

# Progress of Management and Business Strategies

Our key strategy is a business growth strategy that simultaneously implements existing core businesses and invests in the creation of new growth businesses. The key strategy entails ambidextrous management (AX) and business transformation (BX). Through the key strategy, the NYK Group aims to enhance the competitive advantages of its overall business. To support the key strategy, we are also pursuing strategies aimed at other types of transformation.

Our ESG management has moved into the implementation phase. Various initiatives are progressing toward full-scale social implementation and commercialization. We will further enhance our ability to advance strategies and maximize corporate value with the aim of realizing our Vision for 2030.



## Progress of Management Strategy (ABCDE-X)

<p><b>Contribution to the Decarbonization of Society through Offshore Wind Power-Related Businesses</b></p> <p>AX · BX × EX</p>	<p><b>Ambitious Initiatives Trialing New Fuels and Developing Next-Generation Fuel Ships</b></p> <p>AX · BX × DX · EX</p>	<p><b>Ambitious Initiatives for the Development and Social Implementation of Autonomous Ships</b></p> <p>AX · BX × DX</p>	<p><b>Expansion of the Logistics Business Value Chain</b></p> <p>AX · BX × DX</p> <p>P44 Liner &amp; Logistics</p>	<p><b>Strengthening of the LNG Business and Contribution to Supply Stability</b></p> <p>AX · BX × DX</p> <p>P56 Decarbonization Initiatives</p>
<p><b>Ambitious Initiative for a Liquefied CO<sub>2</sub> Maritime Transportation and Storage Business</b></p> <p>AX · BX × EX</p>	<p><b>Utilization of 3D Models to Improve the Efficiency of Ship Design</b></p> <p>AX · BX × DX</p>	<p><b>Ambitious Initiative for the Development of the Space Business</b></p> <p>AX · BX × DX</p>	<p><b>Safe and Efficient Ship Operations through the Use of Data</b></p> <p>AX · BX × DX</p> <p>Vol.14, Discover Our ESG Stories  <a href="https://www.nyk.com/english/esg/does/stories/detail_14.html">https://www.nyk.com/english/esg/does/stories/detail_14.html</a></p>	<p><b>Ambitious Initiatives to Utilize the Capabilities of the Group's 35,000 Employees</b></p> <p>CX</p> <p>P22 SPECIAL FEATURE The NYK Group's Growth Drivers              Technological Capabilities and Human Resources</p>



Progress of Management Strategy (ABCDE-X)

Contribution to the Decarbonization of Society through Offshore Wind Power-Related Businesses

AX · BX X EX

Operation of a Crew Transfer Vessel and the Opening of a Training Center for Offshore Wind Power Generation Workers

In July 2023, at Ishikari Bay New Port we began operating Rera As, which is a crew transfer vessel (CTV) for offshore wind power operations and the first such vessel to be owned and operated by the NYK Group. The vessel has been certified by Nippon Kaiji Kyokai (ClassNK) as complying with the International Safety Management Code, which confirms that the vessel has established a ship safety management system meeting international standards. The vessel is also the first domestic CTV to receive a Wind Farm Support Vessel notation, which recognizes that the vessel is fully equipped with the facilities and manuals necessary for the safe transportation of workers. Also, in January 2024 NYK placed its first order with a Japanese shipyard for a CTV. By expanding our CTV fleet, we aim to play an active role in promoting sustainable energy.



The CTV Rera As

With a view to meeting future growth in the domestic demand associated with offshore wind power, in April 2024 we opened the Akita School of Wind and Sea—a training center jointly operated with Nippon Marine Enterprises, Ltd.—in the training building of Akita Prefectural Oga Kaiyo Senior High School. We will provide basic safety training for offshore wind power generation workers and for crew members as well as simulator-based ship-handling training. Our aim is for approximately 1,000 personnel to complete this training each year. Moreover, we will arouse the interest of Akita Prefectural Oga Kaiyo Senior High School students and students of nearby elementary and junior high schools by opening the training center to them. In this way, we will contribute to local development and foster future maritime human resources.



The ship-handling simulator used for training at the Akita School of Wind and Sea © Nozomi Takahashi (ozimoncamera)

Ambitious Initiatives Trialing New Fuels and Developing Next-Generation Fuel Ships

AX · BX X DX · EX

Commencement of the Operations of an Ammonia-Fueled Tugboat

In August 2024, the ammonia-fueled tugboat Sakigake began operations in the Port of Yokohama. Sakigake was an LNG-fueled tugboat, which we converted to create the world's first commercial ammonia-fueled vessel. Based on co-creation with IHI Power Systems Co., Ltd., and ClassNK, in 2021 NYK began developing the ammonia-fueled tugboat as one of the Green Innovation Fund Projects of the New Energy and Industrial Technology Development Organization (NEDO). In developing the tugboat, we have steadily accumulated technologies and achieved world firsts. These include obtaining an approval in principle from ClassNK for an ammonia-fueled vessel, approval from ClassNK for an ammonia-fueled marine engine developed by IHI Power Systems, and realization of truck-to-ship ammonia bunkering. We will make use of the knowledge acquired through the social implementation of the tugboat in the construction of the ammonia-fueled ammonia gas carrier scheduled for completion in 2026. Through this initiative, we will promote ammonia-fueled vessels.



Sakigake, an ammonia-fueled tugboat which is converted from LNG-fueled tugboat

Ambitious Initiatives for the Development and Social Implementation of Autonomous Ships

AX · BX X DX

Toward Social Implementation in the Second Stage of a Fully Autonomous Ship Project

NYK and NYK Group companies Japan Marine Science Inc., MTI Co., Ltd., and Kinkai Yusen Kaisha Ltd. are participating as members of the DFFAS+ (Designing the Future of Fully Autonomous Ships Plus) consortium in MEGURI 2040 Fully Autonomous Ship Project promoted by the Nippon Foundation. In the first stage, a demonstration trial of the operation of a fully autonomous ship between Tokyo Bay and Ise Bay was completed. The aim of the second stage is to achieve full-fledged practical implementation of the technologies developed for fully autonomous ships. With this in mind, the consortium will conduct a demonstration trial of ship-land operations utilizing four different types of coastal ships and fleet operation centers in two locations. The consortium aims to establish commercial operations utilizing the developed technologies. In addition, initiatives will be undertaken to move forward with the technology-related aspects of the project, such as establishing international standards for fully autonomous ship technologies and obtaining certification for the systems developed (including cooperation in the examination of certification schemes). Also, the project will help to establish a basis for social implementation by contributing to the formulation of laws, regulations, and rules.



A fleet operation center, which supports the remote operation of fully autonomous ships © The Nippon Foundation

Ambitious Initiative for a Liquefied CO<sub>2</sub> Maritime Transportation and Storage Business

AX · BX X EX

Commencement of a Joint Study on Optimization of a CO<sub>2</sub> Liquefaction and Storage Process

Since establishing Knutsen NYK Carbon Carriers AS (KNCC) as a joint venture with the Knutsen Group\*<sup>1</sup> in 2022, we have been developing a liquefied CO<sub>2</sub> carrier with the aim of participating in the carbon capture, utilization, and storage value chain. There are three methods of liquefied CO<sub>2</sub> transportation: low pressure, medium pressure, and elevated pressure. Including technology jointly developed with Mitsubishi Shipbuilding Co. Ltd., the NYK Group has acquired approval in principle for all three methods. Among these methods, the elevated pressure method\*<sup>2</sup> is a proprietary technology of KNCC. In March 2024, JX Nippon Oil & Gas Exploration Corporation, NYK, and KNCC signed a memorandum of understanding on a joint study aimed at optimizing a carbon dioxide liquefaction and storage process that uses Cargo Tank Cylinders, a proprietary technology of KNCC. We will conduct optimization verification by the latter half of 2024 and work toward social implementation of a carbon capture, utilization, and storage value chain that encompasses CO<sub>2</sub> capture from factories through to liquefaction and temporary storage.



KNCC's demonstration facility (Cargo Tank Cylinders test rig)

\*1 The Knutsen Group is a Norway-based comprehensive shipping corporate group. NYK and the Knutsen Group are jointly engaged in the operations of NYK Offshore Tankers AS, one of the world's leading shuttle tanker operators.  
\*2 The details of the design of the elevated pressure method have acquired a General Approval for Ship Application from Norwegian classification society DNV.

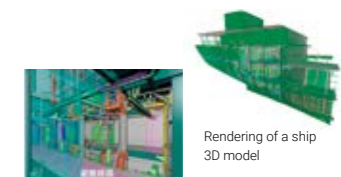
Utilization of 3D Models to Improve the Efficiency of Ship Design

AX · BX X DX

Digital Transformation of Ship Life Cycles

In March 2024, NYK received 3D model-based approval from ClassNK for the basic design of a new multipurpose container ship. A collaborative system was utilized so that ClassNK was able to use its proprietary system to check 3D model data created by NYK. This new method streamlines design and approval by eliminating an information-sharing process that utilizes 2D drawings.

In May 2024, NYK, MTI, and Smert Design Co., Ltd. launched a trial for the utilization of 3D models in the initial design phase of ship construction. The trial is part of the Ship Design Streamlining Project by Front Loading,\*<sup>1</sup> a joint research project being advanced by the three companies. The trial aims to model 3D design information of existing similar ships and sister ships. With the aim of facilitating smooth decision-making, designs applicable to the new ship will be examined and discussed on the same system by the shipyard and the shipping company. The use of the same system makes communication easier and reduces the work and processes required for ship designs, which are becoming increasingly complex. Further, we plan to utilize 3D designs to establish a 3D model-based ship management tool that we refer to as "digital finished plans."\*<sup>2</sup> The conversion of finished plans from 2D drawings into 3D drawings promises not only to allow rapid understanding of drawings but also to promote the use of ship maintenance and management data for the digitally enabled management of ships.



Rendering of a ship's interior 3D model

\*1 This method gives priority to important decisions and design elements in the early stages of the design process. It reduces design changes in the later stages and increases quality and productivity.  
\*2 This is a generic term for documents that are prepared based on the design drawings delivered upon completion of a ship. They include specifications, calculation sheets, equipment lists, and operation manuals.

Ambitious Initiative for the Development of the Space Business

AX · BX X DX

Creation of New Value through a Ship-Enabled Space Business and the Utilization of Satellite Data

We are currently engaged in research and co-creation with various partners to commercialize an idea for launch-site ships that launch rockets from the ocean, which was proposed by employees training at NYK Digital Academy.\* By providing unprecedented services that integrate operations at sea and in space, we aim to participate in and contribute to the development of the space industry based on our competence as a comprehensive logistics company. In 2022, a joint proposal submitted by NYK and Mitsubishi Heavy Industries, Ltd. was accepted by the Innovative Future Space Transportation Program of the Japan Aerospace Exploration Agency (JAXA), and the three parties began joint research on the theme of marine retrieval of a reusable rocket. In April 2023, we established the Advanced Tech and Space Business Development Team. Our goal is to establish operations for the launch of rockets and the marine retrieval of reusable rockets. Ultimately, we want to create a new business that combines data from launched satellites with data from ship operations.

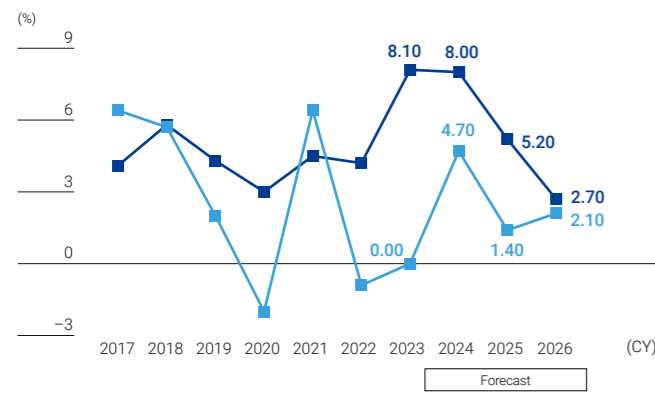


\*An NYK Group training program that develops business leaders who have insight into real customer needs and take the initiative to innovate and reform

# Environment Analysis

## Liner Trade

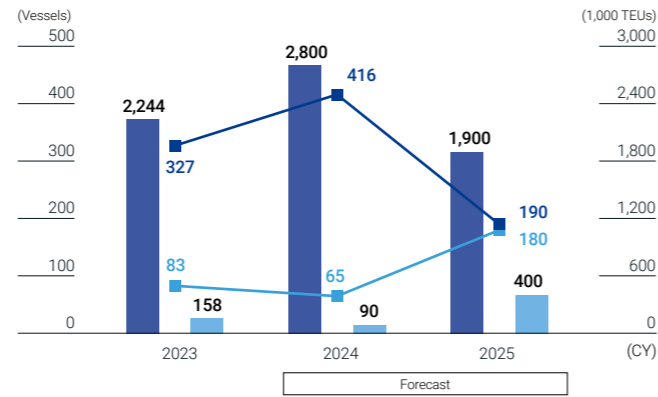
Increase in Seaborne Trade and Fleet Tonnage (YoY%)



Legend:   
■ Percentage change in container cargo movements   
■ Percentage change in container shipping capacity

Source: Created by NYK based on Drewry Maritime Research Container Forecaster Quarter 2, June 2024

Vessel Completion and Scrapping (As of July 31, 2024)



Legend:   
■ Completed vessels   
■ Scrapped vessels   
■ Completed volume (Right axis)   
■ Scrapped volume (Left axis)

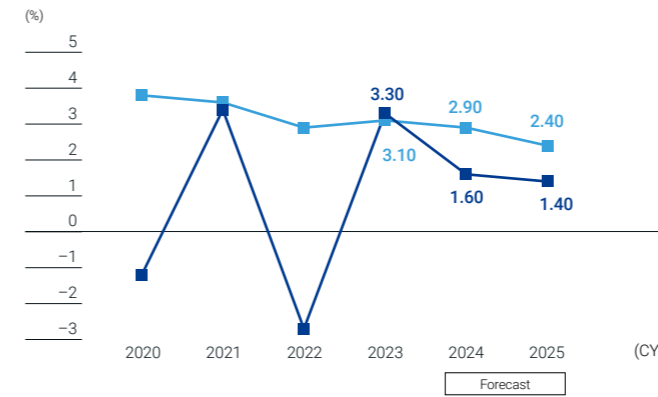
Source: Created by Research Group of NYK based on MDS, S&P Global, Drewry, and Clarksons Research

### Environment Analysis: Liner Trade Business

- Although the rapid increase in container cargo movements in 2021 slowed in 2022, they are expected rise again in 2024, mainly from Asia to North America, due to such factors as the Red Sea crisis.
- Completion of the record-breaking number of new container vessels ordered since 2020 is expected to begin in earnest from 2023, with completions reaching a peak in 2024.
- The scrapping of container vessels stagnated due to a shortage of container shipping capacity, which resulted from a steep increase in cargo volume, which was caused by stay-at-home demand during the COVID-19 pandemic, and from the detour of vessels to the Cape of Good Hope in response to the Red Sea crisis.
- Although the outlook for the Red Sea crisis is uncertain, the aging of fleets and the replacement of vessels with next-generation fuel ships could lead to more scrapping from 2025 onward.

## Dry Bulk

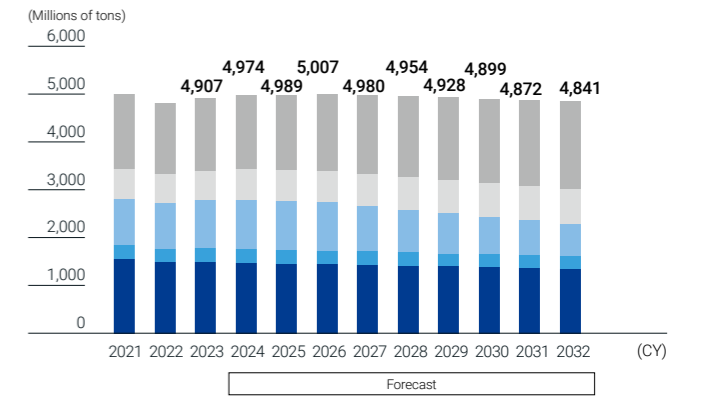
Increase in Seaborne Trade and Fleet Tonnage



Legend:   
■ Percentage change in fleet tonnage   
■ Percentage change in cargo movements

Source: Created by NYK based on Clarksons Dry Bulk Trade Outlook (April 2024)

Volume and Forecast of Dry Bulk Seaborne Trade



Legend:   
■ Iron ore   
■ Coking coal   
■ Steam coal   
■ Grain   
■ Minor bulk cargo

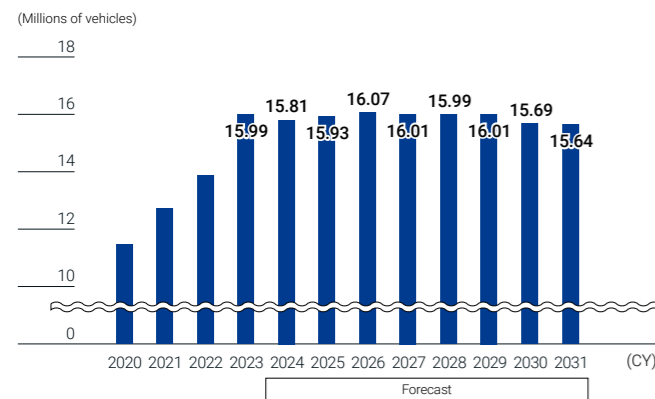
Source: Up until 2022 prepared by NYK and from 2023 onward estimated by NYK

### Environment Analysis: Dry Bulk Business

- For respective ship sizes, the pressure from excess capacity supply is limited. Although there are ships on order from 2024 onward, the ratio of ships on order is lower than that of other ship types.
- Business conditions are expected to remain favorable. While orders for new-ship construction are at a low level, in fiscal 2025 and beyond some number of aging vessels may exit from the market. Also, firm demand for iron ore and coking coal is expected.

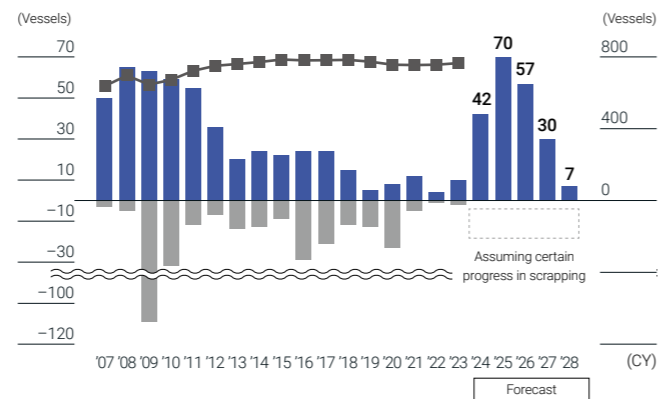
## Automotive Business

Worldwide Car Transportation Volume (Excluding Intra-Region Transportation)



Source: Created by NYK (including estimation)

Pure Car and Truck Carriers: Completed, Scrapped, and Operating Ships



Legend:   
■ Completed   
■ Scrapped   
■ Vessels in operation (right axis)

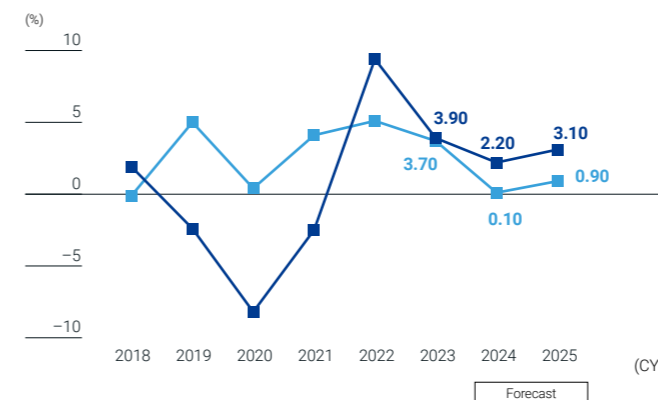
Source: Data by Clarksons (Graph is created by NYK)   
 Note: Includes vessels with capacities of less than 3,000 vehicles (69 ships as of April 2024)

### Environment Analysis: Automotive Business

- Shipping capacity supply-demand is tight due to strong transportation demand and a limited supply of shipping capacity.
- Many newbuild vessels are scheduled for completion in and after 2025. The shortage of shipping capacity could temporarily ease.
- Shipping capacity demand trends require careful monitoring due to logistical constraints—such as changes in shipping routes as a result of geopolitical risks and ships idling in various regions—as well as the impact of slow-steaming operations and other environmental measures.

## Energy

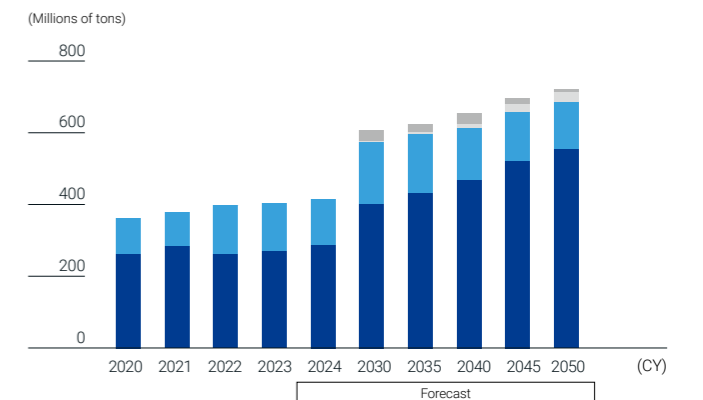
Increase in Seaborne Oil Trade and Fleet Tonnage



Legend:   
■ Percentage change in oil tanker fleet tonnage   
■ Percentage change in crude oil seaborne trade

Source: Created by NYK referring to Clarksons Oil & Tanker Trades Outlook (May 2024)

LNG Transactions and Demand Forecast



Legend:   
■ Asia and Oceania   
■ Europe   
■ North, Central, and South America   
■ Africa   
■ Others

Source: Created by NYK with reference to S&P Global Commodity Insights "LNG Supply Demand Gap (January 2024)"

### Environment Analysis: Energy Business

- With respect to supply and demand related to crude oil trade, growth in demand is expected to surpass growth in supply over the short to medium term.
- Demand for LNG is expected to remain strong, especially in Asia.
- Population growth and economic development are likely to lead to moderate growth in demand for energy transportation, centered on emerging countries. However, careful monitoring of structural changes is required. These include the progress of decarbonization and the increase in renewable energy.

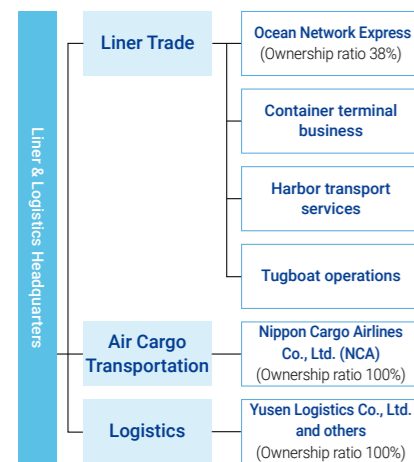
# LINER & LOGISTICS HEADQUARTERS

As part of social infrastructure and the core business of the Group, we aim to deliver sustainable growth through earnings power.

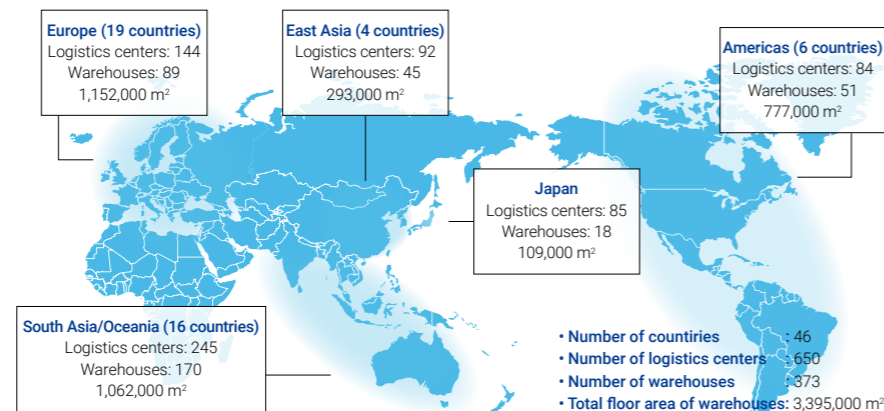
**Takuji Banno**  
 Managing Executive Officer  
 Chief Executive of Liner & Logistics Headquarters



## Business Model of Liner & Logistics Business



## Logistics Center Locations (As of March 31, 2024)



## Strategic Points and KPIs of ONE 2030 Medium-Term Management Plan

<b>Operational Efficiency</b> Continue to improve our major competency	×	<b>Economy of Scale</b> Secure economy of scale	×	<b>Sustainability</b> Decarbonization / Financial stability / Sustainable organization	=	<b>Sustainable Competitiveness</b> Sustainable Growth
<b>Major KPIs</b>						
<b>Long-term ROE target</b> 10% or more	<b>Decarbonization targets</b> • Emissions intensity: Scope 1 (by 2030) 70% reduction • Absolute emissions, Scope 1+2+3 (by 2050) Net-zero GHG emissions	<b>Fleet scale</b> (Fiscal 2030 target) 3 million TEU level <b>Net profit</b> (Fiscal 2030 target) US\$ 3.8 billion	<b>Investment</b> (Fiscal 2024–Fiscal 2030) US\$ 25 billion to US\$35 billion <b>Dividend payout ratio</b> (Fiscal 2024–Fiscal 2026) Over 30% Special dividend at US\$3 billion level			

## Summary of Fiscal 2023

The Liner & Logistics Headquarters oversees business that includes container ships, logistics, air cargo, tugboats, and harbor operations, with global operations mainly handling general consumer goods. In fiscal 2023, earnings grew along with rising freight market rates from the third quarter onward. The rise reflected a tighter demand and supply balance due to the impact of longer lead times as shipping was obliged to detour around the Suez Canal following unrest in the Middle East and due to an increase in the number of waiting days at the Panama Canal due to tightened transit restrictions. In North America, the economy remained resilient, and we were able to capture the demand for North America-bound cargo particularly from China.

## Business Policy for Fiscal 2024

### Liner Trade

There is no change to the outlook for continued growth in transportation demand for general consumer goods as the global population increases. However, a surge in delivery of new vessels has continued since the autumn of 2023, and is expected to continue in fiscal 2024, with the possibility of an oversupply of fleet capacity. This trend is expected to continue until 2025–2026; however, the demand–supply balance is expected to be gradually restored as ship scrapping that had been held up during the COVID-19 pandemic accelerates in response to tightening of environmental regulations. Since the number of container shipping companies has decreased, and discipline within the alliance has become easier to maintain, we no longer operate with the expectation of making a loss. In addition, each container shipping company is stepping up initiatives for efficient operations, such as slow-steaming. Given this environment, Ocean Network Express Pte. Ltd. (ONE) aims to increase its fleet scale to the 3 million TEU (twenty-foot equivalent unit) level, backed by world-class earnings capability, establish global services to

steadily capture demand, and accelerate investments for decarbonization in order to achieve more sustainable growth in line with its medium-term management plan, ONE 2030, announced in March 2024. ONE will prioritize growth investments while conducting agile shareholder returns based on the status of internal reserves each year and working to optimize the balance sheet.

### Logistics

Under its medium-term management plan, the NYK Group has positioned its logistics business as a growth engine that makes up the core of the Group's global network. From the perspective of building a business portfolio based on the shipping business with its rapid market fluctuations, the logistics business is expected to provide a stable contribution in terms of profitability. Yusen Logistics Co., Ltd. (YLK) operates the air and ocean freight forwarding businesses, as well as contract logistics, supply chain solutions, and customs clearance and land transportation operations. The company is firmly capturing demand centered on North America, where business conditions are favorable, and is steadily accumulating profits. With freight rates returning to previous levels after spiking during the COVID-19 pandemic, the forwarding business is unlikely to see the profit levels of the past few years, but we will continue to steadily generate profits in fiscal 2024, mainly in the contract logistics business, where stable earnings are expected to continue. The business of delivering items to people will continue, and we must firmly capture demand and grow the logistics business. Under the Group's medium-term management plan, we have set a special investment quota of ¥140.0 billion by fiscal 2026, which also includes the logistics business. There are limits to how much further growth can be achieved organically, and we will therefore continue to make necessary investments in fiscal 2024.

### Coastal Shipping and Harbor Transport

In addition to ONE and YLK, the division includes companies that support the

Group's domestic logistics services, such as Kinkai Yusen Kaisha Ltd., which handles coastal shipping operations using roll-on roll-off ships, as well as companies involved in freight importing and exporting services in Japan, such as on-site services around ports and inland transportation of shipping containers. In this business area, the problem of labor shortages will undoubtedly emerge going forward, and GHG emissions reduction activities are also expected to advance rapidly. The Company will utilize the knowledge it has cultivated in the oceangoing business to help find solutions to these social issues and contribute to the sustainable growth of the logistics business in Japan.



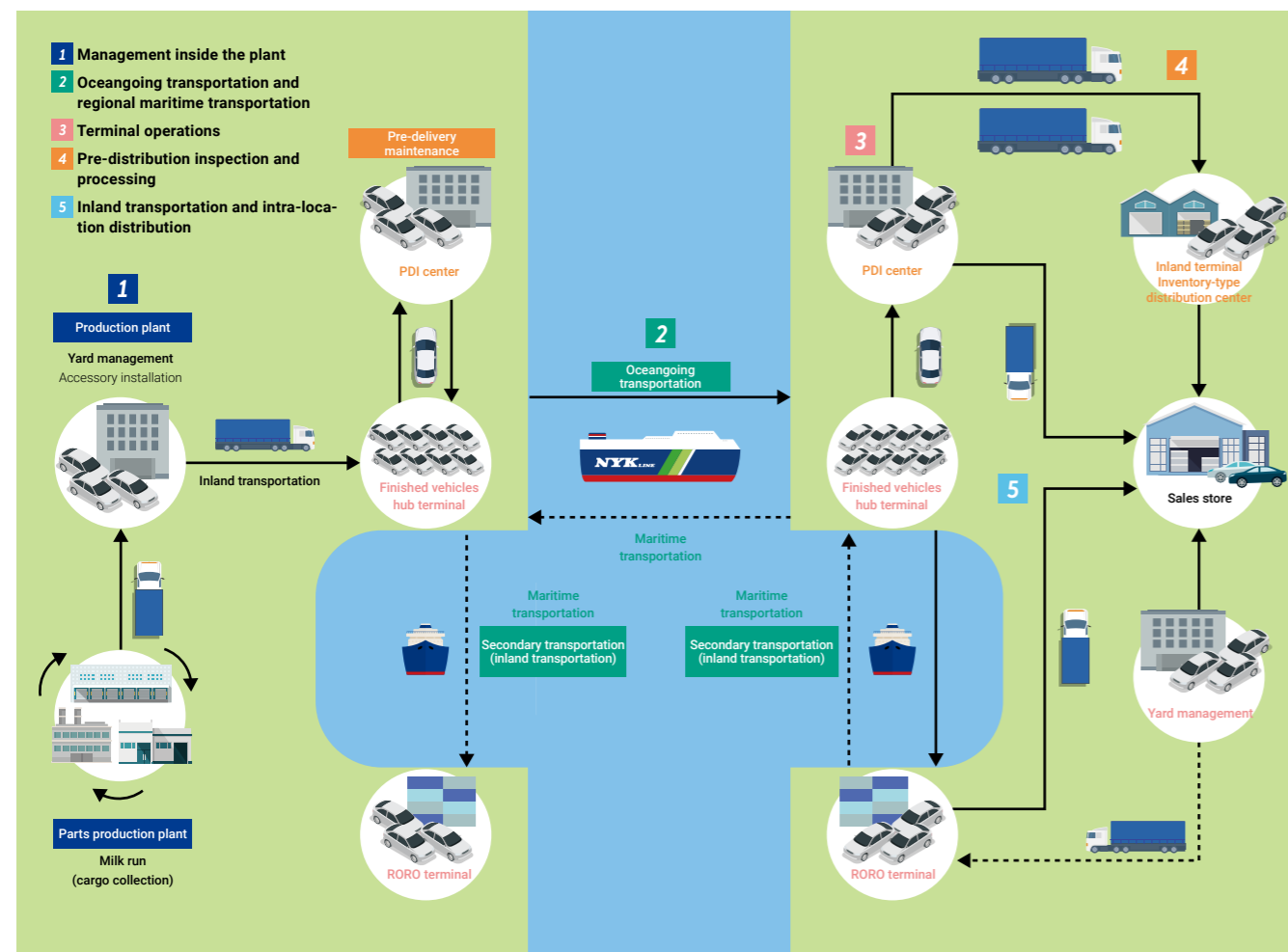
# AUTOMOTIVE BUSINESS DIVISION

We will stay one step ahead of the rapidly changing automotive industry in our environmental response and provide a wide range of solutions.

**Yutaka Ikeda**  
 Managing Executive Officer  
 Chief Executive of Automotive Business Division



## Automotive Business Value Chain



## Summary of Fiscal 2023

The Automotive Business Division is committed to its mission of delivering vehicles safely and reliably to every corner of the world and is engaged in key management goals focused on four S.

### Key Management Goals for the Automotive Business: four S

- Solution** Quality Improvements in three areas: ships, ship operations, and material handling
1. Thorough deployment and sharing of information
  2. Promotion of DX and safe navigation in ship operations
  3. Continuation of activities to increase frontline capabilities
  4. Establishment of fire prevention measures

- Sustainability** Implementation of GHG emissions reduction measures
1. Increased deployment of LNG-fueled vessels
  2. Promotion of slow-steaming operations
  3. Use of biofuels and energy-saving devices fitted to ships
  4. Environmental impact reduction measures at business sites

- Synergy** Strengthening of customer services and development sales
1. Maintenance of a highly profitable cargo collection system
  2. Business expansion through collaboration between car carriers and automotive logistics
  3. Proactive reorganization of customer portfolio
  4. Fleet maintenance to support flexible services

- Strength** Increase in organizational capabilities
1. Continuation of workplace environment improvement activities
  2. Companywide human resource development in Japan and overseas
  3. Continuation of activities to maintain and improve governance
  4. Continuation of divisional internal improvement activities

situation in the Middle East in the second half of fiscal 2023. Nevertheless, the division managed to steadily accumulate the number of vehicles transported by implementing smooth and seamless ship allocation plans and operations. This was achieved through coordination with customers based on numerous, direct discussions within headquarters and close communication with the front lines. Furthermore, in fiscal 2023, all eight initial orders for LNG-fueled pure car and truck carriers finally appeared in our fleet. We have acquired medium- to long-term transport contracts ranging from five to ten years for all eight vessels. As public awareness of Scope 3 GHG emissions increases, there is a palpable sense of growing interest among customers for medium- to long-term contracts for vessels powered by next-generation fuels. In the automobile logistics business, earnings grew rapidly after the completion of several years of efforts to liquidate unprofitable businesses and reallocate resources into areas where growth is expected. The automotive industry is currently undergoing significant changes regarding technology, distribution networks, and sales methods. Amid these changes, the division is currently examining new investment in the automobile logistics business, since it is extremely important to the further expansion of its business activities. Going forward, we will make full use of our new terminals and logistics centers to expand our business opportunities.

## Business Policy for Fiscal 2024

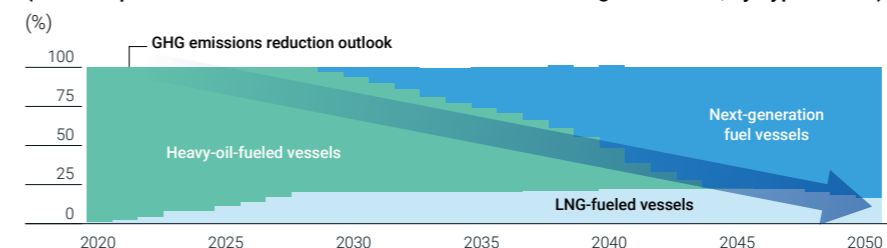
We will continue working on our four management goals focused on four S. Among

these, we plan to focus especially on three key issues. The first is building structures and systems to enable continuous provision of high-quality services in the event of a supply chain disruption amid increasing global geopolitical risks. In fiscal 2023, the division leveraged its organizational capability to achieve outstanding results in ship allocation planning and business planning. However, we are constantly aware of the potential for a situation beyond what we have envisaged, and we will further enhance our organizational capabilities and proposal capabilities to ensure that we can assist customers even in the event of an emergency.

The second issue is sales activities that look ahead to the elimination of supply shortages. In fiscal 2024, we expect fleet capacity shortages to continue; however, new ships ordered by each company are expected to be completed around 2025, which could rapidly reverse the supply shortage. We expect to be able to balance this to a degree by promoting scrapping and slow-steaming, and the division will minimize the impact of market fluctuations by working to acquire medium- to long-term contracts centered on vessels powered by next-generation fuels. Furthermore, in the past few years, demand for electric vehicles has risen around the world, and although the temporary overheating of demand has subsided, cargo volumes are expected to increase over the long term. We will therefore continue our initiatives for safety and quality in their transportation.

The third issue is our environmental response. In addition to using biofuels and next-generation fuels, the Group will make every effort to reach its GHG emissions reduction goals through a range of initiatives, including the removal of materials adhered to hulls and the use of high-efficiency energy-saving devices. We also expect a significant effect from slow-steaming. Thus, despite difficulties due to restrictions on logistics such as a detour around the Suez Canal and transit restrictions on the Panama Canal, we will encourage even greater coordination between sales representatives and voyage operators to enhance our ability to produce creative solutions.

## Car Carrier Portfolio (Road Map for 2050 under the Current Medium-Term Management Plan, by Type of Fuel)



# DRY BULK DIVISION

Leading business transformation with a more sophisticated business model.

Hiroaki Nishiyama

Managing Executive Officer, Chief Executive of Dry Bulk Division



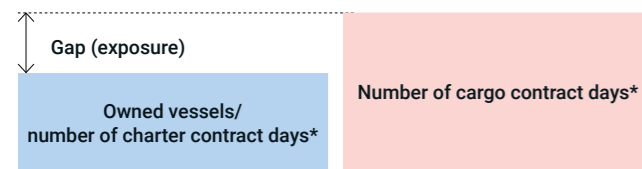
## Dry Bulk Division Main Overseas Offices (As of March 31, 2024)



## Four Strategies of Dry Bulk Division

- 1 Enhancing the sophistication of exposure management and market forecasting
- 2 Evolving into a non-asset dry bulk business
- 3 Strengthening the specialized carrier business to build up long-term stable profits
- 4 Participating in supply chains beyond the maritime shipping industry

## Management of Market Fluctuation Risk

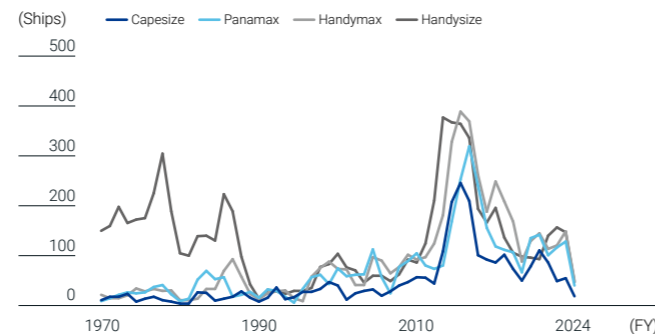


\* Market-linked contracts (index-linked charter contracts) are not included in the number of contract days.

- ① For a specific period in the future, income and expenditure fluctuate in line with maritime transport market conditions for the number of days in the gap.
- ② We calculate and track the number of exposure days for each future period and monitor to ensure it is within an appropriate range.
- ③ If necessary, we adjust the number of exposure days to an appropriate value using measures such as FFA\* transactions.

\* Freight forward agreement. A derivative transaction targeting the charter rate index for a specific period in the future

## Numbers of Completed Vessels by Type



Source: Clarkson Research Services

## Summary of Fiscal 2023

With a fleet of approximately 450 vessels ranging from coastal ships of 10,000 tons or less to 300,000 ton-class oceangoing ships, the Dry Bulk Division caters to demand of approximately 5 billion tons per year, providing cargo transportation services that support people's lives around the world. We define the Group's Mission, "Bringing value to life," as delivering value even to the customers of our customers, and we are working to realize this ideal through the Four Strategies of Dry Bulk Division and our ESG strategy. To provide value to many customers operating their businesses in regions around the world, the division is working together to promote the abovementioned strategies under the concept of "on the same page."

In fiscal 2023, dry bulk freight market rates fell below initial expectations for a time, but the success of the above strategies enabled us to steadily accumulate earnings. To manage our exposure, we have created and refined management methods to sharpen a picture of our exposure and established a system for judging whether or not to make important strategic business investments based on a highly precise assessment of risk. In the dry bulk business, we aggressively promoted medium-term charter contracts of two years or longer to stably secure ships with high environmental performance, which are increasingly in demand. In the past, the market price risk of long-term charters and owned ships weighed on the division's earnings at times. However, by changing our policy to one of concluding new contracts for a certain number of ships, we consider that we have achieved satisfactory results from the perspective of contributing to achieving GHG emissions reduction targets and increasing profitability through fuel efficiency. Regarding accumulating long-term stable profits, in an environment where customers' business structures are changing, thus requiring us to provide flexible transportation services, by placing advance orders for LNG-fueled vessels and proposing the added value of minimizing environmental impact to customers, we have managed to conclude

stable long-term contracts. Moreover, regarding participating in supply chains beyond the maritime shipping industry, we increased our opportunities for concrete dialogue with many customers by having a deeper discussion about how to approach the transportation of reduced iron, which is expected to increase in the future, from a perspective of decarbonization. All of these measures have room for further development, and we intend to continue them.



SG Ocean, an LNG-fueled capesize bulk carrier (with an LNG dual-fuel engine)

## Business Policy for Fiscal 2024

In fiscal 2024, we intend to continue promoting our strategies from fiscal 2023.

The number of new ships on order for dry bulkers in the global market is currently at quite a low level. Iron ore demand in China is strongly rooted, and demand for coking coal used for steelmaking is also expected to remain solid. Under these conditions, the freight market rate is expected to remain favorable to a certain degree, albeit with some fluctuation. However, it would be better to avoid making an easy assumption that demand will continue in the future, and we will apply fixed-point observations even more rigorously.

Regarding our ESG strategy, we are working on diverse measures on various front lines, such as sales, operations, and charters, to contribute to society by realizing ESG on all front lines. First, as a division that operates a large fleet of vessels, ensuring safety during voyages is our duty to crew members, port workers and material handlers around the world, and ultimately to all of society. We will therefore operate our business giving highest priority to safe operations and making this a major premise. Next, we are focusing on initiatives to reduce GHG emissions. There are a

number of obstacles to be overcome to reach our emissions reduction target, but we are determined to resolve social issues and achieve a competitive advantage in the future by steadily building on our results.

In addition, the division was first among the Company's divisions to proactively increase productivity. For example, with regard to DX, we have mainly followed the autonomous ideas of people engaged on the ground to streamline existing operations, introduce measures to create resources that generate new value, and promote the development of digital tools. Over the past two years, we have realized nearly 120 tools and ideas, and by continuing to pursue productivity gains throughout the division, we will create value to be delivered to customers.

Finally, we are committed to providing occasions for sharing the NYK Group's Mission and strategies and enabling free and open communication in order to promote a host of measures, such as those mentioned above, throughout the entire division. For example, we hold town hall meetings inside the division and provide time for management-level personnel to have intensive discussions. Through measures such as these, we are making a focused effort to create an environment that will enable each individual working in the division to take ownership and achieve their full potential.



# ENERGY DIVISION

We will accelerate our advanced initiatives, looking ahead to the energy value chain of the future.



Hironobu Watanabe

Managing Executive Officer, Chief Executive of Energy Division

## Energy Value Chain Portfolio Strategy

Exploration	Prospecting and drilling	Development	Production and storage	Regional transportation	Purification/ Liquefaction/Storage	Transportation	Customer
Seismic/ Research vessel	Drillship	LNG upstream business		Shuttle tanker	Floating LNG (FLNG) unit	LNG carriers	LNG floating storage and regasification unit (FSRU)/LNG floating storage unit (FSU)
			Floating production, storage, and offloading (FPSO) unit Floating storage and offloading (FSO) unit		LNG mid-stream business	Tankers (crude oil/LPG/chemicals) Coal carriers	LNG bunkering
		Ammonia and hydrogen production			Ammonia floating storage	Ammonia-fueled ammonia gas carrier Coastal ammonia transportation Liquefied CO <sub>2</sub> transportation MCH* transportation	Ammonia floating storage Ammonia bunkering Tidal and sea current power generation

■ Introduced 
 ■ Under consideration 
 ■ Introduced (green business) 
 ■ Under consideration (green business)

\* MCH: Methylcyclohexane

## Summary of Fiscal 2023

Under the Group's medium-term management plan, the Energy Division is positioned to execute a business strategy with two pillars: advancing existing businesses and developing new growth businesses. With regard to existing businesses, we steadily accumulated contracts and projects mainly in the LNG business and offshore business. Furthermore, with favorable conditions for LPG and chemical product carriers, the division achieved solid results overall.

In new businesses, we commenced operation of a crew transfer vessel (CTV) in Ishikari Bay as a business related to offshore wind power. In the next-generation fuel-related business, we launched full-scale initiatives to commercialize ammonia fuel, following on from our steadily developing LNG-fueled vessel and LNG-fuel supply businesses. In August 2024, we delivered the world's first ammonia-fueled vessel, a commercial ammonia-fueled tugboat. In line with the concept of "co-creation" set out in the medium-term management plan, we are working on initiatives in a consortium with external organizations such as engine manufacturers, shipbuilders, and classification societies.



LPG carrier also able to carry ammonia "Gas Garnet" (Vessel equipped with LPG dual-fuel engine)



Newly built CTV, "Rera As"

## Business Policy for Fiscal 2024

Natural gas pipelines from Russia to Europe have been disrupted by Russia's invasion of Ukraine, driving changes in the previous pattern of trade, such as an increase in shipments of LNG from the United States to Europe. In addition, uncertainty around the demand and supply of energy has increased due to the impacts of a detour around the Suez Canal due to turbulence in the Middle East and transit restrictions in the Panama Canal due to water shortages.

Under these conditions, the importance of stable energy supplies centered on fossil fuels remains completely unchanged, while in the long-term scenario, decarbonization and a transition to clean energy are also in progress and will require us to develop and

expand our initiatives even further to respond to this business environment.

In fiscal 2024, under our division target of "Bringing energy safely and more cleanly to all," we will continue to make safe transport our top priority, while aiming to support energy demand and promoting the transportation of existing conventional energy sources as well as carbon reduction and decarbonization. We will also aim to expand new zero-emission and renewable energy-related businesses. We will promote these initiatives while remaining closely attuned to our customers' needs. Specifically, in our existing businesses, in addition to LNG, which continues to see strong demand, we will position LPG and chemical products as key domains, responding reliably to transportation demand and continuing to accumulate stable revenues. At the same time, we will promote the decarbonization of transportation.

In new businesses, we will steadily conduct initiatives in the offshore wind power-related business in Japan while looking at initiatives overseas, including M&A. In the ammonia-related business, we will promote construction of ammonia-fueled ammonia gas carriers, with a plan to develop ammonia gas transportation into a

major business of the division following the coal transportation business. With the transport business at our core, we will look in the future to contribute to the construction of a value chain from upstream ammonia production to downstream supply. In the CO<sub>2</sub>-related business, we will leverage the Group's patents in CO<sub>2</sub> capture and storage technologies and proceed to commercialize them.

The Energy Division will continue to provide value across the entire energy value chain through the two pillars of its existing businesses and new businesses, aiming to implement ambidextrous management and expand business earnings.