with relevant stakeholders, including consumers and suppliers, to promote sustainable consumption. This collective effort aims to address the critical issue of global warming by leveraging green consumption power, with the goal of limiting the temperature rise to within 1.5°C above pre-industrial levels.

momo, through the vision and strategy of the "Sustainable Living Blueprint," aims to achieve net-zero carbon emissions by 2050. It actively promotes carbon reduction across four major areas: Green Operations, Green Packaging, Green Logistics, and Green Consumption. Short-, medium-, and long-term goals and action plans have been established to address related environmental issues. In 2024, a total of 16 action plans were completed, including 6 related to climate governance and energy resource management, 2 for sustainable supply chains, 2 for green packaging, 2 for green logistics, and 4 environmental targets aligned with ISO 14001. The related action plans are jointly implemented by the Sustainability Development Department, the Supply Chain Management Division, the E-Commercial Sales Division, the Multimedia Business Division, the General Affairs (& Procurement) Department, and the Occupational Safety and Health Office, among other relevant responsible units. For detailed information, please refer to the description of the strategy in Section 3.2 Strategy.

**Sustainable Development Management Committee Structure**



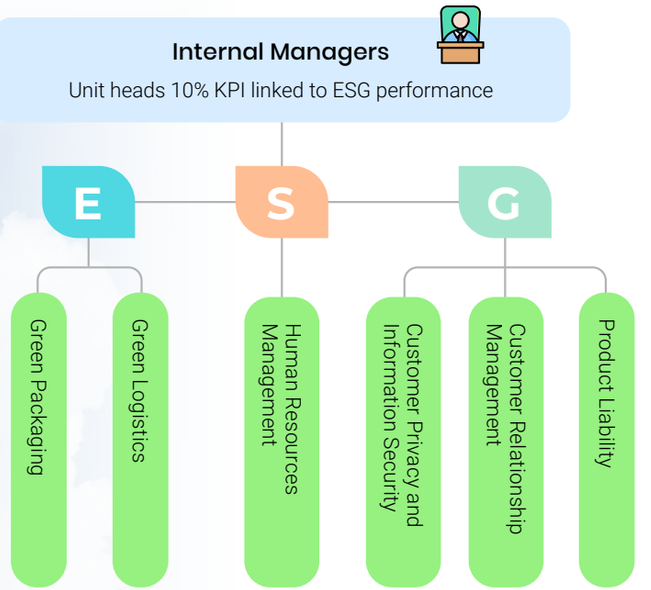
## 3.1.2 Board Oversight of Climate-Related Risks

The Board of Directors not only supervises the overall operational risks of the Company, formulates strategies, and identifies operational, financial, and tax risks, but also oversees the implementation of the Company's sustainable development. momo incorporates climate-related risks into the Company's major operational risks. In 2024, the climate-related issues reported to the Sustainable Development Management Committee and the Board of Directors are as follows:


## 3.1.3 Remuneration and Performance Evaluation Mechanism

momo follows the Regulations for Board of Directors and Functional Committee Performance Assessments, conducting annual self-assessments of the Board of Directors, its members, and functional committees. At least once every three years, a performance evaluation is carried out by an external professional independent organization or a team of expert scholars, with the evaluation covering the extent of ESG participation. After conducting internal and external performance evaluations, the evaluation results are submitted to the Remuneration Committee, and a report along with improvement plans is presented to the Board of Directors.

To strengthen ESG initiatives, momo has incorporated climate issues into the personnel compensation management system. Since 2021, internal managers have been required to integrate ESG goals into business unit operations. Annual goal setting includes ESG-related strategic objectives, which account for 10% of total targets. These objectives include green procurement, energy-saving measures, and ESG training. These goals are also aligned with key material topics. In the future, momo will continue to internalize green management and steadily advance toward the goal of becoming "Leading Green E-commerce Pioneer".



# 3.2 Strategy

momo formally launched the sustainability vision program in 2019, outlining a "Sustainable Living Blueprint" to promote the Company's sustainable development. Following the five major sustainability pillars of "Partnership Matters," "Customer Matters," "Environment Matters," "Employee Matters," and "Society Matters," and upholding the committed to being "Leading Green E-commerce Pioneer," momo adopts a multi-faceted approach in its core business. Regarding greenhouse gas-related targets, momo continues to leverage digital empowerment and extend efforts across six strategic dimensions: momo Green Life Members, Green Partners, Low-Carbon Warehousing, Green Logistics, Environmentally Friendly Packaging, and Green Operations. By integrating technological support, momo drives various low-carbon transformation initiatives, steadily advancing toward its net-zero goal.

Following the introduction of the ISO 14064-1 Greenhouse Gas Inventory in 2016, momo obtained ISO 14001 Environmental Management System certification for the first time in 2019. It was also awarded the “Reduced Online Shopping Packaging Logo” by the Ministry of Environment. In 2023, momo received its first ISO 14067 Carbon Footprint Certificate and the Ministry of Environment’s Carbon Footprint Label, and continues to be recognized with the “Online Shopping Packaging Reduction Logo 2.0.” Starting from its core operational competencies, momo continues to promote Green Life membership and expand the circular packaging ecosystem, strengthening ESG-driven circular economy initiatives and connecting suppliers to implement sustainable green operations.

The following outlines the goals and implementation status of momo’s six Green E-commerce strategic dimensions, highlighting its efforts in climate change mitigation and adaptation.

### Strategy

| Strategy | Significance to momo | Implementing Unit | Correspondence to the Core Pillars of the Sustainable Path of Green E-commerce |
|---|---|---|---|
| **1. Green Life Member** | momo has established momo Green Life Collection and the momo Green Life Members program to encourage consumers to purchase sustainable products and jointly support the sustainable consumption initiative. | E-Commercial Sales Division, Multimedia Business Division, Sustainability Development Department | Customer Matters<br>(Please refer to section 3.1 of the Sustainability Report) |
| **2. Green Partners** | momo collaborates with a diverse range of partners, including suppliers, delivery companies, convenience stores, Taiwan Mobile, Simple Mart, and Chunghwa Post, to implement initiatives such as circular logistics boxes, node removal plans, and Diverse Pick-up Services. Additionally, momo advances supplier ESG self-assessment and capacity building to create shared green value. | Supply Chain Management Division | Partnership Matters<br>(Please refer to sections 2.4 and 4.3.2 of the Sustainability Report) |
| **3. Low-Carbon Warehousing** | Promote green logistics centers and automated warehousing. Each large distribution center undergoes comprehensive environmental assessment before construction, integrating green building concepts, renewable energy, energy-saving design, and flood prevention to create low-carbon, energy-efficient storage facilities. | General Affairs (& Procurement) Department | Environment Matters<br>(Please refer to section 4.1.5 of the Sustainability Report) |
| **4. Green Logistics** | momo has introduced electric scooters to establish a green logistics fleet, complemented by a maintenance program to reduce vehicle damage rates and resource consumption. Additionally, by applying optimal delivery route simulation, shipping warehouse analysis, and advanced storage technologies at distribution centers, momo improves delivery efficiency and reduces transportation-related carbon emissions. | Supply Chain Management Division | Environment Matters<br>(Please refer to section 4.3 of the Sustainability Report) |
| **5. Environmentally Friendly Packaging** | momo uses AI to recommend optimal packaging and adopts recycled materials and reduction technologies for circular packaging. Through reusable bags, reusable cartons, and consolidated delivery, consumers are invited to contribute to environmental protection. | Supply Chain Management Division | Environment Matters<br>(Please refer to section 4.2 of the Sustainability Report) |
| **6. Green Operations** | momo promotes paper reduction and digitization through three key areas: consumer channels, suppliers, and internal approvals. It also continues waste recycling, reduction, and reuse efforts at its headquarters and warehouses to optimize resource use. | General Affairs & Procurement Department, Sustainability Development Department, Occupational Safety and Health management Office | Environment Matters<br>(Please refer to section 4.1 of the Sustainability Report) |

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## 1. Green Life Member

### momo Green Life Members Program

- Offer consumers sustainable choices, including priority use of circular packaging and a new carbon-reducing logistics option through consolidated delivery. Combine these with curated products from momo Green Life Collection and Exclusive Green Offers discounts to strengthen engagement with eco-conscious shoppers.
- As of 2024, nearly 700,000 momo members have joined the momo Green Life Members program, with 469,664 members agreeing to use reusable bags and 541,489 members consenting to consolidated delivery.
- In 2025, momo will launch the momo ECO Points reward system and a Carbon Reduction Dashboard. By visualizing the impact of accumulated carbon reduction actions, members are encouraged to participate more actively and understand their environmental influence.


momo Green Life Member

### momo Green Life Collection

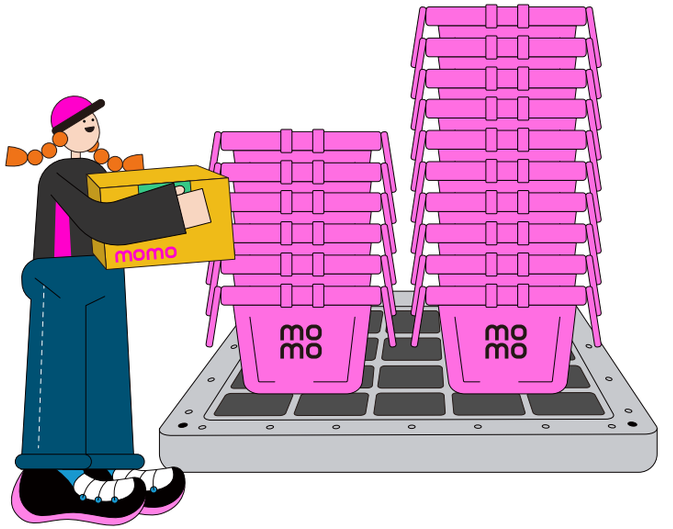
- momo established momo Green Life Collection to encourage consumers to choose sustainable products. Hundreds of sustainable brand partners have been called upon to provide over 5,300 green products, including household cleaning supplies, health foods, plastic-reduction alternatives, and beauty and personal care products.
  - momo Green Life Collection organizes several online and offline events each year that integrate consumer engagement with environmental awareness. These include beach cleanups, green shopping festivals, eco-beauty promotions, and showcases of plastic-reduction products, encouraging consumers to take action for a more sustainable planet in their daily lives.
    - momo Green Life Collection encourages suppliers to obtain more certifications. Currently, it features 11 certified product labels, including ECOCERT (EU organic certification) and USDA Organic (USA), promoting broader adoption of sustainable standards.


## 2. Green Partners

### Promote the use of reusable logistics crates alongside suppliers

- To reduce single-use cardboard boxes, resource consumption, and waste disposal costs, momo has provided suppliers with reusable logistics boxes since 2021. In 2024, 34 suppliers participated in the rental program, with a total of 2,325 boxes used, cutting carbon emissions by 17.6 metric tons [Note].

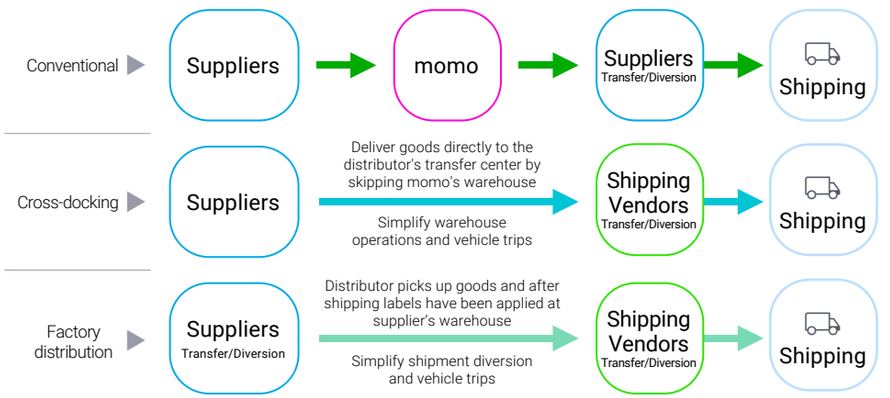
Note: The calculation method for carbon reduction of reusable logistics crates: With 6.1 kg of carbon emissions per 1 kg of carton box made fromvirgin wood pulp as a comparison base and reusable logistics crates weighing 1.24 kg, a total of 2,325 reusable logistics crates were used in 2024, which translated into an average $CO_2e$ saving of 7.564 kg per carton used, resulting in a total reduction of 17.6 tonnes of $CO_2e$ in 2024. (Source: Taiwan Paper Industry Association).



## Node Removal Plan

- Since 2018, momo has continuously promoted node removal models. By 2024, 22 suppliers and 40 brands have collaborated with momo on the node removal models.
- The types of node removal plans have continued to expand, encompassing 220 categories. In 2024, the number of shipments using node removal reached 2,285,711, representing an approximate 52% increase compared to 2023. This resulted in a carbon emission reduction of 143.26 metric tons of $CO_2e$.

### Node-removal Operating Models




## Diverse Pick-up Services


- In 2024, momo partnered with four major convenience store chains, Taiwan Mobile service centers, and iBox self-pickup stations, reaching a total of 16,600 pickup locations. Convenience store pickups totaled approximately 5.941 million parcels, a 3.8% increase compared to the same period in 2023. The average distance for last-mile delivery of packages was 0.7 km. The convenience store channel as a whole achieved savings of up to 4.159 million kilometers.
- In 2023, in collaboration with convenience store chains, we also introduced convenience store return services, allowing consumers to return items from the nearest convenience stores. This enables the collection of return items when delivering goods to convenience stores, reducing the need for individual pickups for returns.
- A partnership has been established with the delivery company Yamato Transport (Taiwan) for expedited in-store delivery. Convenience store shipments dispatched from momo's central-southern warehouses can now be directly delivered by Yamato Transport (Taiwan) to the designated convenience store for pickup, reducing the number of trips previously required to consolidate shipments from the northern warehouse.

## Supplier ESG Self-Assessment and Capability Building

- In 2024, momo uploaded 14 videos to the SCM Academy platform, with total annual views exceeding 53,000. By integrating diverse online learning resources and designing phased learning themes, including ESG topics, the initiative strengthens suppliers' sustainability awareness.
- In the first quarter of 2024, the implementation of supplier ESG self-assessment was introduced, including greenhouse gas inventory, carbon reduction target planning, and packaging material reduction issues.
- To build supplier ESG capabilities, momo launched the "momo ESG Academy" in 2024, covering four key topics: international net-zero and carbon trends, greenhouse gas self-assessment tools, product carbon footprint analysis and business linkage, and packaging reduction & reusable logistics crates promotion. A total of 88 suppliers participated, strengthening sustainability awareness and advancing shared green progress.


## New Supplier Selection and Packaging Reduction Agreement

- In response to the announced implementation of the "Targets and Measures for Restrictions on Internet Shopping Packaging", momo formulated the packaging reduction guidelines in 2024, where the sign-up rate for the corresponding consent form among suppliers was 98.9%. In addition, momo conducts random packaging inspections on a regular basis in an effort to promote online shopping packaging reduction based on three principles, namely packaging reduction, eco-friendly materials, and reusable packaging.

## 3. Low-Carbon Warehousing

momo promotes the concept of green logistics by establishing "Green Distribution Center" and "Automated Warehousing." Through the implementation of solar power systems, green building design concepts, and rainwater recycling systems, the major distribution centers of momo (northern and southern regions) aim to reduce warehouse carbon footprint and develop low-energy, low-carbon green warehousing. These facilities are developed with low energy consumption and low carbon emissions in mind. Prior to construction, each distribution center undergoes a comprehensive site environmental assessment to enhance the Company's resilience to climate change.

### Renewable Energy and Building Energy Efficiency

- momo's large-scale distribution centers incorporate a variety of eco-friendly building materials and energy-saving designs, including green energy roofs, energy-efficient lighting, steel structures/ environmentally friendly materials, double-layer walls, and multi-layer LOW-E glass in their architectural construction. Regarding ventilation and cooling, the natural ventilation system includes features such as normally open rolling doors, exhaust vents, slow-speed fans, and co-flow fans to reduce radiant heat absorption on exterior walls. Additionally, tunnel wind and water curtain systems are introduced to lower facility temperatures while maintaining humidity levels, using the principles of tunnel airflow combined with water curtains. Consequently, air conditioning energy consumption is effectively reduced.
- In addition, the Northern Distribution Center is equipped with a rainwater recycling irrigation system for plants, while the Southern Distribution Center has a groundwater system. The recycled groundwater is used for flushing toilets within the facility, thereby conserving water usage in warehouses.
- The Central Distribution Center is currently under construction and is expected to be operational in 2027. The building design has referenced the scoring indicators of the Green Building Label. The interior decoration uses more than 75% green building materials, and incorporates high-efficiency air conditioning design and LED lighting, creating a low-carbon, energy-saving warehouse.
- The Northern Distribution Center, Southern Distribution Center, and the under-construction Central Distribution Center are all equipped with solar power generation facilities. The Northern Distribution Center can supply approximately 1,200,000 kWh of electricity annually, while the Southern and Central Distribution Center, once operational, can each supply about 1,300,000 kWh of electricity per year. In the future, momo's self-purchased/self-built warehouses will be fully equipped with renewable energy systems, with the intention of operating on a self-generation and self-consumption basis.



## 4. Green Logistics

In 2024, the overall capacity of the delivery fleet of Fu Sheng Logistics Co., Ltd., a subsidiary of momo, has increased to account for 25.6% of the shipments from momo warehouses. momo reduces logistics carbon emissions through two key strategies: building a green fleets and minimizing transportation footprint, enhancing delivery efficiency and promoting green energy use.

### Green Fleets

- 100% of the vehicles procured are environmentally friendly. 170 trucks and 145 scooters procured comply with Tier 1 energy efficiency and Tier 2 energy efficiency requirements respectively, and all fossil-fueled vehicles have been tested for emissions as required by law.
- Fifty three-wheeled commercial electric motorcycles have been purchased, achieving a cumulative carbon reduction benefit of 50 metric tons of $CO_2e$. Additionally, the container capacity of the three-wheeled commercial electric scooters is approximately three times larger than that of the existing large containers of scooters, allowing more cargo to be carried and boosting transportation efficiency.
- It is projected that the proportion of electric motorcycles will increase to 30% by 2025, rise to 50% between 2026 and 2027, and continue to increase thereafter.
- The in-house fleet implements a maintenance plan to extend vehicle lifespan and reduce resource consumption caused by vehicle damage and replacement.

### Reducing Transportation Carbon Footprint

- **Optimal Delivery Route Simulation:** momo has deployed 58 main and satellite warehouses across northern, central, and southern regions. By integrating AI systems to plan optimal or shortest delivery routes and utilizing the QGIS geographic information system, momo conducts order hotspot analysis to delineate delivery zones, replacing traditional administrative boundaries and enhancing delivery efficiency.
- **Optimal Shipping Warehouse Analysis:** Utilize big data management to analyze the optimal configuration of various goods and storage warehouses, aiming to minimize the distance between products and consumers. During shipment, orders are automatically assigned to the most suitable warehouse based on factors such as warehouse inventory, on-site operations, shipment volume, and the availability of shipping carriers for pickup. This approach optimizes dispatching distances, reducing the round trips and transfer scheduling time for shipping carriers, as well as minimizing packaging material consumption and delivery mileage resulting from split shipments of the same order.
- By the end of 2024, the Southern Distribution Center officially began operations, featuring automated warehousing and smart picking systems that boost logistics efficiency. Its strategic layout enhances momo's logistics network, enabling better resource allocation and supporting energy savings and carbon reduction.

## 5. Environmentally Friendly Packaging

momo actively responds to the Ministry of Environment's "Targets and Measures for Restrictions on Internet Shopping Packaging." In 2023, it continued to be awarded the "Reduced Online Shopping Packaging Logo 2.0" In particular, the Company reduces packaging and innovates packaging technology by leveraging big data and system support to analyze inventory locations and shipping methods, minimizing cross-warehouse split shipments and cardboard use while improving vehicle loading efficiency. Compared to the base year 2019, it reduced a total of 4,710 tonnes of carbon emissions in 2024. On average, this equates to a reduction of 66 grams of carbon emissions per item, which is equivalent to the annual carbon sequestration of 390,000 trees [Note].

Note: Calculation of the carbon reduction from optimized packaging: 2024 quantity of each packaging material × weight reduction per unit compared to the base year (2019) × the sum of the carbon emission coefficients of each packaging material.


### Circular Packaging Actions

- **momo Reusable Bags:** momo continues to partner with Chunghwa Post mailboxes, iBox lockers, and Simple Mart stores across Taiwan to recycle reusable bags. In 2024, the initiative expanded to include Taiwan Mobile and 7-ELEVEN, bringing the total number of recycling stations to over 15,000 nationwide. By the end of 2024, reusable bag shipment warehouses accounted for more than 76% of momo's self-owned warehouse network.
- **Recycled Cartons:** In collaboration with eight Tzu Chi Environmental Protection Education Centers under the Tzu Chi Foundation, consumers can return used cartons to these stations. After sorting, Tzu Chi transports them back to momo's warehouse for cleaning, disinfection, and refurbishment. The cartons are then stamped with a "Recycled Cartons" label and reused for future shipments. In addition, momo has set up carton recycling stations at its headquarters and Ruiguang office to provide employees with convenient recycling access, reinforced through internal announcements. Starting in 2024, the Northern and Southern Distribution Centers have also joined the initiative, allowing consumers to return momo cardboard boxes to the security offices at both locations for recycling. As of 2024, momo has cumulatively refurbished and put back into use over 460,000 cardboard boxes.

### Reduction in Packaging Materials

- Using 100% recycled pulp to manufacture natural-colored cartons, with printing coverage below 30% of the surface area.
- The number of carton specifications has increased to 41. By offering more size options, momo has reduced the use of cushioning materials and lowered the volume void ratio in e-commerce packaging.
- In 2024, 11.29 million self-operated imported products were shipped in original green packaging. By collaborating with overseas manufacturers to align factory packaging with momo's sales combinations, repackaging waste was significantly reduced.
- Reduced size of momo stickers for supplier orders, optimized packaging for specific product categories, developed paper-based materials, and reviewed items suitable for original carton shipping.
- In 2024, the average weight of packaging material per unit was 141.73 grams, representing a 26.5% decrease (a reduction of 51.1 grams) compared to the baseline year 2019.

### Innovation in Packaging Materials Technology

- Utilized AI technology to develop the "Optimal Packaging Recommendation" module and established a streamlined standard operating procedure (SOP) for packaging. This assists frontline personnel in selecting the most suitable packaging size, thereby avoiding the use of excess packaging materials. In the future, AI interface planning will incorporate prompts for environmentally friendly packaging to boost the volume of circular packaging shipments.
- 30% of the material used in the eco-friendly bags in 2024 is recycled plastic, with printing areas accounting for less than 20%.
- Promoted the use of water-activated adhesive tape made from FSC-certified paper pulp and plant-based starch adhesive, which becomes sticky upon contact with water.
- Implement FSC-certified forest pulp honeycomb paper bags to reduce the use of cushioning materials.
- Cartons are made from >100% internationally certified recycled pulp.
- Recycled plastic for reusable bags is made from waste film collected from warehouses and processed through heat fusion, and is designed for up to 25 uses.


## 6. Green Operations

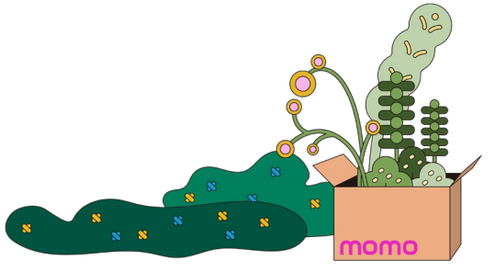
### Paper Reduction and Paperless Applications

Through the promotion of paperless applications from three directions: "consumer channels," "suppliers," and "internal approval," momo aims to reduce paper consumption while simultaneously enhancing operational efficiency. Through paperless applications, momo reduced paper consumption by 68.18 million sheets in 2024, equivalent to a decrease in carbon emissions of approximately 518.19 tonnes.

#### Description of Paperless Applications

| Directions for Paperless Applications | Explanation | 2024 Performance |
|---|---|---|
| **Consumer Channels** | momo introduced electronic invoices in 2015. Online and voice confirmation were also offered as an alternative to consumer certificate of return. Proof of payment for travel packages was also switched from paper to e-mail notification. | • Reduced paper consumption by over 6,671 million sheets<br>• Reduced approximately 507.02 tonnes of carbon emissions |
| **Suppliers** | momo streamlined the supplier account reconciliation process. Online processing of statements, payment and donation receipts, and return/allowance certificates by the B2B value-added center reduced the need for printed invoices, printed account statements as well as mail and postage. | • 93.64% of suppliers now use the paperless process for reconciliation<br>• Saved over 1.23 million sheets of paper<br>• Reduced approximately 9.42 tonnes of carbon emissions |
| **Internal Approval** | momo has introduced 75 types of electronic forms and electronic taxi vouchers to reduce the use of paper in the office and to enhance the transparency of the approval process. | • Saved over 230,000 sheets of paper<br>• Reduced approximately 1.75 tonnes of carbon emissions |

Note: Each pack of A4 paper (500 sheets, 80g, 210 mm x 297 mm) represented 3.8kg $CO_2e$.
Source: Carbon Footprint Information Platform



## Waste Reduction

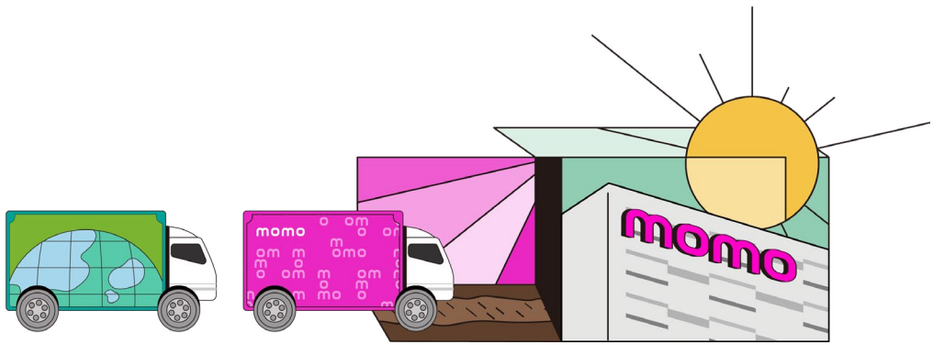
momo sets annual waste reduction targets and actively promotes related initiatives. Waste recycling, reduction, and reuse are implemented across its main operational sites: the headquarters buildings and warehouses.

- **Headquarters Building:** Since launching its office waste reduction initiative in 2020, momo has implemented resource recycling, encouraged paper reuse, promoted eco-friendly utensils, and adopted video conferencing, leading to a steady decline in waste. In 2024, per capita waste was approximately 0.0137 metric tons, an 18.25% reduction from the 2020 baseline, with total recycled resources reaching around 10.65 metric tons.
- **Warehousing:** momo is committed to improving internal resource recycling. In 2024, total waste amounted to approximately 903.2 metric tons, while recycled resources reached about 3,615.36 metric tons. Moving forward, momo will continue to optimize resource utilization and promote circular reuse in warehousing operations.


**Warehouse Waste Recycled Volume** (Unit: Tonnes)

| Item | 2022 | 2023 | 2024 |
|---|---|---|---|
| Cardboard Box Recycling Volume | 3,001.97 | 3,091.97 | 3407.82 |
| Plastic Recycling Volume | 81.59 | 112.41 | 204.95 |
| Bubble Wrap Recycling Volume | 1.59 | 3.61 | 2.59 |
| Total Recycling | 3,085.15 | 3,207.99 | 3,615.36 |

Note 1: Scope of Disclosure: Warehouses under 100% operational control of momo for the years 2022-2023; warehouses of momo and all subsidiaries included in the 2024 consolidated financial statements.
Note 2: Calculated as the weight set out in the monthly waste removal contract



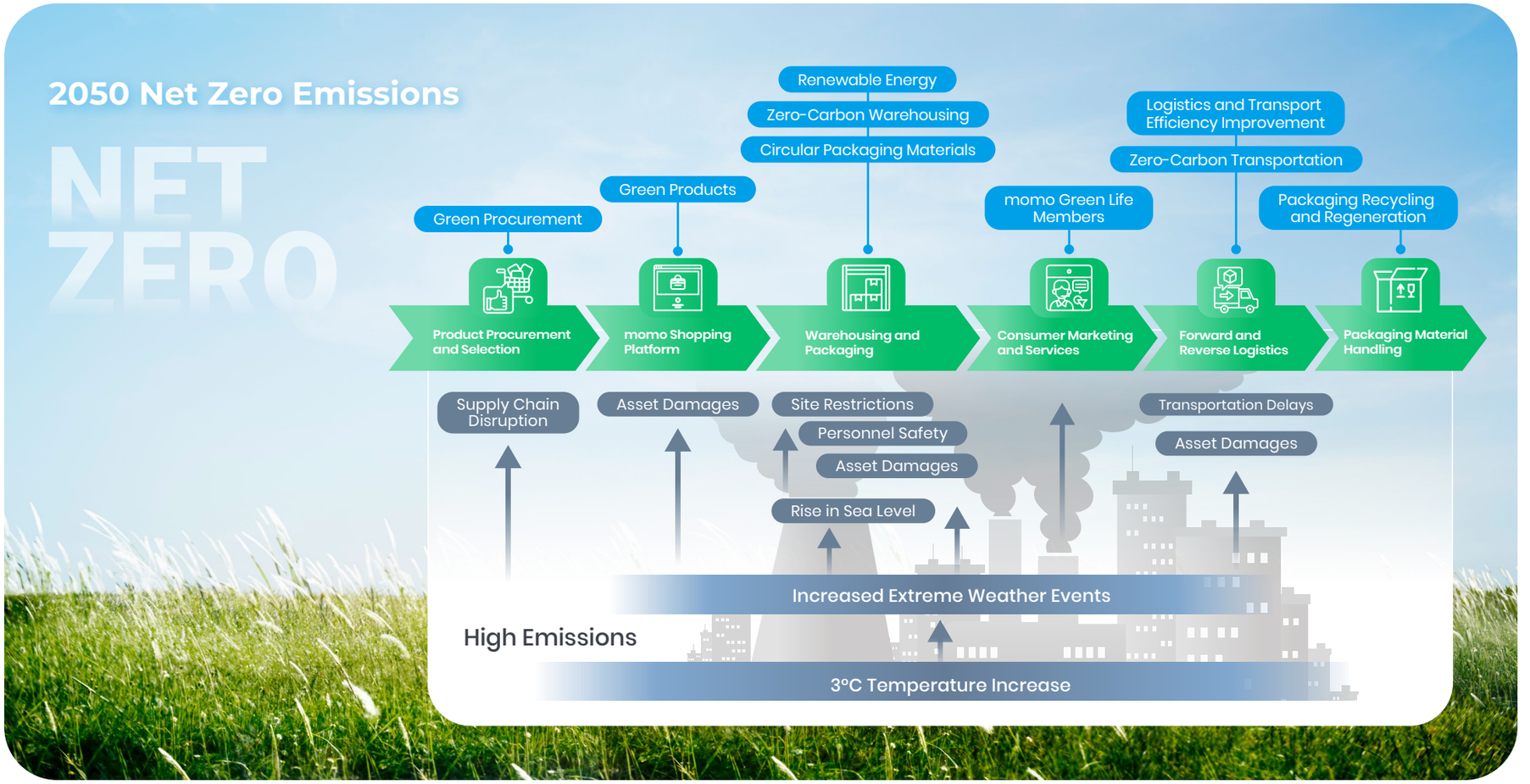

## Green Procurement

momo has implemented a green procurement policy, prioritizing the purchase or leasing of products that possess energy-saving and environmental protection certifications. In 2024, momo implemented measures including packaging reduction, reusable bags, recycled cartons, diverse pick-up services, and consolidated delivery to reduce delivery and carton procurement costs. The total value of green procurement in 2024 amounted to NT$642,280,968. Furthermore, in 2024, momo formulated the packaging reduction guidelines and invited suppliers to sign their compliance, achieving a sign-up rate of 98.9% for the corresponding consent form among suppliers. In addition, momo conducts random packaging inspections on a regular basis in an effort to promote online shopping packaging reduction based on three principles, namely packaging reduction, eco-friendly materials, and reusable packaging.

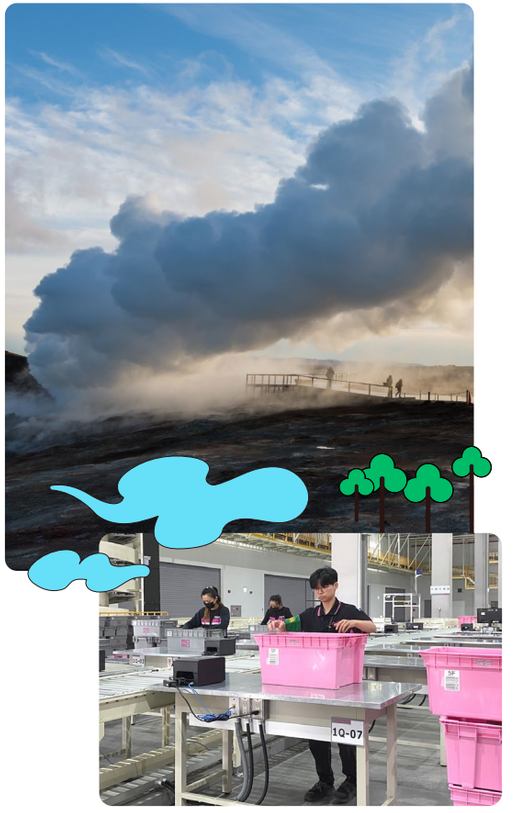
## 3.2.1 Climate-Related Scenario Analysis

momo recognizes the significant impact that climate change may have on its overall operational value chain. The organization has systematically identified potential issues and impacts across its value chain:

**Net Zero Emissions by 2050 and momo's Value Chain**



momo evaluates potential climate-related risks and opportunities within its value chain every two years through a structured identification process. This helps assess short-, medium-, and long-term operational issues under specific climate scenarios. In addition, financial impact analysis is conducted on the top-priority issues identified. The 2024 climate issues corresponding to value chain risk nodes are detailed in the table below:



| Climate-Related Risks, Opportunities, and Value Chain | Product Procurement and Selection | momo Shopping Platform | Warehousing and Packaging | Consumer Marketing and Services | Forward and Reverse Logistics | Packaging Materia Handling |
|---|---|---|---|---|---|---|
| Issue **Risk Occurrence Node** | | | | | | |
| Self-Built Zero Carbon Building | | | ✓ | | | |
| Energy Upgrade | | | ✓ | | | |
| Electric Vehicles Replacing Fuel-Powered Vehicles | | | | | ✓ | |
| Replacing Leased Buildings with Zero Carbon Buildings | | | ✓ | | | |
| Increase Carbon Fee | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Warehousing and Site Flooding | | | ✓ | | | |
| Increased Operating Costs Due to Extreme Weather Conditions | | ✓ | ✓ | | ✓ | |
| Temperature Rise-Driven Increase in Personnel Costs | | | ✓ | | ✓ | |
| Average Temperature Increase | | | ✓ | | | |
| Insufficient Sustainability Practices | | ✓ | | ✓ | | |
| Extreme Weather-induced Chain Disruption | ✓ | | ✓ | | ✓ | |
| Stagnation in Sustainability Performance | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Investment in Packaging Material Technology | | | ✓ | | | ✓ |
| Net Zero Technology R&D | ✓ | | ✓ | | ✓ | ✓ |
| Issue **Opportunity Occurrence Node** | | | | | | |
| Zero Carbon Warehousing | | | ✓ | | | |
| Proactive Sustainability Initiatives | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Rising Green Consumption Awareness | ✓ | ✓ | | ✓ | | ✓ |
| Logistics and Transport Efficiency Improvement | | | | | ✓ | |
| Packaging Material R&D | | | ✓ | | | ✓ |

Contents



## 1. Data Collection on Climate Issues

### Climate-related Risk and Opportunity Identification Procedures


According to reports regularly published by the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC), momo has selected the Net Zero Emissions by 2050 Scenario (NZE), SSP 1-2.6 and SSP 5-8.5 scenarios, and compiled a list of transition risks, physical risks and opportunity issues that reflect the business characteristics of momo at each time.

Based on the definitions of short-, medium- and long-term time horizons, the following table shows the period of occurrence of climate-related risks and opportunities:

### Timeframes of Climate-Related Risks and Opportunities

| Schedule | Duration | Period | Description |
|---|---|---|---|
| Short-term | 1-2 years | 2025-2026 | In alignment with its sustainability strategy, momo has designated 2025 to 2026 as the short-term timeframe. |
| Medium-term | 3-7 years | 2027-2031 | Based on the international report referenced in this TCFD disclosure, which outlines global energy transition and carbon reduction pathways through 2030, and in alignment with the Company's sustainability strategy, momo has set 2031 as its medium-term target. |
| Long-term | 8-26 years | 2032-2050 | The current international trend is for most countries to set a target of achieving net zero emissions by 2050. In response to this global trend, momo has established a goal to achieve net zero carbon emissions by 2050. |

Note 1: SSP stands for Shared Socioeconomic Pathway, whereby scenario simulations are carried out to assess the social and economic consequences following policy implementation.
Note 2: Transition risks refer to the financial and reputational risks facing an organization amidst changes in policy, law, technology, and markets that may be warranted by the transition to a low-carbon economy. Physical risks represent the potential financial impacts of climate change on an organization during immediate extreme weather events and long-term extreme temperature variations. Opportunities mean those that an organization can create to mitigate and adapt to climate change.

## 2. Explanation of Climate Scenarios

In order to understand the risks that momo may encounter in the years ahead under the influence of extreme climate and the potential development opportunities towards net zero emissions, three climate scenarios were adopted for the simulation of climate-related risks and opportunities, including NZE, SSP 1-2.6 and SSP 5-8.5 scenarios:

- **NZE scenario:** To achieve the goal of keeping the Earth's warming below 1.5°C, the IPCC published a special report in 2018 recommending that the world should take action to cut emissions by half by 2030 and reach net zero emissions by 2050. In the IEA's 2024 World Energy Outlook, NZE represents the most ambitious emissions reduction scenario, where countries achieve net zero by 2050. Applying this scenario reflects the global trend toward aggressive climate policy and decarbonization efforts.
- **SSP 1-2.6 and SSP 5-8.5 scenarios:** The IPCC's Sixth Assessment Report (AR6) published in 2021 changes the RCP scenario used in the previous AR5 to the SSP scenario by incorporating factors such as population growth, economic development, technological innovation, corporate governance and behavioral change. SSP 1-2.6 represents a scenario where the world is moving towards low GHG emissions, while SSP 5-8.5 signals a scenario in which the global market is consolidating, and the successful resolution of many environmental issues has led to a widespread belief that even with a full commitment to fossil fuels, it is possible to make progress towards a high level of emissions in a sustainable manner.

## 3. Climate-related Risk and Opportunity Assessment Methods

After creating a list of risk and opportunity topics, the relevant departments assist in identifying and evaluating the risks and opportunities, ranking the importance of the departments corresponding to each topic, calculating the weight percentage of each department in the topic, and consulting common methods employed in risk management practice. The following formula is applied to assess the significance of the risks and hazards with respect to the degree of harm caused by each risk.

- **Risk Hazard = Probability of Occurrence × Impact Severity**
- **Likelihood of Occurrence:** The likelihood of occurrence is categorized into five levels: Highly unlikely, unlikely, likely, highly likely and extremely likely. Each level is assigned a score from 1 to 5. The assessment of the likelihood for each issue is based on references to relevant international scientific reports and the professional experience and judgment of senior executives from related departments.
- **Impact Level:** The impact level is categorized into "Extreme," "Major," "High," "Moderate," and "Mild." Issues are classified by financial impact based on capital amount, with impact levels assessed using historical climate risk events and the expert judgment of senior executives from relevant departments.

### Description of Likelihood Levels

| Possibility | Level Range | Level Range Score |
|---|---|---|
| Extremely likely | 81%-100% | 5 |
| Highly likely | 61%-80% | 4 |
| Likely | 41%-60% | 3 |
| Unlikely | 21%-40% | 2 |
| Highly unlikely | 0%-20% | 1 |

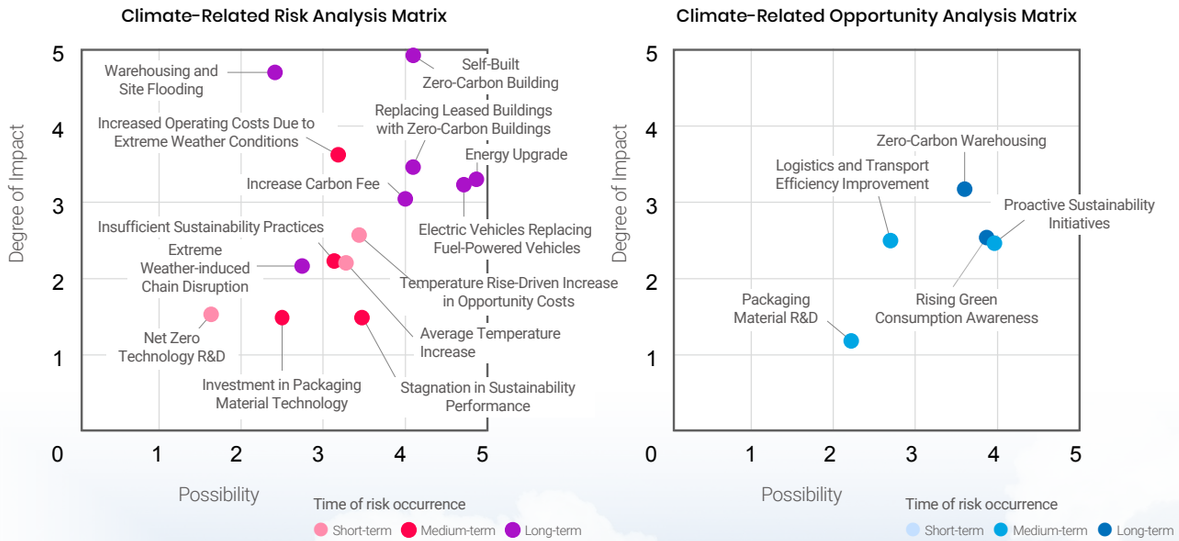
### Description of Impact Levels

| Degree of Impact | Potential Financial Impact Amount | % Accounted for in the Paid-In Capital |
|---|---|---|
| Extreme | Over 72 million | Accounts for approximately over 3% of the paid-in capital |
| Major | 24 million - 72 million | Accounts for approximately 1-3% of the paid-in capital |
| High | 7.2 million - 24 million | Accounts for approximately 0.3-1% of the paid-in capital |
| Moderate | 2.4 million - 7.2 million | Accounts for approximately 0.1-0.3% of the paid-in capital |
| Mild | Below 2.4 million | Accounts for approximately under 0.1% of the paid-in capital |

## 4. Climate-related Risk and Opportunity Issue Analysis

Through the climate-related risk and opportunity identification process, based on the ranking results and after internal discussion within momo, it was decided that the major issues for this round of identification include 4 transition risks, 1 physical risk, and 2 opportunity topics. The results of this identification and ranking are listed below:

Based on the identified climate-related risks and opportunities ranking results and following momo's internal discussions, it has been determined that this assessment's material issues include four transition risks, one physical risk, and two opportunity issues. The identification and ranking results are listed as follows:




### Description of Climate-related Risk Issues

| Order | Type | Risk | Description | Schedule |
|---|---|---|---|---|
| 1 | Transition risk | Self-Built Zero Carbon Building | In response to the growing trend of zero carbon building development, momo must ensure that future construction of office buildings, warehouses, and logistics distribution centers meets zero carbon building standards. This will lead to increased construction costs and higher capital expenditures. | Long-term |
| 2 | Transition risk | Energy Upgrade | Given the international community and the Taiwanese government's requirement for companies to use renewable energy, momo has had to boost the share of renewable energy in its operations, resulting in higher operating expenses and, consequently, increased operational costs. | Long-term |
| 3 | Transition risk | Electric Vehicles Replacing Fuel-Powered Vehicles | In response to international trends in low-carbon logistics and domestic transportation electrification, momo is gradually replacing its existing fuel-powered logistics vehicles with electric ones. This includes increased procurement of electric scooters and trucks, leading to higher equipment costs and increased capital expenditures. | Long-term |
| 4 | Transition risk | Replacing Leased Buildings with Zero Carbon Buildings | In response to the domestic and international trend toward near-zero carbon buildings, the replacement of leased buildings for momo's leased office buildings and warehouses will result in increased operating costs. | Long-term |

| Order | Type | Risk | Description | Schedule |
|---|---|---|---|---|
| 5 | Physical risk | Increased Operating Costs Due to Extreme Weather Conditions | Extreme weather events such as typhoons, torrential rain, and floods may lead to reduced company productivity and increased maintenance frequency for assets and equipment, such as office locations, logistics fleets, and warehouse facilities, resulting in higher operating costs. | Medium-term |
| 6 | Transition risk | Increase Carbon Fee | The government plans to begin collecting carbon fee from major emitters in 2025, and may gradually expand the scope to include more industries. If momo becomes subject to this regulation and its annual emissions exceed the government's threshold, the Company will be required to pay carbon fee based on the excess amount. This would increase operating expenses and, in turn, raise overall operating costs. | Long-term |
| 7 | Physical risk | Warehousing and Site Flooding | Global sea level rise may inundate warehouses and operational sites located in low-lying areas, resulting in additional relocation expenses and increased insurance costs. | Long-term |
| 8 | Physical risk | Temperature Rise-Driven Increase in Personnel Costs | Rising average temperatures may force warehouse and outdoor operations personnel to vacate their workstations, leading to increased operating costs. | Short-term |
| 9 | Physical risk | Average Temperature Increase | Rising average temperatures may increase electricity costs at operational sites due to higher energy consumption from air conditioning, equipment cooling, and emergency power systems. | Short-term |
| 10 | Transition risk | Insufficient Sustainability Practices | As consumers increasingly focus on sustainability, if momo fails to continuously promote environmental sustainability in its products, such as introducing sustainable goods or encouraging suppliers and business partners to reduce carbon emissions, it risks losing consumer preference. Consumers may shift to other purchasing channels with stronger sustainability practices, leading to a decline in sales and reduced revenue. | Medium-term |
| 11 | Physical risk | Extreme Weather-induced Chain Disruption | Extreme weather events such as typhoons, heavy rains, and floods may disrupt suppliers or logistics operations, leading to supply chain interruptions and impacting company operations. | Long-term |
| 12 | Transition risk | Stagnation in Sustainability Performance | TheCompany's lack of action on sustainability may result in stagnant performance, leading to a decline in sustainability ratings and potentially diminishing investor favorability. | Medium-term |
| 13 | Transition risk | Investment in Packaging Material Technology | In response to domestic regulations and guidelines on reducing packaging for online shopping, momo needs to increase the proportion of recycled materials and the usage rate of recyclable packaging materials in its packaging. During operations, it invests in research and development as well as procurement of recycled materials and reusable boxes (bags), which in turn leads to an increase in operating costs. | Medium-term |
| 14 | Transition risk | Net Zero Technology R&D | In response to the net-zero emissions trend, momo invests in the research and development of logistics-related net-zero technologies. This includes procuring relevant technologies and equipment, and allocating personnel to study innovations such as optimal delivery routes and warehouse dispatch analysis. If these R&D efforts fail, it could result in capital loss and increased operating costs for the Company. | Short-term |

| Order | Type | Risk | Description | Schedule |
|---|---|---|---|---|
| 1 | Opportunity | Zero Carbon Warehousing | momo transforms existing and future warehouse buildings into energy-efficient structures, incorporating renewable energy to create low-power, zero carbon facilities—reducing electricity expenses and lowering overall warehousing operational costs. | Long-term |
| 2 | Opportunity | Rising Green Consumption Awareness | As consumers increasingly focus on sustainability and prefer eco-friendly products, momo's early response to sustainable consumption trends helps boost customer satisfaction and loyalty—ultimately driving revenue growth. | Short-term |
| 3 | Opportunity | Proactive Sustainability Initiatives | momo adopts proactive sustainability measures and continues to gain favor from investors. | Medium-term |
| 4 | Opportunity | Logistics and Transport Efficiency Improvement | By continuously advancing zero carbon logistics, adopting more efficient transportation methods, and innovating logistics technologies, momo effectively reduces labor and time costs as well as fuel consumption—ultimately lowering operational expenses. | Medium-term |
| 5 | Opportunity | Packaging Material R&D | Investment in packaging material R&D to reduce carbon emissions during operations, compliance with government guidelines on e-commerce packaging reduction, and expansion into new business areas ultimately lower operational costs. | Medium-term |

## 3.2.2 Climate Resilience and Assessment of Financial Impact

In the 2024 ranking of climate change risk significance, the top four risks are all transition-related. These include: (1) In response to the trend of zero carbon building development, momo's future office buildings, warehouses, and distribution centers must meet zero carbon standards, leading to increased construction and capital expenditures; (2) To comply with international and Taiwanese government requirements for renewable energy use, momo must raise the proportion of renewable energy in its operations, increasing operating expenses and costs; (3) In line with global low-carbon logistics and domestic vehicle electrification trends, momo will gradually replace fuel-powered logistics vehicles with electric ones, increasing equipment and capital expenditures; (4) In response to the domestic and international trend toward near-zero carbon buildings, the replacement of leased buildings for momo's leased office buildings and warehouses will result in increased operating costs. The respective impact severity scores are 20.30, 16.42, 15.47, and 14.51.

In addition, since the Company has included the impact of extreme weather on its operations as a major operational risk, after discussion and considering the physical risks, the impact hazard value of 11.33 for "extreme weather events such as typhoons, torrential rain, and floods may lead to reduced company productivity, resulting in higher operating costs" has been incorporated together with the previous four transformation risk issues into the financial impact calculation. The explanation of the financial impact is as follows:

**Transition risks: In response to the growing trend of zero carbon building development, momo must ensure that future construction of office buildings, warehouses, and distribution centers meets zero carbon building standards. This will lead to increased construction costs and higher capital expenditures.**

- **Impact Statement:** According to the Net Zero Pathway proposed by the IEA for 2050, new buildings in all countries and regions must comply with zero carbon building codes by 2030. Furthermore, according to Taiwan's 2050 net-zero roadmap, 100% of newly constructed buildings and over 85% of existing buildings must meet near-zero carbon standards by 2050. In response to this trend, momo's replacement of existing buildings will lead to increased operating costs.
- **Issue occurrence period:** Long-term (2032-2050)
- **Disclosure of potential financial impacts:** Calculation is based on a one-time conversion of the distribution center into a green building.
- **Average annual financial impact:** approximately 0.03% of 2024 revenue.

**Transition risks: Boost the share of renewable energy in operations, resulting in higher operating expenses and, consequently, increased operational costs, in response to the international community and the Taiwanese government's requirement for companies to use renewable energy.**

- **Impact description:** According to the 2050 Net Zero Pathway proposed by the International Energy Agency (IEA), traditional energy sources will be gradually phased out by 2030. In response to this trend, momo's increase in the proportion of renewable energy will result in higher operating costs.
- **Issue occurrence period:** Long-term (2032-2050)
- **Disclosure of potential financial impacts:** Using 2024 as the base year, momo estimates annual growth in product throughput and warehouse electricity consumption, while also factoring in annual energy-saving rates for offices and warehouses, as well as self-consumption of electricity generated from renewable sources.
- **Average annual financial impact:** Based on a conservative estimate using the net-zero target as the evaluation benchmark, this represents approximately 0.10% of 2024 revenue.

**Transition risks: In response to international trends in low-carbon logistics and domestic transportation electrification, momo is gradually replacing its existing fuel-powered logistics vehicles with electric ones. This includes increased procurement of electric scooters and trucks, leading to higher equipment costs and increased capital expenditures.**

- **Impact description:** According to the IEA's 2050 Net Zero Pathway, the proportion of electric vehicles is expected to reach 20% by 2030 and 60% by 2040. Additionally, the Taiwan government has announced plans to ban the sale of fuel-powered cars and motorcycles by 2040. In response to this trend, momo's purchase of electric vehicles will lead to increased operating costs.
- **Issue occurrence period:** Electric scooters (2025-2050), electric trucks (long-term, 2032-2050)
- **Disclosure of potential financial impacts:** Future vehicle demand is estimated based on annual revenue growth rate, with calculations including one-time replacement and purchase of electric motorcycles, construction of charging stations, and one-time replacement of fuel-powered trucks with electric trucks.
- **Average annual financial impact:** Electric scooters account for approximately 0.007% and electric trucks for approximately 0.02% of 2024 revenue.

**Transition risks: In response to the domestic and international trend toward near zero carbon buildings, the replacement of leased buildings for momo's leased office buildings and warehouses will result in increased operating costs.**

- **Impact Statement:** According to the Net Zero Pathway proposed by the IEA for 2050, new buildings in all countries and regions must comply with zero carbon building codes by 2030. Furthermore, according to Taiwan's 2050 net-zero roadmap, 100% of newly constructed buildings and over 85% of existing buildings must meet near-zero carbon standards by 2050. To align with this trend, momo's upgrading of existing buildings will result in increased operating costs.
- **Issue occurrence period:** Long-term (2032-2050)
- **Disclosure of potential financial impacts:** Calculation is based on a one-time upgrade of leased office buildings and warehouses to Diamond-level green buildings.
- **Average annual financial impact:** approximately 0.06% of 2024 revenue.

**Physical risk: Extreme weather events such as typhoons, torrential rain, and floods may lead to reduced company productivity, resulting in higher operating costs.**

- **Impact description:** The frequency and intensity of extreme weather events such as typhoons, heavy rainfall, and floods have increased due to climate change. Future extreme weather conditions may impact momo's production capacity, leading to increased operating costs and revenue losses.
- **Issue occurrence period:** Medium-term (2027-2031)
- **Disclosure of potential financial impacts:** Assuming that compound disaster events caused by extreme weather result in power outages, and considering the potential future revenue growth, it is estimated that the inability to place orders on the website platform for 8 hours may impact the shift of daily necessities consumers.
- **Average annual financial impact:** approximately 0.03% of 2024 revenue.

The top-ranked climate change opportunity for momo is transforming existing and future warehouse buildings into higher energy-efficiency facilities, complemented by the installation of renewable energy systems to create low-power, zero carbon warehouses. This would reduce electricity expenses during operations and lower overall warehouse operating costs, reaching an impact value of 11.64. This assessment also includes the opportunity that is the Company's early alignment with sustainable consumption trends to enhance customer satisfaction and loyalty, in response to growing consumer awareness of sustainability and preference for more eco-friendly green products thereby increasing revenue. This has an impact value of 9.94. The financial implications of these two major climate-related opportunities are summarized as follows:

**Opportunity: Transforming existing and future warehouse buildings into higher energy-efficiency facilities, complemented by the installation of renewable energy systems to create low-power, zero carbon warehouses. This would reduce electricity expenses during operations and lower overall warehouse operating costs.**

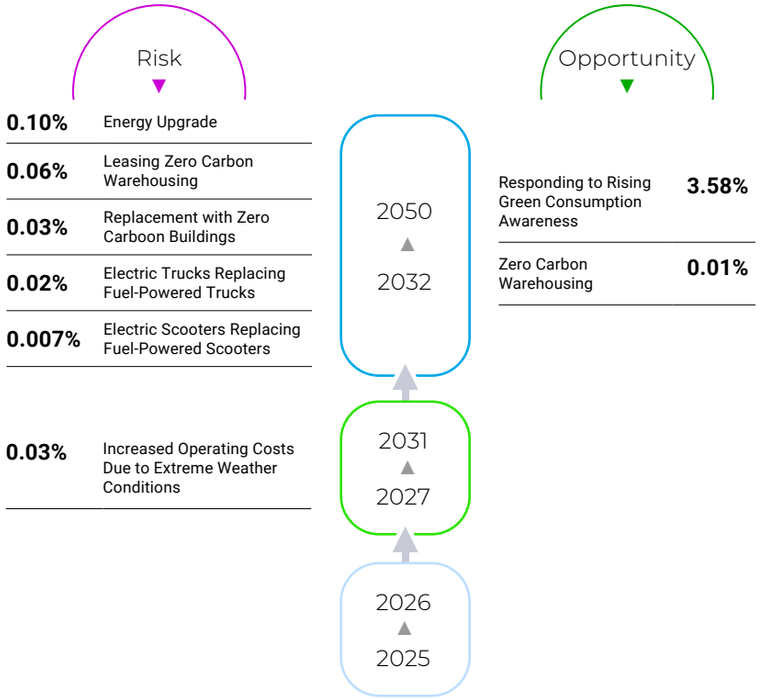
- **Impact Statement:** According to the Net Zero Pathway proposed by the IEA for 2050, new buildings in all countries and regions must comply with zero carbon building codes by 2030. Furthermore, according to Taiwan's 2050 net-zero roadmap, 100% of newly constructed buildings and over 85% of existing buildings must meet near-zero carbon standards by 2050.
- **Issue occurrence period:** Long-term (2032-2050)
- **Disclosure of potential financial impacts:** Assuming the Northern Distribution Center achieves near-zero carbon building status in the long term (2032-2050), it is expected to save 50% of electricity costs based on projected annual energy savings from the year of commissioning. The expected electricity savings are subject to long-term uncertainty due to national policy impacts on electricity pricing. Costs are conservatively estimated using the average actual price per kilowatt-hour in 2024.
- **Average annual financial impact:** approximately 0.01% of 2024 revenue.

**Opportunity: The Company's early alignment with sustainable consumption trends to enhance customer satisfaction and loyalty, in response to growing consumer awareness of sustainability and preference for more eco-friendly green products thereby increasing revenue.**

- **Impact description:** AIn the Ministry of Environment's 2024 Net Zero Green Lifestyle Transformation Technology and Strategy Development Project, areas with both high public willingness and high carbon reduction potential were surveyed. Scenario results showed that in the living quality category, the top choices were high-efficiency appliances (94.6%) and remote-controlled appliances (82.5%). In the eco-friendly green fashion category, the top choices were environmentally friendly materials for clothing and daily goods (92.7%) and energy-saving apparel (87.8%). Furthermore, enterprises promoting priority carbon reduction areas, combined with the public's willingness to implement, help create business opportunities.
- **Issue occurrence period:** Long-term (2032-2050)
- **Disclosure of potential financial impacts:** Estimated momo Green Life Collection sales growth
- **Average annual financial impact:** approximately 3.58% of 2024 revenue.


**Ranking of Financial Impacts of Climate-related Risks and Opportunities**

(Unit: Estimated financial impact as a proportion of 2024 revenue)




## Climate Resilience

Based on a comprehensive scenario analysis and in-depth financial impact assessment conducted in 2024, momo systematically reviews its corporate climate resilience and regularly reports the outcomes and key performance indicators of climate resilience management to the Sustainable Development Management Committee. momo has positioned climate resilience as a core element of its strategic development and is committed to continuously strengthening its adaptive capabilities. This commitment is embedded into its fundamental operational competencies and corporate culture to address the increasingly extreme challenges of global climate change. At the same time, momo seeks to seize market opportunities brought by the low-carbon transition, creating sustainable business operations and enhancing brand value.

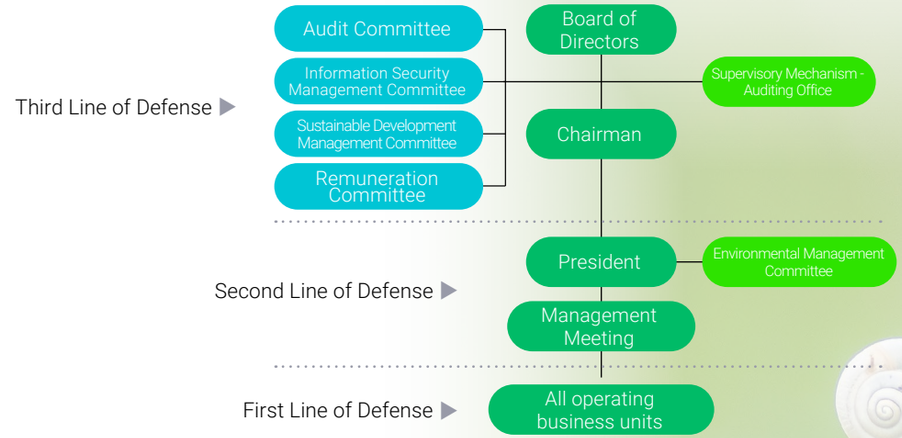
# 3.3 Risk management

## 3.3.1 Integration of Climate-Related Risks and Overall Risk Management System

In November 2023, momo revised the Risk Management Policies and Procedures, which was approved by the Board of Directors as the highest guiding principle for risk management. The Board of Directors serves as the highest decision-making unit, while the Audit Committee under its purview is tasked with overseeing the implementation of risk-related strategies; in addition, the Auditing Office assists the Audit Committee in carrying out matters related to risk management, and reports the implementation of risk management to the Board of Directors on a regular basis (at least once a year).

momo has identified "climate change risk" as a key operational risk. In accordance with its risk management procedures, the Company regularly inventories and identifies the impacts that climate change may pose to momo's operations, as well as implements response measures and management methods through the responsible units.

**Three Lines of Defense in Risk Management and Management Processes**




**Implementation of the Three Lines of Defense in Risk Management**

| Three Lines of Defense in Risk Management | | |
|---|---|---|
| **First Line of Defense** | **Operating unit** | Each operating unit, which is responsible for risk identification, assessment, and control, not only reviews the risk and control points in its line of work on a regular basis, but also keeps abreast of the addition and amendment of related laws, regulations, and orders announced by the competent authorities. Each operating may add and amend related internal rules and regulations when necessary. |
| **Second Line of Defense** | **Management level** | The managerial personnel in charge of each unit is tasked with planning and overseeing risk management associated with the line of work in which the unit is involved, implementing the Board of Directors' decisions on risk management, and directing the allocation of resources to ensure the effective implementation of internal control procedures. |
| **Third line of defense** | **Governance level** | As the highest decision-making unit for risk management, the governance unit is charged with approving risk management policies and related rules and regulations, and overseeing the implementation of risk management policies in order to ensure the effective operation of the risk management mechanism. |
| **Supervisory mechanism** | **Audit Office** | The Auditing Office is responsible for assessing the risk level of each line of work and using it as the basis for drawing up annual audit plans; carrying out audit operations to check and review the actual implementation of risk management at each operating unit; as well as reporting audit findings and tracking deficiencies found during the auditing process. |

## 3.3.2 Climate-related Risk Management Measures

momo places great importance on addressing both the potential and actual impacts of low-carbon transition and climate-related disasters on its operations. Based on the major climate risks and opportunities identified in 2024, momo has formulated response measures and assessed the management costs of each issue over the evaluation periods (medium-term and long-term), presented as follows:

### Measures and Management Costs for Major Climate-related Risks and Opportunities

| Major Climate-related Risks and Opportunities | Management Actions and Response Measures | Management Costs |
|---|---|---|
| **Self-Built Zero Carbon Building** | • Use flood simulation data and consider geographic and environmental factors when constructing warehouses.<br>• Warehouses adopt tunnel wind cooling and natural ventilation design to mitigate temperature rise.<br>• Construct solar energy installations on the roofs of idle self-owned warehouses to produce renewable energy.<br>• Conduct factory environmental assessments in accordance with regulations, including soil liquefaction evaluation, stratigraphic analysis, and groundwater monitoring. In addition, establish green belts to meet flood control needs and reduce ecological impact. | Long-term personnel and operational costs are approximately NT$320,320,000 |
| **Energy Upgrade** | • momo utilizes idle rooftop space at its own warehouses to install solar energy systems, including at the Northern and Southern Distribution Centers, to generate renewable energy. | Long-term personnel and operational costs are approximately NT$366,080,000 |
| **Electric Vehicles Replacing Fuel-Powered Vehicles** | • To improve transport efficiency and reduce carbon emissions from logistics mileage, momo builds a green fleet and continues to purchase electric vehicles. The share of electric scooters is expected to reach 30% in 2025 and 50% by 2026–2027, with ongoing increases planned. Gradually implement an environmentally friendly and efficient transportation model using short-chain logistics and node removal technologies.<br>• We have expanded our warehousing locations and collaborated with suppliers in the factory distribution and cross-docking modes to shorten the goods delivery time and distance.<br>• Use AI data to introduce the "optimal distribution route suggestion" module. | Long-term personnel and electric vehicle maintenance costs estimated at approximately NT$202,046,000 |
| **Replacing Leased Buildings with Zero Carbon Buildings** | • momo continuously evaluates the feasibility of future leasing of green buildings or zero carbon buildings.<br>• The headquarters building has implemented an air conditioning operation control mechanism, monitoring electricity usage behavior to achieve building energy conservation and carbon reduction.<br>• The warehouse has adjusted to a half-power mode without affecting lighting conditions, implemented centralized on-site operations, and evaluated the introduction of LED lighting fixtures. | Long-term personnel and operational costs are approximately NT$5,280,000 |
| **Increased Operating Costs Due to Extreme Weather Conditions** | • momo has established the "Disaster Safety Prevention and Rescue Management Regulations" and the "Emergency Incident Response Measures Management Regulations" to reduce disaster losses. Additionally, warehouses use a heavy rain and typhoon checklist, including checks on emergency generator operation and fuel levels, to manage disaster risks.<br>• momo has decentralized its system services to Internet Data Centers and cloud data centers to mitigate the risk of power outages.<br>• The Central Distribution Center under construction is equipped with outflow control facilities. Through the drainage ditches, collection wells, and rainwater inflow pipes around the site, water is directed into a raft-type detention basin. The water level in the detention basin is regulated by pumps and control valves, effectively accommodating the required flood detention volume during heavy rain periods after site development. | Medium-term personnel and operational costs are approximately NT$437,360,000 |
| **Zero Carbon Warehousing** | • The Central Distribution Center currently under construction is being designed with reference to the Green Building Label scoring criteria. Over 75% of interior decoration materials used are certified green building materials, and the facility incorporates energy-efficient features such as high-efficiency air conditioning systems and LED lighting. | Long-term personnel and operational costs are approximately NT$320,320,000 |
| **Rising Green Consumption Awareness** | • momo Green Life Collection has mobilized over one hundred suppliers to offer more than 5,300 types of green products to consumers.<br>• momo Green Life Members program empowers consumers with sustainable consumption choices, including priority access to low-carbon logistics options such as circular packaging and consolidated delivery. Members are also provided with a carbon reduction dashboard to track their personal emissions savings. The program is complemented by momo Green Life Collection, which features curated sustainable products and offers exclusive Green Life member discounts, strengthening engagement with the eco-conscious consumer segment. | Long-term personnel and operational costs are approximately NT$343,200,000 |

# 3.4 Metrics and targets

In response to the potential risks of climate change impacting stakeholders, momo has actively promoted greenhouse gas inventory and verification since 2016. Starting in 2019, through the development of the "Sustainable Living Blueprint," momo established indicators and targets related to Scope 1 and Scope 2 greenhouse gas emissions. These efforts aim to continuously deepen climate risk response and adaptation, maintain stable operations, and strengthen the company's sustainable resilience.

## 3.4.1 Greenhouse Gas-related Indicators and Targets

### Greenhouse Gas Reduction and Management

Grounded in its core business competencies, momo aligns with key climate themes such as climate governance and energy resource management and green logistics, while identifying multiple sources of greenhouse gas emissions. The relevant responsible units, according to their business duties, have established the greenhouse gas emission targets for Scope 1 and Scope 2 based on the year 2023 as the baseline year, as follows:

**GHG Scope 1 and 2 Reduction Targets and Achievement Status**

| Type | Base Year | Achievement Status for 2024 | Short-term Goals (2025) | Medium-term Goals (2026-2027) | Long-term Goals (2028-2030) |
|---|---|---|---|---|---|
| **Scope 1** | | | | | |
| Green Fleets | 2023 | Carbon emissions per delivery for self-owned fleet compared to base year -4.8% | Fu Sheng increased electric scooter market share to 30% | Fu Sheng increases electric scooter market share to 50% | Continuous optimization of energy usage and green fleet |
| **Scope 2** | | | | | |
| Headquarters Buildings Office | 2023 | Per capita electricity consumption -4.4% | Per capita electricity consumption -1% | Per capita electricity consumption -2% | Per capita electricity consumption -2% |
| Warehouse | 2023 | Per ping (3.3m²) electricity consumption - 10.1% | Per ping (3.3m²) electricity consumption - 1% | Per ping (3.3m²) electricity consumption - 2% | Per ping (3.3m²) electricity consumption - 2% |

Since introducing ISO 14064-1 for greenhouse gas inventory in 2016, momo has undergone third-party verification annually. At the end of 2018, it implemented the ISO 14001 Environmental Management System and obtained its first ISO 14001 certification in 2019. momo has continued to pass annual re-certifications ever since.

In 2023, momo obtained its first ISO 14067 Carbon Footprint Certification and the Carbon Footprint Label from the Ministry of Environment. The Company also planned to apply for additional carbon footprint labeling by conducting a lifecycle carbon emissions inventory for momo's retail services and planned corresponding carbon reduction measures for emission hotspots, driving low-carbon transformation throughout the value chain.


momo's GHG emissions over the past three years are as follows:

**Greenhouse Gas Emissions Over the Past Three Years** (Unit: Tonnes $CO_2e$)

| Direct/Indirect Emissions | Scope | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| **Direct emissions** | Scope 1 | 1,595.48 | 1,815.70 | 2,000.55 |
| **Indirect emissions** | Scope 2 | 13,240.45 | 13,534.71 | 15,021.96 |
| Total emissions | | 14,835.93 | 15,350.41 | 17,022.51 |
| **Emissions per capita** | | 2.70 | 2.73 | 2.89 |
| **Emission intensity** | | 0.14 | 0.14 | 0.14 |

Note 1: Inventory boundary: 2022 and 2023 - momo's 100% operational control sites and subsidiaries in Taiwan (Fuli Life Insurance Agent, Fuli Insurance Agent, Bebe Poshe International, Fu Sheng Logistics, Prosperous Living); 2024 - momo and all subsidiaries included in the consolidated financial statements.
Note 2: Per capita emissions: 2022 and 2023 - GHG emissions (scope 1 and 2)/Total number of personnel (including dispatched staff) at momo's 100% operational control sites and subsidiaries in Taiwan (Fuli Life Insurance Agent, Fuli Insurance Agent, Bebe Poshe International, Fu Sheng Logistics, Prosperous Living); 2024 - Greenhouse Gas (Scope 1 and 2) Emissions/Total number of personnel (including dispatched staff) across momo and all subsidiaries included in the consolidated financial statements.
Note 3: Emission intensity: 2022 and 2023 - GHG emissions (scope 1 and 2)/Revenue from momo's 100% operational control sites and subsidiaries in Taiwan (Fuli Life Insurance Agent, Fuli Insurance Agent, Bebe Poshe International, Fu Sheng Logistics, Prosperous Living); 2024 - Greenhouse Gas (Scope 1 and 2) Emissions/ Revenue from momo and all subsidiaries included in the consolidated financial statements.
Note 4: The baseline year for GHG inventory was 2022. Global Warming Potential (GWP) was sourced from the IPCC Fifth Assessment Report.
Note 5: GHG tracked included Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, Sulphur Hexafluoride, and Nitrogen Trifluoride.

**Emissions Over the Past Three Years** (Unit: Tonnes $CO_2e$)

| Categories of Scope 3 | 2022 | 2023 | 2024 |
|---|---|---|---|
| 1. Purchased goods and services | 1,425,862.64 | 1,329,323.67 | 1,314,368.57 |
| 2. Capital goods | 18,107.59 | 37,863.09 | 48,817.37 |
| 3. Purchased goods and services | 2,574.96 | 2,971.95 | 3,116.70 |
| 4. Upstream transportation and distribution | 73,822.88 | 42,632.77 | 42,310.23 |
| 5. Waste generated in operations | 628.53 | 645.64 | 616.66 |
| 6. Business travel | 14.16 | 18.49 | 21.01 |
| 7. Employee commuting | 2,552.11 | 2,587.80 | 3,525.56 |
| 8. End-of-life treatment of sold products | 645.82 | 733.72 | 718.88 |
| Total emissions of Scope 3 | 1,524,208.69 | 1,416,777.13 | 1,413,157.04 |
| Total emissions of Scope 1, 2, and 3 | 1,539,044.62 | 1,432,127.54 | 1,430,179.55 |

Note 1: Inventory boundary: 2022 and 2023 - momo's 100% operational control sites and subsidiaries in Taiwan (Fuli Life Insurance Agent, Fuli Insurance Agent, Bebe Poshe International, Fu Sheng Logistics, Prosperous Living); 2024 - momo and all subsidiaries included in the consolidated financial statements.

Note 2: 2022, 2023, and 2024 - Scope 3 emissions exclude categories No. 8, 9, 10, 11, 13, 14, 15 after a significant methodology assessment of indirect greenhouse gas emission sources.

Though not currently subject to Taiwan's carbon fee regulations, and despite the exclusion of "carbon fee imposition" from its list of major climate risks, momo has adopted the spirit of internal carbon pricing in 2024, taking into account the IEA 2050 Net Zero Emissions Roadmap and Taiwan's carbon fee policies. Using a shadow price, momo estimates its willingness-to-pay for carbon management, aiming to incorporate carbon risk into the formulation of its low-carbon corporate strategies. Currently, momo is conducting an evaluation of its existing consolidated shipping low-carbon initiative to estimate the carbon management willingness-to-pay price. The internal carbon price (ICP) at momo is NT$4,251 per tCO2e. Subsequently, momo will continue to internally study and evaluate the appropriateness, management objectives, and implications of internal carbon pricing, and will adjust the internal assessment methodology and calculation process accordingly.

## 3.4.2 Other Climate-related Indicators and Targets

Based on the risks and opportunities associated with each strategic dimension, momo has established indicator management approaches and set short-, medium-, and long-term goals. The details are shown in the table below:

### Greenhouse gas reduction and management

**Climate-related Strategic Management Indicators**

| Strategy | Issue | Approach to Indicator Management | Risks and Opportunities |
|---|---|---|---|
| Green Life Member | Sustainable Consumption Initiatives | • Growth in the operational performance of momo Green Life Collection<br>• Promote momo Green Life Members to strengthen the sustainable consumer base<br>• Optimization of momo Green Life Members features | ⊕ Rising Green Consumption Awareness |
| Green Partners | Sustainable Supply Chain | • Enhancement of supplier sustainability risk<br>• Green Supplier Management | ⊖ Investment in Packaging Material Technology |
| Low-Carbon Warehousing | Green Building | • Completion and utilization of large-scale distribution centers built in green concept | ⊖ Self-Built Zero Carbon Building |
| Green Logistics | Green Logistics | • Creating green fleets<br>• The Last Mile Towards Decarbonization | ⊖ Electric Vehicles Replacing Fuel-Powered Vehicles Logistics<br>⊕ Transport Efficiency Improvement |
| Environmentally Friendly Packaging | Circular Packaging Materials | • Enhancing the utilization rate of circular packaging materials<br>• Packaging reduction compared to base year (2019) | ⊖ Investment in Packaging Material Technology |
| | Waste Reduction | • Reducing waste from operational process | |
| Green Operations | Energy Efficiency Improvement | • Completion and utilization of solar power system in self-built warehouses | ⊖ Energy Upgrade Replacing Leased Buildings<br>⊖ Zero Carbon Buildings<br>⊕ Zero Carbon Warehousing |
| | Uninterrupted Operations | • Uninterrupted self-operations | ⊖ Increased Operating Costs Due to Extreme Weather Conditions |

## Climate-related Management Indicators and Short-, Medium-, and Long-term Targets

| Issue | Approach to Indicator Management | 2024 Goals and Achievement Status | Short-term Goals (2025) | Medium-term Goals (2026-2027) | Long-term Goals (2028-2030) |
|---|---|---|---|---|---|
| Sustainable Consumption Initiatives | Growth in the operational performance of momo Green Life Collection<br>• Number of momo Green Life Collection purchasers compared to the previous year +5%<br>• Number of momo Green Life Collection products compared to the previous year +5%<br>• Number of participants in online/offline momo Green Life Collection activities reached 1200 | • Number of momo Green Life Collection purchasers compared to the previous year +27%<br>• Number of momo Green Life Collection products compared to the previous year +9%<br>• Number of participants in online/offline momo Green Life Collection activities reaches over 2000 | • Number of momo Green Life Collection purchasers compared to the previous year +10%<br>• Number of momo Green Life Collection products compared to the previous year +10%<br>• Number of participants in online/offline momo Green Life Collection activities reached 1,500 | • Number of momo Green Life Collection purchasers compared to the previous year +10%<br>• Number of momo Green Life Collection products compared to the previous year +10%<br>• Number of participants in online/ offlinemomo Green Life Collection activities reached 1,500 | • Number of momo Green Life Collection purchasers compared to the previous year +10%<br>• Number of momo Green Life Collection products compared to the previous year +10%<br>• Number of participants in online/offline momo Green Life Collection activities reached 1,500 |
| | Promote momo Green Life Members to strengthen the sustainable consumer base<br>• Number of momo Green Life Members compared to the previous year +20% | • Number of momo Green Life Members compared to the previous year +29% | • Number of momo Green Life Members compared to the previous year +20% | • Number of momo Green Life Members compared to the previous year +25% | • Number of momo Green Life Members compared to the previous year +25% |
| | Optimization of momo Green Life Members features | • Continuous optimization of the functions of the "momo Green Life Members" and the "momo Green Life Collection"<br>• Planned and developed the Carbon Reduction Dashboard and momo ECO Points projects | • The first phase, Carbon Reduction Dashboard, is scheduled to be launched in 2025<br>• The second phase, momo ECO Points reward mechanism, will be launched in Q3 of 2025<br>• Plan at least one in-person event focused on environmental friendliness for momo Green Life Members | • Plan and present product sustainability information<br>• Hold at least one offline event that is environmentally friendly every year | • Enhance product sustainability information<br>• Hold at least one offline event that is environmentally friendly every year |
| Sustainable Supply Chain | Enhancement of supplier sustainability risk | • Completion of Phase 1 of the ESG self-assessment for new key suppliers<br>• Plan 14 in-person ESG training sessions for suppliers | • Continue promoting ESG self-assessments among key Tier-1 and new suppliers<br>• Conduct at least one ESG training session for suppliers | • Continue promoting ESG self-assessments among key Tier-1 and new suppliers<br>• Incorporate ESG audit criteria into evaluation for new suppliers<br>• Continue conducting supplier ESG education and training | • Continue promoting ESG self-assessments among key Tier-1 and new suppliers<br>• Continue conducting supplier ESG education and training<br>• Plan the selection of top-performing ESG suppliers |
| | | | • Supplier Evaluation Categorization: Grades A, B, and C (based on product quality, information security, cash flow, order management, and consignment inventory)<br>• New version of the information security self-assessment form | • Conduct on-site factory visits and provide guidance based on evaluation ratings and high-risk suppliers | • Conduct on-site factory visits and provide guidance based on evaluation ratings and high-risk suppliers |
| | Green Supplier Management | • Promote green packaging across the supply chain: Continue advancing the use of reusable logistics boxes and advocating for increased shipment in original packaging | • 10 companies introduced reusable logistics crates<br>• Promote the purchase of eco-friendly packaging materials from momo to 80 vendors<br>• Promote ESG to suppliers through 1 online video | • YOY growth of 10% in the usage of reusable logistics boxes<br>• Promote the purchase of eco-friendly packaging materials from momo to 100 vendors<br>• Promote ESG to suppliers through 2 online videos | • YOY growth of 10% in the usage of reusable logistics boxes<br>• Promote the purchase of eco-friendly packaging materials from momo to 120 vendors<br>• Promote ESG to suppliers through 3 online videos |
| Green Building | Completion and utilization of large-scale distribution centers built in green concept | • The Central Distribution Center is being constructed according to green building concepts | • The Central Distribution Center is constructed according to green building concepts | • Completion of the construction of the Central Distribution Center according to green building concepts | |

| Issue | Approach to Indicator Management | 2024 Goals and Achievement Status | Short-term Goals (2025) | Medium-term Goals (2026-2027) | Long-term Goals (2028-2030) |
|---|---|---|---|---|---|
| Green Logistics | Creating green fleets<br>• Carbon emissions per delivery for self-owned fleet compared to base year 2023: −1%;<br>• Reduction of 2500 trips through node removal | • −4.8% (average carbon emissions per delivery item: 0.25 kg CO2e/item)<br>• 4,018 trips | • Fu Sheng increased electric scooter market share to 30% | • Fu Sheng increases electric scooter market share to 50% | • Continuous optimization of energy usage and green fleets |
| | The Last Mile Towards Decarbonization | • Analyze carbon reduction benefits from consolidated delivery and short-chain logistics, and develop a logistics decarbonization optimization plan<br>• In 2024, each package avoided 0.068 kg CO2e emissions | • Addition of return channels to reduce reverse logistics mileage: FamilyMart return service has been added alongside the existing 7-ELEVEN return option<br>Continuously promote consolidated delivery, adding the Southern Distribution Center as a consolidation point to reduce the total delivery mileage and improve delivery speed for customers in the southern region | • Increase the inventory items at central-southern warehouses, raise the proportion of deliveries from the central-southern warehouses to customer orders of those regions, and reduce the overall delivery mileage | • Collaborate with convenience stores or other logistics providers to reduce the number of transfers and delivery mileage for customer order packages |
| Circular Packaging Materials | Enhancing the utilization rate of circular packaging materials<br>• Expand the share of momo recyclable bags leaving the warehouse to 50%<br>• Increase the recycling rate of reusable bags and expand recycling channels to include more than one outlet<br>• Optimization and redesign of reusable bags<br>• Increasing the use of recyclable cartons for shipping, targeting an annual growth rate of total usage ≧ 10%<br>• Expanding Tzu Chi cooperation sites | • Expand the share of momo recyclable bags leaving the warehouse to 76%<br>• Recycling rate for reusable bags reached 21.4%<br>• Completed the expansion of 2 recycling channels (Taiwan Mobile and 7-Eleven)<br>• Complete optimization and redesign of reusable bags<br>• Total usage of recyclable cartons for shipping reached an annual growth rate of 18%<br>• Added one additional Tzu Chi coordination point | • Share of shipments using circular packaging reaches 1%<br>• Increase the number of cardboard recycling points to enhance the reuse of incoming cardboard boxes<br>• Increase recycling channels for reusable bags<br>• ITRI Recycled Carton POC | • Establish a packaging research center to enhance recyclability and innovative packaging design | • Continue packaging R&D and reduction efforts through the packaging research center |
| | Packaging reduction compared to base year (2019) ≧ 25% | • Reduction ≥26.6% | • Reduction ≥30%<br>• Increase original carton shipments by ≧ 23% | • Reduction ≥35% | • Comply with government regulations on packaging reduction |
| Waste Reduction | Waste per capita in headquarters buildings (base year: 2020) −4%<br>Limits: Only the headquarters building is included in the calculation | • −18.25% | • −4% | • −7% | • −10% |
| Energy Efficiency Improvement | Completion and utilization of solar power system in self-built warehouses | • Complete the installation and commissioning of the solar energy system at the Southern Distribution Center<br>• Annual electricity generation at the Northern Distribution Center reached 1.186 million kWh | • Officially commission and obtain green energy certification for the solar power self-generation and self-consumption system (1,200 kWp) at the Southern Distribution Center | • Plan, establish, and commission a 1,200 kWp solar self-generation system at the Central Distribution Center | • All future self-built warehouse solar systems for self-use will come with constant performance monitoring |
| | Enhancement of carbon inventory and Scope 3 data management capability | • Complete carbon avoidance analysis per item for Diverse Pick-up Services, consolidated delivery, electric scooters, reusable bags, recycled cartons, and optimized packaging systems<br>• Completed carbon footprint analysis for 1P products, identified product categories accounting for 80% of emissions, and tracked the top 30 brands with the highest cumulative product emissions | • The ISO 14064-1 inventory boundary has been expanded to include 9 domestic and international subsidiaries, achieving 100% coverage | • Scope 3 inventory and expansion of disclosure to include 1 to 2 additional categories<br>• Achieving a 3% carbon footprint reduction across the service lifecycle, certified with a carbon reduction label | • Scope 3 inventory and expansion of disclosure to include 1 to 2 additional categories |
| Uninterrupted Operations | Uninterrupted self-operations | | • Regular assessment of emergency response measures for extreme climate events | • Regular assessment of emergency response measures for extreme climate events | • Regular assessment of emergency response measures for extreme climate events |

# Appendix - TCFD Disclosure Comparison Table

| Disclosure Items Recommended by TCFD | | Climate-Related Information of TWSE/TPEx-Listed Companies | Corresponding Sections | Page Number |
|---|---|---|---|---|
| **Governance** | a. Describe the Board of Directors' oversight of climate-related risks and opportunities. | 1 Explain the Board's and management's oversight and governance of climate-related risks and opportunities. | 3.1.1 | 9 |
| | b. Describe the role of management in assessing and managing climate-related risks and opportunities. | | 3.1.2 | 10 |
| **Strategy** | a. Describe the short-, medium-, and long-term climate-related risks and opportunities identified by the organization. | 2 Explain how identified climate risks and opportunities affect the company's business, strategy, and financials (short-, medium-, and long-term). | 3.2.2 | 25 |
| | b. Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning. | 3 Describe the financial impact of extreme climate events and transition actions. | 3.2.2 | 25 |
| | c. Describe the organization's strategic resilience, considering various climate-related scenarios, including those involving a 2°C increase or more severe conditions. | 5 If scenario analysis is used to assess climate resilience, disclose the scenarios, parameters, assumptions, analytical factors, and key financial impacts. | 3.2.2 | 25 |
| **Risk management** | a. Describe the organization's process for identifying and assessing climate-related risks. | 4 Describe how the identification, assessment, and management processes of climate risk are integrated into the overall risk management system. | 3.2.1 | 18 |
| | b. Describe the organization's processes for managing climate-related risks. | | 3.3.2 | 29 |
| | c. Describe how the processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management framework. | | 3.3.1 | 28 |
| **Metrics and targets** | a. Disclose the indicators used by the organization to assess climate-related risks and opportunities in accordance with its strategy and risk management processes. | 6 If a transition plan is in place to manage climate-related risks, disclose its content along with the metrics and targets used to identify and manage physical and transition risks. | 3.4.1<br>3.4.2 | 30<br>31 |
| | b. Disclosure of Scope 1, Scope 2, and Scope 3 (if applicable) greenhouse gas emissions and related risks. | 9 Greenhouse gas inventory and assurance status. | 3.4.1 | 30 |
| | c. Describe how the processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management framework. | 8 If climate-related targets are set, disclose the covered activities, GHG emission scopes, planning timeline, and annual progress. If carbon offsets or renewable energy certificates (RECs) are used to meet targets, specify the source and quantity of offsets or RECs. | 3.4.2 | 31 |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