



# Total Innovation

**Nippon Yusen Kabushiki Kaisha  
NYK Report 2020**

Financial, Social and Environmental Performance



Prologue

Focusing on the Next Generation

# Brand New Vision

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We are looking ahead to the next stage of our integrated logistics business strategy centered on maritime shipping.

Surveying the NYK Group reveals a multitude of insight, know-how, technological expertise, and comprehensive global networks developed through operations.

Can we harness these elements to create completely new value?

Can we realize the kind of value that is needed in the coming era?

Inspired by these questions, we have created new goals and approaches for achieving them.





## Our Goal

To play an essential role in society and industry as a

# Sustainable Solution Provider

In supporting society and industry for 135 years, we have done much more than simply “transport” cargo.

We have played an essential role in society because we have boldly taken on new challenges that no-one else has and achieved results.

Today, we are witnessing the dramatic dawning of a new era.

We believe that environmental, social, and governance (ESG) issues constitute the key theme for value creation going forward. Taking a completely new approach, we will continue to play an essential role in the world as a corporate group, winning the favor of society in the new era.



## Our Approach

We will make an amazing transformation through a concerted groupwide effort.

# NYK

# Total Innovation

Issues emerge when we take an ESG-centric management perspective. Solving issues requires more than technological development. Doing so also requires a full commitment to an amazing transformation through a powerful, far-reaching, concerted groupwide effort. Moving on from the past and changing our organization, human resources, approaches, and behavioral patterns—this is how we will become a Sustainable Solution Provider that plays an essential role in society. This is the NYK Group's Total Innovation Strategy.



## Contents

8	Message from the President
16	NYK Group ESG Story
<b>18</b>	<b>Our Approach</b>
18	ESG Management at the NYK Group
20	The NYK Group's Innovation for Solving Issues in Maritime Shipping
22	Innovation Roadmap
24	Next Innovation for Zero
26	A Group of Technical Experts for Creating New Value
28	Taking On the Challenge of Maritime Autonomous Ships through Open Collaboration
30	NYK × Green
32	NYK × Digital
34	Feature: Roundtable Discussion Considering New Possibilities and Innovation That Contribute to Solving Social Issues through Business
<b>38</b>	<b>Our Value</b>
38	The NYK Group Continues to Grow While Supporting the Overcoming of Challenges in Society and Industry Based on Its Basic Philosophy of "Bringing value to life."
40	Ultra-Long Perspective on History of Enhancing Corporate Value
42	Data on the NYK Group's Sustainability
44	Supporting the Challenges of Society and Industry with a Solid Track Record and Technology
46	Our Business Foundation Supporting the Challenges of Society and Industry
<b>48</b>	<b>Our Progress</b>
48	Message from the CFO
50	Efforts to Mitigate Climate Change
52	Medium-Term Management Plan Progress
56	Business Overview
56	Global Logistics
58	Bulk Shipping: Car Transportation Division
60	Bulk Shipping: Dry Bulk Division
62	Bulk Shipping: Energy Division
<b>64</b>	<b>Corporate Governance</b>
64	Directors, Audit and Supervisory Board Members, and Executive Officers
66	NYK Group Management System
68	Independent Outside Directors' Messages
70	Message from Chief Compliance Officer
73	Corporate Governance
76	10-year Summary
80	Environmental Data
82	Environmental Accounting, NYK Green Bonds
83	Human Resources Data
86	Corporate Data
87	External Evaluations

### Editorial Policy for NYK Report

The NYK Report 2020 is the eighth iteration of the NYK Group's integrated report, which first launched in 2013. Targeting a wide range of the NYK Group's stakeholders, the report is designed to present the Company's various initiatives to solve environmental, social, and governance (ESG) issues, as well as its management strategies, which are strongly oriented toward contributing to the sustainable growth of society and industry as well as of the NYK Group. In the *NYK Report 2020*, we highlight once again the Group's raison d'être while telling our growth story with a focus on the next generation, asking ourselves what value we can provide through our businesses to the societies and industries of the future.

**Website**

**General business activities** <https://www.nyk.com/english/>

<b>Financial information</b> Website section: Investor Relations <a href="https://www.nyk.com/english/ir/">https://www.nyk.com/english/ir/</a>	<b>Nonfinancial information</b> Website section: CSR <a href="https://www.nyk.com/english/csr/">https://www.nyk.com/english/csr/</a>
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**NYK Report (Booklet, PDF (full version), and Financial Results), etc.**

Fiscal Statements	Fact Book I, II	Corporate Governance Code related documents
Business report		

### Cautionary Statement with Regard to Forward-Looking Statements

Some statements made in this report are forward-looking statements that are based on information currently available and involve certain risks and uncertainties that could cause actual results to differ materially from those projected. Please be advised against undue reliance on such forward-looking statements. NYK undertakes no obligation to publish revised forward-looking statements to reflect events, circumstances, or unanticipated events after the present juncture.

### Scope of Report

- **Reporting period:** Fiscal 2019 (April 2019 to March 2020)  
In some cases, information from April 2020 and beyond is included.
- **Coverage:** The activities of NYK and its consolidated group companies in Japan and overseas are included.  
The scope of coverage is indicated when there are differences in the major companies involved in specific business operations.
- **Date of issue:** October 2020 (previous: August 2019; next: August 2021)

### Target Reader

This report has been prepared for all parties who have an interest in the activities of the NYK Group, including customers, shareholders, investors, business partners, employees, local communities, NPOs/NGOs, students, certification bodies, researchers, and those responsible for CSR/ESG at other companies.

### Guidelines for Disclosure about the Environment, Social, and Governance factors

- International Integrated Reporting Framework Version 1.0 by the International Integrated Reporting Council (IIRC)
- GRI Standards, global standards for sustainability reporting produced by the Global Reporting Initiative (GRI)
- ISO 26000
- *Environmental Reporting Guidelines 2018*, by the Ministry of the Environment, Japan
- *Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation* by the Ministry of Economy, Trade and Industry
- Japan Business Federation  
Society 5.0 –Co-creating the Future

[Globe icon](#) [CSR > NYK Report > GRI STANDARDS / ISO26000 INDEX](#)



Ship name:	Selene Leader
Type:	Pure car and truck carrier
Gross tonnage:	59,499 tons
Length overall:	199.99 meters
Total loading car capacity: 6,400 units	

# Adoption of Environmental, Social, and Governance (ESG) Initiatives as the NYK Group's Next Growth Strategy While Moving to a New Stage through Total Innovation

## Keep the Logistics Lifeline Open

There is no doubt that many people take the maritime shipping and logistics industries for granted in much the same way as water and air. However, as infections by COVID-19 spread rapidly throughout the world, some regions are struggling with ongoing increases in cases even now. This situation has brought home to many the great social responsibility borne by the maritime shipping and logistics industries, which usually operate unnoticed, expressed by the NYK Group's mission statement, "Bringing value to life." Take air cargo services for example. With passenger services reduced or suspended, the transport of medical supplies, such as pharmaceuticals, masks, and surgical gowns, has now fallen to Group company Nippon Cargo Airlines Co., Ltd. (NCA). As cities go into lockdown one after another around the world, human movement has been severely restricted. Personnel needed to operate transportation services have

been assigned, and we transport freight to its destinations, despite the risk of infection. I am sure you will have seen many news reports of shortages of masks and medical supplies, mainly in Japan. Without the efforts of NCA, Japan may well be in an even worse situation. The same goes for container ships that transport living essentials, dry bulkers that convey foods such as soy and wheat, and tankers that deliver energy resources. The NYK Group operates over 750 vessels worldwide, staffed by nearly 20,000 crew members, which continue to carry the cargoes essential for society. It is our duty to keep the logistics lifelines open, upon which society depends, while making people's daily lives safer and more secure. In light of this, I would like to once again encourage all employees of the NYK Group to take pride in their work and carry out this great mission and responsibility faithfully.

## Hikawa Maru Evoking a Sense of a "Safety-" and "Innovation-Oriented" History

In writing this president's message, I visited Hikawa Maru, which is moored at Yamashita Park in Yokohama. I have made the trip many times before. Built in 1930, Hikawa Maru was operated as a passenger ship on NYK's Seattle service, carrying not only cargoes but also transporting many people as well. It even served as a hospital ship during World War II. Hikawa Maru was designed to withstand harsh winds and waves, drawing lessons from the sinking of the Titanic in the Northern Atlantic. It was designed with 10 watertight

compartments that could be sealed with waterproof sliding doors in the event of inundation. The vessel was state of the art, brimming with technologies that were considered innovative at the time. The extremely high level of safety is evident even to observers today. Looking at Hikawa Maru with its many innovative technologies designed to ensure absolute safety, I had a strong sense of the NYK Group's "Innovation-Oriented" corporate culture and its determination to be a leader of the times.



## Hitoshi Nagasawa

President, Representative Director,  
President and Chief Executive Officer

### Career at NYK

After joining the Company in 1980, Hitoshi Nagasawa became the general manager of LNG Group in 2004, a corporate officer in 2007, and a managing corporate officer in 2009. He has been in charge of the Energy Division since becoming a director in 2011 and has chaired a committee overseeing the strategies of bulk shipping since being appointed as an executive vice-president corporate officer in 2018. Mr. Nagasawa was involved in the Company's acquisition of upstream interests in the LNG business and development of the offshore business.

The NYK Group uses its diverse human resources drawn from many countries worldwide as a strength, bringing them together in an open corporate culture based on respect for people. Here, a process of repeated "chemical reactions" among people has sparked innovation that has enabled the Group to continue operating in the core maritime shipping and logistics industries. If we can continue to be consciously innovative as a group and parlay this into real action, then we should be able to survive for another 150 or 200 years. Conversely, I am keenly aware of the danger that, if we lose this

virtue, we might be eliminated from the market. Amid a rapidly changing society in an era of rising uncertainty that clouds the future, rather than merely toying with change, we must act as a united group and fully confront the many issues that appear before us while aiming to be a sustainable business through Total Innovation.

## Utilizing ESG Initiatives to Become the Preferred Choice of Customers

ESG is the foundation for the NYK Group's aspiration to become a sustainable business entity. The logistics industry, and not only ships, uses a large amount of fossil fuels, which certainly has an impact on the environment. This puts the industry at a disadvantage in terms of responding to climate change and preserving the environment, and we need to understand that the industry is under constant pressure to improve. I believe that, to carry out its social mission, the Group must not only keep the logistics lifeline open but also lead the way in responding to environmental issues. In my opinion, this will become one of our growth strategies going forward. Rather than simply falling into line with other companies and following the mainstream, I am convinced that our way forward is to become a front runner, driven by various innovations. It is with this in mind that we started the NYK Digital Academy, an in-house training program for skills development, in 2019, inspired by the importance of human resource development for sparking innovation for new value creation.

We have also integrated ESG perspectives into our management strategies. I am constantly communicating to the directors and executive officers involved in decision-making that I want them to include ESG perspectives in their judgments as well as the conventional financial perspectives when considering investments. We now have some actual cases of investments being made through comprehensive judgments emphasizing ESG perspectives that will produce a competitive advantage over the medium to long term in addition to financial viability. To give an example, there is a project for dry bulkers fueled by liquefied natural gas (LNG). The dry bulk business is under immense pressure from excess capacity supply, making it difficult to achieve high profits. There was some

disagreement within management over whether we should build the more expensive LNG-fueled ships, but we decided to make the investment after giving weight to the future potential of dry bulkers that are kinder to the earth's environment. We might have put off investment and watched global trends carefully; however, this led us to fall behind in the field of LNG-fueled dry bulkers, leaving us at a disadvantage in terms of preserving the environment. Building up a track record is also a very important factor in differentiating ourselves in the maritime shipping industry.

In sales activities, we emphasize that the Group should compete not only on price but also by confidently offering high-quality modes of transportation that are highly conscious of the environment and safety. For example, being able to transport a finished vehicle while reducing CO<sub>2</sub> emissions by 20%, compared with doing so via a conventionally fueled vessel, also seems like a tangible benefit to the customer.

When meeting with members of top management of other companies, I find that ESG comes up as a topic of interest extremely frequently. These days, our customers are also anxious to partner with companies taking a firm approach to ESG initiatives and the Sustainable Development Goals (SDGs). The NYK Group can become the preferred choice of many customers as a company that is taking serious, concrete action on social problems, by making use of innovative technologies and providing modes of transportation that are highly environmentally conscious. We plan to increasingly approach customers with the idea that partnering with the Group will enable them to engage in cutting-edge, sustainable business operations.



## Moving toward a Deep Understanding of ESG and Creating the NYK Group ESG Story

I believe that the true value of a company should be measured not by how long it has been in operation, but rather by how tirelessly it has strived to continue to fulfill its social responsibility across eras. Companies that present a sincere stance naturally attract empathy and support. I feel that the ESG issues in which people around the world are engaging need to be at the foundation of all of our growth strategies going forward. Moreover, ESG is by no means some kind of window-dressing; rather, it is an essential factor for ensuring the NYK Group's sustainability—a growth strategy and a differentiation strategy. This must be accepted by all Group employees. In April 2020, we established the Framework for promoting ESG management, under which I will personally head the Group's internal and external efforts to place ESG at the center of management. We are also focused on creating the NYK Group ESG Story, which presents its ESG initiatives. This initiative is intended to share the direction that we should be heading in, as well as to enable the entire Group to engage with a common awareness (see page 17 for details).

It is also important to disclose information inside and outside the Group to show how serious our ongoing efforts are. In addition to quantitatively measuring our progress, we need to provide a careful explanation of our specific route forward. Setting quantitative targets should enable us to further align the vectors of each business site. Currently, the Group is disclosing various qualitative and quantitative ESG data, such as management's environmental target of reducing CO<sub>2</sub> emissions by 30% in fiscal 2030 and by 50% in fiscal 2050, compared with fiscal 2015 levels. Beyond properly disclosing our progress on these targets each year, the 2021 edition of the NYK Group ESG Story will describe the measures for raising our level of achievement and the emergent issues presented in the 2020 edition. We will continue to present our annual improvement measures via subsequent editions of our ESG Story. In this way, I want to enable our stakeholders to evaluate the Group's serious and continued efforts.

## Heading toward a Sustainable Business Structure for Growth Strategies Based on ESG Initiatives

Under our medium-term management plan, we have presented four key initiatives, including ESG, in line with the theme of "Digitalization and Green." This framework has not changed significantly; however, from now on, rather than placing ESG on the same level as other key initiatives, we will treat it as a compass that shows management's long-term direction while drawing up medium-term business strategies looking at a three- to five-year period to increase the NYK Group's corporate value. Right now, we are undertaking structural reforms of the dry bulk business, which has a substantial downside risk to earnings from high-cost charters. Once these reforms reach a certain stage, we will be able to formulate a long-term strategy for the next leap forward. ESG initiatives will be the starting point when we begin devising this strategy. Among the themes of "Digitalization and Green" in the medium-term management plan, I see Digitalization as an important tool for accelerating our initiatives on the environment. For example, we are currently working with four laboratories, including Monohakobi Technology Institute Co., Ltd., on a project using big data and AI to analyze optimal operations and weather phenomena. If we can use the fruits of this project to improve fuel consumption, we will be able to reduce our CO<sub>2</sub> emissions. Digitalization is also applicable for promoting workstyle reforms and responding to risks that have emerged in the past few years around information management and logistics system security. Furthermore, we expect to be able to create new value by combining the various data that we

receive from our existing businesses with ESG concepts. On the other hand, under the Green aspect of the medium-term management plan, we are working to commercialize green businesses based on the theme of renewable energy. This involves organically linking our sales and engineering divisions and making use of the global network we have developed over many years to collaborate with leading partners in Japan and overseas. Among these collaborations, we have made steady progress in offshore wind power, with proactive support from the Japanese government following the enactment of a new law to promote offshore wind power in 2019. With regard to fuels for shipping, we will also step up our research and development efforts in such areas as hydrogen and ammonia. Decarbonization cannot be achieved by the NYK Group alone. However, by cooperating with various stakeholders to make progress toward the same target, we can contribute to achieving it as early as possible.

To report on our progress regarding the medium-term management plan, against our fiscal 2022 target for consolidated recurring profit of between ¥70.0 billion and ¥100.0 billion, in fiscal 2019 we recorded recurring profit of ¥44.4 billion after factoring in a recurring loss of ¥15.5 billion in the Air Cargo Transportation segment. Excluding this loss, recurring profit was almost ¥60.0 billion, within reach of our aforementioned fiscal 2022 target. However, the impact of COVID-19 is significant, and amid major uncertainties, we are

projecting recurring profit of ¥20.0 billion in fiscal 2020. For the last 10 years, our shareholders' equity has been negatively impacted, so our first priority is to establish a sustainable capital structure. If we can generate recurring profit of between ¥70.0 billion to ¥100.0

billion, then our net profit will be around the ¥50.0 billion level. After paying stable dividends in accordance with profits, our duty at this time is to quickly return shareholders' equity to an appropriate level and then look to draw up larger strategies.

## Transforming Highly Volatile Businesses into Businesses Realizing Stable Earnings

The NYK Group has steadily built up business with stable freight rates based on medium- to long-term contracts. On the other hand, we are working on structural reforms for businesses operating in highly volatile market conditions, such as the dry bulk business, the container shipping business, and the air cargo transportation business, and these efforts are gradually beginning to produce results. In the container shipping business, we established Ocean Network Express Pte. Ltd. (ONE) with other Japanese shipping companies, and saw it begin operations in fiscal 2018. While losses for ONE were unavoidable in fiscal 2018, its first year of operations, the company suddenly turned a profit. Given the significant impact of the spread of COVID-19 on global supply chains, ONE's earnings forecast for fiscal 2020 is still undetermined. However, the alliance with other shipping companies that gave rise to ONE has stabilized the freight rate market more than previously, while achieving a profitable structure in just one year, a truly remarkable feat.

In the dry bulk business, where a mismatch between freight on the income side and vessel charter periods on the expense side is driving market volatility risk, we are working to increase market

resilience by eliminating this mismatch through a process of encouraging early returns of high-cost chartered vessels. Dry bulk is said to account for around half of global seaborne trade, which is estimated at 12.0 billion tons annually. Most of these dry bulk cargoes are under short-term contracts. Some are of the opinion that we should deal only in long-term contracts. However, since long-term contracts make up only a part of dry bulk cargoes, I do not share this view. By allocating short-term chartered vessels to short-term contracts, we can avoid market risk while utilizing our strengths, such as our operational expertise and ability to combine cargoes that reduce our percentage of ballast voyages. These measures will allow us to compete on short-term contracts, and we are already seeing results. We are only part way along in shifting to this track, but once this reform is complete, we can expect the dry bulk business to begin generating stable profits in the same way as our car carrier and energy businesses. The direction of our initiatives is correct, and we are already making progress. It is for this reason that I believe we must move now to generate powerful momentum on the theme of ESG as our next step.



## Further Enhancement of Corporate Governance

Since Japan declared a state of emergency over COVID-19 in April, I have worked with all chief executive officers—almost every day, including weekends and national holidays—to ascertain and share the status of our business sites. When emergencies occur, it is important at the minimum to have a system for gathering information quickly, and I was able to confirm that the NYK Group has established a strong corporate governance system.

As a first step in improving governance, we will promote improvements in the decision-making process. The Board of Directors makes decisions on matters above a certain level. The forum for decision-making has been changed from the previous Committee of Corporate Officers, which had 28 corporate officers, to a newly established Management Meeting of nine members comprising the president, chairman, and chief executives. Thanks to the reduced



membership of the Management Meeting and the sharing of all internal information among its members, discussions are extremely active and intense, while the transparency of the decision-making process feels markedly improved. The title of corporate officer has been changed to executive officer, as the officers who are not on the Management Meeting are intended to focus on business execution (see page 66 for details).

Management Meeting members are always expected to express their agreement or disagreement with management proposals, including their reasons, and I make the final decision in my role as president. All statements are recorded in the minutes. The accumulation of these minutes should serve as a textbook for future management teams. By continuing with this system, we should further improve the decision-making process. In addition, it is naturally transmitted to our employees that the management team is thoroughly discussing matters, which has a good influence on employees' attitude and approach to work. We will completely eliminate opacity and show everyone inside and outside the Company a more transparent, more serious decision-making process. I believe this is very important for increasing the NYK Group's corporate value in

both times of emergency and ordinary times.

Furthermore, from a perspective of supervising business execution, the opinions and guidance of our outside directors will become more important. At Board of Directors' meetings, outside directors require the execution side to give explanations on how they envisage and manage risks, and how they will respond in the event that they materialize. For example, with regard to climate change risk, we received a question about how we are analyzing this risk and the future business model of the Energy Division amid uncertainty over the handling of fossil fuels. We have had many very candid opinions stating that our recognition of the issue is poor, and that we ought to obtain opinions from third-party experts. It is true to say that we overlooked several points, and we have therefore completely taken on board the opinions we received. Moreover, in light of past incidents of inadequate business operations, we have received guidance to the effect that compliance ought to be managed in not only sales divisions but also across the Company by corporate divisions. Such guidance has made a significant contribution to improving the NYK Group's governance.

from home unexpectedly took root due to the spread of COVID-19, the workstyles of mainly our onshore personnel have changed considerably. Now, we will address the issues of how to incorporate this new workstyle as a Company system and how we can foster a corporate culture of active communication.

Assuming that vaccines and treatments will be developed at some stage in the near term, we are envisaging a scenario in which we gradually return to relative normality between winter 2020 and 2021. However, considering the possibility of second and third waves of infection, we cannot be naively optimistic. We may be obliged to revise the figures of both our earnings forecast and our medium-term management plan financial targets due to the impact of COVID-19. Nevertheless, the direction of the strategies presented in the medium-term management plan and the direction that I personally wish to take are absolutely aligned, and we will proceed based on our current policies. Just to reiterate, ESG is an issue that we should

address as a member of society, as well as an approach that we should thoroughly promote as a growth strategy to be explored by the NYK Group. Even when emergencies occur, you can count on the Group's latent strengths, as it continues to transport the cargoes that society needs, and on its Total Innovation inspired by ESG. We would like to ask for your continued support going forward.



**Hitoshi Nagasawa**  
President, Representative Director,  
President and Chief Executive Officer

## The NYK Group's Latent Strengths and Total Innovation

Prior to my appointment as president in 2019, I was in charge of the Energy Division for many years. During that time, I created an environment where my team worked cheerfully and energetically while sticking to results in order to contribute to the NYK Group's earnings. As president, I still stick to results, but one thing that has fundamentally changed is how I now think constantly about all of the Group's stakeholders, including shareholders, instead of concentrating on just its employees. As I have become more conscious of a wider range of stakeholders, my sense of responsibility has also grown considerably.

As part of this, I would like all employees to see the Group as a great stage upon which to express themselves to the best of their ability. If we can make such a group, it will surely be full of energy, happiness, and enthusiasm, giving rise to a sense of achievement. The entire Group will certainly head in a good direction. The NYK Group has a strongly established culture in which we naturally support each other in times of trouble, without trying to hold one

another back. I would like us to treasure this wonderful culture that has been left to us by our predecessors. The sight of Group employees working cheerfully and with motivation is the best moment in my day. At the same time, we are also making revisions to the personnel system, as I suspect that we are not drawing out the full potential of the Group's employees. I would like the management team and our employees to take on their challenges seriously at all times. If we discuss matters seriously as we work, I believe we will get the right results every time. Following the spread of COVID-19, we introduced a telecommuting system and, even though we are faced with a situation that makes relieving crew members difficult, our fleet of over 750 vessels continued their voyages without causing any great turmoil. Cargo airlines also operated at full capacity, and even when emergencies occurred, we took safety countermeasures, managed employee health, and showed ourselves once again to be an amazing corporate group with a strong chain of command, including at Group companies around the world. On the other hand, as working





# NYK Group ESG Story

In the fall of 2020, NYK marks its 135th founding anniversary. We asked ourselves what we need to do to continue playing an essential role in society and industry going forward. We are certain that the answer to this question lies somewhere within the NYK Group. We have been working to formulate the “NYK Group ESG Story,” envisaging our aspirations for the future and holding numerous groupwide discussions to present our route forward.

We will place ESG at the heart of management, working to solve social issues from a long-term perspective. This is the NYK Group’s growth strategy.

## ☑ The NYK Group’s Framework for Promoting ESG Management

Under its medium-term management plan announced in March 2018, the NYK Group has integrated ESG issues into its management strategies. In April 2020, we established a framework for promoting ESG management, headed by the president. The purpose of the framework is to identify the ESG issues related to our business that the Group will address, set specific targets, and promote further engagement. By integrating solutions into cross-divisional issues, such as social and environmental concerns, and businesses from a long-term perspective, we will formulate the Group’s growth strategies.

### ▶ Formulating the NYK Group ESG Story

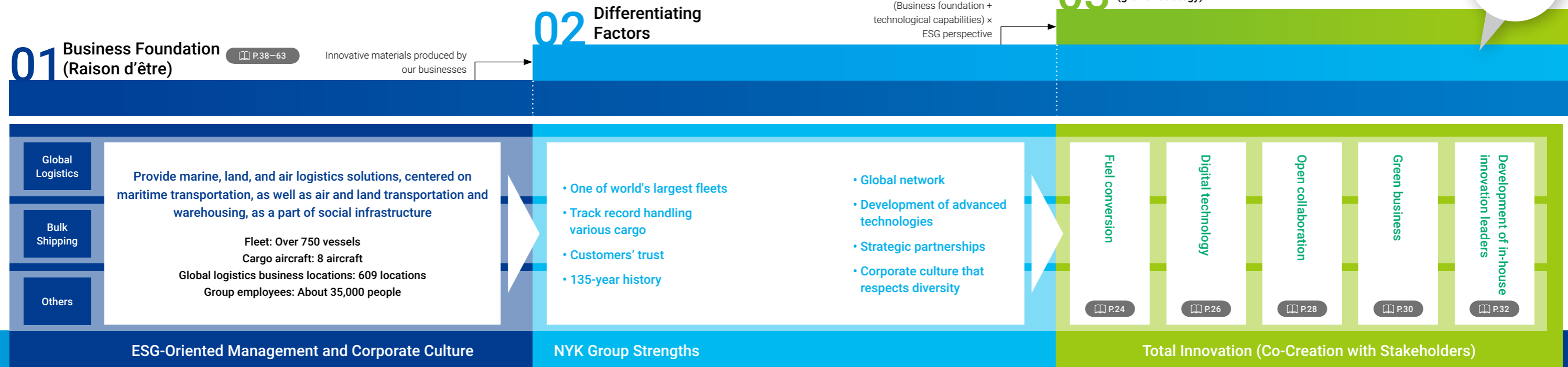
Within fiscal 2020, we plan to announce the NYK Group ESG Story, which will summarize the ESG issues that will be addressed by the Group. Specific targets and key performance indicators will be set for the issues presented in this story, and we will report on our progress each year. The story will also be revised each year in an ongoing review to ensure that our activities reflect the needs of society and the times.



# ESG Management at the NYK Group

From its founding to this day, the NYK Group has underpinned society and industry by satisfying the needs of society and its customers for transporting goods.

At our roots is an innovation-oriented corporate culture that is constantly pursuing new value creation. This corporate culture has been lovingly passed down from our predecessors. In its aim to be a sustainable solution provider essential to society and industry, the Group is keen to increase corporate value through Total Innovation while co-creating with its various stakeholders and focusing on ESG initiatives in its management.

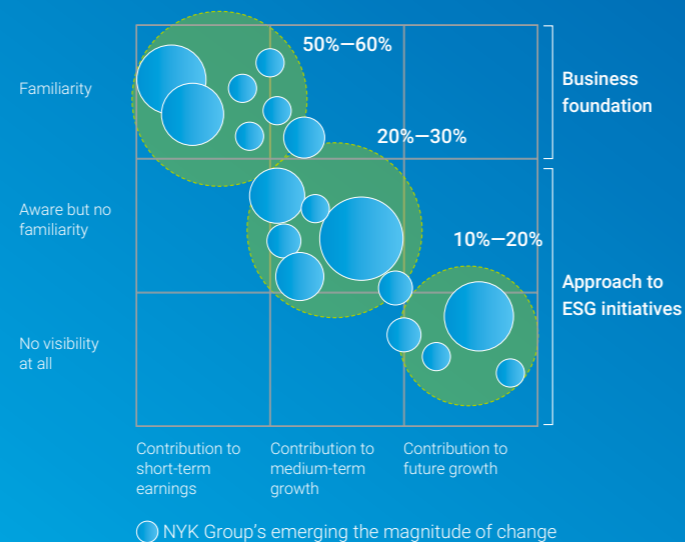


## ✓ The NYK Group's Long-Term Approach to Management

### Initiatives

#### 1 | Challenge Growth Fields

Through existing business activities, the NYK Group supports the development of society and industry. At the same time, we are plotting a growth strategy for the future by identifying social and environmental issues that could become business opportunities for the Group. The NYK Group's approach to ESG management is all about investing business resources in growth fields. In an era of volatility, uncertainty, complexity, and ambiguity (VUCA), we are promoting ESG management to remain a sustainable Corporate Group.



### Technology

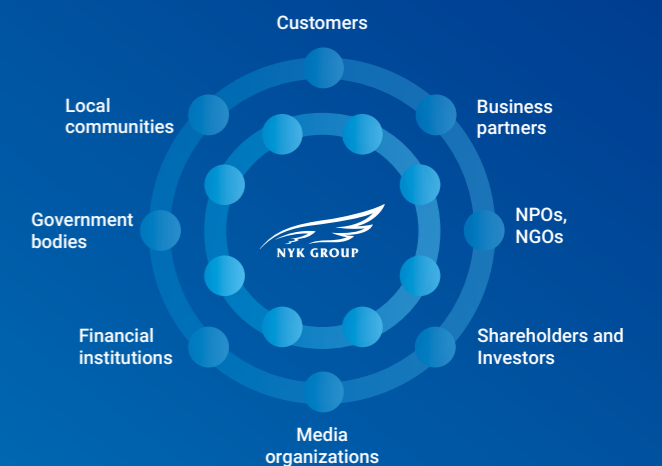
#### 2 | Compete with "Technological Capabilities × Co-Creation"

The technological capabilities that the NYK Group has accumulated over the 135 years since its founding have been cultivated through collaborative creation with stakeholders, such as the understanding of customers, the cooperation of business partners, and the support of local communities.

To take on challenges in new fields, we need to increase the potential of our technological capabilities by combining them with co-creation. Co-creation is the driving force for promoting innovation.

We will continue to promote ESG management, which the Group is aiming for, and work to create new value through co-creation with world-class partners.

#### Co-Creation with Various Stakeholders

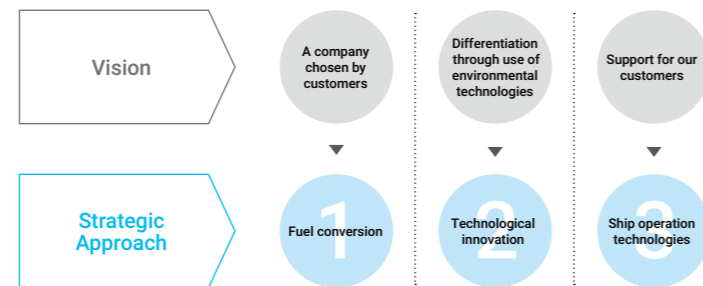


# The NYK Group's Innovation for Solving Issues in Maritime Shipping

In ESG management, the NYK Group views the growing concern about environmental issues as an opportunity and aims for a world with blue oceans by spurring innovation in maritime shipping, using the Group's technological capabilities as a wellspring for differentiation.

## ✓ Differentiation Strategy in ESG Management

We are advancing a differentiation strategy in ESG management, based on the "Digitalization and Green" theme in our medium-term management plan. From a "Green" standpoint, we are taking on the challenge of achieving zero emissions in ship operations, by converting ship fuels and participating in the hydrogen and ammonia business. In order to increase the safety of ship operations, we intend to make advances in the "Digitalization" of technologies for ship operations and manned autonomous ships. From the standpoint of addressing climate change, an issue that affects all industries, the Group is working to reduce environmental burden in line with its medium- and long-term environmental targets, which have been verified by Science Based Targets (SBT). By providing customers with environmentally friendly modes of transportation, we can help our customers solve their own environmental issues. To this end, the Group is marshalling all its technological capabilities.



Group Medium- to Long-Term Environmental Targets (GHG Reduction Targets)

	2016	2017	2018	2019	2030 (Target)	2050 (Target)
Ships	-0.5%	-1.6%	-2.4%	-2.8%	-30%	-50%
Aircraft						

\* CO<sub>2</sub> emissions per ton-kilometer (base year fiscal 2015)

CSR (Corporate Social Responsibility) > Environment > Environmental Regulation

## ✓ Environmental Regulations for International Shipping

The International Maritime Organization (IMO) is leading discussions to strengthen regulations of international shipping in order to address various environmental problems.

Category	Regulations	International conventions and regulations	Sea area	2014	2015	2016	2017	2018	2019	2020	2021	2025
GHG	EEDI (Energy Efficiency Design Index)	Appendix VI to the MARPOL Convention	Open sea areas	Ph 0 0%	Ph 1 10%					Ph 2 20%		Ph 3 1bn
	SEEMP (Ship Energy Efficiency Management Plan)	Appendix VI to the MARPOL Convention	Open sea areas	Mandatory								
	DCS (Data Collection System)	Appendix VI to the MARPOL Convention	Open sea areas						Adoption			
SOx · PM	SOx	Appendix VI to the MARPOL Convention	ECA	1.0%	0.1%							
			Open sea areas	3.5%					0.5%			
NOx	NOx	Appendix VI to the MARPOL Convention	ECA	Tier II regulations		Tier III regulations (U.S. and Canada coastlines)						(Adding North Sea and Baltic Sea)
			Open sea areas	Tier II regulations								
Biodiversity	Ballast water	Ballast Water Management Convention	Open sea areas				Effective					
	Fouling (Organisms that attach to vessels)	—	—	Formulation of guidelines in 2011 for managing attached organisms (unenforced)								
Demolition	Ship recycling	Ship Recycling Convention (still pending)	Open sea areas	Adopted in 2009 and shall be applicable to all vessels upon becoming effective								

GHG : Greenhouse gases (GHGs) including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>), etc.  
 EEDI : The Energy Efficiency Design Index is a formula for measuring a ship's CO<sub>2</sub> emissions per ton-mile, based on the design of the ship being built, incorporating various parameters.  
 SEEMP : The Ship Energy Efficiency Management Plan (SEEMP) is an operational plan for improving energy efficiency on a voyage-specific basis.  
 DCS : Shipping firms use a data collection system (DCS) to report to the IMO on fuel consumption, distance traveled, and time spent at sea for all vessels of 5,000 gross tonnage or above operating internationally.  
 SOx regulations : Regulations for the percentage of sulfur content in fuel oil, in order to reduce SOx volume in exhaust gas  
 NOx regulations : Staged regulations for NOx volume in engine exhaust gas  
 Tier I regulations: Regulations for emissions based on rated speed of engines for ships constructed between 2000 and 2010.  
 Tier II regulations: Mandates 20% reductions from Tier I regulations for ships constructed after 2011. Tier III regulations: The start year for these regulations differs by covered sea area and they come into effect in two stages, the first in 2016 and the second in 2021.  
 Ballast Convention: After it came into effect in September 2017, this convention mandated that ballast water-processing equipment should be installed on ships by a certain deadline, depending on the type of ship, to prevent the spread of living organisms and some pathogenic bacteria from one region to another.  
 Ship recycling : This convention aims to control labor accidents and environmental pollution when ships are dismantled (scrapped). It is effective 24 months after conditions are met.

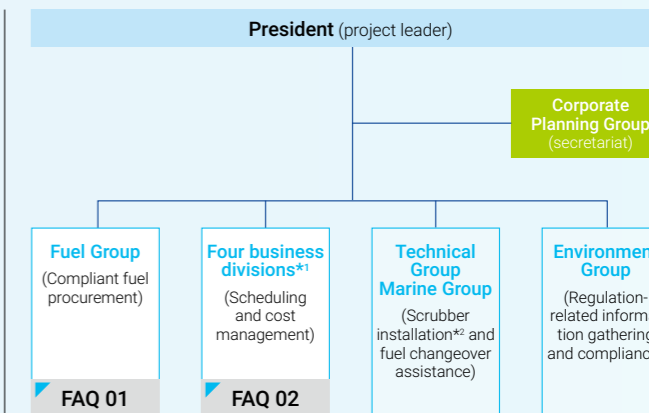
## Column

# Organizational Power of the NYK Group to Comply with Regulations

To prevent atmospheric pollution, the IMO instituted a regulation on January 1, 2020 (The 2020 Global Sulphur Cap), in order to limit the concentration of sulfur oxide (SOx) in vessel fuel oil to 0.5%. The NYK Group commenced the IMO 2020 project in April 2019 to take on the challenge of complying with this regulation as a top management priority.

## ✓ Outline of the IMO 2020 Project

To bring existing vessels into compliance with SOx regulations, it is necessary to either switch to low-sulfur content fuel oil (compliant fuels) or install exhaust gas cleaning systems (scrubbers) on ships. Each measure comes with its own problems that must be solved. Compliant fuel impacts ship machinery in the context of supply systems to ships and fuel changes. Installing scrubbers, meanwhile, requires a shipyard to do the construction work and finding a place where the equipment can be installed on the ship. The Group started a cross-divisional internal promotion project with the president as the project leader, gathered information from numerous related departments within NYK, made adjustments with involved parties, and finished bringing the Group's entire fleet up to compliance with SOx global cap regulations, allowing full compliance with the regulation from January 1, 2020.



\*1 Four business divisions: Global Logistics, Car Transportation, Dry Bulk, and Energy  
 \*2 No. of vessels with scrubbers: Decision already made to install scrubbers on about 80 vessels in operation as of March 31, 2020

## FAQ: How did NYK achieve its mission? 01

### Fuel Group Initiatives

The Fuel Group is responsible for procuring ship fuel. For this project, the Group made its best effort to gather information about compliant fuels and secured enough in advance. For the start of the regulation instituted by the IMO in January 2020, bunker suppliers proceeded with preparations such as adjusting the content of the new fuel. On the other hand, one of the major concerns was whether the supply of the compliant fuels would be adequate to meet world demand. NYK planned to start bunkering with compliant fuels from around October 2019 and commenced negotiations with bunker suppliers in April 2019 in order to procure enough thereof. To make sure we could procure and switch over to compliant fuels, we held individual briefings with staff in the ship operating divisions many times, sharing our switch-over plans to systematically change over to compliant fuels by the end of 2019, thereby enabling us to execute these plans.

We also built a system to purchase the optimal amount of compliant fuels and visualized the demand forecast. Furthermore, we realized cost savings by working with the ship operations divisions.

## FAQ: How did NYK achieve its mission? 02

### Dry Bulk Division Initiatives

The fuel consumption of dry bulkers varies depending on the type of vessel and routes taken. In order to ensure a smooth switch to compliant fuels before the end of 2019, a system for visualizing the remaining oil inside fuel tanks used by other divisions was deployed on the dry bulker fleet. The amount of remaining fuel was verified on each vessel and, if the amount was higher than anticipated, the division head and all relevant employees shared information and sent out alert emails. Twice a week, each vessel that had triggered an alert email was analyzed carefully, and the person in charge of ship operations coordinated with relevant departments to reverify conditions.

To smoothly switch over to compliant fuels, IBIS TWO Plus, an internal organization that engages in activities to conserve fuel, was designated the secretariat, and it held study sessions for all persons in charge of ship operations to learn about the switch to compliant fuels and related contracts. Around 100 people participated per study session, spreading awareness across the entire Group.



# Innovation Roadmap

## —Promoting Safe Operations and Decarbonization—

Achieving zero emissions in oceangoing shipping will require enormous effort to overcome thorny issues. Our duty to ensure safe operations also means protecting the ecosystems in the ocean, a precious resource. The NYK Group has created a Vessel Technology and Innovation Road Map, identified issues to tackle from a long-term perspective, and is making steady progress on the development of technologies for the future.

### ☑ Vessel Technology / Innovation Road Map (abridged version, updated August 2020)

● Digitalization ● Hardware innovations



\* Full version available in NYK Report 2018

P.24-25

#### ▶ 01: Advanced predictive maintenance

### Establishment of the Remote Diagnostic Center

The NYK Group monitors the operations of approximately 200 ships equipped with SIMS. Since engine plant anomaly detection system and data quality management systems have been well developed, the Remote Diagnostic Center (RDC) was established at NYK Fil Maritime E-Training, Inc. in the Philippines as an organization of digital shipmanagement in order to monitor NYK fleet intensively and effectively. The RDC's mission is to maintain and provide reliable and high-quality logistics by preventing serious accidents and reducing CO<sub>2</sub> emissions, thereby contributing to ESG management at the Group and its customers (see page 29 for details).

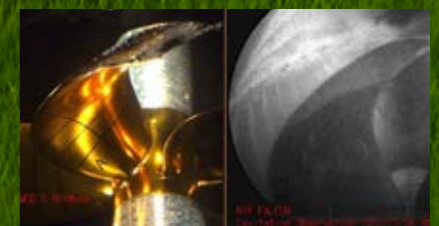


Remote Diagnostic Center

#### ▶ 02: Ship design using full-scale simulation

### Designing with Full-scale Simulations Using Data from Cutting-Edge Sensors

NYK, together with MTI Co., Ltd. and Furuno Electric Co., Ltd., has developed sensors to measure the flow of water around ship in operation. The collected data is shared with Japan Marine United Corporation for analysis and utilization. Using the simulations reflecting actual ship, we have designed a more efficient propeller that reduces CO<sub>2</sub> emissions by about 2%. Plans call for performing the same measurements on a large crude oil tanker built in 2020, and then deploying the technology to other types of vessels. We will utilize this full-scale simulation technology to designing hull forms as lower resistance toward 2050.



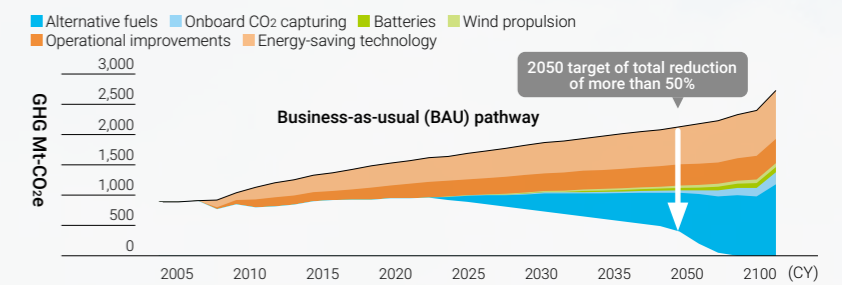
Propeller (model and actual ship)

### ▶ Reductions in GHG Emissions in International Shipping

The International Maritime Organization (IMO) has come up with a scenario for achieving zero GHG emissions from international shipping during this century. The IMO expects that the 2030 target will be achieved mainly by operational and technical energy efficiency measures, and beyond 2030, the introduction of zero-carbon fuels will be main options to reduce GHG emissions.

Source: MTI Co., Ltd. based on data from the Japan Ship Technology Research Association

### Pathway toward Zero Emission



# Next Innovation for Zero

## —A Further Step toward Decarbonization—

Decarbonization is an issue faced by every industry. In response, while promoting a shift to low-carbon and decarbonization with regard to modes of transportation, the NYK Group has commenced efforts to create a value chain for the carbon-free society of the future.

**LNG Fuel** Promotion of LNG-Fueled Vessels

**Delivery of Japan's First LNG Bunkering Vessel**

Joint venture company Central LNG Shipping Japan Corporation (CLS) established by NYK, Kawasaki Kisen Kaisha Ltd., JERA Co., Inc., and Toyota Tsusho Corporation concluded a ship-building contract with Kawasaki Heavy Industries Ltd., which is building an LNG bunkering vessel. The vessel will be delivered around the fall of 2020 and will be the first of its kind in Japan. To prepare for the start of an LNG fuel supply/sales business for vessels in Japan's Chubu region, the four companies also established CLS and Central LNG Marine Fuel Japan Corporation (CLMF) in May 2018. CLS will own and provide ship management services for the LNG bunkering vessel currently under construction, while CLMF will be responsible for the LNG fuel supply/sales business.



**Building of Japan's First LNG-Fueled Pure Car and Truck Carrier**

NYK placed an order for one of the world's largest pure car and truck carriers fueled by LNG, the construction of which started in September 2019. It is the first large-scale LNG-fueled vessel to be built in Japan, with its completion scheduled for around fall 2020.

The vessel will be equipped with large LNG fuel tanks. To minimize a reduction in vehicle loading capacity due to accommodating the tanks, principal particulars have been optimized, such as the breadth of the vessel, and designs for maximizing vehicle loading space have been implemented to enable transportation of approximately 7,000 vehicles (standard vehicle equivalent). In addition, in terms of environmental performance, the vessel will be about 40% more energy efficient than conventional vessels in terms of reducing CO<sub>2</sub> emissions per unit of transport, far exceeding the International Maritime Organization's Energy Efficiency Design Index Phase 3 requirements, entailing a 30% improvement in energy efficiency, which will become effective in 2025. The vessel is additionally expected to reduce sulfur oxide emissions by approximately 99% and nitrogen oxide emissions by roughly 86% compared with conventional heavy oil-fired engines.

**Hydrogen and Ammonia** Establishment of a Value Chain for Decarbonization

**The World's First Global Hydrogen Transportation Demonstration Project Starts in Earnest**

NYK, Chiyoda Corporation, Mitsubishi Corporation, and Mitsui & Co., Ltd. have established the Advanced Hydrogen Energy Chain Association for Technology Development (AHEAD), which has started the world's first global hydrogen transportation demonstration project in earnest. After methylcyclohexane produced in Brunei is transported to Japan by ship, the hydrogen is separated out at a dehydrogenation plant in Kawasaki City and supplied to a gas turbine at the Mizue power station owned by Toa Oil Co., Ltd. In June 2020, toluene produced by the separation process at the dehydrogenation plant was shipped to Brunei to start a process of chemical combination once again with hydrogen to create a circular supply chain.



Transportation by ISO tank container

**Participation in Joint Research on the World's First Ammonia-Fueled Ammonia Gas Carrier and Ammonia Floating Storage and Regasification Barge**

In August 2020, NYK, Japan Marine United Corporation, and Nippon Kaiji Kyokai signed a joint R&D agreement for the commercialization of an ammonia-fueled ammonia gas carrier (AFAGC), which would use ammonia as the main fuel, as well as of an ammonia floating storage and regasification barge (A-FSRB). Both the AFAGC and the A-FSRB are world R&D firsts. Since ammonia does not emit CO<sub>2</sub> when used as fuel, it is expected to see increasing demand as a next-generation fuel. The project aims to contribute to the decarbonization of not only the maritime shipping industry but also the energy industry by realizing the transportation of ammonia by large-scale vessels and providing various logistics solutions, including providing storage on the A-FSRB, for electric power companies in Japan seeking to introduce mixed combustion of ammonia at coal-fired thermal power stations.



Image of AFAGC exterior

### ➤ Road Map for Vessel Fuel Change

<p><b>2015</b> Japan's first LNG-fueled tugboat, Sakigake, delivered</p> 	<p><b>2016</b> World's first LNG-fueled pure car and truck carrier, AUTO Eco, delivered</p> 	<p><b>2017</b> World's first purpose-built LNG bunkering vessel, Engie Zeebrugge, delivered</p> 	<p><b>2019</b> Methanol-fueled vessel Takarua Sun delivered</p> 	<p><b>2020</b> • Scheduled delivery of the first LNG-fueled pure car and truck carrier, Sakura Leader, built in Japan • Scheduled delivery of Japan's first LNG bunkering vessel</p> <p><b>2022</b> Scheduled delivery of LNG-fueled pure car and truck carrier</p> <p><b>2023</b> Scheduled delivery of LNG-fueled large coal carrier</p>
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**Low-carbon fuels: LNG, LPG, methanol**

Heavy oil

**Zero-carbon fuels: Hydrogen, ammonia**

Synthetic methane

Concept Ship NYK SUPER ECO SHIP 2050



2015

2020

2030

2050

# A Group of Technical Experts for Creating New Value

The NYK Group is constantly working to resolve the various issues that arise in the business and operation fields.

By combining our rich experience and strong technological expertise built through operations with cutting-edge digital technologies starting with the Internet of Things (IoT) and big data, we intend to build and implement the maritime industry's leading advanced system for optimizing vessel design and their operations. We are creating new value with a variety of global partners both within and without the maritime cluster.

It is the group of technical experts that will lead the way to this new value.

## ✓ A Track Record of Taking On Challenges to Create Value



## Message

### Integrating the Power of Our Technical Headquarters to Accelerate Value Creation

#### Tomoyuki Koyama

Senior Managing Executive Officer  
Chief Safety Officer (Marine)  
Chief Information Officer  
Chairman of Group IT Strategy Committee  
Chief Executive of Technical Headquarters  
(Executive Chief of Environmental Management,  
Chairman of Technology Strategy Committee)



At the NYK Group, safety and the environment are the most important challenges when it comes to promoting ESG management. I believe the key to addressing these challenges lies in how much of the power of our Technical Headquarters we can integrate. We have formulated a Vessel Technology and Innovation Road Map (see pages 22 and 23 for details), which shows various time frames and research domains toward 2050. This road map includes the NYK SUPER ECO SHIP 2050, a concept ship, factoring in the environment in ESG. In addition, we are progressing R&D to realize safe operations and to develop carbon-free vessels.

Further, we have set medium- to long-term environmental targets that anticipate the reduction of CO<sub>2</sub> emissions from vessels and the ripple effect down to the supply chain (see page 20 for details). As a first step toward reaching these targets, we are investigating the introduction of LNG-fueled vessels in line with our new building plan. However, LNG fuel is considered as a bridging solution for reducing our carbon footprint, we are extremely keen in developing zero-emission vessels by switching fuels to either Ammonia or hydrogen, which we plan to introduce around 2030. On top of fuel changes, we continue to pursue innovative hull and machinery design to curtail CO<sub>2</sub> emissions. Having said so, dramatic improvements in operational efficiency are needed as the contribution of hardware innovation to decarbonization is limited at least before the zero-emission vessels era. We are confident that through the cooperation of our customers together with our digital transformation, we will be achieve our goals.

The function of Technical headquarters includes New Building, Fleet Safety, Environment, ICT, Digitalization and 130 employees are working for those. NYK also has four R&D arms—MTI Co., Ltd, Japan Marine Science Inc., NYK Business

Systems Co., Ltd., and Symphony Creative Solutions Pte. Ltd.—which makes the NYK Group unique and strong. It is because of this organizational strength and our solid track record that we are able to engage in open collaboration with marine equipment manufacturers, shipyards, and companies outside the maritime cluster. Moreover, in June 2020 we made the decision to become a founding member of the Maersk Mc-Kinney Moller Center for Zero Carbon Shipping, a research center dedicated to promoting decarbonization within the maritime industry by converting to alternative fuels.

The Technical Headquarters has two major areas of focus: infrastructure technology to support business and cutting-edge technology aimed at differentiating the Group from others. The former refers to technology that supports the foundation of the Group's business, such as new buildings, ship management, and IT infrastructure, including cybersecurity. Without this technology, operations would not continue even for a day. The latter refers to technology directed toward the future, keeping us a half-step ahead of the competition. SIMS, a ship information management system introduced in 2008, is one of our trailblazers in cutting-edge technology. This system accumulates voyage data and weather and sea conditions as big data, provides engine performance analysis and condition-based maintenance (CBM),\* among other functions, and is leading to the development of manned autonomous ships. The ship management data sharing platform NiBiKi, which went into full-scale operation from 2019, has made it possible to convert the human element of onboard operations into big data as well. I believe that the ability to analyze the data collected by SIMS and NiBiKi by the Group's engineers is what differentiates us and will lead to future business returns.

\* CBM is preventative action that continually monitors the status of equipment anomaly on board so that maintenance can be performed before breakdown. As a result, advanced engine plant operations can be expected.

# Taking On the Challenge of Maritime Autonomous Ships through Open Collaboration

Advanced system integration, exemplified by autonomous ships, is essential for improving the safety and efficiency of ship operations while reducing crew workloads. NYK and Group companies Monohakobi Technology Institute Co., Ltd. (MTI) and Japan Marine Science Inc. (JMS), which are taking the lead on technological development, aim to develop autonomous ships with crews that uses systems capable of advanced data processing, developed through open collaboration with global players supporting the maritime shipping industry and with system vendors and companies from other sectors.



Autonomous ships

## 2016

### Participation in i-Shipping, a Japanese Government R&D Project

NYK, MTI, and JMS have joined four projects, including collision avoidance and autonomous operations, as part of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT)'s Maritime Productivity Revolution project, or i-Shipping. These five-year projects launched in 2016.

## 2019

### Participation in One Sea, Asia's First Autonomous Ship Alliance

From its base in Europe, MTI joined the international One Sea ship alliance, which aims to make autonomous ships a reality.

## 2020

### Maritime Test of Remote Navigation of Tugboat

A consortium of 16 companies, including NYK, MTI, Keihin Dock Co., Ltd., and JMS, was formed in 2018 to participate in the MLIT project to test autonomous ships. Maritime tests are conducted using tugboats in Tokyo Bay (route between Yokohama and Yokosuka) for the purpose of identifying issues in the operating environment, such as for the drafting of safety requirements.



[https://www.youtube.com/watch?time\\_continue=15&v=YGn-2ifrYVY&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=15&v=YGn-2ifrYVY&feature=emb_logo)

### AiP\* Certification Obtained from Nippon Kaiji Kyokai (Class NK) for APExS Autonomous Ship Concept Framework

\* AiP = Approval in Principle (basic certification)

## 2020

### Participation in MEGURI 2040 Crewless Maritime Autonomous Surface Ship Trial Project

This project aims to make crewless maritime autonomous ships a reality on coastal routes around Japan. The project, which is being jointly carried out by NYK and the Japan Foundation, is to conduct maritime tests in 2021 for the development of the world's first crewless maritime autonomous ship. The consortium of 26 domestic firms (as of October 2020) includes NYK, JMS, MTI, and Kinkai Yusen Kaisha Ltd.



## Messages

### Co-Creation of Maritime Autonomous Ships from a User's Perspective

The NYK Group is developing manned autonomous ships with its know-how of field operations at shipping companies. Key features of this initiative are the open collaboration with manufacturers and service providers with advanced technological capabilities and development that focuses on crews, the users of the ships. All processes, ranging from concept formulation to design, risk assessment, development, verification, installation, and operation, are openly conducted with partners and stakeholders. Leveraging the fields of expertise of major players in the maritime shipping industry, we aim to be the first in the world to develop autonomous ships as an industry.

#### Hideyuki Ando

Director of Monohakobi Technology Institute Co., Ltd.

### Creation of Value by Pursuing Technologies Staying Half a Step Ahead

As suggested by the words "Creating the future with on-site knowledge and practice," the NYK Group's initiatives in manned autonomous ships are unique in that they are being advanced in collaboration with numerous partners both inside and outside the Company, with a focus on navigation officers and engineers, to identify and solve issues related to safe and efficient ship operations that navigation officers and engineers in charge of ships face every day. The people involved in this initiative have come to understand that we are always aiming, with our partners, for technologies that are almost within reach. Without being bound to the technologies we develop, going forward we strive to create new value in our businesses by standardizing technology and spreading it around the world. We aim to create the future demanded by users, based on the relationships of trust we have built with our partners.

#### Satoru Kuwahara

General Manager  
Maritime Technical Group, Japan Marine Science Inc.  
(ship captain from NYK)

Core technologies

## 2008

### 2008

#### Development of Ship Information Management System (SIMS)

SIMS enables the collection of more granular data on actual sea conditions. By installing SIMS on our ships, the operational and fuel-related data of each ship can be shared among land and sea locales in a timely manner.

### 2018

#### IoT Open Platform and Creation of International Standards

NYK became a core member of the Internet of Ships Open Platform (IoS-OP) operated by Ship Data Center Co., Ltd. (ShipDC), a subsidiary of Class NK, with the aim of spurring innovation in the maritime shipping industry. The Japan Ship Machinery and Equipment Association (JSMEA)'s Smart Ship Application Platform (SSAP) Group drew up the ISO 19847 and ISO 19848 international standards for shipboard data servers to share field data at sea and land standard data for shipboard machinery and equipment, used in ship data collection systems developed by MTI, with cooperation from ship equipment makers and the Japan Ship Technology Research Association (JSTRA).

### 2012

#### Launch of IBIS Project for Optimal Economic Operations

The IBIS Project was launched with the objective of achieving optimal economic operations for container ships. The project aims to reduce CO<sub>2</sub> and fuel consumption across the entire fleet through information sharing on land and at sea, business process reforms, and data utilization. Its impact is on the scale of several billion yen per year. In 2013, IBIS-TWO was launched to find the most optimal economic operations for vessels other than container ships. In 2019, IBIS-TWO was renamed IBIS TWO Plus and given a broader scope.

### 2017

#### Joint Development of J-Marine NeCST Ship Navigation Support Tool

NYK and MTI, along with Japan Radio Co., Ltd., developed J-Marine NeCST as a ship navigation support tool for managing and sharing data, including digital nautical charts, on a large display.

### 2019

#### Commencement of Joint Research with Dualog on Cyber Risk Management System for Ships

The Cepa Shield project was launched to develop cybersecurity management systems for ships—using a grant received from the Norwegian government fund Innovation Norway—along with Dualog, a maritime IT system developer in Norway. Development is proceeding on a two-year time frame with the system being installed and tested on 50 NYK vessels.

#### Acquisition of Certification for Cybersecurity Management System for Ships

Group company NYK LNG Shipmanagement Ltd. obtained certification for its cybersecurity management system from Class NK (its first such accreditation). The system will be installed on ships due for their first annual inspection after January 2021, and manuals for crew and onshore personnel will be updated with descriptions of the system. The NYK Group is making preparations to rapidly comply with this schedule.

### 2019

NYK received the Grand Prize at the IT Japan Award 2019, organized by Nikkei Computer magazine, for its initiative to use the IoT for detecting anomalies in the engine rooms of ships.



### 2020

#### Establishment of Remote Diagnostic Center (RDC)

As a part of efforts to digitally manage ships, in August 2020 the Remote Diagnostic Center (RDC) was established inside NYK-FIL Maritime E-Training, Inc. Seafarer Training Center in the Philippines. From onshore, the RDC monitors the engine plants of approximately 200 vessels equipped with SIMS.

The RDC will contribute to fuel conservation and the prevention of incidents of serious engine troubles for NYK fleet. The RDC is also looking to develop into a remote control center for the autonomous ship in the future (see page 22 for details).



NYK SUPER ECO SHIP 2050



NYK ×

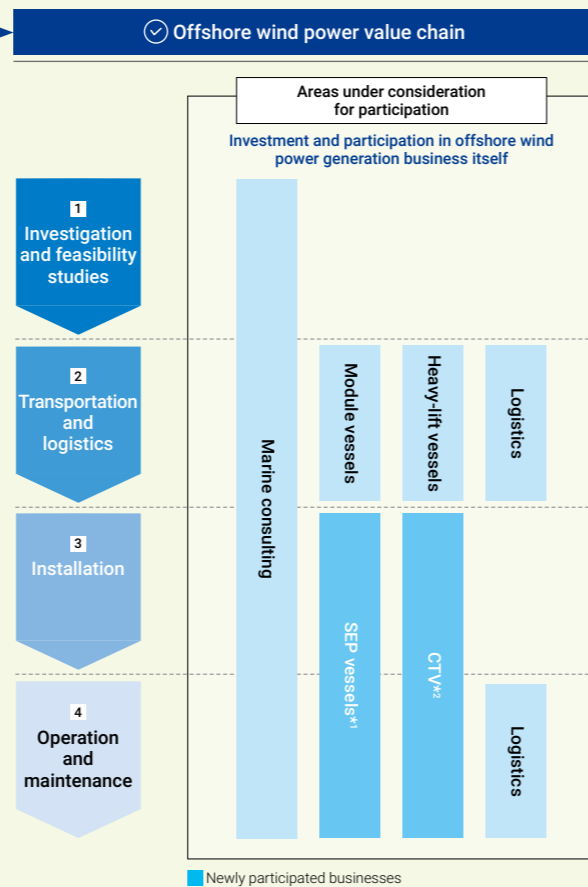
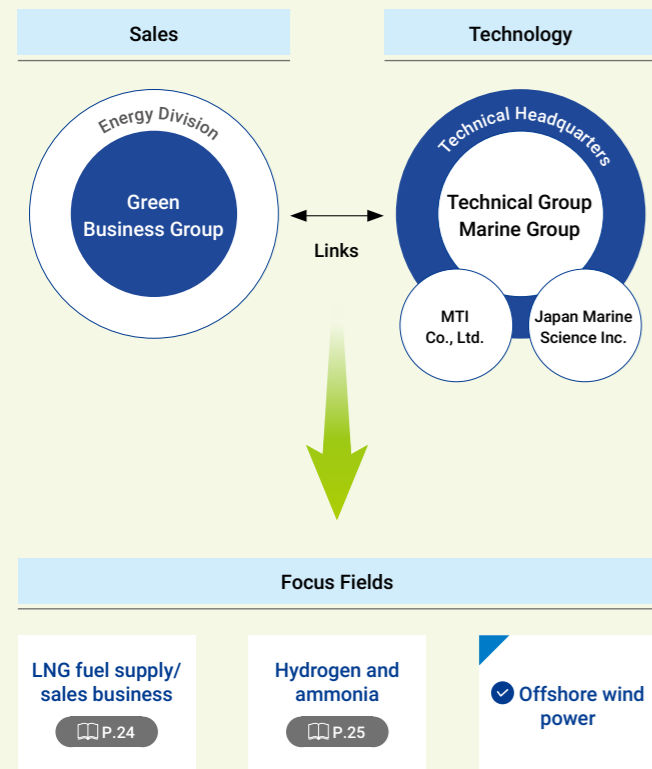
Green

## Aiming to Create New Value Based on the Theme of Renewable Energy

The NYK Group established the Green Business Group in April 2019 to accelerate business development in environmental fields. In 2017, the Group launched fuel supply service for LNG-fueled vessel in Europe using the world's first purpose-built LNG bunkering vessel. In 2020, we started operations with Japan's first LNG bunkering vessel. We are also promoting specific projects in fields such as offshore wind power.

### Striving to Create Businesses Using Both Sales and Technologies

The Green Business Group is leading our efforts to reform our traditional business models. Accordingly, we have mobilized the NYK Group's engineers under the concept of Green to develop technology-oriented sales.



\*1 SEP vessel: Self-elevated platform. A vessel required for offshore wind turbine and foundation installation operations  
 \*2 CTV: Crew transfer vessel. A vessel for transporting crews for offshore wind turbine and foundation installation and maintenance after power generation commences



### The Role of Green Business in Our Becoming a Sustainable Company



Toshi Nakamura

Senior General Manager, Green Business Group



The NYK Group faces two major trends of this era. Consequently, it is under great pressure to make changes on an unprecedented scale. The first major trend is decarbonization. As a maritime shipping and logistics company, the Group operates the business of transporting fossil fuels while consuming a large quantity of heavy fuel oil. To continue its existing businesses, the Group needs to take action on pivoting completely to a low-carbon model, with the ultimate goal of decarbonization. The other major trend is slow trade associated with protectionism and the shift to local production for local consumption. Businesses have a life span, just like living organisms. The Group's sustainable growth thus requires bold initiatives in the green business field, which is also a requirement of the times.

The Green Business Team was launched in April 2018. In 2019, the Green Business Group was established as a dedicated department, and it is now in its third year in a row since the establishment. Although this is only the third year, there are numerous needs within society, and the group is handling a rapidly increasing number of projects (see page 55 for details). The Green Business Group's basic strategy is a value chain strategy, similar to the Energy Division, which aims to be involved across all stages, from upstream to downstream. For example, in the offshore wind power business, we envisage being involved at every stage, from feasibility studies through to the transportation of materials, wind turbine installation, and, after completion, maintenance and electricity sales. Furthermore, this business is one where the Group can apply the expertise of its existing businesses in constructing and operating vessels, and we expect to assist with offshore wind turbine and foundation installation vessels (SEP vessels) at the

construction stage of an offshore wind farm and with crew transfer vessel (CTV) operations at the maintenance stage. Moreover, in developing the hydrogen and ammonia business, we plan to participate from both the demand and supply sides. First, we have been gradually creating hydrogen and ammonia demand while starting initiatives to build a supply network for these gases. In July 2017, the Company established the Advanced Hydrogen Energy Chain Association for Technology Development (AHEAD) with external partners and started the world's first demonstration project of an international hydrogen supply chain in June 2020 (see page 25 for details). Building a hydrogen supply chain is likely to take over 10 years from now to complete. Nonetheless, we will proceed with technological development in collaboration with external partners.

The medium- to long-term vision of the Green Business Group is to "develop and establish a business that contributes to reducing the environmental burden of activities involving transportation and power generation as one of the NYK Group's earnings foundations, thereby making the Group's overall business operations sustainable." To make this vision a reality, we are carrying out initiatives in four areas of innovation: product innovation to provide the necessary services for offshore wind power; market innovation to open new markets for the supply of hydrogen and ammonia; open innovation for building win-win relationships with partners in Japan and overseas that have specialist knowledge; and organizational innovation for developing new businesses through unified efforts with technical divisions, such as the Technical and Marine Groups, MTI Co., Ltd., and Japan Marine Science Inc. Through these initiatives, we will realize our vision to build a business division that can generate several billions of yen in profits per fiscal year after a decade.

NYK ×

Digital



## Cultivating Business Leaders Who Will Perceive Customers' True Needs and Work Proactively in Innovation

We have established the NYK Digital Academy to develop human resources who will lead the Group in the future. We are currently running the second semester of the program for young managers in the NYK Group.

### Types of Human Resources We Aim to Cultivate

- Business leaders who will lead the Group by opening new markets, creating new businesses, and inspiring internal transformation
- Project leaders who will drive internal reforms and innovation

### Column: NYK Digital Academy Is a Great Long-Term Investment



**Katsuhiro Nishinari**  
Professor,  
Research Center for Advanced Science and  
Technology,  
The University of Tokyo  
Outside Guest Lecturer,  
NYK Digital Academy

The next generation of innovation leaders will need to be aware of overall optimization in their activities. One of the issues in international logistics is how to seamlessly integrate marine and land transportation. The solution requires people who are able to think beyond ordinary operational frameworks. To achieve such a mindset, it is important that they acquire a wide range of knowledge and experience from an early stage. I think it is excellent that NYK has an internal organization for developing such human resources with a long-term perspective. It is without doubt that the NYK Digital Academy is a great long-term investment.

My role in the academy is to provide knowledge about the universal mathematics that lies behind everything. I hope to contribute to developing human resources who are able to see beyond conventional patterns of thought and action to reveal their essential nature.

### Course Content

- In foundational studies, participants acquire innovation techniques for design thinking and analysis techniques using data science, such as machine learning, using real examples from maritime shipping and other industries. In the practicum, the participants are tasked with enacting internal reforms or creating new businesses based on themes that they select themselves.
  - Internal and external experts are invited to give lectures.
  - During the practicum, mentors are assigned to each team.
  - In the final session, the participants give a presentation to the Group's senior management.
- Upon graduating from the program, participants receive a completion certificate and an internal qualification.

Lectures: One two-hour lecture/week (total lecture time: 124 hours/participant)

Schedule: Foundational studies (two months), practicum (four months)

Follow-up: Six months after the program



Web conference



Short-term intensive practicum in the Philippines

### After Graduation

Coordinate with the Digitalization Group to promote internal reforms or create businesses together with relevant internal departments, with the goal of carrying out the proposal presented during the course

“  
Developing the Next Generation  
of Human Resources Who Will Lead  
the Organization to Create New Value  
and Achieve Transformation  
”

### Naotaka Ishizawa

Dean of the NYK Digital Academy  
Digitalization Group

Invited as an outside lecturer to the School of Engineering,  
The University of Tokyo, on "Theory of Advanced Logistics Science I"



Human resources are the most important driver of sustainable growth in a company. The NYK Group's business environment is experiencing major changes, such as the advancement of digital technologies, requiring us to radically revise our conventional business models. With a sense of crisis over the rising level of future uncertainty, we decided that we needed a training program that would take employees' thinking and our business processes to a completely new level. With that in mind, the NYK Digital Academy was launched in September 2019.

There are three unique aspects to the academy's establishment. The first is that the employees themselves designed the training program, rather than outsourcing this task. In addition to inviting highly esteemed outside lecturers, a large number of employees serve as lecturers. Among such employees are those involved in starting new businesses at overseas locations and achieving unprecedented transformations, as well as those who have acquired expertise in cutting-edge innovation at educational and research institutes in Japan and overseas. These employees are thereby able to give guidance related directly to the Group's businesses. The second aspect is the creation of a business story that resonates with many people, which is an essential element for forging business leaders. The academy takes innovation as its primary theme. To discover seeds that have not been fully recognized or realized inside the Company, the academy uses approaches for searching and creating new value, such as listening to people from a wide range of industries, creating a hypothesis for a business story, and then repeatedly verifying it. The third aspect is an emphasis on learning the latest approaches for creating new businesses from the perspective that innovation is not created by accident.

The academy's goal is not to train specialist engineers and digital technicians; rather, it is to nurture business leaders who can create new businesses, lead organizations, and realize their ideas. The first two months of the six-month training program are spent acquiring a thorough understanding of foundational content. This part of the program focuses on universal elements, such as mathematical science, that will be needed in any era, on the Group's history and principles, and on other learning, such as liberal arts, required for business leaders. The participants also learn about the latest technologies underpinning mathematical analysis, such as machine learning and programming languages, which will be essential skills for business going forward. In addition, the program includes a short practicum with overseas Group company employees to hone participants' skills in cross-cultural communication and ability to adapt to different environments. In the remaining four months of the program, the participants work together proactively on planning and proposing a new business or promoting internal reforms in line with their chosen theme. The final session is allocated to presenting a proposal to the president. However, to ensure that the proposal in question does not end there, but carries on to fruition, there is a biannual follow-up after the training program, which is conducted in coordination with the relevant internal parties.

The mission of a company is to provide value to its customers and meet the expectations of society. I hope that it will become normal within the Group to see graduates of the academy challenging and supporting each other as they autonomously undertake projects. As a cutting-edge educational institution, the academy will make maximum use of the knowledge resources within the Group to cultivate human resources who will create new value by working across Group, industry, and regional boundaries.

# Considering New Possibilities and Innovation That Contribute to Solving Social Issues through Business

In its medium-term management plan, "Staying Ahead 2022 with Digitalization and Green," the NYK Group is promoting initiatives to contribute to resolving environmental, social, and governance (ESG) issues and achieving the Sustainable Development Goals (SDGs), with the aim of solving social issues through business. In this section, we asked Representative Director Eiji Oishi of Minna-denryoku, Inc., who has generated a stream of successful examples in the fields of innovation and entrepreneurship, to talk to the Group's young employees—who will take up the baton for the future—about social issues, innovation, and work ethic.

## Minna-denryoku, Inc.'s First Meeting with the NYK Group

President Oishi, could you begin by talking about what kind of company you have created in Minna-denryoku, Inc.?

**Oishi:** Minna-denryoku, Inc. was founded in 2011 and has 83 employees (as of April 2020). Many of our diverse employees have had very different careers, and we value their individuality and respect their opinions. We manage the business with an emphasis on solving social issues while creating

corporate value. Our two guiding principles are "have fun" and "make a profit." We pursue projects that are fun for ourselves, the public, and our customers and which generate profit for society as well as the company. One of our recent business activities is "Zero-Carbon Yokohama," a decarbonization initiative promoted by Yokohama City in Kanagawa Prefecture. It is an inter-regional collaboration project in which renewable energy from Yokohama Town in Aomori Prefecture will be supplied to operators in Yokohama City. Minna-denryoku, Inc. is providing its proprietary blockchain technology, while NYK agreed to participate, and the two companies became acquainted by

jointly supplying renewable energy to Hikawa Maru.

## Viewing the Corporate Culture of the NYK Group from Outside and Inside

What kind of company is the NYK Group?

**Oishi:** Over these past few years, especially, I feel there has been an increase in companies showing a strong interest in renewable energy, with the NYK Group

among their number. As I soon realized after collaborating with the Group, although many companies become slower in their decision-making and more inflexible as they expand in size, the NYK Group has a wonderful corporate culture that is actually flexible and supportive of adopting new ideas. An institutional investor with whom I am acquainted said that the Group's level of sincerity in its approach to addressing ESG issues and the Sustainable Development Goals (SDGs) supersedes that of the majority of companies in Japan. The president of the NYK Group himself, Hitoshi Nagasawa, leads the way in promoting ESG management. While the Group naturally has a firm stance on achieving profitability, I feel that it is ahead of other companies in terms of the sincerity it shows in promoting business from new perspectives, such as social issues.

**Hashimoto:** The NYK Group really does have a large number of talented human resources. In keeping with its history and corporate culture of operating its business on the wide oceans, the Group has an outstanding, open organizational culture.

That being said, I do not mean that we are at all indulged; if I make a mistake, I have senior colleagues and coworkers who will point it out to me directly, in addition to drawing my attention to things from different perspectives.

The cargoes handled by the NYK Group are many and varied, including food, living essentials, coal, and crude oil. The story that is shared throughout the Group is one of delivering the cargo that is required to carefully meet various needs. Although we may have different approaches, I feel that we are united in our goal. Over 10 years ago, shipping was focused primarily on speed. Today, however, fuel economy is emphasized with a view to saving energy, and we are called to create even more value based on the theme of "Digitalization and Green." I believe that the Group has worked to meet the needs and expectations of the changing times.

**Oishi:** When I listened to you speaking just now, I felt that the NYK Group's business is truly broad, from marine transportation to green business. The amount of trust needed to create a global network cannot

be built overnight. It is because the Group and other entities were there to ensure the continued flow of logistics that society and industry were able to continue functioning even amid the COVID-19 crisis. However, I think that it can be difficult for people in general to see the importance of your role. Would it not be a good idea to tangibly demonstrate your social and industrial impact so that more people could understand the important role of the NYK Group?

**Kurakado:** In the Dry Bulk Division, I belong to a team whose mission it is to dig up and launch new dry bulk businesses, and I am in charge of sales. Moreover, I am also working on resolving the issue of ocean plastic waste in parallel with my main duties. Even as we continue a business with a long history, the Group has a corporate culture that enables people to take on the challenge of new businesses.

President Oishi, what aspects do you focus on when seeking new business opportunities?

**Oishi:** I believe I can best answer this question by describing my track record of starting businesses. In 2007, I happened to

## Profile

### Eiji Oishi

Representative Director and President  
Minna-denryoku, Inc.

After graduating from university, Eiji Oishi worked at an advertising production company before taking a job at a major printing company and then subsequently starting up numerous new businesses. In 2011, he founded Minna-denryoku, Inc., and was involved in a project with Setagaya Ward, Tokyo, to raise awareness regarding renewable energy. In 2016, he developed an electricity retailing service centered on renewable energy, with the concept of "Power supply with traceability," which enables consumers to identify their electricity producers. This original service uses blockchain technology to allow electricity consumers to freely choose their producer, and its earnings have grown. With one of Japan's leading renewable energy rates, the service has electricity supply contracts with approximately 3,000 contracts. Currently, the company is working to expand the "Power supply with traceability" concept outside the electricity sector by realizing "Lifestyle with knowing where the product came from."

## Profile

### Wataru Kurakado

Project Team  
Global Mineral Resources Group

Wataru Kurakado joined NYK as an onshore office worker in 2011. Following his involvement in on-site training regarding pure car and truck carriers and container ships, he was assigned to the LNG Group. Subsequently, Mr. Kurakado worked on overseas finance in the Finance Group before assuming his current role working on new business development in the dry bulk business while tackling the problem of ocean plastic waste.

## Profile

### Ayako Hashimoto

Technical Team and Green  
Technology Team,  
Technical Group

Ayako Hashimoto joined NYK as an engineer in 2005, where she worked in the Technology Division on new shipbuilding and in-service vessels. She also carried out research and development at MTI Co., Ltd., during which time she took childcare leave. Currently, Ms. Hashimoto is involved in building vessels that use alternative fuels, such as hydrogen and ammonia, to help achieve the Group's aim of reducing its greenhouse gas emissions and working on verification testing.

see a young woman walking with a solar-powered cell phone battery charger on a subway car and, as my own cell phone battery was on the verge of running flat, I wondered whether I would be able to purchase electricity from her. That experience provided me with a flash of inspiration that I might be able to create electricity and sell it to other people, and so I started Minna-denryoku, Inc. The added value of traceability of your electricity producer has become a major point of differentiation from our industry peers. When issues become too big, we may lose the motivation to solve them. Who specifically will benefit from our solving a particular issue? Ocean plastic waste, as an example, is an extremely grave issue facing the world. However, rather than thinking about it from the broad perspective of the whole world, we might think about it on a personal level and just want to feed our children fish that is safe to eat, for example, or let them play

in a clean ocean. When we visualize issues in such a manner, the more specific and clear they are in our minds, the more readily solutions and ideas should emerge. In addition, the closer your motivations are aligned to your goals, the more able you are to be determined and passionate, no matter what difficulties you face. Even with a social business, it is not so easy that you can succeed via superficial means. It is because I have had such experiences that I find it valuable to rely on my own instincts.

Taking on the Challenge of Creating New Value

Please tell us about your initiatives concerning ocean plastic waste.

**Kurakado:** Because the NYK Group's main business is the maritime shipping industry, I was interested in social issues related to the oceans, and ultimately I have a strong desire to use our vessels to make a social contribution. This desire inspired me to launch a project in this regard by visiting individual ocean research laboratories, universities, among others, when not performing my main duties, after obtaining the permission



of my supervisor. In March 2020, I began promoting an open sea sampling survey of microplastics in collaboration with Yutaka Kameda, an associate professor at the Chiba Institute of Technology (CIT), which has extensive knowledge regarding microplastic research. The NYK Group operates various vessels in oceans around the world, and we started a trial collecting samples of plastic waste during voyages of three dry bulk vessels carrying coal, iron ore, chips, etc., over a wide range of ocean. Since then, the number of target vessels and samples have steadily increased, and we are aiming for 100 samples by the end of this year. These samples are then analyzed by the CIT to create a worldwide microplastic map that comprises data such as waste size, distribution concentration, etc. We also associate the sample date, location information, and weather and ocean condition data. Promoting this project has made me keenly

aware of the importance of cooperating with relevant internal departments. Now, we have started up a task force comprising members from each relevant department to promote activities with the Environment Group.

**Oishi:** That is a really great project, something which only the NYK Group could do. When considering commercializing the project, we incorporated blockchain technology to create a totally new kind of value. In the case of ocean plastic waste, you need to think about how to attach meaning to that value and also what kind of consideration it merits. For example, when you eat sushi, even if a particular sushi restaurant is a little more expensive than others, if eating there helps reduce ocean plastic waste, I would be happy to do so, because

I would see it as being connected to my children's future. When I started an Internet business at a major printing company, as it was at the dawn of the Internet era and the notion of public infrastructure was not well established, I was told that, even if we distributed news and articles digitally, we would not be able to charge a fee for doing so. When I established Minna-denryoku, Inc., at first everyone said that there was no way I would be able to sell electricity of the same quality for a higher price, even if it were only ¥1 higher. Nonetheless, I think it was my creating a persuasive story about the benefit to the earth that generated demand and enabled us to achieve profitability. You may also find with ocean plastic waste that business opportunities will expand if you can make a clearer story of how it will ultimately create value.

**Hashimoto:** I believe there must be value in the data collected regarding ocean plastic waste. It is likely that certain people would benefit from utilizing this data. As President Oishi said, if you can create a system that clearly benefits a specific customer demographic, then we can contribute to society as a shipping company.

Finding the Key to Achieving Innovation

President Oishi, what is the secret to creating a group of people who share the same principles?

**Oishi:** People differ as to what they find interesting. What is most important is to create a corporate culture that enables mutual respect among people and acceptance of their interests. In my experience, I have really felt that the more passionate someone is to make his or her particular business a success, the longer the business will operate, as opposed to running a business born of the interest of your company or supervisor. If I can be really passionate about something, then I can communicate that passion to other people. Moreover, if I can find just one other person who will get fired up about what interests me, then I will be able to give my best, no matter what challenges we face. All work is challenging, yet valuable. As a person who oversees others, one thing I make a point of doing is to encourage my team members to look at problems from a bird's-eye perspective and understand how to find the meaning in their work. Then, I make sure to not only pay attention to employees working on the front lines but also remain aware of those who are doing the steady work behind the scenes. Such an approach inspires even greater passion in individuals and makes them more likely to spark innovation.

**Hashimoto:** I am one of those who finds it easy to make work interesting. Nevertheless, within the Company there are people with all kinds of opinions. When I listened to what you said, frankly I experienced a kind of culture shock. As I strived to develop more as an engineer, I also had a

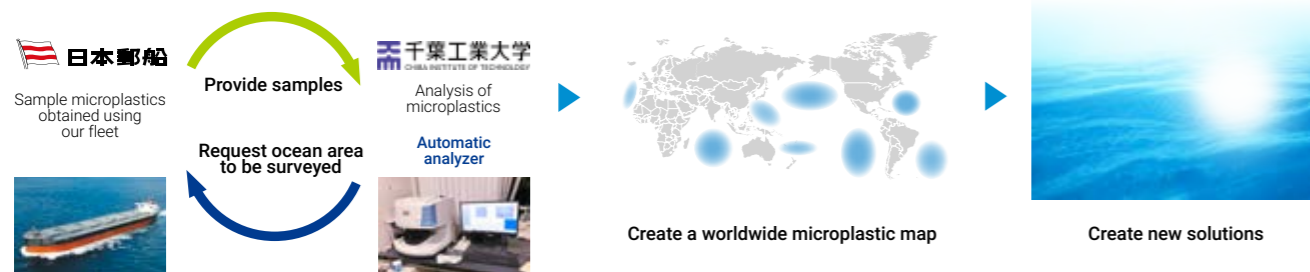
constant sense of unease that something was lacking in the status quo and that I was not creating value. This discussion has made me aware of the many ways in which I can still contribute.



**Kurakado:** I also found a lot to take away from today's discussion. I really felt it is important to go back to my instincts and the feeling I had when I started my project, as well as to ensure my project reaches its goal. From now on, I will boldly take on new challenges without fear.

**Oishi:** Please do try to take on all kinds of challenges. Many people who have qualifications or specializations shut themselves inside that framework. By building up experience, you may even find that your strengths and expertise can change. Even if people think that they have an area of expertise, they may often find they also have other strengths, and the NYK Group is no exception. It is important not to box yourself in. Rather, it is vital for companies and supervisors to help their employees be aware of the value of being open-minded. I wish all of you the very best with your future endeavors, and I look forward to being able to work with you on initiatives that are "fun and profitable" going forward.

Microplastic Sampling Analysis Flow



# The NYK Group Continues to Grow While Supporting the Overcoming of Challenges in Society and Industry Based on Its Basic Philosophy of "Bringing value to life."

## Highlights of the NYK Group's History

1885—

Born of the merger of Mitsubishi Mail Steamship Company and Kyodo Unyu Kaisha, NYK resultantly expanded its business from the seas of Asia to the oceans of the world under a "nibiki" flag featuring two thick red lines on a white background to symbolize the union of the two companies from which NYK arose.



1945—

During World War II, NYK tragically lost its two key assets—ships and crew members. Following the war and throughout a period of high economic growth, the Company embarked on the development and leveraging of the specialized carrier business to support Japan's economic growth.



Akagi Maru II with the Japanese flag flying as the ship enters New York Harbor

1985—

The yen appreciation stemming from the Plaza Accord in 1985 had a major impact on the cost structure of shipping companies. We responded by shifting to a multinational mix of our seafaring workforce and beginning a structural transformation, to become a comprehensive global logistics enterprise centered on our maritime shipping industry.



2010—

In addition to expanding into new business fields, such as the shuttle tanker and offshore businesses, we continue to take on the challenge of new fields that go beyond the conventional framework of a comprehensive global logistics enterprise, such as introducing ships powered by LNG fuel to decouple the Company's environmental impact and entering the green business field.



The History of NYK Group  
<https://www.nyk.com/english/profile/history/>



### Corporate Culture of the NYK Group

#### Our Basic Philosophy of "Bringing value to life."

##### Bringing value to life.

The NYK Group's basic philosophy, "Bringing value to life," expresses the purpose and reason for the Group's existence—i.e., the value the Group brings to all living things and the environment while realizing prosperous lives and daily fulfillment for people around the world.

Value in items is created when they are with the people who need them and are in the necessary places. In the future, the Group will play a central role in contributing to a sustainable society and environment, in addition to delivering the essential items and services to the people that need them and to the desired places.

Based on this basic philosophy, the Group is working every day toward its goal of co-creating sustainable value with all of its stakeholders while flexibly adapting its business models to changes in this current era and in society.

#### Spreading of Our Basic Philosophy: "Bringing value to life."

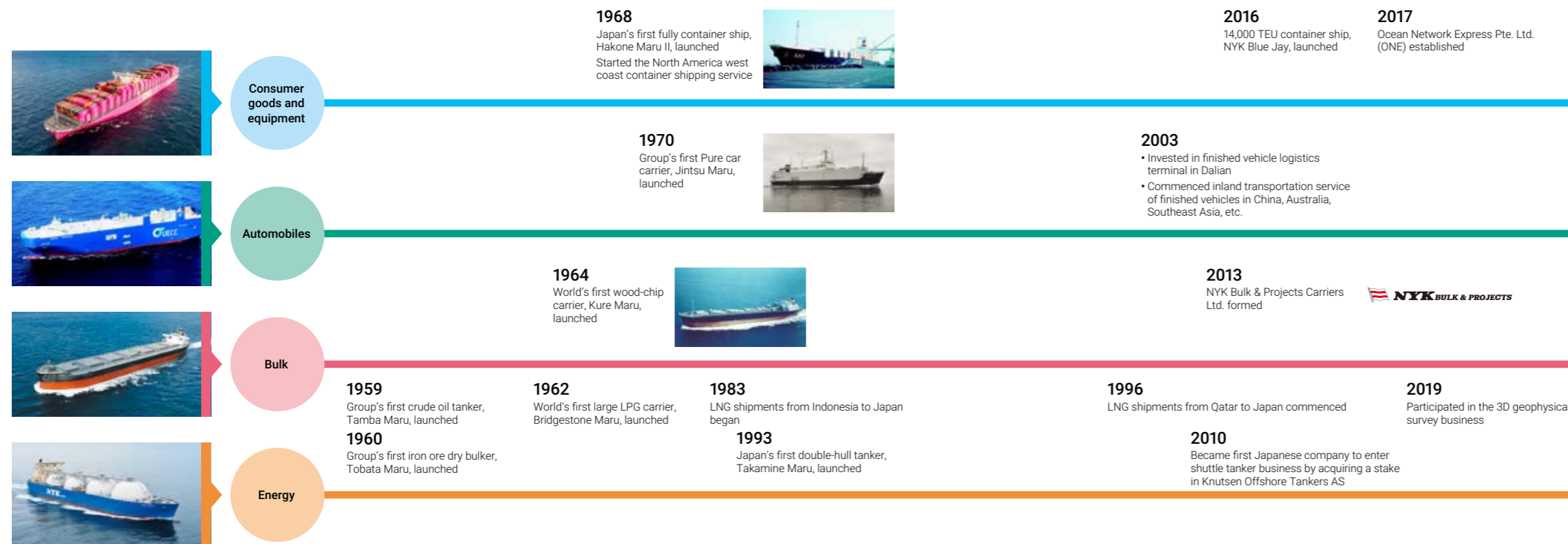
The NYK Group traces its origins back to the maritime shipping industry started by Yataro Iwasaki, the founder of the Mitsubishi Group. He believed that the shipping industry would not only expand our business but also benefit society as a whole.

All employees are convinced that the Group's operations form a social infrastructure and a business that support industry. In 2020, with the COVID-19 pandemic continuing unabated, the Group will fulfill its mission to "keep the logistics lifeline open" so that people can live comfortably and with peace of mind.

Formulated in 2018, our basic philosophy inherits the mission and spirit that have been passed down through the generations since the Company's founding. This philosophy has permeated throughout the Group and down to its roots as words that express the true ambitions of all our employees.

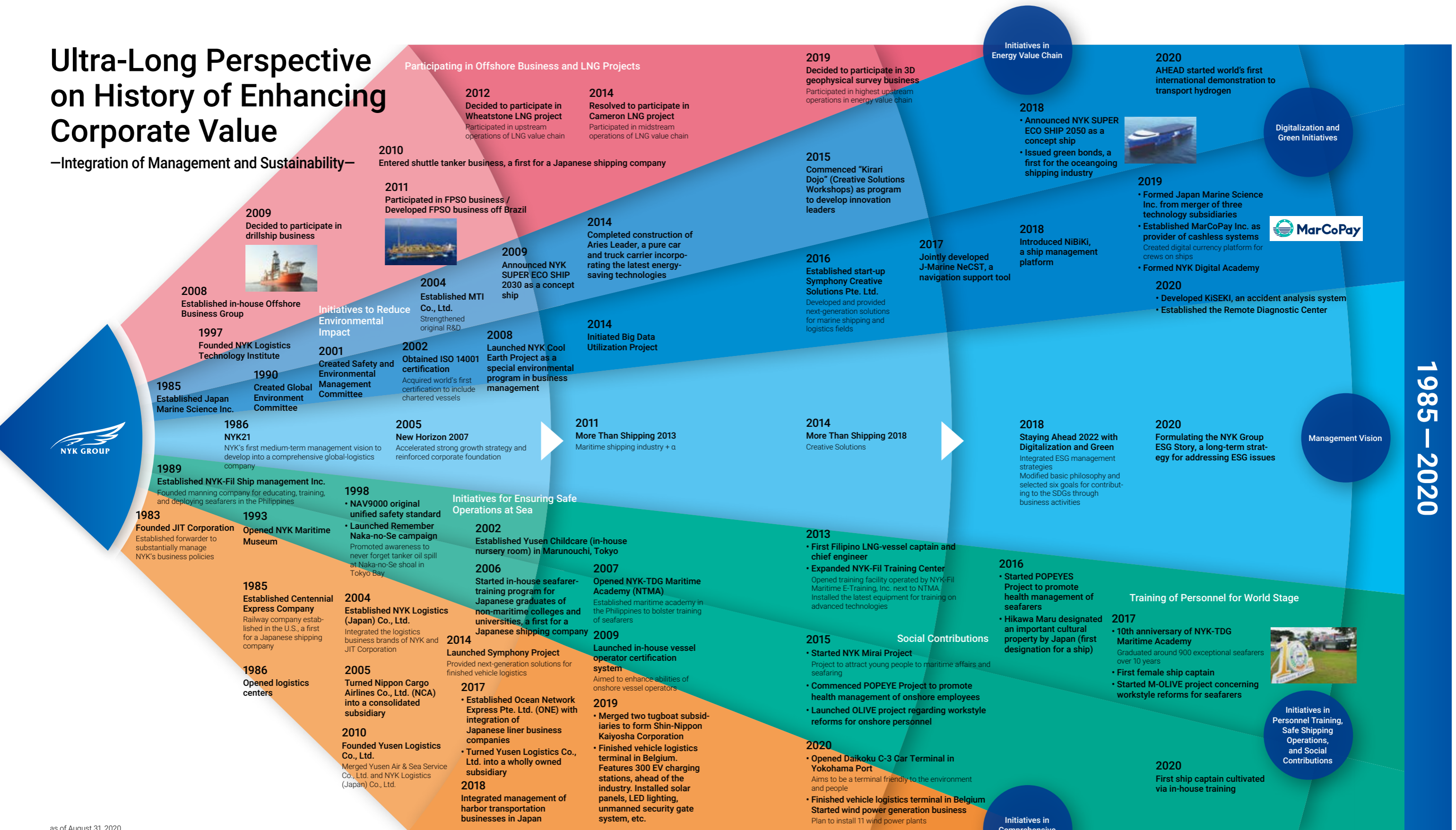
**"If we launch a ship, the benefits will be widespread, and the resulting prosperity will be felt by many."**

Yataro Iwasaki  
 Mitsubishi Group Founder  
 Source: *Iwasaki Yataro Den (Volume 2)*  
 (Photo : Mitsubishi Archives)



# Ultra-Long Perspective on History of Enhancing Corporate Value

—Integration of Management and Sustainability—



1985 — 2020

as of August 31, 2020

# Data on the NYK Group's Sustainability

The NYK Group formulates management strategies and measures while considering long-term risks and opportunities and monitoring changes in the external environment, with the aim of maximizing revenues and sustaining growth. On these pages, we present a variety of data on sustainability from five perspectives, including earnings growth, capital efficiency, and shareholder value, while referring to the Ministry of Economy, Trade and Industry's Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation.

PEST Analysis	Major Opportunities and Risks	Management Strategies to Enhance Corporate Value	Indicators for Measuring Progress on Strategies
<p><b>Politics</b></p> <ul style="list-style-type: none"> <li>Geopolitical risks affecting global political affairs</li> <li>Rise of trade protectionism</li> </ul> <p><b>Economy</b></p> <ul style="list-style-type: none"> <li>Changes in international and regional economic conditions</li> <li>Increasing investible funds due to excess liquidity</li> </ul> <p><b>Social</b></p> <ul style="list-style-type: none"> <li>Growing populations in emerging and developing countries</li> <li>Widening income disparity and the North-South divide</li> <li>Climate change and ocean conservation problems</li> <li>Shift to a low-carbon and decarbonized society</li> <li>Workstyle reforms in Japan</li> </ul> <p><b>Technology</b></p> <ul style="list-style-type: none"> <li>Advancements in AI and digital technologies</li> <li>Spreading of 3D printers and changes in supply chains</li> <li>Blockchain platforms</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Rising demand for maritime shipping</li> <li>Growing demand for alternative long-distance shipping services</li> <li>Demand for high-quality shipping services</li> <li>Growing calls for safety and environmental measures</li> <li>Appearance of alternative supply areas</li> <li>Need to restore supply chains</li> <li>Stricter evaluations of vessel quality and ship management</li> <li>Increasing need for digital technology development</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>Decreased demand for maritime shipping</li> <li>Rising market volatility</li> <li>Foreign exchange and bunker oil price fluctuations</li> <li>Declining competitiveness due to technological obsolescence</li> <li>Blockades of shipping routes</li> <li>Oversupply from excess tonnage</li> <li>Increasing likelihood of maritime accidents</li> <li>Mobility or loss of key personnel</li> </ul>	<p><b>Medium-Term Management Plan</b></p> <p><i>Bringing value to life.</i></p> <p><b>Management strategies</b></p> <p>Safety, The Environment, Human Resources</p> <p><b>The NYK Group's material issues</b></p> <p>Governance</p> <p><b>The Group's Material Issues</b></p> <p><a href="https://www.nyk.com/english/csr/materiality/materialissue.html">https://www.nyk.com/english/csr/materiality/materialissue.html</a></p>	<p><b>Indicators for Measuring Progress on Strategies</b></p> <ol style="list-style-type: none"> <li>Sustained earnings growth</li> <li>Increase in asset and capital efficiency</li> <li>Ongoing improvement in shareholder value</li> <li>Creation of social and environmental value</li> <li>Improvement in human resource capabilities</li> </ol>

**Size of Fleet (number of vessels / deadweight tonnage)\*** 1 4

(End of fiscal 2019)

**784** vessels /  
**67,468k** DWT

\* The number of vessels includes LNG carriers and cruise ship that are owned by joint venture companies. DWT includes the tonnage of other companies' share of co-owned ships.

**Number of Green Financing Deals** 2 4

(Fiscal 2019)

**4** deals

**Recurring Profit of Businesses with Stable Freight Rates** 1 4

(Fiscal 2019)

**¥72.0** billion

**ROE (that of last year shown in parentheses)** 2 3

(Fiscal 2019)

**6.6** %  
(-8.6%)

**Logistics Business Locations** 1 4

(End of fiscal 2019)

**609** locations /  
**46** countries

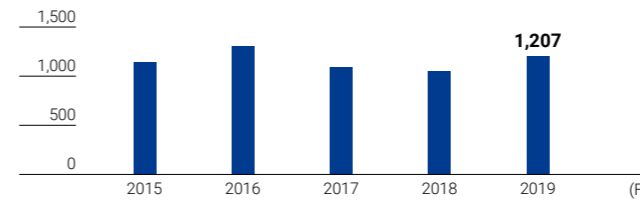
**EPS (that of last year shown in parentheses)** 3

(Fiscal 2019)

**¥184**  
(-¥263)

**R&D Expenses** 1 4

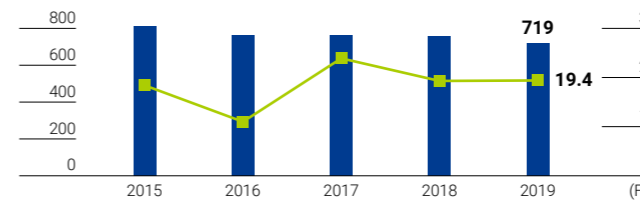
(Millions of yen)



The NYK Group actively develops technology to enhance the safe operation of ships and to protect the environment.

**Trends in Downtime** 1 4

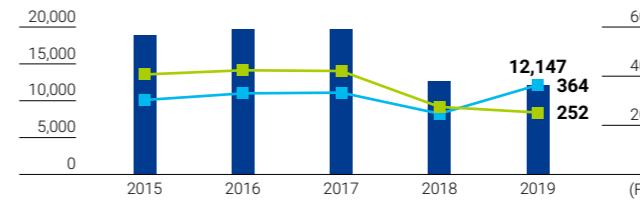
(Vessels) Number of vessels in operation (left axis) Downtime per vessel (right axis) (Hours)



The NYK Group uses the downtime which operations of our vessels are stopped due to accidents and troubles as a measure of the achievement of safe operations.

**CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub> Emissions** 4

(Thousand tons) CO<sub>2</sub> (left axis) NO<sub>x</sub> (right axis) SO<sub>x</sub> (right axis)

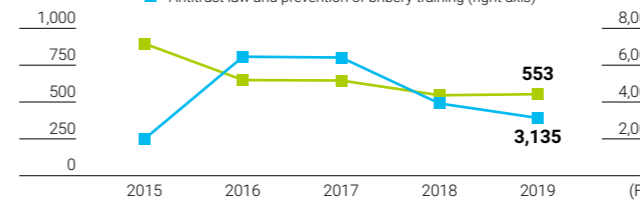


GHG emission volumes of vessels and aircraft are monitored and measured to reduce emissions.

\* From fiscal 2018, figures do not include container ships due to the integration of liner business with NYK, MOL and K-Line to new joint venture ONE. (PDF) Further details are provided on page 80 of the full report.

**Number of Participants in Compliance, Antitrust Law, and Prevention of Bribery Training** 5

(Participants) Compliance training (left axis) Antitrust law and prevention of bribery training (right axis)



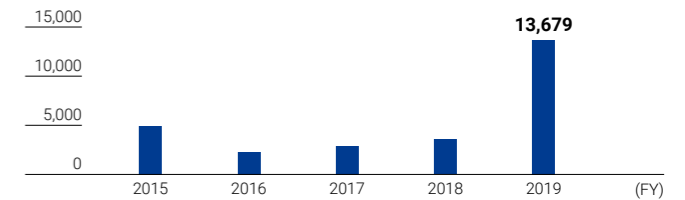
Group employees receive training to improve their understanding of corporate governance.

\* The number of participants for compliance training comprises individuals at headquarters and of domestic Group companies.

\* The number of participants decreased from fiscal 2018 due to the integration of the liner trade businesses of NYK, MOL, and "K" Line.

**Environmental Protection Costs** 1 4

(Millions of yen)

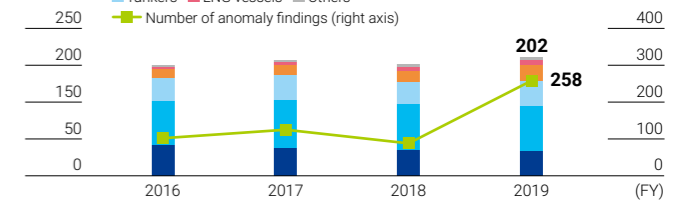


The NYK Group seeks to recognize the costs associated with its efforts to protect the environment.

\* In fiscal 2019, costs were considerably higher than in a typical fiscal year due to compliance with SOx regulations (installation of scrubbers). (PDF) Further details are provided on page 82 of the full report.

**Number of SIMS-Equipped Vessels and Number of Anomaly Findings** 1 4

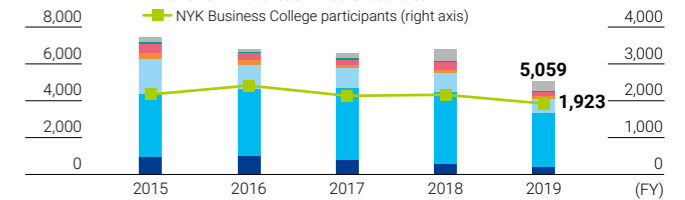
(Vessels) Container ships, Bulk carriers, Pure car and truck carriers, Tankers, LNG vessels, Others (left axis) Number of anomaly findings (right axis)



NYK is promoting analysis of engine plant data collected by SIMS with the aim of quickly detecting of anomalies that may lead to serious engine trouble.

**Number of NYK Business College Participants / Number of NYK Maritime College Seafarer Participants (by Nationality)** 5

(Participants) Japan, The Philippines, India, Croatia, Romania, Indonesia, Other countries (left axis) NYK Business College participants (right axis)



The NYK Business College for office workers and the NYK Maritime College for seafarers have extensive training systems to enhance the overall abilities of Group employees.

\* The number of NYK Business College participants includes Group employees.

**ESG DATA BOOK 2019**

In March 2020, the NYK Group published its ESG DATA BOOK 2019 (in Japanese), which features detailed ESG-related performance data. This report contains more ESG-related data for the purpose of supplementing information disclosure.



[https://www.nyk.com/ir/pdf/2019\\_nykreport\\_12.pdf](https://www.nyk.com/ir/pdf/2019_nykreport_12.pdf)



# Supporting the Challenges of Society and Industry with a Solid Track Record and Technology

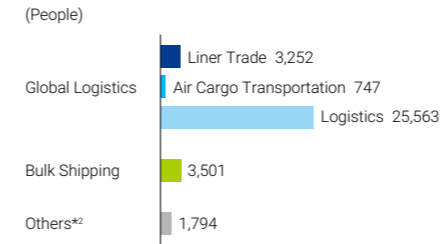
The NYK Group supports society and industry in a myriad of ways. The Group boasts one of the world's largest fleets of ships and an extensive marine transportation network, in addition to a land and air transportation service network, terminal operations, and a broad range of marine businesses derived from the maritime shipping industry. At the root of all this is our reputation, and the confidence it brings, passed down through the generations for more than 135 years, as well as our proven technological capabilities that we have deployed in good faith.

While further refining the trust and technological capabilities of the Group, we will contribute to the realization of a sustainable society while eyeing the future.

## Creation of Work Environments for Diverse Personnel

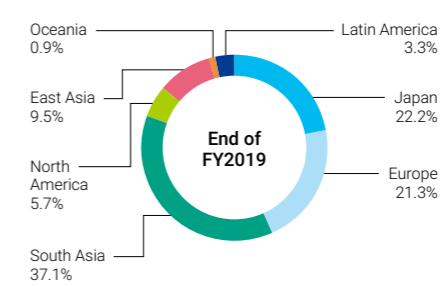
The NYK Group employs approximately 35,000 people of diverse backgrounds. We make a concerted effort to upgrade work environments so that each and every employee can utilize their abilities to the fullest on the global playing field while collaborating together.

### Employees by Segment\*1

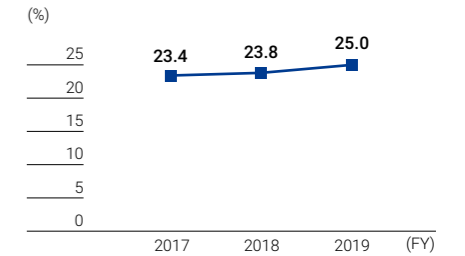


\*1 As of March 31, 2020 \*2 Includes corporate divisions

### Percentage of Employees by Region (Consolidated)



### Ratio of Women Managers (Consolidated)



## Global Logistics

Delivering a full range of transportation services globally using one of the world's largest service networks.

Daily essentials, foods, electronics, auto parts, semiconductor parts

### ONE\*1 Fleet Size

**1,571k** TEUs\*2

(as of March 31, 2020)  
(Source: ONE's fiscal 2019 results briefing materials)

\*1 Jointly established through the integration of NYK's liner trade business with those of MOL and "K" Line  
\*2 Fleet capacity by number of 20-foot container equivalents



No. 6  
in world

### NCA\* Network's Main Bases

**15** cities around the world

(as of March 31, 2020)

\* Nippon Cargo Airlines Co., Ltd.



### Number of Warehouses

**345** locations

(as of March 31, 2020)



## Car Transportation Division

Built a transportation network with pure car and truck carriers around the world while providing inland transport, terminal operation, and PDI services.

Passenger cars, trucks, construction machinery, railcars

### Car Transport Fleet

**103** vessels

(as of January 1, 2020)



No. 1  
in world

### Number of Automobile Logistics Business Sites

**37** locations

(as of April 30, 2020)



## Dry Bulk Division

Safe and stable transport services for iron ore, coal and other natural resources from around the world.

Iron ore, coal, wood chips, grains

### Bulk Carrier Fleet

**173** vessels

(as of January 1, 2020)



No. 2  
in world

### Number of Medium- to Long-Term Contracts\*

**UP 15 %**

(Compared with March 31, 2018)

\* Calculated based on the number of contracts as of March 31, 2018, net number of expired contracts subtracted from newly contracted projects (including non-delivered vessels). Figures refer to the number of CVC and COA contracts of more than two years (consolidated basis).

## Energy Division

Covering the entire energy value chain with optimized and safe transport services.

Crude oil, oil products, chemicals, LNG, LPG, offshore business, green business

### LNG Capacity Share

**6.1 %**

(as of March 31, 2020)



### Tanker Fleet

**79** vessels

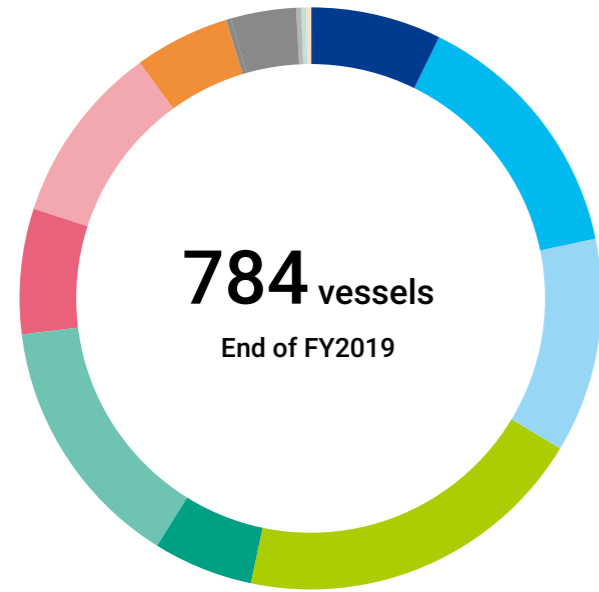
(as of January 1, 2020)



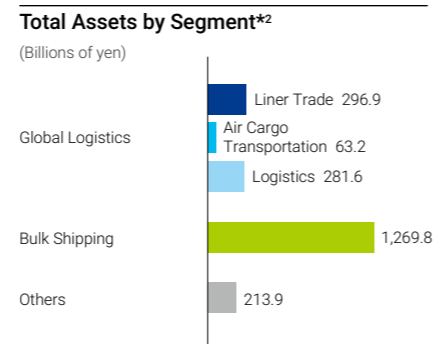
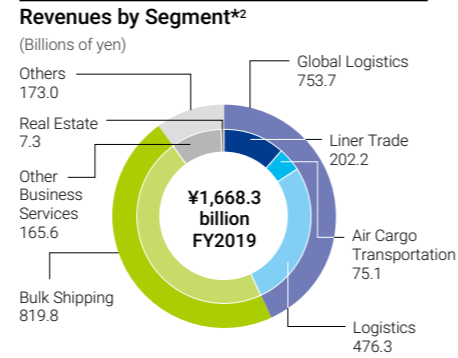


# Our Business Foundation Supports the Challenges of Society and Industry

## NYK Group's Fleet\*1



\*1 Comprises co-owned ships and includes LNG carriers and cruise ship that are owned by joint venture companies



\*2 Prior to eliminations (fiscal 2019)  
Based on the segments of the Company's financial reports

Container ships	58	Multi-purpose carriers	41
Capesize bulkers	114	Other	1
Panamax bulkers	92	Cruise ship	1
Handysize bulkers	155	Shuttle tankers	28
Wood chip carriers	43	FPSO	3
Pure car and truck carriers	111	FSO	2
Tankers	56	Drillship	1
LNG carriers	78		

## Topics The NYK Group's Initiatives in Response to COVID-19

### Response to the COVID-19 Pandemic

The NYK Group is making every effort to maintain stable business operations with a mission to "keep the logistics lifeline open" and fulfill its social missions of supporting global logistics and lifelines.



Please go to the special website we have set up below for more details.

[https://www.nyk.com/english/news/2020/covidinfo\\_20200619\\_01.html](https://www.nyk.com/english/news/2020/covidinfo_20200619_01.html)



### Issues and Measures Related to Crew Changes

The global spread of COVID-19 has led to restrictions on the movement of people in countries around the world, causing problems with crew changes on ships. Crews on cargo ships are usually changed after working for three to six months straight on a ship, but the pandemic has forced crews to work for longer periods on ships. This has led to a variety of situations, such as crew waiting at home to board a ship, crew unable to travel to other countries to board ships, and crew stuck waiting in foreign countries after disembarking because international passenger flights have been suspended. For now, we have been changing crews with the cooperation of our customers and related parties, enabling crew from the Philippines and other nations to disembark in their home countries, away from their normal shipping routes. However, we believe it will take more time to fix the problem of changing crews, which emerged in mid-March.

Changing crews on a regular basis is necessary to maintain mental and physical health, as well as crew employment, and disruptions to this cycle can have a significant impact on international seaborne trade. This problem cannot be solved by the NYK Group alone, and as essential workers, ship crews need to be able to board and disembark from their ships and move between countries with ease. To find a better solution, we are collaborating with external organizations such as the



Meeting on a ships

Japanese Shipowners' Association and the International Maritime Organization (IMO).

### New Workstyles during COVID-19

During the COVID-19 pandemic, NYK is sparing no effort to fulfill its mission as infrastructure that supports society on a daily basis, placing the highest priority on the safety of Group employees, including ship crews, and taking every step to prevent the spread of COVID-19 in business activities.

The NYK Group's businesses cover a broad spectrum, including offices, ships, logistics centers in various areas, as well as marine container and aviation terminals. We are focusing efforts on creating safe work places through the use of IT and promoting the establishment of digital infrastructure. We also view this situation as a good opportunity to improve work efficiency and aim to enhance productivity.

#### Examples

At our offices, we are changing workstyles to allow employees to work from home with IT tools, shifting to online tools for recruiting college graduates, announcing financial results, and disseminating maritime educational information in support of children through social media.

In automobile logistics services, we are reviewing work processes and moving toward contact-less models to counter COVID-19, while also examining and implementing labor-



saving measures for cargo loading and pre-delivery inspection (PDI) work in finished vehicle terminals and logistics centers.

Disinfecting the cockpit (Nippon Cargo Airlines Co., Ltd. (NCA))

# Continuing to Focus on Stable Management While Integrating ESG into the Management Decision-Making Process

We will use the latent strengths that have emerged on our front lines to steadfastly carry out our mission and responsibilities, while considering the uncertainties arising from COVID-19.



**Eiichi Takahashi**

Representative Director,  
Senior Managing Executive Officer,  
Chief Financial Officer, and Chief Executive  
in charge of the Management Planning  
Headquarters

## Summary of the Results for Fiscal 2019 and Earnings Forecast for Fiscal 2020

Despite the impact of the spread of COVID-19 in the fourth quarter, it had a limited impact on our results for fiscal 2019, which surpassed our initial expectations. In the Global Logistics business, operations of Ocean Network Express Pte. Ltd. got on track as the company entered its second year of business, improving its bottom line by optimizing its cargo portfolio, trades, and vessel deployment to achieve a sharp increase in profits from the previous fiscal year. In the Bulk Shipping segment, the Car Transportation and Energy divisions performed strongly. In the changeover to marine fuels compliant with sulfur oxide (SOx) regulations, which had been a matter of concern, careful preparations made with relevant parties, including Group companies, enabled us to continue the smooth provision of stable transportation services after the regulations came into force on January 1, 2020. Beyond demonstrating the NYK Group's strong response capabilities, this was very significant in that we managed to gain the understanding of our customers regarding the considerable cost burden by appealing to them from a perspective of environmental conservation.

In our results outlook for fiscal 2020, amid a high level of uncertainty, assuming that the economic impact of COVID-19 will peak around April to June, with the situation gradually picking up from there, we are projecting recurring profit of ¥20.0 billion in fiscal 2020. Looking at the situation by business, in the Energy Division we are expecting continued, stable profits centered on long-term contracts and supported by firm demand as a part of the social infrastructure. The Global Logistics business, which transports general consumer and durable goods, and the Car Transportation Division were heavily impacted by the stall in economic activity from an early stage, but cargo demand appears to be gradually recovering after bottoming

out in the first quarter. In the Dry Bulk Division, there have been no major changes, but we must expect a decline in profits for the full fiscal year as the market has endured a prolonged slump and is not stable.

## Financial Strategy and Progress under the Medium-Term Management Plan

We face a highly uncertain business environment; however, as a corporate group that supports society and industry through transportation services, we are constantly aware that we can only carry out our mission and responsibilities by ensuring not only stable services but also stable management. To this end, we have secured approximately ¥300.0 billion in commitment credit lines from financial institutions to create a rock-solid financial foundation. We have separately borrowed approximately ¥120.0 billion in long-term funds to cover repayments in fiscal 2020. Even if we were to face a new wave of COVID-19 infections, we would not have any financial concerns for the time being.

Meanwhile, with regard to investments, we plan to steadily allocate funds toward future growth. We have strictly selected investments in new vessels, with the amount of decided investments totaling around ¥230.0 billion as of March 31, 2020, compared with ¥1,130.0 billion at March 31, 2009, during the global financial crisis. In considering new investments, we will prioritize securing free cash flow while aiming for a sustainable business structure and continue to look for opportunities to invest in future growth. Furthermore, as we promote ESG management in the NYK Group going forward, we will also apply an ESG perspective to investment decisions and fund procurement. We believe it is important to integrate ESG properly into our management decision-making process.

In fiscal 2019, as operating cash flows recovered to a certain extent and progress was made in asset disposals, we recorded positive free cash flow of over ¥60.0 billion, which was used to reduce interest-bearing debt. On the balance sheet, the amount of interest-bearing debt has not changed much, but this result includes the impact of around ¥90.0 billion from the adoption of the new IFRS 16 lease accounting standard at the Company's overseas consolidated subsidiaries. In real terms, we reduced our interest-bearing debt by the same amount. We plan to continue liquidizing assets such as cross-shareholdings and real estate. To provide stable returns to our shareholders, we have retained the same dividend policy targeting a dividend payout ratio of 25% and a lower limit on annual dividends of ¥20 per share.

Turning to our medium-term management plan, under which we have set a target for recurring profit of between ¥70.0 billion and ¥100.0 billion, excluding the impact of COVID-19, our earnings capability has recovered to the point where we can generate between ¥50.0 billion and ¥60.0 billion in recurring profit, and we are making steady progress toward this target. We are also advancing strongly on our ROE target of 8%, with a result of 6.6% as of March 31, 2020. We are still some distance from our target debt-to-equity ratio (DER) of 1.5 times or lower, however, with a result of 2.27 times. That being said, this partly reflects the impact of applying the aforementioned lease accounting standard, and we will continue to improve until we reach our DER target. Once we reach a stage where the impact of COVID-19 becomes clearer, we have plans to revise our targets, including quantitative ones. Nevertheless, we are certain that the direction of the business and financial strategies in the medium-term management plan is correct, and at this point we do not intend to change said direction significantly.

## Difficult Times Highlight the Latent Strength of the NYK Group's Accounting Division

As the Accounting Division proceeded with the task of preparing the full-year financial results for fiscal 2019 during the COVID-19 pandemic, we placed employee safety as our first priority and implemented strong measures to prevent infection as much as possible, such as avoiding crowding by using other office spaces and asking people to come to the office only when necessary. As employees from the Accounting Division prepared financial results for the end of the fiscal year in March, our overseas Group companies faced a difficult task amid city-wide lockdowns. However, thanks to all relevant Group company employees carrying out their duties faithfully, we managed to announce our financial results. In a time of unprecedented difficulty, the fact that we have been able to finalize our financial results as in other fiscal years is a testament to the latent strength of the Group's Accounting Division, and I would like to express my gratitude and admiration for their performance.

While people may tend to take preparation of financial results for granted, I believe it is important to strengthen our structures to ensure financial results can be announced properly in any situation to ensure that we are trusted as a company. Going forward, we intend to learn from this experience and review and streamline our existing procedures.

# Efforts to Mitigate Climate Change

The NYK Group recognizes climate change as an important management issue. In December 2018, we announced our support for the final recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and are taking steps to examine the content of our information disclosures and our disclosure measures to ensure they meet the TCFD's stringent expectations. In April 2020, we rebuilt our corporate governance framework to include more concrete indicators and goals as part of efforts toward mitigating climate change, and we have developed related activities on a companywide basis.

## Governance

It is necessary to measure the impact of climate change on the NYK Group's business over the long term and factor these measurements into specific management strategies and other actions. Therefore, in April 2020 we established a management framework, headed by the president, for responding to climate change.

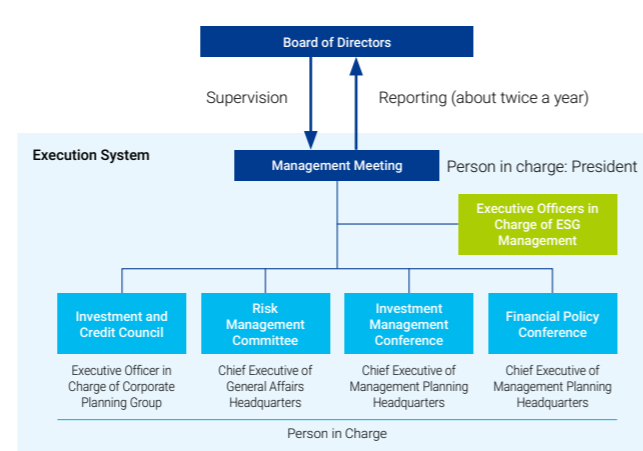
### Key Management Points

- Under the framework for promoting ESG Management (see page 17 for details), matters related to climate change are reported to the Management Meeting (see page 66 for details) by way of a task force comprising members from throughout the Company, and decisions are made after thorough discussion.
- The Management Meeting reports on climate change related matters to the Board of Directors about twice a year in accordance with the Rules of the Board of Directors.
- Executive officers in charge of ESG management participate in meetings of four important decision-making bodies—the Investment and Credit Council, the Risk Management Committee, the Investment Management Conference, and the Financial Policy Conference.

### Key Initiatives after Establishing Framework for Climate Change Response Management

- An executive officer in charge of ESG management has participated in all meetings held by the four aforementioned bodies (at least one officer between the officer in charge and the assistant officer in charge).
- The Risk Management Committee has discussed risks and opportunities related to climate change (see the following page).
- The Management Meeting has held discussions on greenhouse gas emissions reduction as a climate change countermeasure.

Framework for Climate Change Response Management



## Strategy and Risk Management

### Scenario Analysis

The NYK Group recognizes the importance of scenario analysis to assess risks and opportunities related to climate change as well as the importance of understanding the impact of climate change on the Group's businesses, strategies, and finances. Taking a long-term perspective, we are factoring climate change into our original forecasts on transportation demand, in addition to taking steps to manage risks and grasp opportunities based on socially plausible scenarios. The Company uses the World Energy Outlook presented by the International Energy Agency (IEA) as a reference point for future energy-related trends and analyzes the IEA's main Stated Policies Scenario (STEPS) and Sustainable Development Scenario (SDS), which assume the Sustainable Development Goals (SDGs) of the United Nations will be fulfilled. We make independent calculations to measure the impact that risks and opportunities related to

climate change will bear on energy transportation demand, and on seaborne trade demand in particular. In addition, the existence of necessary parameters, such as exchange rates, fuel prices, and carbon taxes, will be also reflected in the Group's business operations.

Ahead of other divisions, in the Energy Division we are making preparations for an effective scenario analysis by identifying any factors that could affect scenarios facing the division, quantifying them in terms of uncertainty and degree of impact, and then mapping out each factor. We are looking into introducing scenario analyses for the Dry Bulk Division and the Car Transportation Division in the future. Based on the information brought to light through these efforts, we will proceed with disclosure to project our future vision and to show its resilience over the long term.

### Major Potential Risks and Opportunities from Climate Change

The NYK Group is working to understand the various risks and opportunities that may arise from climate change. The Risk Management Committee (see pages 71 and 72 for details) monitors the risks facing the Group and its responses thereto and meets annually to confirm the impact of climate change on the Group's businesses from a long-term perspective.

#### Potential Risks and Opportunities

Potential risks and opportunities		Impact on the Group	
Transition Risk	Policies, laws, regulations	<ul style="list-style-type: none"> <li>Stricter environmental regulations (EEDI, GHG reductions)</li> <li>Restrictions on the use of heavy oil, fuel conversion, obligatory use of renewable energy</li> <li>Adoption of market-based measures (MBMs)</li> </ul>	<ul style="list-style-type: none"> <li>Increased capital expenditure, ships become stranded assets</li> <li>Reduced service capabilities</li> <li>Increased costs to purchase credits</li> </ul>
	Technology	<ul style="list-style-type: none"> <li>Response to new technologies and investment</li> </ul>	<ul style="list-style-type: none"> <li>Higher R&amp;D expenses to develop new technologies</li> <li>Existing technology or technology under development becomes obsolete</li> </ul>
	Market	<ul style="list-style-type: none"> <li>Changes in logistics market (local production and consumption, recycling)</li> <li>Installation of renewable energy and autonomous vehicle technology</li> </ul>	<ul style="list-style-type: none"> <li>Changes in cargo demand, reduced cargo volume</li> <li>Increased capital expenditure</li> </ul>
	Reputation	<ul style="list-style-type: none"> <li>Avoidance of use of fossil fuels</li> <li>Bidding criteria introduced for environmental performance</li> </ul>	<ul style="list-style-type: none"> <li>Earlier conversion to new fuels</li> <li>First-mover market capture, increased differentiation</li> </ul>
Physical Risk	Acute	<ul style="list-style-type: none"> <li>Increased incidences of abnormal weather</li> </ul>	<ul style="list-style-type: none"> <li>Schedule delays, increased cargo damage, and quality impairment</li> <li>Increased risk of machinery troubles and ship-handling accidents</li> <li>Increased ship operating costs</li> </ul>
	Chronic	<ul style="list-style-type: none"> <li>Climate change-induced shifts in populations, regional activity</li> <li>Ship investment to meet cargo demand trends</li> <li>Impact on port facilities from rising sea levels</li> </ul>	<ul style="list-style-type: none"> <li>Changes in cargo demand, reduced cargo volume</li> <li>Revised investment plans, increased investment costs</li> </ul>
Opportunity	Market	<ul style="list-style-type: none"> <li>Development of new businesses</li> <li>Development of new technologies</li> </ul>	<ul style="list-style-type: none"> <li>Increased business related to renewable energy such as wind power</li> <li>Increased shipping opportunities for alternative energy sources such as biomass, hydrogen, and ammonia</li> <li>Development of new businesses using existing technologies</li> <li>Reduced fuel consumption due to new technologies</li> </ul>

#### Countermeasures for Climate Change-Related Risks (example)

The NYK Group is moving forward with the following measures to mitigate risks related to climate change.

- Development of governance system
- Development of decision-making process for investments that factors in climate change
- Introduction of risk management methods that account for climate change and performance of scenario analysis
- Greater understanding of cargo demand, including fossil fuels, etc.
- Promotion of switch to LNG-fueled vessels
- Development and practical application of technology for switching to new types of fuel to power vessels
- Acceleration of fuel conservation activities
- Stable procurement of fuel oil compliant with IMO regulations
- Active ESG engagement with financial institutions and investors

#### Metrics and Targets

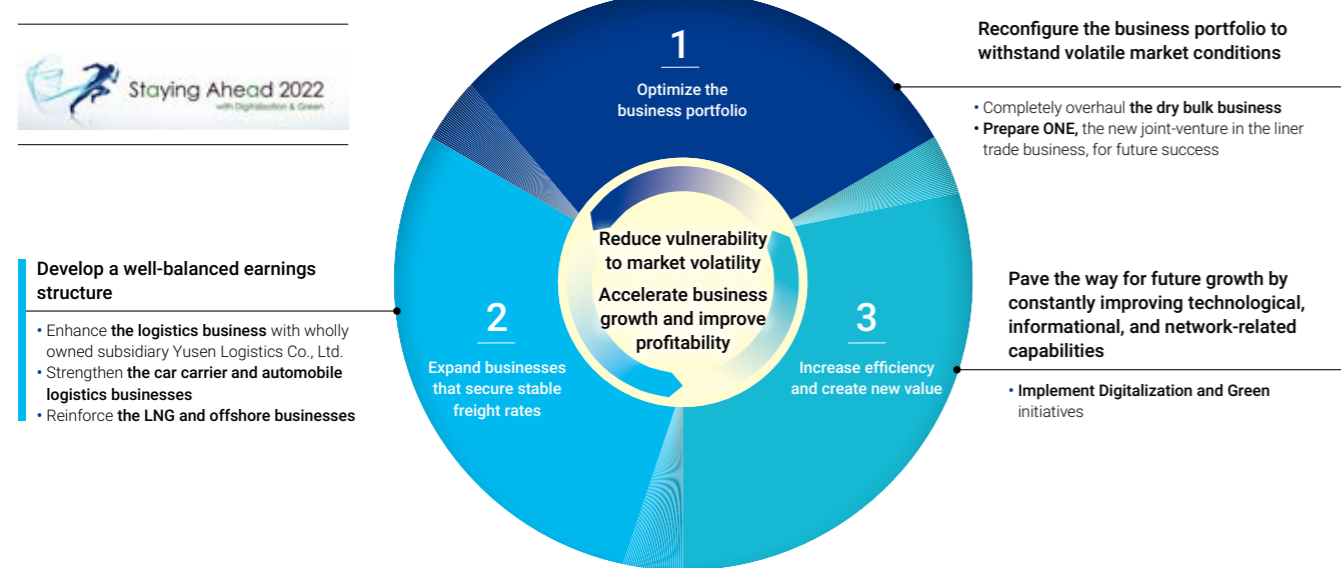
We are engaged in companywide discussions about undertaking greater disclosure of specific metrics and targets. Details of our efforts and qualitative targets are set to be disclosed in the

NYK Group ESG Story, which is scheduled to be released within fiscal 2020. Going forward, we will establish quantitative metrics and targets for disclosure from fiscal 2021.

# Medium-Term Management Plan Progress

We launched our five-year medium-term management plan, "Staying Ahead 2022 with Digitalization and Green," in fiscal 2018. Each business division is now implementing measures in line with the three basic strategies outlined below and achieving steady results. Here, we will look back on the main initiatives and progress in fiscal 2019, the second fiscal year of the medium-term management plan.

## Medium-Term Management Plan



## Progress in Fiscal 2019

Examples of Initiatives

	Plan	Fiscal 2019 results	
STEP 1 Optimize the business portfolio	<b>Dry Bulk</b>	Strictly control market risk exposure Reform our fleet portfolio Strengthen medium- to long-term relationships with customers	Reduced rate of market exposure in the fleet from 35% to 28% (compared with March 31, 2018) Decided to make early redelivery of two high-cost chartered vessels (nine vessels in total since fiscal 2018) Increased medium- to long-term contracts by 15% (compared with March 31, 2018)
	<b>Container</b>	Integration of our liner business together with those of MOL and "K" Line (ONE) Pursue efficiencies and economies of scale to generate ¥110 billion through synergies	Compared with FY2018, performance improved dramatically with profitability restored by thoroughly carrying out the following initiatives: • Cargo portfolio optimization and reinforcement of yield management • Product rationalization • Organization optimization Achieved synergistic effects one year earlier than planned
	<b>Others</b>	—	NCA: Restarted operations after all aircraft temporarily grounded due to improper maintenance. Certificate of continuing airworthiness reinstated after responding to business improvement order
STEP 2 Expand businesses that secure stable freight rates	<b>Promote Growth</b>	Leverage Group business infrastructure for strengthening sales Develop finished vehicle logistics terminals that provide high value-added	Cooperation with YLK resulted in securing project cargo Signed finished vehicle logistics terminal operation agreement in Egypt
	<b>Enhance Investment</b>	LNG fleet plan: around 100 vessels (end of FY2022) Developing business at every stage of the energy value chain, from upstream to downstream	LNG carriers: 78 vessels in operation (nine new LNG carriers will be delivered from FY2020 onward) Signed medium- to long-term contracts for three shuttle tankers and one FPSO
STEP 3 Increase efficiency and create new value	<b>Digitalization</b>	Thorough application of the latest digital technology	Conducted trial of MarCoPay, an onboard cashless system. Received approval from Bangko Sentral ng Pilipinas (central bank of the Philippines) Successfully conducted the world's first manned autonomous ship trial Realized sophisticated maintenance through constant monitoring and diagnosis via sensors Established the NYK Digital Academy to nurture leaders who will drive innovation
	<b>Green</b>	Create new value for the next generation under themes including renewable energy	Signed memorandum of understanding to enter the offshore wind power business with overseas partners Started operation of tidal power generation Started survey of microplastics in oceans Executed sustainability-linked loans

## Results of Initiatives

### Example Initiative

STEP 1

### Decisively Reform Dry Bulk Business to Withstand Volatile Market Conditions

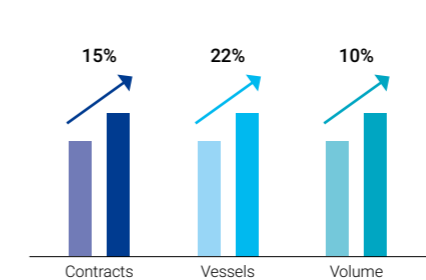
To optimize the portfolio, we are completely overhauling our business and undertaking structural reforms. We are working to increase the number of vessels on medium- to long-term contracts through the early redelivery of high-cost chartered vessels and strengthening medium- to long-term partnerships with customers. We will also manage operations by strictly controlling market risk exposure and utilizing ICT and other tools to reduce costs through efficient vessel allocations and operations, aiming to establish a stable earnings structure.

#### Early Redelivery of High-Cost Chartered Vessels (Vessels)

Targeting 20 vessels over 3 years



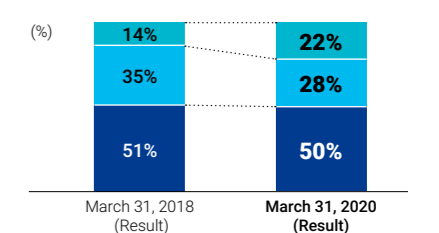
#### Securing Medium- to Long-Term Contracts



\* Comparison between March 31, 2018 and March 31, 2020 on a consolidated basis  
\* Figures are the number of new contracts including vessels to be delivered since April 2018 minus the number of expired contracts. All figures refer to consecutive voyage charters and contracts of affreightment with periods of two or more years (on a consolidated basis).

#### Reduce Market Risk Exposure

Through early returns of high-cost chartered vessels and the securing of medium- to long-term contracts, the exposure fleet rate contracted to 28%.



\* Medium to long term: more than two years  
\* Graph percentages are approximate and may not sum to 100% due to rounding after the decimal point.

### Example Initiative

STEP 1

### Build an Operational Framework That Ensures Reliability and Safety for the Re-Born NCA

Nippon Cargo Airlines Co., Ltd. (NCA) has been conducting a complete overhaul of its business to restore trust since receiving a business improvement order and operation improvement order from the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in fiscal 2018. The company has carried out extensive activities in various areas, including strengthening control and supervisory functions on the front lines and at the business management level, reforming safety promotion meetings, and establishing an information-sharing system and links between frontline operations and back-office divisions. Through these activities, NCA is working to ensure safety and build a stable operating structure.

#### Response to Business Improvement Order

**June 2018** All eight of NCA's B747-8F aircraft were grounded for safety checks.  
**July 2018** A business improvement order and an operation improvement order were received from the MLIT (certificate of continuing airworthiness revoked). The NCA Investigation Committee and the NYK Response Committee were established.  
**August 2018** A 69-point improvement plan was submitted to the MLIT.  
**January 2019** The NCA Investigation Committee drafted the Investigation Committee Report containing 43 proposals. All eight of the B747-8F aircraft resumed operations.  
**February 2019** NCA made an interim report to the MLIT on the improvement measures.  
**June 2019** A progress report was made to the MLIT. All 69 of the planned improvement measures were completed, while subsequent measures to ensure full adherence to the aforementioned improvement measures were implemented.  
**February 2020** NCA received notice of approval of its request for the certificate of continuing airworthiness from the MLIT.  
**March 2020** NCA made its final report to the MLIT on improvement measures. Seven improvement measures and 12 proposals were incorporated into systems and regulations. NCA continued to conduct measures to ensure full adherence over the medium to long term.  
**As of August 2020** Five of the eight B747-8F aircraft have acquired the certificate of continuing airworthiness. All eight aircraft are scheduled to be certified by January 2021.

#### Main Improvements

- Shifted to single-aircraft-type operating system for B747-8F aircraft
- Rebuilt maintenance system
- Ensured companywide awareness regarding the observation of manuals and compliance
- Strengthened control and supervisory functions across the company, including not only at maintenance divisions but also at the business management level

#### Initiatives for Acquiring Continuous Airworthiness Certificate

To receive a safety reevaluation, coordination between the maintenance front lines and the back-office divisions (engineering, maintenance planning, and quality assurance) is important. Individual maintenance operational procedures were thoroughly reviewed and extensive education and awareness-raising among maintenance technicians were carried out to ensure that maintenance operations are executed properly. Furthermore, when situations arise that have not been anticipated by back-office divisions, the front lines indicate areas needing improvement and back-office divisions respond accordingly to ensure mutual understanding through cooperation between both sides and to promote operational improvements. The 60 or so maintenance technicians are divided into three teams to upgrade the management structure. In addition, on-site points of contact with back-office divisions were established to create an environment that facilitates consultations with maintenance engineers. Furthermore, the monthly safety promotion meetings\* have been reorganized to involve members from management, business, and corporate planning divisions, including those on the maintenance front lines and belonging to back-office divisions, to create a structure that allows companywide safety-related discussions and sharing of information. Going forward, building a safe operating structure will continue to be our top priority in the re-born of NCA.

\* A meeting under the Safety Promotion Committee, chaired by the president, for promoting concrete safety activities across the organization. The meeting discusses measures to address safety concerns.

**Example Initiative** **Expand the Automobile Logistics Business**

**3**  
STEP  
**2**

In the automobile logistics business, we are working to expand earnings by operating new finished vehicle logistics terminals in regions around the world. We aim to make transportation and cargo handling more efficient by using digital technology, respond proactively to the environment, and realize sophisticated finished vehicle logistics with an eye on structural changes in the overall automobile industry.

**August 2020**  
**Start of Operations at Yokohama Daikoku C-3 Terminal**

The Company started operations at its first finished vehicle logistics terminal in Japan. Port of Yokohama handles one of the highest volumes of finished vehicles of any terminal in Japan. We operate a finished vehicle logistics terminal leased from Yokohama Kawasaki International Port Corporation. With the introduction of LED lighting for the port and the establishment of a break facility for employees, we aim to make the terminal considerate to both the environment and people.

**First Half of 2021**  
**Commencement of Operations at Finished Vehicle Logistics Terminal in Turkey**

The Company has established a joint venture with a Turkish port management company for building a finished vehicle logistics terminal in Yarimca near Istanbul. This is the first large-scale terminal for handling finished vehicles near Istanbul. It will be equipped with a multistory car park on-site and offer added-value services, such as pre-delivery inspection (PDI) services, including repair and parts application.

**Second Half of 2020**  
**Start of Wind Power Generation Operations at Finished Vehicle Logistics Terminal in Belgium**

The Group operates one of the world's largest finished vehicle logistics terminals at the port of Zeebrugge. We have installed 11 wind turbines at the port in cooperation with the Zeebrugge port authorities and ELECTRABEL SA. We will seek to use the insight gained from this green project to expand this approach to terminals in other locations.

**Second Half of 2021**  
**Opening of First Finished Vehicle Logistics Terminal in Egypt**

In December 2019, the Group signed an agreement with the General Authority for the Suez Canal Economic Zone to operate a finished vehicle logistics terminal at East Port Said in Egypt. We will collaborate with Bolloré Africa Logistics and Toyota Tsusho Corporation to construct the first dedicated terminal for finished vehicles in Egypt, in order to meet rising demand in this regard going forward.

**Example Initiative** **Business Expansion through Energy Value Chain Strategy**

**4**  
STEP  
**2**

In the LNG and offshore businesses, the NYK Group is steadily accumulating medium- to long-term projects with a view to building a stable earnings base. In addition, by responding to demand for LNG bunkering and LNG fuel supply/sales business and new sources of energy, we aim to expand our business into fields where we can leverage our technological capabilities.

**LNG Fleet Plan**

FY2020 or afterward: On Order **9** vessels

As of end of FY2019: Fleet in operation **78** vessels → About **100** vessels planned as of end of FY2022

	Charterer	Vessel Name / Shipyard	Project	FY2020	FY2021	FY2022	FY2023
1	EDF	Elisa Larus	U.S.	→			
2	Mitsubishi Corporation	HHI	U.S.	→			
3	Total	SHI	Worldwide	→			
4	Mitsubishi Corporation	HHI	Canada		→		
5	Mitsubishi Corporation	HHI	Canada		→		
6	Total	SHI	Worldwide		→		
7	Total	SHI	Worldwide		→		
8	Total	SHI	Worldwide		→		
9	Edison	HIHI	Worldwide		→		

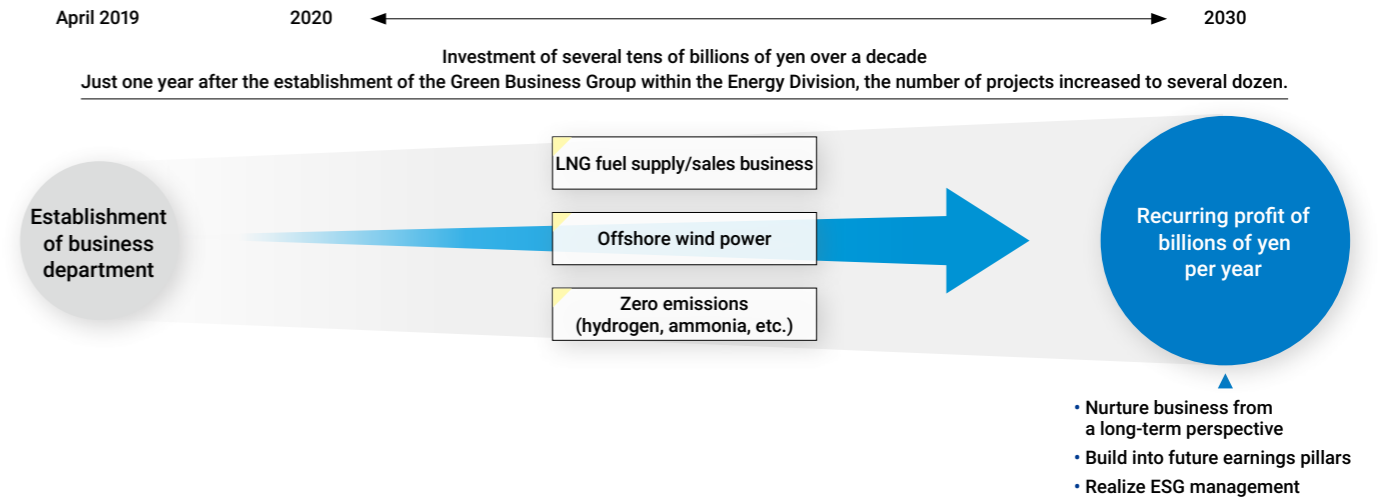
**Offshore Business Projects on Order**

	Value chain	Charterer	Oil Field / Area / Scope	FY2020	FY2021	FY2022	FY2023
1	Shuttle Tanker	Equinor ASA	Brazil / Roncador	→			
2	Shuttle Tanker	Equinor ASA	Brazil / Roncador	→			
3	Shuttle Tanker	Total	Brazil / Roncador	→			
4	Shuttle Tanker	ENI	North Sea and Barents Sea		→		
5	Shuttle Tanker	ENI	North Sea and Barents Sea		→		
6	FPSO	Petrobras	Brazil / Roncador		→		
7	Shuttle Tanker	PetroChina	Brazil / Roncador		→		

**Example Initiative** **Expand Green Business**

**5**  
STEP  
**3**

The NYK Group established the Green Business Group to advance initiatives under Green, one of the themes of the medium-term management plan. As part of these initiatives, we aim to build new business models (see page 30 for details) in the renewable energy field, such as domestic offshore wind power, and centered on the use of LNG fuels as well as hydrogen and ammonia in order to reduce the environmental impact of the Group's fleet. To build these business models into future business pillars, the Group will freely utilize all manner of available resources, including its sales, technology, and intelligence, and promote ESG management.



**TOPICS**

**ESG Approach and Its Relationship to the SDGs**

In the medium-term management plan, formulated in March 2018, the NYK Group selected six of the United Nations Sustainable Development Goals (SDGs) to contribute to through its business activities.

**The NYK Group's Contributions to Achieving the SDGs**



As the NYK Group is dependent upon the oceans to conduct its business activities, it is inevitably drawn to Goal 14 (Conserve and sustainably use the oceans, seas and marine resources). To encourage employees to recognize how the SDGs relate to their own lives, we conducted activities concerning this goal in fiscal 2019.

**The SDG Closely Related to the NYK Group**



- 1 We invited Yukihiro Misawa, manager of plastic countermeasures from WWF Japan, to give a lecture to employees at the head office and at Group companies in Japan on the issue of ocean plastic waste.
- 2 We instituted a policy of serving beverages in paper containers instead of PET bottles to visitors to our head office customer conference room. (Offering refreshments has since been suspended during the COVID-19 pandemic.)
- 3 At the in-house office shop, plastic containers and straws are no longer used/ offered, and plastic shopping bags are no longer provided with purchases. We have also introduced a discount system for people bringing their own cups. (The bringing of one's own cup has been suspended during the COVID-19 pandemic.)

CSR > SDGs Initiatives

We have narrowed down our initiatives through business activities to focus on seven key themes. (as of July 2020)

Main Themes	Main Activities	Sustainable Development Goals
Education for ship crew candidates	• NTMA • In-house training	4, 8, 17
Training of the next generation and initiation of workstyle reform	• Fostering generalists • NYK Digital Academy • NYK Business College • NYK Maritime College • OLIVE and POPEYE projects*	4, 8, 17
Improvements to onboard cash management	• Onboard cashless system (MarCoPay)	8, 17
Green business	• Offshore wind power and tidal power • LNG fuel supply/sales business	7, 13, 17
Innovation	• The concept ship NYK SUPER ECO SHIP 2050 (NYK SES 2050)	7, 13, 17
Safe operation and reduction of environmental impact	• Employment of IoT, big data, AI, and other digital technologies • Adherence to environmental regulations and reductions in CO <sub>2</sub> emissions	8, 13, 17
Conversion to next-generation fuels	• Low carbonization of marine fuels • Decarbonization	7, 13, 17

\* OLIVE (Outdate Long-standing work practices and Increase Vitality of Employees) M-OLIVE (OLIVE Project for Mariners)

\* POPEYE (Promotion of Physical & Mental Enrichment of Yusen Group Employees) and POPEYES (Promotion of Physical & Mental Enrichment of Yusen Group Employees and Seafarers) health management projects

CSR > Human Resources

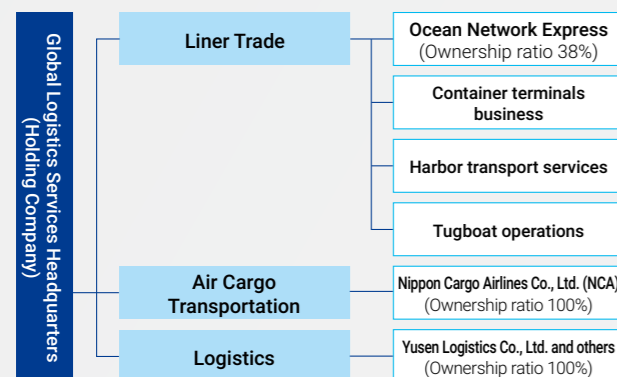
# Global Logistics



We will strengthen the relationships with each operating company and encourage collaboration, aiming to create a sustainable business with stable freight rates as a public service provider.

**Hiroki Harada**  
 Director, Senior Managing Executive Officer  
 Chief Executive of Global Logistics Services Headquarters

## Business Model of the Global Logistics



## ■ Establishing a Sustainable Business Model at the Global Logistics

The Global Logistics Services Headquarters differs from other headquarters in that it is organized as a holding company. Its role is to bring the operating companies together and support them. Each operating company has its own management targets and business plans. However, the Company works to ensure that these targets and plans always align with the medium- to long-term targets of headquarters by strengthening relationships, reinforcing governance, and disseminating the NYK Group's strategies through numerous two-way discussions between each business company and management. The container shipping business, which delivers general consumer goods and production components around the world; the Air Cargo Transportation, which meets emergency transport demand; and the Logistics, a non-asset-type business that comprehensively responds to diverse requests, truly embody the concept of "Bringing value to life." Amid the spread of COVID-19, we faced a novel set of challenges, such as implementing

telecommuting, preventing infection in frontline operations and overcoming difficulties in relieving seafarers and crew changes. However, if we failed to deliver our cargoes, people around the world would be unable to continue their daily lives. For this reason, I believe that our mission as a public service provider is to steadily carry out our operations with a strong commitment to ensuring the continued flow of logistics. As we go forward, we will need to be highly sensitive of changes in supply chains and other areas. However, as long as populations increase and economies grow, demand will always be there. To continue meeting all manner of needs throughout the world, the Global Logistics must have a business structure capable of generating sustainable earnings. The Global Logistics business is part of the infrastructure supporting the global economy and society, and my aspiration is to see it become a sustainable business with stable freight rates. Looking ahead, we aim to achieve a win-win future with all of our stakeholders, including the employees of each operating company, our customers, and business partners.

## ▶ Liner Trade

### ■ Review of Fiscal 2019 and Business Direction for Fiscal 2020

As a result of global-scale business integration, the operating environment of the container shipping business now has seven or eight companies of considerable size operating globally. Three major alliances created by these companies have been controlling supply appropriately in response to demand since before the current COVID-19 outbreak, which is gradually stabilizing the freight rate market. Ocean Network Express Pte. Ltd. (ONE) started operations in April 2018, following its formation by three Japanese shipping companies, and in fiscal 2018 recorded heavy losses as the three aforementioned companies worked to reorganize and integrate their business processes after establishing ONE and took time to create the best practices for the new company, drawing from their

own respective legacies. In fiscal 2019, however, ONE recorded a dramatic improvement, with a profit of US\$105 million, as the company improved its cargo portfolio and its contracts with customers to leverage the benefits of its scale. Since April 2020, the global economy has deteriorated rapidly with the spread of COVID-19. Cargo movements have slumped as demand has receded, but we expect them to recover gradually after bottoming out in the first quarter. ONE will continue to monitor demand trends and proactively adjust capacity to maintain stable freight rates and utilization. Naturally, we do not consider the current profit level to be satisfactory, and we will continue to pursue cost-competitiveness within the industry. Today, the only way to pack products and intermediate goods into standardized boxes and deliver them intact to their final consumption destination is to use shipping containers. Containers are an excellent means of transportation capable of carrying all manner of cargoes, including raw materials and resources, all over the world. We believe they will continue to be needed in the future, and that this business will grow.

## ▶ Air Cargo Transportation

### ■ Review of Fiscal 2019 and Business Direction for Fiscal 2020

Despite a continuing contraction in cargoes arriving in and leaving from Japan due to factors such as the trade dispute between the U.S. and China, since the outbreak of COVID-19 began in March 2020, air transportation supply has been forced to squeeze, and market prices have improved rapidly. Around half of all international air cargoes are carried in the belly space of passenger aircraft. We view the current market environment with 90% of passenger services suspended as just a temporary situation. During the COVID-19 pandemic, NCA has handled a steep increase in demand for medical supplies and related materials and PC-related items for working from home. We are proud to be playing an important role in supporting society in such a manner.

It is extremely unlikely that demand will remain stable in the air cargo sector. In our business, centered on eight dedicated cargo aircraft, we still face the issue of being unable to generate sustainable profit during normal times, and radical measures need to be considered. On the other hand, we have now seen that international air cargo transportation has an issue in that cargo movement is dependent on human movement, and this could lead to a rethink regarding the need for large-scale, dedicated cargo aircraft. By making full use of the characteristics of such aircraft, we will maintain a production system of necessary supply that can

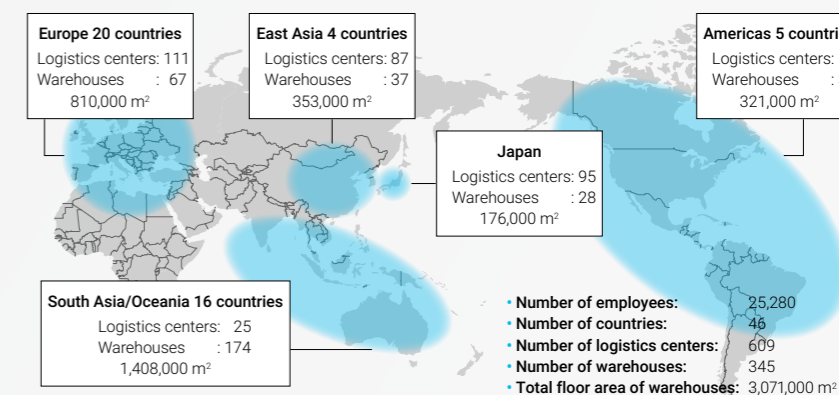
cope with emergency demand while continuing to provide safe operations and stable transportation services.

## ▶ Logistics

### ■ Review of Fiscal 2019 and Business Direction for Fiscal 2020

In both the ocean-freight-forwarding and logistics businesses, handling volumes dropped significantly due to background factors including the trade dispute between the U.S. and China, unrest in Hong Kong, and the COVID-19 pandemic. On the other hand, a dramatic decrease in international passenger flights has given rise to dramatic and unusual changes in the supply and demand environment for the air-freight-forwarding business. Yusen Logistics Co., Ltd. (YLK) has been moving ahead with revising its medium-term management plan TRANSFORM 2025 Phase 2, which was originally scheduled to start in fiscal 2020. However, the environment has been dramatically altered due to the COVID-19 pandemic, and we have been obliged to revise the specific numerical targets for fiscal 2020. YLK will evolve into a strategic partner by closely aligning with its customers and providing new value. At the same time, it will pursue operational efficiency gains through the integration of business processes, which has been an issue to be addressed, and proactively improve its regional business portfolio and organization. Moreover, YLK has developed a global network and is easily the NYK Group's most prominent customer contact point. With its ability to link the Group's frontline capabilities and technologies with customer needs and desires, in addition to its ability to generate ideas and identify opportunities for advancing businesses with partners around the world, YLK is expected to be a powerful supporting force for the NYK Group.

## Logistics Center Locations (As of March 31, 2020)



# Car Transportation Division



In an era of dramatic transformation in the automotive industry, we will continue to work on improving profitability and efficiency by making use of next-generation technology to push through with sustainable growth and business development.

**Takaya Soga**  
 Managing Executive Officer  
 Chief Executive of Automotive Transportation Headquarters

## ■ Establishing a Sustainable Business Model at the Car Transportation Division

The specifications and forms of ownership and sales of automobiles are changing dramatically, from gasoline cars to electric vehicles, from human driving to autonomous driving, from ownership to sharing, and from in-person sales to online sales. Despite these changes, the role of automobiles as tools to enrich human lives remains the same, and their production in areas all over the world is likely to continue. In the same way, as the production and sale of finished vehicles become localized going forward, although we may see a decrease in long-haul ocean transport volumes and an accelerating modal shift toward railway transportation, the logistics-related demand for finished vehicles itself will always be present. Since the Car Transportation Division is involved with extensive operations, from pure car and truck carriers to the automobile logistics business, we should be able to respond flexibly to various needs, whatever form they may take. We will work to continue creating and providing value for the wide-ranging automotive industry.

The Car Transportation Division has all manner of well-honed technologies related to the building and operation of pure car and truck carriers. We continue to pursue the ultimate in transportation quality through deck strength, securing methods, slope anti-slip technologies, established loading/unloading paths, and damage prevention. For example, Group company MTI Co., Ltd. conducts vibration experiments at its lab to propose the most suitable securing methods for new vehicle models. We have a proud tradition of upholding customer trust through such activities. With the coming shift to electrification and advances in automated driving, we envisage new needs such as battery charging and adjustment and supplementation of electronic components during transportation. To meet any kind of request, advanced technical expertise and skills are needed along with a global logistics network. The NYK Group will continue to create

added value using its combined technological capabilities, including those of its Group company Yusen Logistics Co., Ltd.

The division has long been a pioneer in preparing next-generation environmental vessels with a view to promoting ESG management. Over the coming 10 years, all newly built pure car and truck carriers will be LNG-fueled vessels. From the mid-2030s, we aim to switch to zero-emission vessels using new marine fuels such as hydrogen and ammonia. Environmental conservation initiatives are now essential. In this context, the amount of CO<sub>2</sub> emitted in producing a car and delivering it to the end consumer, as well as how much of a contribution the NYK Group can make to reducing said amount, are important matters. We believe that being among the industry front-runners in this regard is itself an important differentiating factor.

In a period of major change, with a dramatic transformation of the automotive industry, a strong emphasis on protecting the environment, and the emergence of a new normal after COVID-19, the Car Transportation Division will not react passively, but will continue actively making and testing hypotheses to push through with sustainable growth and the development of its business.

### Global Car Transport Fleet Ranking (As of December 31, 2019)

Rank	Operator	Vessels	Share (%)	Capacity (Cars)	Share (%)
1	NYK	103	15.0%	616,015	15.2%
2	MOL	92	13.4%	545,309	13.5%
3	Glovis	80	11.6%	444,292	11.0%
4	"K" Line	74	10.8%	458,371	11.3%
5	EUKOR	68	9.9%	369,145	9.1%
6	Grimaldi	59	8.6%	269,137	6.7%
7	WWO	54	7.9%	298,655	7.4%
8	HAL	46	6.7%	524,790	13.0%
9	Toyofuji Shipping	17	2.5%	77,060	1.9%
	<b>Total</b>	<b>687</b>			

Source: NYK based on Hoesne Shipping AS, The Car Carrier Market 2019  
 Note: Table includes only vessels with a capacity of 2,000 vehicles or more.

## ■ Review of Fiscal 2019 and Business Direction for Fiscal 2020

In fiscal 2019, the Car Transportation Division set a target of increasing profitability. Our various initiatives included withdrawing from or reducing unprofitable service routes, assigning vessels with a balance between outbound and inbound vessels, optimizing the fleet's scale, making sweeping improvements to fuel efficiency, and steadily changing over to very low sulfur fuel oil. Furthermore, in the auto logistics business, we expanded the finished vehicle logistics terminal business, while revising our business portfolio based on the operations and financial status of Group companies and deciding to withdraw from or liquidate several of them. Thanks to these initiatives, the Car Transportation Division has achieved its overall initial targets.

Automobile sales activities decreased all over the world from late March 2020 due to the impact of the COVID-19 pandemic, which forced a halt to production activities. The number of finished vehicles shipped out and the number of vehicles transported inland both decreased dramatically in April and May. Thereafter, with the resumption of economic activity in each country, cargo volumes have begun to gradually recover since around July. However, the speed of recovery differs by region, appearing slower in Europe, Latin America, and the Middle and Near East than in North America, Australia, and other places. Looking at the full-year projection, the number of vehicles shipped is expected to fall to around 70% or 80% of the previous year's level, with the Car Transportation Division's profits expected to decline as a result.

In this business environment, the Car Transportation Division will continue to work on improving profitability and efficiency as it did in fiscal 2019. At the same time, we plan to examine and implement strategies for reducing our head count in cargo-handling and pre-delivery inspection (PDI) operations with a view to creating a non-contact business process as a countermeasure to COVID-19. Specifically, at the terminals in Belgium of Group company International Car Operators N.V. (ICO), we are trialing the use of auto guided vehicles (AGVs) to move automobiles mounted on pallets around the cargo-handling yard. Up until now, six human drivers were needed to move an equivalent number of vehicles, but using an AGV enables a single driver to move them. Once the operational efficiency gains and safety are confirmed, we plan to roll out AGVs in Singapore, Thailand, and other countries as well. In addition, we are examining the potential for using cameras to enable remote management of cargo-handling and PDI operations to address issues around maintaining and improving transportation quality.

## ■ Progress on the Medium-Term Management Plan

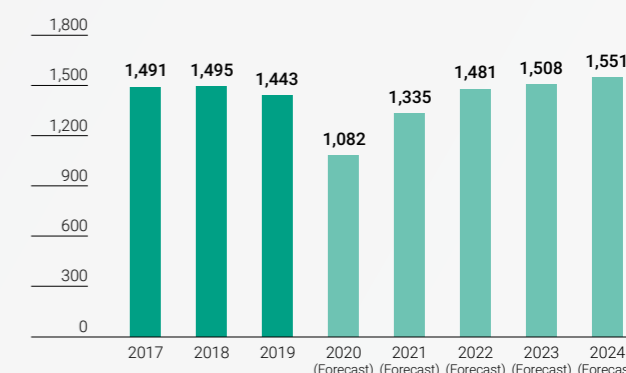
As part of our efforts to strengthen the automobile logistics business, we are proceeding with the opening of finished vehicle logistics terminals globally. Construction on Egypt's first finished vehicle logistics terminal will start in 2021. On August 1, 2020, the

Yokohama Daikoku C-3 Terminal commenced operations. Yokohama Port has one of the highest handling volumes of finished vehicles in Japan, and it is NYK's first finished vehicle logistics terminal in the country, leased from Yokohama Kawasaki International Port Corporation (YKIP). To establish a stable revenue structure and enable provision of value to various stakeholders, we plan to include ESG and sustainability considerations in the operation of the terminal. We have also been promoting wind-power generation at the ICO terminals as a Green initiative and plan to start operations at the end of 2020. Moreover, with regard to Digitalization initiatives, we analyze big data collected by in-house developed ship information management system and now functioning effectively and playing a major role in preventing accidents involving pure car and truck carriers. In fiscal 2019, we achieved zero accidents.

Amid a major transformation in the automotive industry with connected, autonomous, shared & service, and electric (CASE) technologies, we are researching the development of a system for the integrated management of individual vehicle information, from production to delivery to the consumer, using the connected information held by automakers. There are numerous technological hurdles to be cleared, and the system is expected to need a little more time before it is complete, but we believe it will make a huge difference in transforming and streamlining the logistics operations processes for finished vehicles.

### Worldwide Car Transport Volume

(Millions of vehicles)



Source: Created by NYK (including estimates)

# Dry Bulk Division



We will aim to stabilize our earnings structure by promoting reforms to create a flexible organization that is resilient to market volatility.

**Koichi Uragami**

Managing Executive Officer  
Chief Executive of Dry Bulk Division

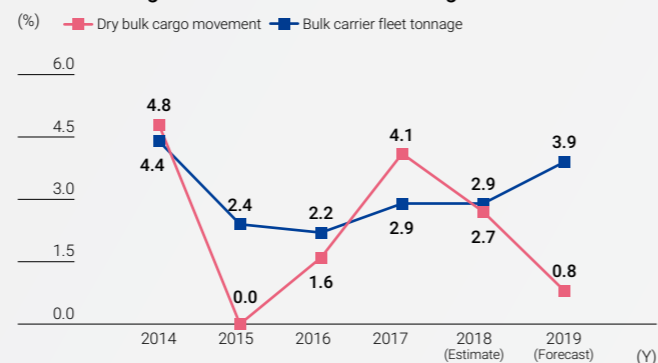
## ■ Establishing a Sustainable Business Model at the Dry Bulk Division

Dry bulk cargoes such as iron ore and grains amount to about 6.0 billion tons annually, around half of total global seaborne trade, which amounts to more than 12.0 billion tons. To meet this transportation demand, the Dry Bulk Division operates about 400 vessels in all, from large dry bulkers, known as capesize vessels, to small dry bulkers, also referred to as handysize vessels. We transport cargoes such as iron ore, grains, coal, and wood chips to destinations in Japan and other countries throughout the world, supporting people's lifelines and industries. The division also transports fossil fuels such as coal, which have become controversial in the face of increasing demand to reduce CO<sub>2</sub> emissions. However, for now these cargoes are vital for relieving chronic energy shortages in rapidly growing Southeast Asian economies and other emerging countries, and for supplying stable electric power to support their social and industrial development. We therefore intend to provide safe, reliable transportation of these cargoes to meet customers' needs. On the other hand, considering the modes of transportation provided by the NYK Group, we will aggressively promote initiatives to reduce CO<sub>2</sub> emissions. In fiscal 2019, we decided to order new large dry bulkers promising to be the world's first to run on LNG fuel for use in transporting coal for thermal power plants. Our ultimate goal in the future is to realize zero-emission vessels. At the present time, however, we will proceed with the conversion to LNG fuel as a bridging solution. Moreover, with regard to our existing vessels, we will actively adopt our refined, low-environmental-impact technologies and strategies for reducing fuel consumption, such as ensuring efficient operations. Through these measures, we will work earnestly with customers deeply invested in environmental issues to reduce our CO<sub>2</sub> emissions.

In the operating environment of the dry bulk business, the proportion of long-term contracts that provide a foundation for

stabilizing earnings is decreasing, and medium- and short-term contracts are increasing. In addition, partly due to the issue of high-cost vessels previously procured, the division currently has a business model that is highly exposed to market volatility. We still intend to continue advancing our countermeasures for high-cost vessels, but by properly ensuring that freight contract periods should meet charter contract periods of vessels, we believe we can create a business that is not only capable of stably generating earnings but is also resilient to market volatility. Amid a growing sense of uncertainty regarding the future, it is anybody's guess how cargo demand will change. That is all the more reason to create an organization that can freely reform its business model and adjust its scale in response to cargo movements and market volatility. In doing so, we will continue to carry out our responsibilities while adhering to our basic commitment of "assigning appropriate vessels when needed to prove worthy of customers' trust" under any conditions.

### Growth in Cargo Movements and Fleet Tonnage



Source: NYK based on Clarksons Research Dry Bulk Trade Outlook, February 2020

## ■ Review of Fiscal 2019 and Business Direction for Fiscal 2020

From January 2020, sulfur oxide (SO<sub>x</sub>) regulations were enacted, leading to an increase in the dry-docking of vessels to fit them with scrubbers for reducing sulfur emissions. Doing so resulted in a decrease in operational vessels, but did not fully relieve the oversupply of vessels. Market conditions for fiscal 2019 trended firmly until the end of the second quarter before reversing direction from the third quarter onward. In the fourth quarter, record torrential rain damage prolonged a stall in cargo movements of iron ore loaded in Brazil, while the COVID-19 pandemic compounded the situation with a deterioration in market sentiment, driving freight rates lower than the decrease in cargoes. The division's use of freight forward agreements (FFAs) as hedges succeeded in minimizing these impacts. Fiscal 2020 has started under difficult conditions due to the COVID-19 pandemic. However, as the first country to restart economic activity, China's activity has been increasing with a slight year-on-year rise in crude steel production and strong year-on-year growth in raw material imports, and larger vessels in particular have been on a recovery trend since around the end of May. Countries are coming out of lockdown and beginning to produce economic measures, and thus cargo movements in Japan, Europe, and the United States are expected to recover gradually. Under these testing market fluctuations, the division is working to build a dry bulk business that is highly resilient to market conditions by further developing and accelerating its key initiatives for improving its earnings structure. In addition, we reorganized the entire division in April 2020 to examine more rational methods. Our first step in this regard was to establish a Tramp Fleet Team to undertake centralized management of our exposure to market conditions. Such management will strengthen the division's countermeasures for high-cost vessels and its formulation and rapid execution of FFA policy. The second step was to establish a Dry Bulk Operation Team. The division's strength and source of differentiation is its capability in vessel operations. Up until now, we have accumulated our operational expertise and the necessary information in each group within the Dry Bulk Division by type of cargo and vessel. By eliminating these boundaries and bringing together the personnel in charge of overseeing vessel operation orders and those on the front lines, we will aim to share best practices to achieve higher levels of performance. Moreover, with regard to budgeting and forecasting revenue and expenses, we have launched a project for establishing common processes within the division and managing them. It will be no easy task to communize administrative processes that each group within the division has spent a great deal of time developing. However, in order for the Dry Bulk Division to work as one to achieve transformation, we believe it is essential to have a common platform comprising the most efficient and highly accurate processes to enable faster and more appropriate decision-making.

## ■ Progress on the Medium-Term Management Plan

Our aim is to build a business portfolio to create a stable business that can secure a certain level of earnings under any market conditions. To that end, we are executing four key initiatives. The first is to meticulously control our exposure to market conditions. By steadily advancing returns of high-cost vessels, we have reduced our exposure to market conditions from 35% to 28%, compared with the end of fiscal 2017, and improved the ratio of matches between freight contracts periods and charter vessel periods. The second is maintaining and expanding long-term contracts. As the pace of change in social trends and in the global economy accelerates, we are strengthening partnerships through proposal-based sales. We have been working to become our customers' preferred solution provider by offering the NYK Group's high-value-added vessels incorporating environmentally compliant technologies along with world-class operational capabilities and maritime expertise. As a result, in fiscal 2019 we won 13 long-term contracts spanning five years or longer. The number of medium- to long-term contracts increased 15% compared with the end of fiscal 2017, showing steady progress. Our third key initiative is securing stable revenues from market-to-market business. In April 2019, we created the Tramp Group, and this has enabled us to steadily secure a certain level of profitability even under low-freight-rate market conditions by efficiently assigning vessels, procuring optimal vessels for contract timings and periods, and securing cargo contracts using our global sales network and other strengths. The fourth key initiative is to open up businesses peripheral to dry bulk. There is a desperate need for a modal shift to vessels that can transport large volumes at once in areas such as bulk logistics and coastal transportation projects, with such vessels also expected to reduce CO<sub>2</sub> emissions. Going forward, we will identify and engage in projects that will constantly drive new value creation, also integrating the perspective of promoting ESG management.

### Bulk Carrier Fleet Ranking (As of January 1, 2020)

Rank	Company	Kt (dwt)	Vessels
1	China COSCO Shipping	31,977	295
2	NYK	15,989	173
3	"K" Line	13,845	115
4	Fredriksen Group	13,529	109
5	Star Bulk Carriers	12,922	117
6	China Merchants	12,922	111
7	MOL	11,277	95
8	Berge Bulk	11,041	56
9	Polaris Shipping Co	9,120	33
10	Oldendorff Carriers	9,043	88
11	Pan Ocean	8,703	62
12	Angelicooussis Group	8,568	49
13	Imabari Shipbuilding	8,563	80

Source: Compiled by NYK based on Clarksons Research Database



# Energy Division



We will grasp demand trends from a long-term perspective and use our global network to pursue new business opportunities and further added value.

**Akira Kono**  
Senior Managing Executive Officer  
Chief Executive of Energy Division

## Establishing a Sustainable Business Model at the Energy Division

As stated in Sustainable Development Goal No. 7, "Ensure access to affordable, reliable, sustainable and modern energy for all," energy is essential for human life. Yet, over one billion people around the world do not have access to electricity in their environments. We believe that the Energy Division's business is connected with our social mission, "Bringing value (in the form of energy) to life," so that various stakeholders will have access to safe, stable, and secure energy.

Energy demand is calculated by predicting population growth, economic growth, and to what extent growth of the economy will raise living standards. The global population currently stands at 7.7 billion and is projected to increase 26%, to 9.7 billion, in 2050. Growth of the economy, however, is difficult to project. That being said, based on annual growth of 2%, for example, the economy is expected to grow by more than 80% by 2050. Considering that living standards are expected to improve, energy demand is virtually guaranteed to continue expanding in the future. The main mission of the Energy Division is thus to make sure it can properly meet demand as it continues to grow, while contributing to the stable supply of energy with a good balance of both fossil fuels and renewables. The division's value chain strategy calls for it to play a part in business at every stage of the energy value

chain, from upstream to downstream. Doing so will enable us to quickly observe energy demand fluctuations and trends going forward so that we can identify new business opportunities and pursue further added value by using our insight and expertise.

On the other hand, considering the long life span of the Energy Division's LNG carriers and offshore business projects, at between 20 and 30 years, and the number of years from making the decision to invest to completing construction, it is necessary to take an extremely long-term view of demand trends and risks. For this reason, the division uses the Stated Policies Scenario (STEPS) in the International Energy Agency's (IEA) annual World Energy Outlook as an indicator of energy demand trends. STEPS is the predominantly used scenario, assuming energy consumption growth of 1.0% per year through to 2040 and the achievement of Nationally Determined Contributions under the Paris Agreement by all countries around the world. However, there is also the Sustainable Development Scenario (SDS), which envisages further reductions in greenhouse gas emissions beyond each country's environmental policies to control the rise in temperatures. To respond to changes in such future scenarios, we have started an initiative in which we list important change phenomena based on STEPS and make fixed-point observations to monitor events that can trigger these phenomena. Looking ahead, we will use scenario analyses to ascertain the impacts and risks to our operations, and utilize these in discussing business

strategies. Taking a bird's-eye view of the outlook for overall energy demand and approaching business management with a long-term perspective are essential for promoting the ESG management advocated by the Company. We will continue to develop these initiatives going forward.

## Review of Fiscal 2019 and Business Direction for Fiscal 2020

Some of very large crude-oil carriers (VLCCs) in the market became non-operational due to economic sanctions on multiple countries and trade friction involving the U.S. The resulting pressure on capacity supply created a surge in freight rates around the summer of 2019. Moreover, the Organization of Petroleum Exporting Countries (OPEC), centered on Saudi Arabia, and other major non-federated oil-producing countries such as Russia, which together make up OPEC Plus, embarked on a large-scale and coordinated oil production cut. A further factor is the emergence of new geopolitical risks sparked by COVID-19. These factors together with global economic trends will need to be monitored carefully going forward.

Overall energy demand at the present time has contracted sharply due to the impact of COVID-19. However, 80% of the division's energy transportation operations comprise medium- and long-term contracts, so we were able to accumulate the anticipated number of long-term contracts in fiscal 2019. During the fiscal year under review, we completed the construction of three new LNG carriers, as well as acquiring a long-term contract that involves an order for one newly built vessel. In our offshore business, we made new contracts for three shuttle tankers and also acquired a medium- to long-term contract for one FPSO.\* Certain business talks were delayed due to the impact of COVID-19, but we expect to be able to capture new contracts in fiscal 2020 as well. Furthermore, we are slated to start phased operations of the Cameron LNG project in the U.S. Thus, the impact of COVID-19 on the Energy Division has been limited, and we anticipate record stable earnings once again in fiscal 2020.

\* Floating production, storage, and offloading system

## Progress on the Medium-Term Management Plan

The Energy Division is steadily carrying out the role expected of it under the medium-term management plan, including accumulating long-term contracts and expanding "Digitalization and Green" initiatives.

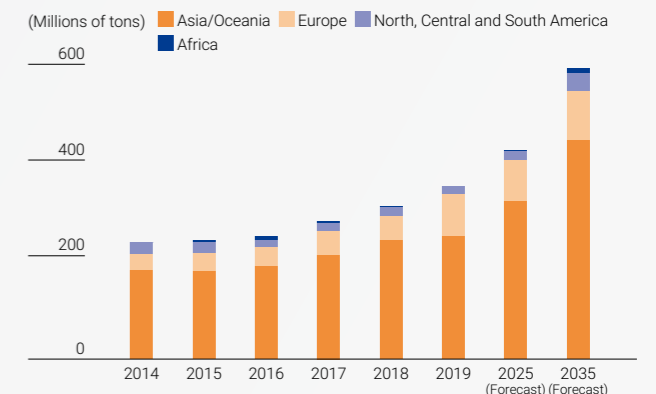
In Digitalization initiatives, the division has started trialing the Ship Information Management System (SIMS), which is being used in other divisions, on its own LNG carriers with cooperation from customers. LNG requires extremely sophisticated cargo management as its liquid temperature is minus 160°C, and the Group has refined its technologies for safely transporting LNG through many years of operational experience. By utilizing this expertise to analyze our accumulated operational big data and realize optimal operations,

we can contribute to reducing fuel consumption, helping bring down both costs and CO<sub>2</sub> emissions. In addition to providing economic benefits and reducing environmental impact, we believe this analysis will help prevent accidents. Another area of focus is to quantitatively visualize these benefits, and we will make use of such efforts as a new kind of added value in business talks going forward.

In our activities for commercializing Green initiatives, one year has passed since we established a dedicated department in April 2019 within the division, and the number of projects has climbed to several dozen. By 2030, we plan to grow this business to a scale where recurring profit reaches several billion yen. We are now about to enter the period for introducing LNG fuel for ships, and we expect to see growth in this area from the late 2020s through to the 2030s. In efforts to achieve zero emissions, there is an increasing focus on alternative fuels such as hydrogen and ammonia, but the technology for these fuels is still currently at the pre-commercial development stage. Going forward, the Energy Division will collaborate with relevant government agencies and leading partners in Japan and overseas, leveraging the NYK Group's strengths in technology and expertise to drive forward R&D and spurring the creation of new value and new businesses.

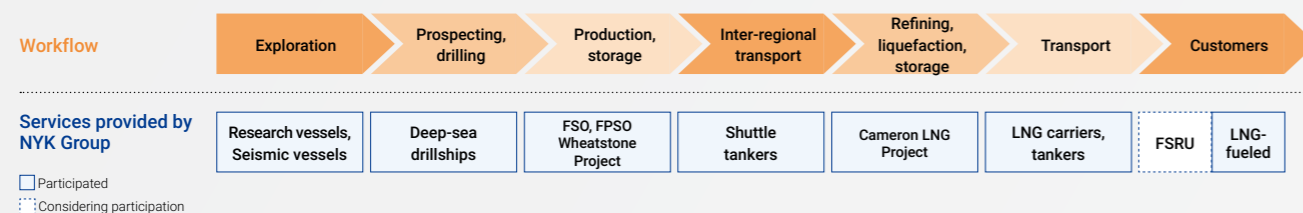
Renewable energy is a field with high growth potential, and the Company plans to engage in it fully. As a first step, we will target the Japanese offshore wind power business, partnering with leading overseas experts through the Group's global network to provide added value at various stages in the value chain, from transportation of materials to power generation and transmission.

## LNG Transactions and Demand Forecasts by Major Market



Source: Compiled by NYK based on IHS Markit LNG Supply Demand Gap 2019

## Offshore Business and LNG Value Chain



## Internal

### Directors



#### Tadaaki Naito

Chairman, Director  
Chairman and Executive Officer

Number of shares held: 46,013  
Attendance at Board of Directors' meetings: 14/14

1978 Joined the Company  
2004 General Manager of Petroleum Group  
2005 Corporate Officer  
2007 Managing Corporate Officer  
2008 Director, Managing Corporate Officer  
2009 Representative Director, Senior Managing Corporate Officer  
2013 Representative Director, Executive Vice-president Corporate Officer  
2015 President, Representative Director, President Corporate Officer  
2019 Chairman, Director, Chairman Corporate Officer  
2020 Chairman, Director, Chairman and Executive Officer



#### Hitoshi Nagasawa

President, Representative Director  
President and Chief Executive Officer  
Executive Chief of ESG Management

Number of shares held: 28,648  
Attendance at Board of Directors' meetings: 14/14

1980 Joined the Company  
2004 General Manager of LNG Group  
2007 Corporate Officer  
2009 Managing Corporate Officer  
2011 Director, Managing Corporate Officer  
2013 Representative Director, Senior Managing Corporate Officer  
2018 Representative Director, Executive Vice-president Corporate Officer  
2019 President, Representative Director, President Corporate Officer  
2020 President, Representative Director, President and Chief Executive Officer



#### Eiichi Takahashi

Representative Director  
Senior Managing Executive Officer  
Chief Financial Officer  
Chief Executive of Management Planning Headquarters

Number of shares held: 19,975  
Attendance at Board of Directors' meetings: 14/14

1982 Joined the Company  
2010 General Manager of Accounting Group  
2012 Corporate Officer  
2016 Director, Managing Corporate Officer  
2018 Director, Senior Managing Corporate Officer  
2019 Representative Director, Senior Managing Corporate Officer  
2020 Representative Director, Senior Managing Executive Officer



#### Hiroki Harada

Director, Senior Managing Executive Officer  
Chief Executive of Global Logistics Services Headquarters

Number of shares held: 7,646  
Attendance at Board of Directors' meetings: 11/11

1983 Joined the Company  
2011 General Manager of Tramp Co-ordination Group  
2014 Corporate Officer  
2018 Managing Corporate Officer  
2019 Director, Senior Managing Corporate Officer  
2020 Director, Senior Managing Executive Officer

\* Attendance by Hiroki Harada at meetings of the Board of Directors is indicated from June 19, 2019, the date he assumed his current positions.



#### Yutaka Higurashi

Director, Managing Executive Officer  
Chief Compliance Officer  
Chief Executive of General Affairs Headquarters

Number of shares held: 6,986  
Attendance at Board of Directors' meetings: N/A

1985 Joined the Company  
2014 General Manager of Legal Affairs Group  
2016 Corporate Officer  
2020 Managing Corporate Officer  
2020 Director, Managing Executive Officer

### Audit and Supervisory Board Members



#### Hiroshi Hiramatsu

Number of shares held: 10,536  
Attendance at Board of Directors' meetings: 14/14  
Attendance at Audit and Supervisory Board meetings: 16/16

1978 Joined the Company  
2004 General Manager of Corporate Planning Group  
2006 Corporate Officer  
2008 Managing Corporate Officer  
2009 Director, Managing Corporate Officer  
2013 Resigned  
2017 Audit and Supervisory Board Member



#### Noriko Miyamoto

Number of shares held: 11,954  
Attendance at Board of Directors' meetings: 11/11  
Attendance at Audit and Supervisory Board meetings: 11/11

1983 Joined the Company  
2012 General Manager of IR Group  
2014 Corporate Officer  
2018 Managing Corporate Officer  
2019 Audit and Supervisory Board Member

\* Attendance by Noriko Miyamoto at meetings of the Board of Directors and the Audit and Supervisory Board is indicated from June 19, 2019, the date she assumed her current position.

### Executive Officers

Senior Managing Executive Officers

#### Tomoyuki Koyama Akira Kono

Managing Executive Officers

#### Takaya Soga Koichi Uragami Shohei Yamamoto Svein Steimler

Executive Officers

#### Nobuhiro Kashima Toru Kamiyama Masashi Suda Shinya Hitomi Taizo Yoshida Kotaro Seki Muneaki Saitoh Kazumasa Okazaki Hideki Suzuki Hiroshi Kubota Shinji Umehara Yuko Tsutsui Toru Maruyama Hiroaki Nishiyama Hisaya Higuchi Hironobu Watanabe Patrick Brennan Jr.

## Outside

### Independent Outside Directors



#### Yoshihiro Katayama

Chief Independent Outside Director

Number of shares held: 12,996  
Attendance at Board of Directors' meetings: 14/14

1974 Joined Japan's Ministry of Home Affairs  
1998 Resigned from the ministry  
1999 Governor of Tottori Prefecture  
2007 Completed term as governor, Professor at Keio University  
2010 Minister of Internal Affairs and Communications  
2011 Resigned from the ministry  
2016 Outside Director of NYK  
2017 Retired from position as professor at Keio University  
2017 Professor at Graduate School of Public Management, Waseda University (current position)  
2019 Chief Independent Outside Director of NYK



#### Hiroko Kuniya

Number of shares held: 5,091  
Attendance at Board of Directors' meetings: 13/14

1981 Announcer and writer for English-language broadcasts of NHK General TV's "Seven O'clock News;" Researcher for "NHK Special" (NHK = Nippon Hoso Kyokai (Japan Broadcasting Corporation))  
1987 Newscaster on NHK satellite broadcasting's "World News"  
1993 Newscaster on NHK General TV's "Today's Close-Up"  
2016 Trustee of Tokyo University of the Arts (part-time, current position)  
2017 Independent Outside Director of NYK



#### Eiichi Tanabe

Number of shares held: 0  
Attendance at Board of Directors' meetings: 11/11

1978 Joined Mitsubishi Corporation  
2008 Senior Vice President  
2012 Executive Vice President  
2016 Senior Executive Vice President, Corporate Functional Officer  
2016 Representative Director, Senior Executive Vice President  
2018 Retired from Mitsubishi Corporation, Advisor of Mitsubishi Corporation  
2019 Independent Outside Director of NYK  
2020 Retired as Advisor of Mitsubishi Corporation

\* Attendance by Eiichi Tanabe at meetings of the Board of Directors is indicated from June 19, 2019, the date he assumed his current position.

### Independent Outside Audit and Supervisory Board Members



#### Hiroshi Nakaso

Number of shares held: 0  
Attendance at Board of Directors' meetings: N/A  
Attendance at Audit and Supervisory Board meetings: N/A

1978 Joined the Bank of Japan  
2003 Director-General of Financial Markets Department of the Bank of Japan  
2008 Executive Director of the Bank of Japan  
2013 Deputy Governor of the Bank of Japan  
2018 Retired as Deputy Governor of the Bank of Japan  
2018 Chairman of Daiwa Institute of Research Ltd. (current position)  
2020 Independent Outside Audit and Supervisory Board Member of NYK



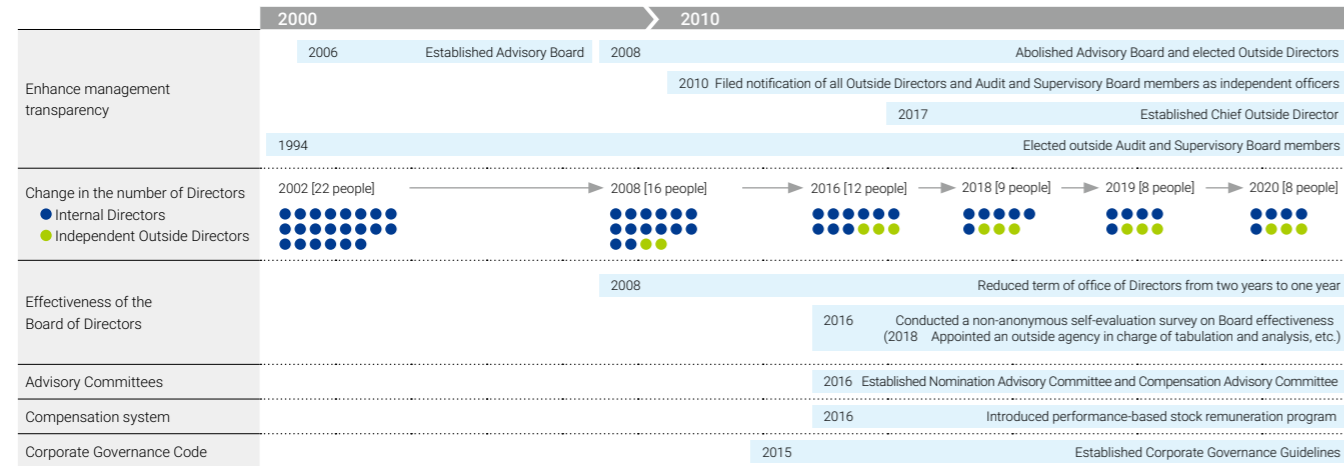
#### Satoko Kuwabara

Number of shares held: 0  
Attendance at Board of Directors' meetings: N/A  
Attendance at Audit and Supervisory Board meetings: N/A

1990 Registered as Attorney-at-Law (Daini Tokyo Bar Association)  
1990 Joined Mori Sogo (currently Mori Hamada & Matsumoto)  
1998 Partner of Mori Hamada & Matsumoto  
2020 Resigned as Partner of Mori Hamada & Matsumoto  
2020 Partner of Gaien Partners (current position)  
2020 Independent Outside Audit and Supervisory Board Member of NYK

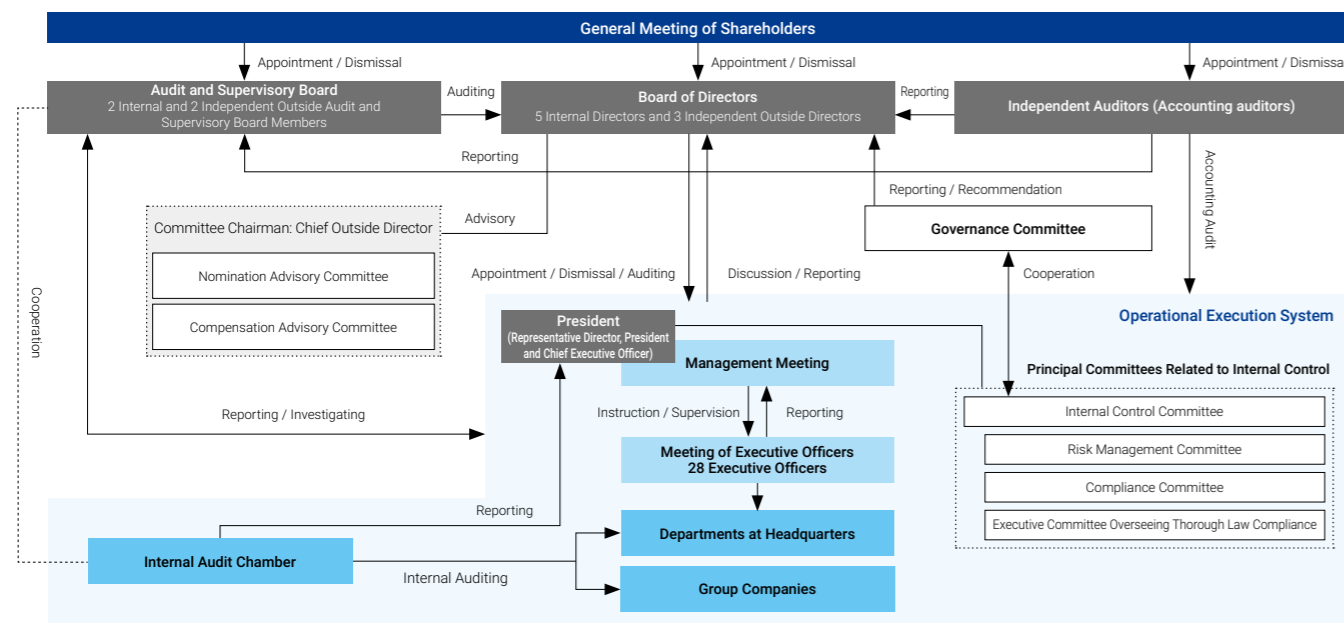


History of Enhancing Corporate Governance



Corporate Governance Guidelines [https://www.nyk.com/english/profile/pdf/gvn\\_report\\_01.pdf](https://www.nyk.com/english/profile/pdf/gvn_report_01.pdf)

NYK's Corporate Governance Organization Chart (as of June 29, 2020)



Initiatives in Fiscal 2019

- Maintained a ratio of independent outside directors and outside audit and supervisory board members of one-third or higher (37.5% for directors and 41.7% for directors and audit and supervisory board members).
- Changed chair of Nomination Advisory Committee and chair of Compensation Advisory Committee to independent outside directors to ensure transparency.
- Revised decision-making process and established Management Meeting in April 2020 to ensure flexible decision-making.
- Changed naming conventions (changed from corporate officer to executive officer) in June 2020 and changed position and prominence of Meeting of Executive Officers to clarify executive responsibilities.
- Enhanced internal auditing function as a means to strengthen Group governance.

Expertise and Experience of Directors (as of June 29, 2020)

The expertise and experience of the directors have been disclosed and communicated to all investors since 2018.

	Age	Number of Years as Director	Portrait	Expertise and Experience														
				Academia / Education	Business Ethics	Business Head / Administration	Corporate Governance	Environment / Safety	Investment	Financial Expertise / Literacy	Government / Public Policy	Foreign Affairs / Geopolitics	Business Assignment Overseas*	Marketing / Sales	Risk Management	Legal / Marine Insurance	Media / Corporate Social Responsibility	Talent Management
<b>Tadaaki Naito</b> Chairman, Director, Chairman and Executive Officer	64	12											Germany					
<b>Hitoshi Nagasawa</b> President, Representative Director, President and Chief Executive Officer	62	9											U.K.					
<b>Eiichi Takahashi</b> Representative Director, Senior Managing Executive Officer	61	4											U.S.					
<b>Hiroki Harada</b> Director, Senior Managing Executive Officer	59	1											U.K. / Belgium					
<b>Yutaka Higurashi</b> Director, Managing Executive Officer	56	-											U.K.					
<b>Yoshihiro Katayama</b> Independent Outside Director Chief Outside Director	68	4																
<b>Hiroko Kuniya</b> Independent Outside Director	63	3											U.S.					
<b>Eiichi Tanabe</b> Independent Outside Director	66	1											U.K.					

\* Includes overseas experience at other companies

We need to deeply instill our purpose and the values we should cherish in all employees, and create a system that enables people to work ambitiously.

Yoshihiro Katayama

Independent Outside Director  
Chief Outside Director



The Governance Committee has been established for one year now, but I am not so sure that we have achieved a common recognition of governance itself. Rather than top-down enhancement of governance, I would like the Group to focus on creating a system and environment in which the members of the organization take on board its mission and code of conduct, with all employees developing a deep sense of their own purpose and the values that they should cherish. Looking back over fiscal 2019, I have been interested in structural problems at subsidiaries and affiliates that seem prone to misconducts or failures, and I have made proposals regarding what I have noticed, such as the status of officers' personnel matters. For loss-making subsidiaries, I encourage giving them autonomy and independence so that they can transform themselves into good companies. Moreover, while the Company has certain limitations due to the nature of its operations, the ratio of

female managers is low, and I must say there is much room for effort and improvement to ensure diversity. I intend to continue focusing on strengthening governance from all aspects going forward.

In risk management, while the NYK Group continues its current business model of using fossil fuels to transport fossil fuels, it is extremely important to be constantly aware of the future beyond this. As we have seen with the current COVID-19 pandemic, it is virtually impossible to accurately project the future of markets and society and to grasp risks in detail. Rather, I think it is vital to have the ability to infer how the near future will play out from daily phenomena.

The NYK Group should aim to be a leader in decarbonizing logistics.

Hiroko Kuniya

Independent Outside Director



Initiatives on the environment are expected to become an increasingly important factor for measuring competitive strength going forward. Within the ESG (Environment, Social, Governance) framework, the NYK Group should actively address environmental issues, to become a leader in decarbonizing logistics. As we go forward, the Group should communicate both internally and externally the impact of the climate crisis on its business, its GHG reduction targets for 2030 and 2050, and its commitment to them. In the next medium-term management plan, it would be desirable to show reduction targets for each business division, as well as to specifying the personnel and budgets required to meet these targets. Moreover, the Group should deepen its exchanges with companies taking a proactive stance on decarbonization and constantly expand its business opportunities while staying abreast of the latest trends in Japan and overseas. The medium- and long-term scenarios for 2030 and 2050 need to be analyzed. The ability to

engage in sufficiently deep debate on climate change risks will be an important aspect of risk management for investment decisions.

With respect to social initiatives, diversity of personnel leads to strength and creativity. Diversity should also lead to stronger risk management and accelerated innovation. The rapid spread of the COVID-19 pandemic brought economic activities to a sudden halt all over the world, taking us by surprise. Sudden dramatic changes in the business environment require flexible and resilient responses. To that end, we should take this opportunity to review and determine whether the Group has created an environment rich in ideas and solutions where diverse personnel, including people on the front lines as well as head office, sales, and engineering personnel, whether they are male or female, young or experienced, can freely express their opinions across organizational lines.

New businesses are expected to emerge amid ESG responses.

Eiichi Tanabe

Independent Outside Director



The business environment for companies is changing rapidly, with the advancement of technology as well as responses to climate change and push-back against globalization. The experience of COVID-19 is accelerating these changes. Amid changing social needs and lifestyles, adapting to the business environment and continuing to grow are difficult tasks for companies. However, times of change also present opportunities to create new businesses. The Company should recognize that stabilizing and entrenching its existing business portfolio alone will make it difficult to grow earnings over the medium to long term and prevent it from meeting the needs of society. The NYK Group has been advocating "Digitalization and Green" initiatives for some time now, and I expect to see new businesses emerging amid its ESG response.

other companies. Improving governance is also in alignment with this objective, and while the Governance Committee established in 2019 is beginning to produce results in this regard, further improvement of organizational capabilities is to be desired.

At Board of Directors' meetings, I monitor management decision-making carefully to ensure that it is acceptable from the viewpoint of every stakeholder. I believe that even more than judgment on individual proposals, it is extremely important to see that a system and culture for making appropriate decisions are taking root firmly in the Company. I will strive to contribute from this perspective as an outside director.

Amid this dramatic change, the pressing question is how well the Company can take risks, which also includes forming alliances with



# Initiatives to Strengthen Corporate Governance

**Yutaka Higurashi**

Director, Managing Executive Officer,  
Chief Compliance Officer,  
Chief Executive of General Affairs Headquarters

## ► Overview

I have spent the past year working to enhance our corporate governance framework. There are two issues that I have addressed. The first was a review of management's decision-making process. We changed the positioning of the Committee of Corporate Officers (currently, the Meeting of Executive Officers)—which was previously tasked with business execution—and newly formed the Management Meeting, comprising executive directors and chief executives. We also clarified the president's decision-making authority as the person responsible for execution and made the decision-making process of the meeting faster and more transparent. Furthermore, to raise the quality of the discussions themselves, we strengthened the systems for organizing and providing high-quality information. Matters of significant importance are to be resolved by the Board of Directors. In the process of proposing matters to the Board, the process of examination and meeting agenda items formulated by the internal execution side are presented in detail to enhance the discussions of and resolution by the Board of Directors.

The second issue was to further enhance internal controls. The NYK Group has over 34,000 officers and employees working at about 200 companies. We have thus created an internal control framework for ensuring that management's intentions are shared across all organizations and levels of the Group and realized. Generally, an internal control framework is categorized into first defense (management within operating divisions), second defense (management support from corporate divisions), and third defense (internal audit divisions). In line with this categorization, we have clarified the location and function of responsibility for each category and organized a chain of command. We have also revised the Company Rules, renewing them to clarify areas of responsibility and

the officers in charge thereof, in a universally understandable manner. Now that we have improved clarity of our rules, we hope to quickly identify issues and autonomously move to improve them, while increasing the sophistication of our internal audit methods and concentrating the Group's relevant resources to make the internal audits themselves more effective.

### Action Plan for Strengthening Corporate Governance

Having formulated an action plan for realizing effective operations, we are now implementing it sequentially.

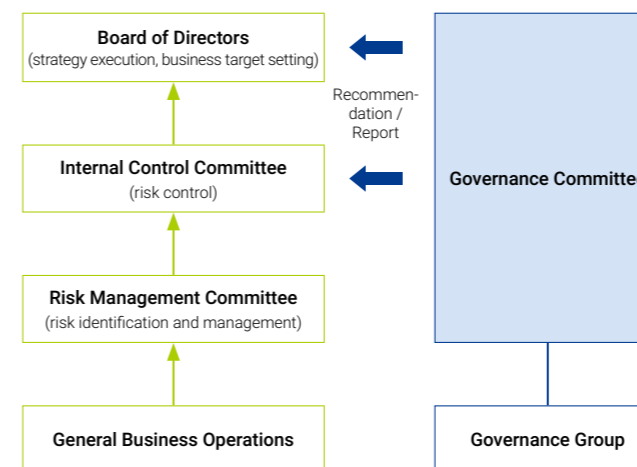
- 1 Improve Board of Directors' effectiveness**
  - Enhance methods for sharing information with independent outside directors
  - Hold discussion meetings
- 2 Strengthen structure for supporting and enacting the business decisions of the president**
  - Reinforce business-planning functions
  - Adopt a flexible and transparent decision-making process
- 3 Strengthen Group governance**
  - Bolster operations of internal control functions
  - Clarify roles and supervisory responsibilities for first and second lines of defense (first: operating divisions; second: corporate divisions) to prevent or quickly uncover fraudulent activity
  - Reinforce internal control functions
  - Revise scope and targets of internal audits and utilize IT to strengthen internal controls as a third line of defense
  - Extension to domestic and overseas group companies
  - Coordinate lines of communication across four global axes

## ► Toward Even Better Corporate Governance

The Governance Committee has now entered the second half of its time-limited activities. In the second year, fiscal 2020, we will consolidate the advances in our internal control initiatives, which we executed in the first year, and shift our focus toward getting the process for autonomously continuing improvements on track. As part of these efforts, we have started "Governance Talk" sessions among senior management and young employees. The sessions are used to precisely confirm that the new corporate governance framework is operating correctly and that participants understand their responsibilities under the new Company rules. We will widen the scope of these sessions to include Group companies in Japan and overseas, aiming to increase awareness of corporate governance among all Group employees. In the process, we will rectify any issues that we find with the framework. Once this PDCA cycle enters its second iteration, we will be able to confirm that the abovementioned first to third lines of defense are functioning soundly, thus seeing the Governance Committee complete its mission.

I was appointed to the legal department in 2014, and the task assigned to me by the Company at that time was to reform the department into one that will play an essential role for the Group now and into the future. The background to this task was an infringement of the Antimonopoly Act that occurred in 2012 (see page 74 for details). Regrettably, compliance violations continued to occur thereafter within the Group. Since my appointment, I have promoted reforms, but, in fact, we have only just arrived at the base camp of the mountain we are to climb. By "base camp," I mean that, by working to deal with these issues, we have finally reached a point where we can see a wider view and are determined to continue climbing even further alongside with many others toward achieving an appropriate level of corporate governance. Over the past few years, the number of groups colleagues that have also started out on this journey has increased. As we hear about the various expectations of our stakeholders, I hope that our operating divisions, corporate divisions, and internal audit division will advance together step by step toward the summit.

### Governance Committee Diagram



### Governance Committee Members (Fiscal 2019)

Name	
Independent Outside Director	Yoshihiro Katayama
Chief Outside Director	
Independent Outside Director	Hiroko Kuniya
Independent Outside Director	Eiichi Tanabe
Internal Audit and Supervisory Board Member	Hiroshi Hiramatsu
Internal Audit and Supervisory Board Member	Noriko Miyamoto
Independent Outside Audit and Supervisory Board Member	Hirohide Yamaguchi
Independent Outside Audit and Supervisory Board Member	Toshinori Kanemoto
Director, Senior Managing Corporate Officer, CCO	Yoshiyuki Yoshida
Director, Senior Managing Corporate Officer, CFO	Eiichi Takahashi

## ► Enhancement of Risk Management

The NYK Group's Risk Management Committee is chaired by the president and meets twice a year. The committee's role mainly comprises three aspects. The first is risk identification. The committee confirms the risks that have an impact on the business activities of each of the seven headquarters and of the Group companies under their supervision in Japan and overseas. Risks may be known risks or newly identified ones. The second aspect is confirming the

probability of risks arising and the individual countermeasures for minimizing the negative impacts of their materialization. Since risks constantly emerge, the committee confirms whether the current risk management system continues to be effective or not. The third aspect is selecting risks that seem material to management from a risk matrix presented by the committee secretariat based on the size of the impact on management and the predicted frequency

of occurrence. The Risk Management Committee performs an important function in terms of risk prevention by ensuring there are no oversights in daily efforts to ascertain and respond to risks.

The Group has provided various kinds of value through comprehensive logistics services based on its original maritime transportation business, and including land and air transportation services. Looking ahead, we will strive to transport value in a host of new ways; however, challenges necessarily involve risks. Naturally, we will employ risk hedges through insurance and similar methods, but it will be essential to co-create with various stakeholders in the challenges we plan to take on going forward. Doing so will necessitate wide-ranging risk control that covers more than just the

Company itself. In other words, we need broad-based corporate governance management that begins with decision-making based on management's judgment and extends to correct business execution after investment.

I believe the broad-based corporate governance management we need going forward will require even greater diversity. The Group actually has a very diverse global workforce. I am of the opinion that sharing organizational targets among our workforce and eliciting their various opinions to entrench diverse viewpoints in frontline business operations constitute the most surefire risk response measure.

| Column |

### How to Be a Resilient Corporation

The NYK Group's basic philosophy is "Bringing value to life," and its livelihood is in the business of delivering various kinds of value. With the recent spread of COVID-19, there is a possibility of a decrease in the goods and value that we have transported to date. However, people always pursue good fortune, and if we change our perspective, we can always generate new value and other transport needs.

Each division must bring all of its organizational capability to bear by carefully observing changes to cargo volumes and trade patterns due to COVID-19, while actively employing all of the Group's accumulated knowledge and expertise. I am in charge of the NYK Maritime Museum and Hikawa Maru, both in Yokohama. Whenever I see these facilities, I am inspired by thinking of the tremendous hardships that the Company has overcome through innovation. COVID-19 may be the first instance we have faced of a threat occurring simultaneously all around the world, but when I look at the museum and Hikawa Maru, I am confident that the strategy to counter this threat will come from our daily efforts and creative ideas.

What I think is best at this point is to make ourselves more resilient as a company, akin to a ship that stabilizes to an upright position after being rocked by a strong wave. I will strive to

ensure that this organization will continue to be one where all of the over 34,000-strong team of Group executives and employees each question their existing ideas of the status quo, become inspired by new viewpoints and approaches, and vigorously discuss the issues they face.



### Board of Directors and Operational Execution System

NYK seeks to construct an appropriate management system that supports transparent and efficient management capable of swiftly and accurately responding to sudden changes in the business environment and that supports fully informed decision-making and oversight by the Board of Directors.

The Board of Directors comprises eight directors, including three outside directors that have met the criteria for independence. The directors are selected to bring diversity and expertise to the Board to stimulate substantive and deep discussions. The Board is configured this way to ensure a sufficient number of internal directors who are well versed in the business of the Group, which is mainly global shipping and logistics operations, and a certain number of independent outside directors with high levels of specialized knowledge that will contribute to corporate management and further enhance the supervisory function of the Board of Directors.

The independent outside directors serve on the Board of Directors and the chief outside director serves as chairman of both the Nomination Advisory Committee and the Compensation Advisory Committee. The independent outside directors also share opinions with the audit and supervisory board members and attend important corporate meetings, including meetings of the Governance Committee, which discusses issues related to internal control. To ensure substantive discussion and deliberation at meetings of the Board of Directors, the independent outside directors are provided with full explanations of discussion topics prior to the meetings and participate in discussion meetings\* among directors and audit and supervisory board members to share information and opinions.

The Company also maintains a system of executive officers comprising 28 executive officers from domestic and overseas group companies, including individuals also serving on the Board of Directors. By resolution and under the supervision of the Board of Directors, the executive officers are authorized to make prompt decisions related to the execution of resolutions of the Board based on prior deliberations and within the scope of authority delegated to them. Furthermore, in April 2020 the Management Meeting was established comprising executive directors as well as chief executives of various headquarters and divisions to ensure more flexible and substantive decision-making. The meeting deliberates on matters to be discussed during meetings of the Board of Directors and other important matters related to business execution.

\*Held after regular meetings of the Board of Directors to exchange opinions on medium- to long-term management issues. The meeting comprises directors, members of the audit and supervisory board, and chief executives of various headquarters and divisions.

### Governance Committee

NYK established the Governance Group in January 2019. The Company is also formulating a governance structure to facilitate active efforts to grasp and report issues and propose ways to improve, and it has established the Governance Committee comprising independent outside directors, audit and supervisory board members, and internal directors to provide highly objective and independent viewpoints on governance issues.

The Governance Committee includes two internal directors with an extensive knowledge of the status of the Group's internal control system and independent outside directors and audit and supervisory board members to provide opinions from an objective point of view. The majority of the committee is outside members to create an atmosphere conducive to discuss that reflect opinions from outside the Company. The committee monitors and evaluates the Group's governance and the business execution of management from an objective perspective and shares its assessments with the Board of Directors to enable executive board members to quickly identify internal control issues and implement effective improvement measures (see page 71 for details). The committee also monitors the progress of the Company's governance improvement action plans, engages in deliberations and discussions about improvements related to strengthening the Company's governance system and improvements related to internal control activities, and gives its recommendations and reports to either the Board of Directors or the Internal Control Committee.

### Internal Control System

The NYK Group maintains the Internal Control Committee that acts as a complementary body to the Board of Directors. This committee is chaired by the president and monitors the status of internal control in four areas: reliability of financial reporting, legal compliance, operating effectiveness and efficiency, and protection of assets. In the event an issue is found, the committee implements corrective measures to ensure the relevant department performs appropriate and effective internal control operations.

The Internal Control Committee monitors the activities of corporate departments that determine companywide systems and internal committees and meetings responsible for cross-functional systems with the objectives of verifying the operating status and strengthening the internal control system.

To establish a more solid group management base, in fiscal 2019 the Group worked to enhance operations of its internal control system with the support of external experts through actions that included implementing a review of the Company rules and strengthen the internal audit function. Furthermore, to strengthen internal governance and spread awareness groupwide, we made efforts to facilitate two-way communication and actively transmit information through events such as talk sessions and by establishing a governance portal site. Through these efforts, we are working to improve understanding of governance among all employees.

### Activities to Strengthen Governance and Spread Awareness

- Conducted talk sessions
  - Three events in January 2020, with a total of 135 participants
  - Four events from July to September 2020, with a total of 399 participants
- Launched governance portal site
  - Launched in January 2020, the site serves as a platform to transmit such information as the Group's efforts to strengthen governance and to communicate messages from executive officers.

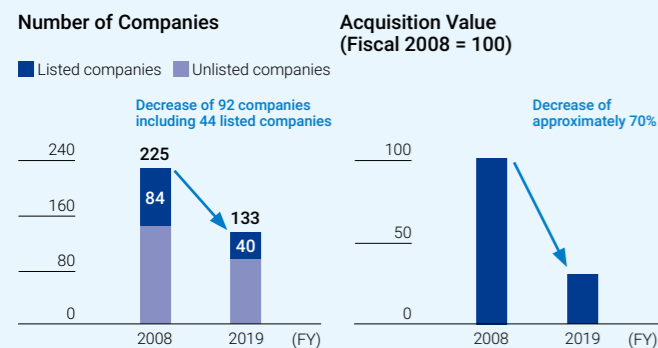
- Posted regular articles in Group magazine
- Provided information related to governance on a monthly basis
- Launching of e-learning
- From fiscal 2020, we plan to implement governance-themed e-learning for both domestic and overseas group companies.

### Policy for Holding Strategic Shareholdings

The Company has adopted a policy to reduce its holdings of strategic shareholdings and has divested approximately 70% (in terms of purchase value) compared to the acquisition value since fiscal 2008. Also, as stipulated in the Corporate Governance Guidelines adopted in November 2015, the Board of Directors annually conducts a comprehensive review of the purpose and objectives of holding individual strategic shares with a focus on the return targets based on the capital cost, the revenue from dividends, general trading conditions and business activities. The number of listed companies in the Company's strategic shareholdings was 40 as of the end of fiscal 2019, down three from the number of 43 as of the end of fiscal 2018.

The Company's current strategic shareholdings are of companies considered to be important business partners with which the Company expects to maintain long-term relationships that will help maintain stable results for the Company. The Board of Directors determined that retaining these shareholdings is suitable for maintaining and strengthening relations with those companies. The Company has set specific standards related to the exercise of voting rights with companies for which it has strategic shareholdings. Under these standards, the Company confirms whether a certain vote will damage the investee company and whether it will contribute to the corporate value of the Company. After these criteria are confirmed and evaluated, a decision to approve or reject a proposal is made.

#### Volume of Strategic Shareholdings (at each fiscal year end)



### Internal Audits

The Internal Audit Chamber conducts internal audits of the Company and domestic group companies based on internal audit rules.

Internal audits for overseas group companies are performed by internal auditors that belong to four overseas regional management offices (the Americas, Europe, Southeast Asia, and East Asia) based

on the policies and guidance of the Internal Audit Chamber.

In fiscal 2019, the Company conducted internal audits of 13 group companies in Japan and 53 business sites overseas. As part of a project to enhance internal auditing, the Company continued to review internal auditing activities and verified the effectiveness of its data analysis methods, which involved checking all expenses-related data, identifying outliers, and other actions.

As this project has progressed, more specialized knowledge and human resources have been required, and, in a move aimed toward improving audit quality, the Company has seconded a total of seven internal audit staff from group companies Yusen Logistics Co., Ltd. and Nippon Cargo Airlines Co., Ltd.

### Group Management Structure

With the overarching objective of enhancing its corporate value, the NYK Group is structuring a Group governance framework and promoting asset efficiency. The Group is revising the management appointment and remuneration decision processes of domestic group companies to improve transparency and unify operating procedures. In addition, the Company has a system of dispatching auditors from a dedicated department to each Group company to oversee directors' business execution and to ensure consistency in the judgment criteria during audits.

For group companies overseas, we have established companies to oversee operations in four regions—the United States, the United Kingdom, Singapore, and China. These companies work with the corporate divisions of the Company to support, strengthen, and optimize governance at overseas subsidiaries in these regions. Moreover, to ensure that management resources are utilized effectively within the Group, we are promoting company integration and expanding shared Group services.

### Executive Committee Overseeing Thorough Law Compliance

The NYK Group previously maintained the Executive Committee Overseeing Thorough Antitrust and Anti-bribery Law Compliance dedicated to ensuring complete Group compliance with the Antimonopoly Act, laws related to bribery, and economic sanctions.

In March 2019, the committee was renamed the Executive Committee Overseeing Thorough Law Compliance, and its scope was broadened beyond compliance to specific laws to cover compliance of all laws, regulations, and licenses.

### Complying with Antitrust Laws

In the global shipping industry, which is subject to the principle of the freedom of shipping (free navigation in international waters and innocent passage in territorial waters), anyone is free to enter or leave the market, which means that it is easy for competition to intensify. To reduce the potential negative impacts from that, such as interruptions to the stable shipping network and reduced shipping and industry competitiveness in emerging countries, the industry

has historically been exempted from the scope of antitrust laws under certain conditions.

With these legal protections diminishing in recent times, it has become common for shipping companies to cooperate through vessel sharing agreements and slot exchanges in order to fulfill infrastructure responsibilities, maintain and improve diverse navigation networks, and manage the frequencies of port calls. As such, companies in the industry encounter many opportunities to make contact with competitors.

Since September 2012, the NYK Group has been subject to investigation by overseas authorities for allegedly violating antitrust laws regarding the shipping of automobiles and other cargo. The Company and some overseas group companies are also subject to class action damage compensation suits in multiple regions.

We offer all our stakeholders a sincere apology for the concerns that we caused.

We implemented various measures including the president declaring thorough compliance with antitrust law, building and operating a control network spanning the entire Group in Japan and overseas, and educating and raising employee awareness through training and manuals on antitrust law and rules concerning contact with other companies in the same industry. Nevertheless, we solemnly accept the fact that this situation occurred and are constructing and initiating a system to ensure absolute compliance with antitrust laws while continuing to raise the awareness of all group employees\* and executive officers.

\* Includes company employees, personnel seconded from other companies, and temporary staff

### Antitrust Laws and Other Legal Compliance Measures

- Annual meetings of the Executive Committee Overseeing Thorough Law Compliance
- Meetings are chaired by the president and attended by directors, executive officers, audit and supervisory board members and general managers.
- September 2019: Meeting held with 107 attendees
- March 2020: Meeting postponed due to COVID-19
- The Executive Committee Overseeing Thorough Law Compliance has met 14 times in total as of March 2020.
- Formulate prevention guidelines and conduct risk assessments of all operating departments of group companies in Japan and overseas
- Review new investment projects by in-house lawyers, etc.
- Obtain written oaths regarding antitrust laws and competition law compliance
- Adopt an application system\* for each officer and employee at headquarters seeking to participate in industry gatherings

\* The system is designed to limit opportunities to interact with companies in the same industry and to require pre-approval to attend necessary meetings and a report on the discussion content after a meeting.

### Absolute Prohibition of Bribery

In January 2014, the Company updated its basic policy and guidelines related to prohibiting bribery to reflect the Japan Unfair Competition Prevention Act (prohibiting the bribing of foreign public officials), the U.S. Foreign Corrupt Practices Act, and the U.K. Bribery Act 2010. Since fiscal 2015, the Company has conducted anti-bribery training for employees in Japan and overseas.

In addition, the Company has been a member of the Maritime Anti-Corruption Network (MACN) since fiscal 2015. MACN is a global network engaged in activities to prevent and eliminate corruption in order to realize fair trade across the entire maritime shipping industry while investigating the root causes of corruption. To reduce the incidence of corruption, MACN has established cooperative relationships with major stakeholders, such as government officials, government authorities, and international organizations.

In April 2016, the Company established a system to prevent the bribery of overseas public officials. When considering new businesses in high risk countries, our legal department screens candidate partners and agents for bribery issues and provides advice and checks, including establishing anti-bribery clauses when creating agreements.

### Fortifying Compliance

Companies around the world are being required to comply with increasingly strict regulations in all regions. The Group's Compliance Committee has been established to maintain and promote awareness of compliance, and it deliberates and makes resolutions regarding the Group's annual compliance plan, policies for compliance-related activities, and other important compliance-related matters.

The Group's Compliance Committee convenes twice yearly and reports its agenda items to the outside directors by way of the Board of Directors.

The NYK Group has set September as the month for strengthening compliance, during which it conducts comprehensive compliance checkups and provides opportunities for staff members to review their conduct and work processes. One activity designed to raise employee awareness of compliance issues is a compliance survey that is distributed throughout the Company followed by several opportunities to provide feedback via the Company's internal web bulletin board.

In April 2020, the Company revised its internal rules related to compliance. In addition to clarifying the rules for reporting compliance incidents (including potential incidents), we held multiple in-house briefing sessions\* regarding the revised rules and the importance of compliance.

\* In-house briefing sessions regarding revised rules held 10 times in remote format from May 2020 to June 2020 (total of 690 participants)

### Compliance Training Programs

Training Programs in FY2019	Number of Programs	Number of Participants
Training on compliance*1	16	553
Training on antitrust law and the prohibition of bribery, etc.*2	199	3,135
e-learning	1	6,198

\*1 Since fiscal 2002, we have held 441 training sessions with 12,488 participants.

\*2 Training was conducted at 111 domestic and overseas group companies in 29 countries, with eight training sessions in Japan and one session every 12 to 18 months in each region overseas. Since the program started in 2009, the program has had some 39,375 participants.

\*3 Data on the transition of the participants mentioned above is indicated in the section "Data on the NYK Group's Sustainability" (see page 43 for details).

# 10-year Summary

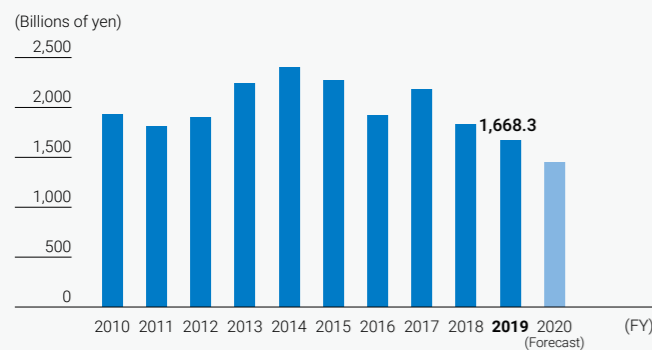
	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
<b>Results of Operation:</b>							
Revenues	¥ 1,929,169	¥ 1,807,819	¥ 1,897,101	¥ 2,237,239	¥ 2,401,820	¥ 2,272,315	¥ 1,923,881
Costs and expenses	1,622,045	1,661,112	1,704,591	1,991,043	2,127,207	2,009,547	1,736,723
Selling, general and administrative expenses	184,777	170,831	175,075	201,200	208,419	213,802	205,236
Operating profit (loss)	122,346	(24,124)	17,434	44,995	66,192	48,964	(18,078)
Recurring profit (loss)	114,165	(33,238)	17,736	58,424	84,010	60,058	1,039
Profit (loss) attributable to owners of parent	78,535	(72,820)	18,896	33,049	47,591	18,238	(265,744)
Capital expenditures	278,570	309,288	302,326	248,230	199,343	115,791	155,993
Depreciation and amortization	100,198	100,857	97,522	105,956	101,045	103,347	92,004
<b>Financial Position at Year-end:</b>							
Total assets	2,126,812	2,122,234	2,430,138	2,551,236	2,569,828	2,244,772	2,044,183
Interest-bearing debt	981,972	1,067,125	1,292,191	1,241,963	1,098,357	940,576	945,391
Shareholders' equity	684,627	579,342	650,490	720,270	810,311	773,678	522,471
<b>Cash Flows:</b>							
Operating activities	174,585	29,837	93,951	136,522	136,448	142,857	27,924
Investing activities	(162,781)	(139,402)	(135,566)	6,409	26,755	(46,895)	(144,612)
Financing activities	(100,161)	72,159	177,966	(95,485)	(199,007)	(160,260)	1,952
<b>Per Share Data:</b>							
Basic net income (loss)	462.73	(429.19)	111.40	194.85	280.60	107.54	(1,572.35)
Equity	4,034.60	3,415.35	3,834.95	4,246.65	4,777.86	4,562.10	3,097.96
Cash dividends applicable to the year	110.0	40.0	40.0	50.0	70.0	60.0	-
Dividend payout ratio	23.8%	-	35.9%	25.7%	24.9%	55.8%	-
<b>Managing Indicators:</b>							
Return on equity (ROE)	11.7%	(11.5%)	3.1%	4.8%	6.2%	2.3%	(41.0%)
Return on assets (ROA)	3.6%	(3.4%)	0.8%	1.3%	1.9%	0.8%	(12.4%)
Return on invested capital	4.6%	(0.6%)	1.1%	2.3%	3.1%	2.6%	0.6%
Debt-to-equity ratio (DER) (Times)	1.43	1.84	1.99	1.72	1.36	1.22	1.81
Shareholders' equity ratio	32.2%	27.3%	26.8%	28.2%	31.5%	34.5%	25.6%

\* Dividend payout ratio has not been indicated when net income has been negative.

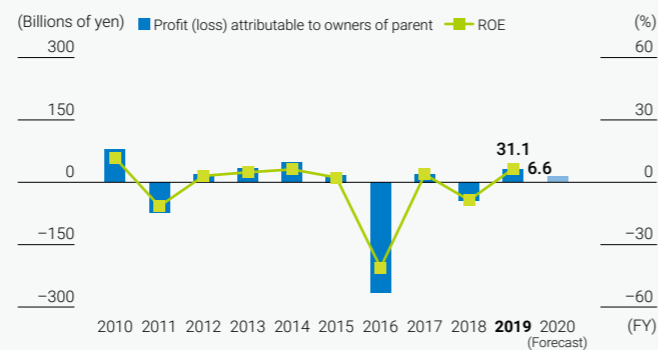
\* On October 1, 2017, the Company conducted a 1-for-10 reverse stock split. The dividends per share in this 10-year summary take into consideration the effect of this reverse stock split.

\* Forecasts for fiscal 2020 have been disclosed based on the performance, and upon announcement of financial results, of each business segment for the first quarter of fiscal 2020 taking into account the trends involving economic stimulus and measures to prevent the spread of COVID-19 in each country, as well as other elements that can be incorporated into the forecast at this time given the characteristics of each business.

## Revenues

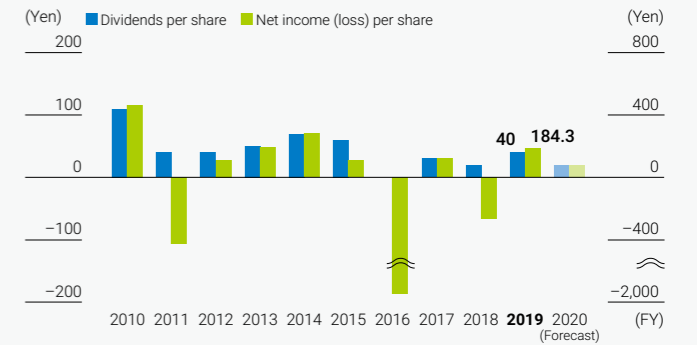


## Profit (Loss) Attributable to Owners of Parent / ROE

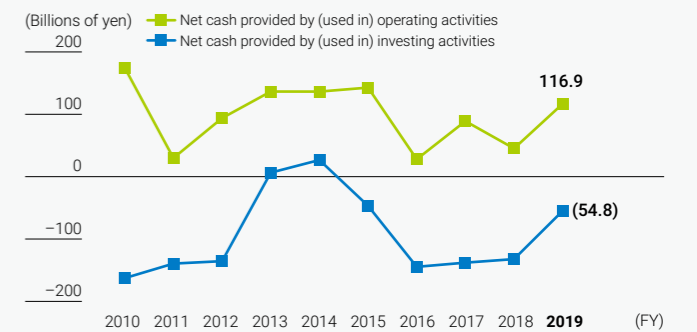


	FY2017	FY2018	FY2019	FY2020 (Forecast)
(Millions of yen)				
	¥ 2,183,201	¥ 1,829,300	¥ 1,668,355	¥ 1,450,000
	1,952,401	1,634,188	1,461,434	-
	202,974	184,026	168,225	-
	27,824	11,085	38,696	13,000
	28,016	(2,052)	44,486	20,000
	20,167	(44,501)	31,129	13,500
	200,443	170,776	139,232	-
	87,839	89,713	104,057	-
(Millions of yen)				
	2,071,636	2,001,704	1,933,264	-
	983,432	1,046,182	1,049,853	-
	551,887	487,432	462,664	-
(Millions of yen)				
	89,090	45,260	116,931	-
	(137,994)	(132,292)	(54,867)	-
	17,587	62,715	(61,733)	-
(Yen)				
	119.57	(263.80)	184.39	79.96
	3,272.21	2,889.26	2,740.41	-
	30.0	20.0	40.0	20.0
	25.1%	-	21.7%	-
(Yen)				
	3.8%	(8.6%)	6.6%	-
	1.0%	(2.2%)	1.6%	-
	1.7%	0.9%	2.7%	-
	1.78	2.15	2.27	-
	26.6%	24.4%	23.9%	-

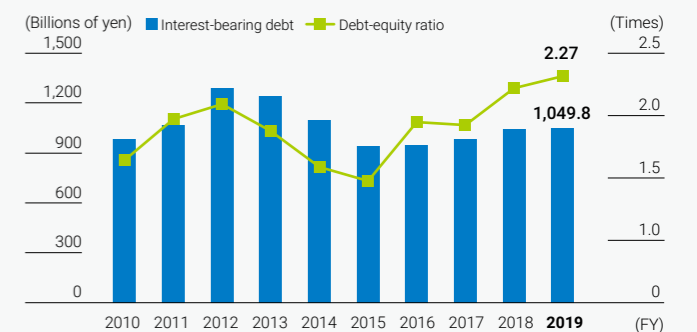
## Dividends per Share / Net Income (Loss) per Share



## Cash Flows



## Interest-Bearing Debt and Debt-Equity Ratio (Gross)



## Ratings

(As of July 31, 2020)

Rating Company	Type of Rating	Rating
Japan Credit Rating Agency, Ltd. (JCR)	Long-term Issuer Rating (Outlook)	A- (Stable)
	Bond Rating	A-
Rating and Investment Information, Inc. (R&I)	Issuer Rating (Outlook)	BBB+ (Negative)
	Long-term	BBB+
	Short-term	a-2
Moody's	Issuer Rating (Outlook)	Ba2 (Stable)



## 10-year Summary By Segment

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
<b>Revenues:</b>							
Liner Trade	¥ 462,163	¥ 418,744	¥ 441,863	¥ 617,494	¥ 696,352	¥ 706,366	¥ 585,904
Terminal and Harbor Transport	122,419	140,089	140,804	-	-	-	-
Air Cargo Transportation	87,234	82,612	77,864	88,854	99,110	91,101	81,919
Logistics	390,929	365,191	366,829	431,567	486,919	496,509	461,361
Bulk Shipping	796,430	730,854	795,587	988,489	995,851	902,291	717,729
Real Estate	11,458	10,849	10,423	9,946	9,504	9,781	9,439
Cruises	35,877	32,471	35,042	45,270	49,802	-	-
Other Business Services	163,535	184,577	173,635	192,767	170,607	147,015	146,614
Elimination and Corporate	(140,878)	(157,571)	(144,950)	(137,150)	(106,327)	(80,751)	(79,087)
Consolidated Total	1,929,169	1,807,819	1,897,101	2,237,239	2,401,820	2,272,315	1,923,881
<b>Recurring Profit (Loss):</b>							
Liner Trade	30,248	(44,757)	(9,433)	(782)	9,807	(321)	(12,716)
Terminal and Harbor Transport	6,699	7,748	6,952	-	-	-	-
Air Cargo Transportation	7,817	3,384	(4,862)	(7,371)	699	1,585	2,631
Logistics	7,750	9,266	4,773	6,534	10,794	11,869	7,650
Bulk Shipping	60,414	(7,786)	18,623	54,884	60,082	46,595	(4,168)
Real Estate	4,368	3,902	3,940	3,824	3,257	3,379	12,079
Cruises	(2,688)	(5,823)	(3,744)	717	2,117	-	-
Other Business Services	(459)	811	1,475	672	(596)	(53)	(1,496)
Elimination and Corporate	15	15	11	(55)	(2,153)	(2,997)	(2,940)
Consolidated Total	114,165	(33,238)	17,736	58,424	84,010	60,058	1,039
<b>Assets:</b>							
Liner Trade	259,367	261,554	280,701	452,479	499,804	419,247	401,983
Terminal and Harbor Transport	138,134	158,466	166,070	-	-	-	-
Air Cargo Transportation	59,992	69,766	90,311	78,845	56,221	47,597	53,004
Logistics	215,219	205,224	217,455	237,998	274,382	250,303	255,189
Bulk Shipping	1,302,705	1,295,649	1,412,501	1,502,207	1,501,200	1,338,549	1,269,346
Real Estate	53,842	54,596	57,372	53,841	56,835	63,542	56,266
Cruises	27,397	28,117	28,659	33,786	44,273	-	-
Other Business Services	507,564	457,568	607,828	552,979	414,123	251,326	209,981
Elimination and Corporate	(437,410)	(408,711)	(430,536)	(360,902)	(277,012)	(125,795)	(201,587)
Consolidated Total	2,126,812	2,122,234	2,430,364	2,551,236	2,569,828	2,244,772	2,044,183
<b>Depreciation and Amortization:</b>							
Liner Trade	9,535	11,471	12,607	16,858	17,660	20,173	17,646
Terminal and Harbor Transport	4,785	4,776	4,789	-	-	-	-
Air Cargo Transportation	740	787	2,320	2,247	2,595	2,160	2,360
Logistics	6,139	6,214	6,376	7,327	8,043	8,202	7,175
Bulk Shipping	74,958	73,710	67,388	75,469	68,688	68,942	61,223
Real Estate	831	924	909	917	1,090	1,118	1,056
Cruises	1,843	1,860	2,044	2,114	1,800	-	-
Other Business Services	1,375	1,122	1,094	1,030	1,387	2,916	2,543
Elimination and Corporate	(13)	(10)	(8)	(9)	(220)	(166)	(1)
Consolidated Total	100,198	100,857	97,522	105,956	101,045	103,347	92,004

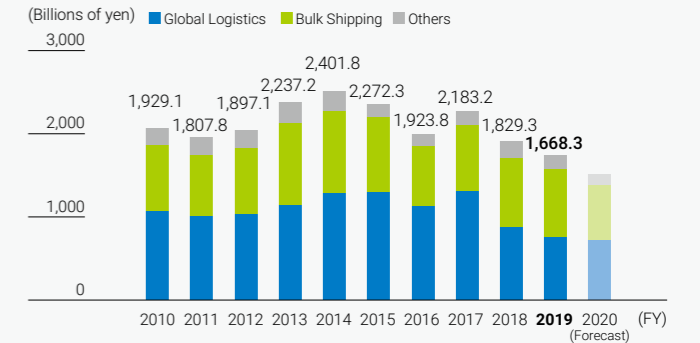
\* Since FY2013, "Terminal and Harbor Transport" has been included in "Liner Trade." In addition, some consolidated subsidiaries have been moved from "Liner Trade" to "Bulk Shipping."

\* Since FY2015, "Cruises" has been included in "Other Business Services."

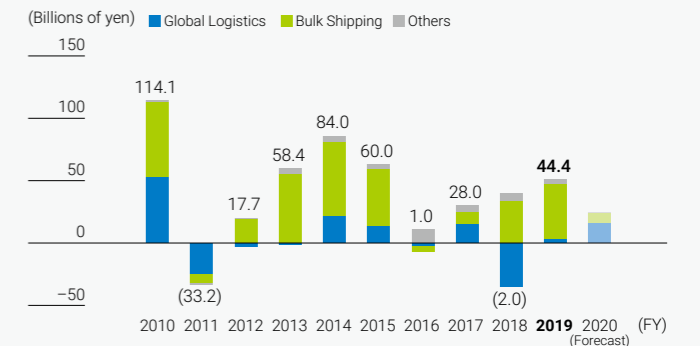
\* Figures before changes to business segment classifications have not been restated.

	FY2017	FY2018	FY2019	FY2020 (Forecast)
	¥ 691,433	¥ 286,339	¥ 202,248	¥ 161,500
	-	-	-	-
	97,826	56,750	75,157	107,000
	512,332	525,826	476,326	444,000
	795,606	841,358	819,807	664,000
	7,941	7,617	7,346	8,000
	-	-	-	-
	172,300	188,158	165,690	127,500
	(94,238)	(76,751)	(78,220)	(62,000)
	2,183,201	1,829,300	1,668,355	1,450,000
	-	-	-	-
	10,874	(26,401)	13,442	1,500
	-	-	-	-
	1,811	(15,969)	(15,583)	13,500
	2,382	7,728	4,721	1,000
	9,643	33,791	44,187	8,000
	2,659	2,747	2,564	2,500
	-	-	-	-
	3,167	3,082	1,773	(2,000)
	(2,522)	(7,031)	(6,619)	(4,500)
	28,016	(2,052)	44,486	20,000
	-	-	-	-
	405,307	361,893	296,981	-
	-	-	-	-
	77,362	64,122	63,205	-
	277,919	281,834	281,608	-
	1,256,094	1,285,305	1,269,819	-
	58,854	57,328	54,948	-
	-	-	-	-
	195,238	171,748	159,032	-
	(199,141)	(220,530)	(192,330)	-
	2,071,636	2,001,704	1,933,264	-
	-	-	-	-
	13,770	11,754	11,668	-
	-	-	-	-
	2,825	4,485	4,006	-
	8,355	9,088	19,881	-
	59,404	60,465	65,982	-
	1,259	1,285	1,355	-
	-	-	-	-
	2,244	2,672	1,216	-
	(19)	(37)	(53)	-
	87,839	89,713	104,057	-

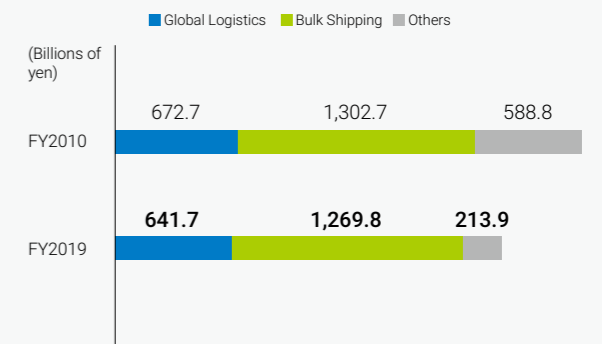
## Revenues



## Recurring Profit and Loss



## Assets



NYK Group GHG Emission Rates for Fiscal 2019

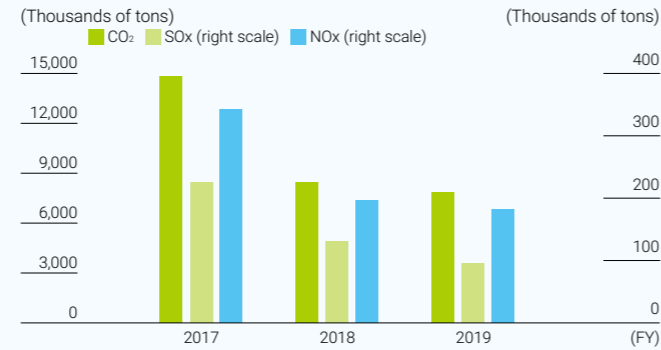
Item	Emission rate
Scope 1 Ships, aircraft, semitrailers, etc.	93.7%
Scope 2 Offices	0.4%
Scope 3 Vessel construction, commuting/business trips	5.9%
<b>Total</b>	<b>100.0%</b>

\* GHG emission data for Scope 1, Scope 2, and Scope 3 has been verified by a third-party organization. Assurance statement (<https://www.nyk.com/english/csr/envi/data/>)

Ships / Aircraft

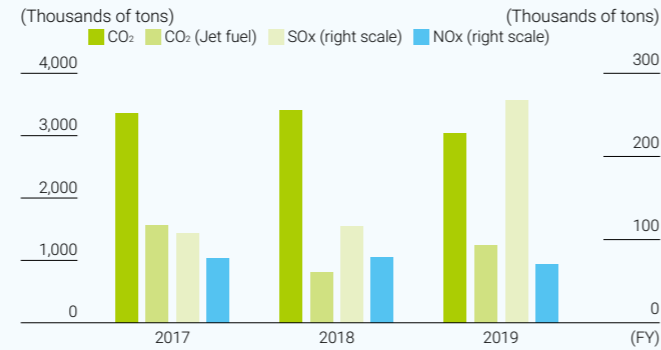
NYK

INPUT (Ships)				OUTPUT			
	FY2017	FY2018	FY2019		FY2017	FY2018	FY2019
	(Thousands of tons)				(Thousands of tons)		
Heavy oil C	4,487	2,574	2,361	CO <sub>2</sub> emissions	14,800	8,473	7,860
Heavy oil A	0	0	0	SO <sub>x</sub>	225	131	96
Diesel	258	143	153	NO <sub>x</sub>	343	196	182



Japan and Overseas Group Companies

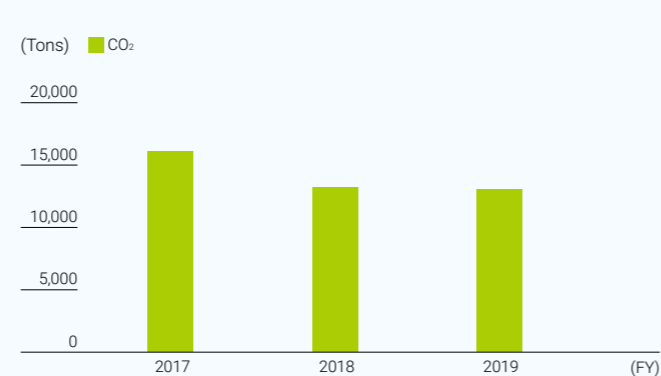
INPUT (Ships)				OUTPUT			
	FY2017	FY2018	FY2019		FY2017	FY2018	FY2019
	(Thousands of tons)				(Thousands of tons)		
Heavy oil C	974	973	876	CO <sub>2</sub> emissions	3,356	3,413	3,040
Heavy oil A	16	20	20	SO <sub>x</sub>	108	116	268
Diesel	85	100	76	NO <sub>x</sub>	78	79	70



INPUT (Aircraft)				OUTPUT			
	FY2017	FY2018	FY2019		FY2017	FY2018	FY2019
	(KL)				(Thousands of tons)		
Jet fuel	625,401	322,673	506,459	CO <sub>2</sub> emissions	1,557	803	1,247

NYK-Operated Container Terminals in Japan

INPUT				OUTPUT			
	FY2017	FY2018	FY2019		FY2017	FY2018	FY2019
	(1,000 kWh)				(Tons)		
Electric power	20,475	16,289	18,082	CO <sub>2</sub> emissions	16,095	13,211	13,035
	(KL)						
Fuel	2,320	2,211	2,088				



\* CO<sub>2</sub> emission volumes from electric power are calculated using the emission coefficient for the electric power supplier with which each terminal has a contract. CO<sub>2</sub> emission volumes from fuel are calculated using the coefficient stipulated in the Global Warming Act.

Offices Input indicates resources and energies we have used.

NYK Headquarters

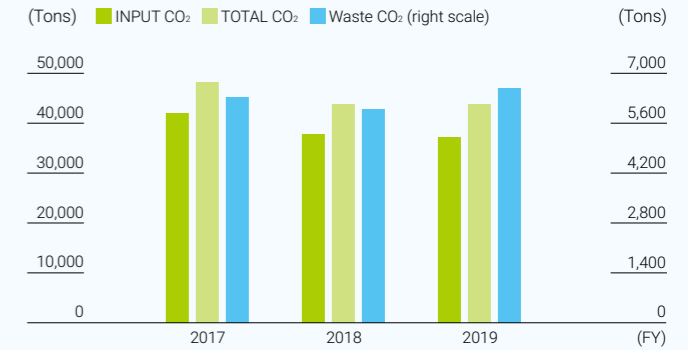
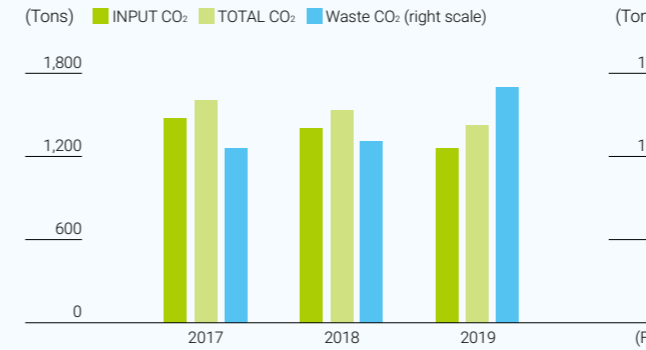
INPUT				OUTPUT			
	FY2017	FY2018	FY2019		FY2017	FY2018	FY2019
	(1,000 kWh)				(Tons)		
Electricity	2,384	2,353	2,194	Ordinary waste	38	40	52
	(KL)						
Heavy oil A	0	0	0	Industrial waste	4	4	5
Heavy oil B C	0	0	0	Recycling	100	103	83
Diesel	0	0	0	Waste CO <sub>2</sub> emissions	126	131	170
Kerosene	0	0	0	INPUT CO <sub>2</sub> emissions	1,479	1,405	1,256
Gasoline	18	15	12	TOTAL CO <sub>2</sub> emissions	1,605	1,536	1,426
	(1,000 m <sup>3</sup> )						
LPG	0	0	0				
City gas	20	21	20				
	(Tons)						
Steam	1,533	1,352	1,028				
	(MJ)						
Heated water	0	0	0				
Cooled water	0	0	0				
	(1,000 m <sup>3</sup> )						
Water supplied by utilities	18	17	15				
	(Tons)						
Paper	22	20	18				

\* Electricity consumption includes all tenants in the headquarters building.  
 \* CO<sub>2</sub> emission volumes are calculated from electric power consumption. CO<sub>2</sub> emissions in fiscal 2019 have been calculated using the coefficient of 0.468 kg-CO<sub>2</sub>/kWh provided (fiscal 2018 result) by TEPCO Energy Partner Incorporated formerly Tokyo Electric Power Co., Inc.  
 \* Of the CO<sub>2</sub> emissions for fiscal 2019, part of the electricity used at the headquarters (115,383.35 kWh) has been offset by using green power.  
 \* The waste volume recycling rate was 77%.  
 \* CO<sub>2</sub> emissions for the past two fiscal years, including those from ordinary and industrial waste, have been recalculated.  
 \* Input CO<sub>2</sub> emissions are the CO<sub>2</sub> emissions created by the input item.

Group Companies in Japan

INPUT				OUTPUT			
	FY2017	FY2018	FY2019		FY2017	FY2018	FY2019
	(1,000 kWh)				(Tons)		
Electricity	53,470	49,292	51,930	Ordinary waste	832	939	957
	(KL)						
Heavy oil A	7	9	9	Industrial waste	1,474	1,211	1,426
Heavy oil B C	0	0	0	Recycling	208	314	317
Diesel	4,849	4,624	4,415	Waste CO <sub>2</sub> emissions	6,340	5,981	6,594
Kerosene	56	50	47	INPUT CO <sub>2</sub> emissions	41,911	37,785	37,213
Gasoline	651	615	579	TOTAL CO <sub>2</sub> emissions	48,251	43,766	43,807
	(1,000 m <sup>3</sup> )						
LPG	57	51	71				
City gas	456	377	317				
	(Tons)						
Steam	216	222	134				
	(MJ)						
Heated water	437	1,519	2,048				
Cooled water	149,981	163,121	115,012				
	(1,000 m <sup>3</sup> )						
Water supplied by utilities	221	218	123				
	(Tons)						
Paper	585	457	420				

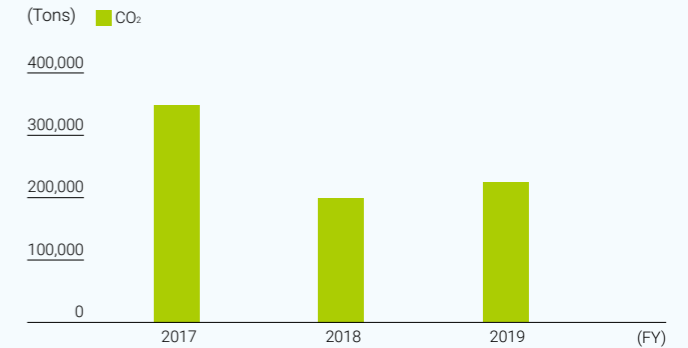
\* CO<sub>2</sub> emission volumes are calculated from electric power consumption. CO<sub>2</sub> emissions in fiscal 2019 have been calculated using the electric utility coefficients (fiscal 2018 results) published by the Ministry of the Environment.  
 \* Figures are for consolidated subsidiaries.  
 \* CO<sub>2</sub> emissions for the past two fiscal years, including those from ordinary and industrial waste, have been recalculated.  
 \* Input CO<sub>2</sub> emissions are the CO<sub>2</sub> emissions created by the input item.



Overseas Group Companies

INPUT				OUTPUT			
	FY2017	FY2018	FY2019		FY2017	FY2018	FY2019
	(1,000 kWh)				(Tons)		
Electricity	88,517	55,866	60,793	CO <sub>2</sub> emissions	349,104	199,471	224,465
	(KL)						
Gasoline	79,978	42,278	26,344				
Diesel	39,636	21,050	48,520				
	(Tons)						
LPG	1,021	616	588				
	(1,000 Nm <sup>3</sup> )						
Natural gas	10,637	7,137	4,921				

\* CO<sub>2</sub> emission volumes are calculated from electric power consumption. CO<sub>2</sub> emissions have been calculated using Greenhouse Gas (GHG) Protocol coefficients.  
 \* Figures are for consolidated subsidiaries.  
 \* The number of reporting companies decreased from the previous fiscal year owing to the transfer of the liner trade business to ONE, a joint venture with MOL and "K" Line, in fiscal 2018.



The NYK Group annually reviews its environmental results to promote responsible environmental protection in its business activities and to accurately track costs associated with environmental activities. In fiscal 2019, we prioritized installing electronically controlled engines and SOx scrubbers on our vessels.

Comparison of All Costs and Results Related to Environmental Activities

		FY2018	FY2019
Prevention of global warming and air pollution, conservation of marine environments, conservation of resources, and deployment of environmental technologies	Environmental protection costs	3,551	13,679
	Year-on-year savings	3,765	396

NYK's In-House Classifications

Environmental policies	Objectives	Items	Environmental protection costs (Millions of yen)
1. Continuous improvement	Maintenance of environmental management systems	Construction, operation, ISO certification (including personnel costs)	85
2. Compliance	Restorative work in response to environmental degradation	Restorative work in response to marine pollution, etc.	0
3. Safe operations	Reduction of accidents and trouble	NAV9000 and other safety promotion activities (including personnel costs)	225
4. Prevention of global warming and air pollution, protection of ocean environments, conservation of natural resources	Prevention of global warming and air pollution	Use of fuel additives to improve combustion, activities to reduce ship fuel consumption, propeller polishing, etc.	872
	Prevention of marine pollution	Use of corrosion-resistant steel in VLCC cargo tanks, etc.	0
	Conservation of natural resources	Environmentally conscious purchases**	0
5. Use of environment-friendly technologies	Prevention of global warming and air pollution	Installation of electronically controlled engines, installation of exhaust gas economizers and other energy-saving devices, low-sulfur fuel measures, etc.	7,886
	Prevention of destruction of the ozone layer	Ship air-conditioners, refrigerators / freezers, etc.	0
	Prevention of marine pollution	Ballast water management systems and the NYK bilge treatment system, etc.	3,981
	R&D expenses	Smart fleet operations, technology to reduce the CO <sub>2</sub> and NOx emissions of large main engines in vessels	618
6. Environment education	Greater environmental awareness and promotion of our Green Policy	Environmental e-learning, environmental protection campaigns, etc.	1
7. Community activities to promote environmental awareness	Environmental information disclosure, social contributions, etc.	Expenses for NYK Report, sponsorship of environmental organizations, etc.	11
<b>Total</b>			<b>13,679</b>

\*1 The Company uses FSCR-certified paper, but the price difference is not substantial and is thus recorded as zero.

Classification According to the Environmental Accounting Guidelines of the Ministry of the Environment

Environmental protection costs	Investments	Expenses
(1) Costs within NYK business activities:		
a. Pollution prevention costs	11,368	112
b. Global environmental protection costs	573	686
c. Recycling costs	0	0
(2) Upstream and downstream costs	0	0
(3) Management activity costs:		
a. Operation and maintenance of environmental management systems	0	310
b. Environmental information disclosure, environmental advertising	0	8
c. Environmental education and training	0	1
d. Expenses for environmental improvement	0	0
(4) R&D costs:		
Environmental-burden reduction	0	618
(5) Social contribution activities costs:		
Social contribution activities	0	3
(6) Environmental damage response costs	0	0
<b>Total</b>	<b>11,941</b>	<b>1,738</b>

Calculation methodology:  
 1. The period is from April 1, 2019, to March 31, 2020. (The calculation period for activities to reduce ship fuel consumption is from January 1, 2019, to December 31, 2019.)  
 2. The scope is primarily business activities associated with NYK's headquarters and branch offices, NYK-operated terminals, fleet, and ancillary activities in Japan. (Expenses to maintain ISO 14001 certification are included for certified Group companies in North America, Europe, South Asia, and East Asia.)  
 3. The Ministry of the Environment's fiscal 2005 Environmental Accounting Guidelines were used.  
 4. Investment amounts refer to costs for depreciable environment-related facilities acquired during the term.  
 5. Expenses include maintenance and management of facilities for the purpose of environmental protection and associated personnel costs, but do not include depreciation.  
 6. Results are noted only to the extent that impacts can be quantified.

Use of Proceeds and Environmental Improvements from the Issue of Unsecured Corporate Bonds No. 40 (NYK Green Bonds) (as of March 31, 2020)

Report on Use of Proceeds  
 • Allocated to LNG-related investments (LNG-fueled vessels, LNG bunkering vessels): ¥6.3 billion  
 • Allocated to regulation compliance-related investments (scrubbers, ballast water management systems): ¥140 million  
 • Refinancing ratio related to the above: 31%

Impact Report	FY2018	FY2019
1. LNG-fueled vessels	1 ship	2 ships
• GHG emissions	35,730 mt per ship per year	
• GHG reduction rate	21%	
• CO <sub>2</sub> reduction rate	30%	
• NOx reduction rate	30%	
• SOx reduction rate	99%	
2. LNG bunkering vessels	1 ship	1 ship
• GHG emissions	3,647 mt per ship per year	
• GHG reduction rate	15%	
• CO <sub>2</sub> reduction rate	30%	
• NOx reduction rate	76%	
• SOx reduction rate	99%	
3. BWMS	1 ship	2 ships
• Volume managed	348,000 mt per ship per year	
4. SOx scrubbers	-	9 ships
• SOx reduction rate	86% per ship	

\* The target period of the Impact Report covers the fiscal year under review (one-year period from April 1, 2019 to March 31, 2020).  
 \* The number of vessels refers to the cumulative number of vessels funded during the period from the issuance of corporate bonds to the fiscal year under review; however, incomplete vessels are not included.  
 \* Environmental improvement effect is a theoretical value that uses an annual impact estimation model with the consent of third-party organization, Vigeo Eiris.  
 \* Figures for GHG emissions and GHG reduction rates take into account methane gas emissions.  
 \* LNG-fueled vessels do not transport products related to "controversial activities" as defined by Vigeo Eiris.

NYK Group (Includes NYK Headquarters)

Employee Demographics Number of employees of consolidated companies (long-term employees, employees on contracts for more than six months)

		FY2017	FY2018	FY2019	
Total number of employees (a)		37,820	35,711	34,857	
By region	Japan	8,156	7,968	7,753	
	Europe	7,390	7,029	7,412	
	South Asia	13,788	13,763	12,934	
	North America	2,667	2,106	1,987	
	East Asia	3,975	3,352	3,303	
	Oceania	420	363	311	
	Central and South America	1,424	1,130	1,157	
	Japan	Men	283	264	230
		Women	6	4	4
	Europe	Men	66	55	68
	Women	7	8	5	
South Asia	Men	92	112	83	
	Women	12	17	14	
North America	Men	30	28	24	
	Women	1	1	2	
East Asia	Men	38	27	25	
	Women	4	1	4	
Oceania	Men	6	7	5	
	Women	2	0	0	
Central and South America	Men	5	6	12	
	Women	2	0	3	

\*1 National staff hired locally. Excludes employees seconded from headquarters and other organizations

Employee Diversity

		FY2017	FY2018	FY2019
Number of non-Japanese seafarers	Total (b)	19,081	18,055	17,742
	Vessels under Group management	7,179	6,879	6,434
	Chartered vessels	11,902	11,176	11,308
Ratio of women employees (%)		35.2	34.6	37.0
Ratio of women managers (%)**		23.4	23.8	25.0

\*1 Managers or higher

		FY2017	FY2018	FY2019	
Ratio of management by region and gender (%)**	Japan	Men	89.9	89.4	89.9
		Women	10.1	10.6	10.1
	Europe	Men	69.5	79.1	72.8
		Women	30.5	20.9	27.2
	South Asia	Men	67.6	67.6	66.2
		Women	32.4	32.4	33.8
	North America	Men	67.4	67.9	64.6
		Women	32.6	32.1	35.4
	East Asia	Men	67.0	63.9	63.0
		Women	33.0	36.1	37.0
	Oceania	Men	85.9	87.7	93.0
		Women	14.1	12.3	7.0
	Central and South America	Men	79.4	72.1	72.7
		Women	20.6	27.9	27.3
	By gender	Men	24,864	23,688	22,265
		Women	12,956	12,023	12,592
By job type	Office workers**	36,630	34,692	33,976	
	Seafarers**	1,190	1,019	881	
New hires	Total	6,263	6,997	5,170	
	Men	4,070	4,508	3,305	
	Women	2,193	2,489	1,865	

\*1 National staff who are managers or higher. Includes employees seconded from headquarters and other organizations

\*2 Includes navigation officers and engineers\* at the office as well as employees seconded from Group companies

\*3 Excludes non-Japanese seafarers

\* Navigation officers and engineers either hold a seafaring license or are in the process of acquiring one at a maritime college.

Number of Group Employees (Including Non-Japanese Seafarers)

	FY2017	FY2018	FY2019
Total (a + b)	56,901	53,766	52,599

Occupational Health and Safety

	FY2017	FY2018	FY2019
Lost time injury (LTI) rate	-	-	1.55
Number of work-related deaths	5	11	5
Mortality rate (%)	0.01	0.03	0.01

Calculation method: (Number of work-related accidents requiring leave) / (Total working hours) x 1,000,000  
 Total working hours are calculated as 2,000 hours per person.

NYK Headquarters

## Employee Demographics

		FY2017	FY2018	FY2019		
<b>Total number of employees</b>		1,710	1,732	1,774		
By gender	Men	1,388	1,410	1,450		
	Women	322	322	324		
Long-term employees	Office workers (Excludes navigation officers and engineers at the office)					
	Men	763	758	767		
	Women	268	265	265		
	Navigation officers and engineers					
	Men	566	566	574		
	Women	18	19	19		
Fixed-term employees	Office workers					
	Men	51	74	93		
	Women	36	38	32		
	Seafarers					
	Men	8	12	12		
	Women	0	0	0		
Non-fixed-term employees*1	Office workers					
	Men	—	—	4		
	Women	—	—	8		
	Seafarers					
	Men	—	—	0		
	Women	—	—	0		
Long-term employees and fixed-term employees*2	Office workers (Excludes navigation officers and engineers at the office)		1,118	1,135	1,169	
	Navigation officers and engineers		592	597	605	
Average age (years old)*3	Office workers (Excludes navigation officers and engineers at the office)		40.8	40.9	41.5	
	Navigation officers and engineers		38.1	37.9	38.4	
Age range*3	Office workers (Excludes navigation officers and engineers at the office)		Under 30	217	211	217
			30-49	537	516	496
			50 and older	277	296	319
	Navigation officers and engineers		Under 30	147	141	140
			30-49	357	364	354
			50 and older	80	80	99
New hires*4	Total		65	53	61	
	Office workers (Excludes navigation officers and engineers at the office)					
	Men	33	22	29		
	Women	5	6	7		
	Navigation officers and engineers					
	Men	25	24	24		
	Women	2	1	1		
Rate of turnover within three years after hire (%)*5	Office workers (Excludes navigation officers and engineers at the office)		0.8	0.9	1.0	
	Navigation officers and engineers		2.4	1.2	7.8	
Ratio of voluntary resignations (%)*6			1.1	0.8	1.5	
Turnover rate at NYK (%)*7			3.1	3.7	3.8	

\*1 Employees who converted to employment contracts with no fixed period

\*2 Long-term employees + fixed-term employees + non-fixed-term employees for fiscal 2019

\*3 Excludes fixed-term employees

\*4 New graduates and mid-career hires

\*5 Calculation method: Number of new graduates and mid-career employees hired in the previous three years who resigned in each fiscal year / Number of new graduates and mid-career employees hired in the previous three years

\*6 Calculation method: Number of employees who resigned at their own request in each fiscal year / Total number of long-term employees at the end of each fiscal year

\*7 Calculation method: Number of employees who resigned in each fiscal year / Total number of long-term employees at the end of each fiscal year

## Employee Diversity

		FY2017	FY2018	FY2019
Ratio of women employees (%)	Office workers (Includes navigation officers and engineers at the office)	21.0	21.2	20.9
	Seafarers	3.6	2.9	2.9
Ratio of women managers (%)*1 (a)	Office workers (Includes navigation officers and engineers at the office)	16.0	18.0	17.1
	Seafarers	0.0	0.0	0.0
Ratio of women managers to the total number of women employees (long-term) (%)*1 (b)		10.5	13.0	12.7
Employment ratio of people with disabilities (%)		2.4	2.4	2.2

\*1 Office workers include employees at manager or higher. Seafarers include captains and chief engineers.

Calculation method: (a) Women managers / Total managers, (b) Women managers / Total number of women employees (long-term)

## Occupational Health and Safety (Includes Fixed-Term Employees)

		FY2017	FY2018	FY2019
Number of occupational accidents*1	Total	7	0	1
	Office workers (Includes navigation officers and engineers at the office)	1	0	0
	Seafarers	6	0	1
Lost time injury (LTI) rate*2		0.47	0.00	0.44
Number of work-related deaths	Total	0	0	0
	Office workers (Includes navigation officers and engineers at the office)	0	0	0
	Seafarers	0	0	0
Number of lost days caused by occupational accidents	Total	42	0	89
	Office workers (Includes navigation officers and engineers at the office)	0	0	0
	Seafarers	42	0	89

\*1 Excludes commuting accidents

\*2 Employees working at headquarters, including navigation officers and engineers\* who are working in the office, seconded employees from Group companies, and contractors for business consignment, etc.  
Calculation method: (Number of work-related accidents requiring leave) / (Total working hours) × 1,000,000

\*3 Engineers refers to those holding a diploma in marine engineering or those attending a technical college or institute to acquire such a diploma.

## Employee Support Systems

		FY2017	FY2018	FY2019
Average number of days of paid leave taken*1		17.0	17.0	17.2
Number of employees who took maternity leave*2		16	21	14
Number of employees who used parental leave program*2	Total	40	52	60
	Men	16	15	28
	Women	24	37	32
Ratio of employees who returned to work after taking parental leave (%)		100.0	93.8 (Number of employees who left the Company: 1)	100.0
Retention rate of employees who used parental leave program (%)		100.0	100.0	93.8 (Number of employees who left the Company: 1)
Number of employees who used shortened working hours program*2	Total	14	22	25
	Men	0	0	1
	Women	14	22	24
Number of working mothers*3		54	56	61
Number of employees who used family-care leave program*2	Total	0	1	0
	Men	0	0	0
	Women	0	1	0
Ratio of employees who returned to work after taking family-care leave (%)		100.0	100.0	100.0
Retention rate of employees who used family-care leave program (%)		100.0	100.0	100.0

\*1 Excludes seafarers and employees currently seconded to other companies / Includes paid summer holidays

\*2 Total number of users, excluding those who left the Company

\*3 Mothers with children in compulsory education or younger / Excludes mothers on maternity or parental leave

## Education

		FY2017	FY2018	FY2019
Average number of hours participating in training programs	Company average	81.8	77.4	67.4
	Office workers*1 (Includes navigation officers and engineers at the office)	40.5	34.9	30.3
	Seafarers	242.2	237.6	210.7
Average expenditure on education and training programs (yen)	Company average	267,037	271,137	255,107
	Office workers*2 (Includes navigation officers and engineers at the office)	144,940	131,334	140,304
	Seafarers	743,068	798,241	697,821

\*1 Excludes workers trained outside the Company

\*2 Programs for office workers trained inside or outside the Company

**Established**

September 29, 1885

**Paid-in Capital**

¥144,319,833,730

**Employees**

- Consolidated: 34,857 (NYK and consolidated subsidiaries)
- Nonconsolidated: 1,774 (1,169 office workers (excluding seafarers); 605 seafarers)\*
- \* The nonconsolidated number of employees includes employees currently assigned to domestic and overseas Group companies.

**Headquarters**

3-2, Marunouchi 2-chome  
Chiyoda-ku, Tokyo 100-0005, Japan  
Telephone: +81-3-3284-5151  
Website: <https://www.nyk.com/english/>

**Common Stock**

- Number of authorized shares: 298,355,000 shares
- Number of issued and outstanding shares: 169,564,428 shares (excluding treasury stock: 490,670)

**Stock Exchange Listings**

First Section of the Tokyo Stock Exchange and the Nagoya Stock Exchange

**Share Registrar and Special Management of Accounts**

Mitsubishi UFJ Trust and Banking Corporation  
Contact Information:  
Mitsubishi UFJ Trust and Banking Corporation  
Corporate Agency Division  
1-1 Nikkocho, Fuchu city, Tokyo 183-0044  
Toll-free: 0120-232-711

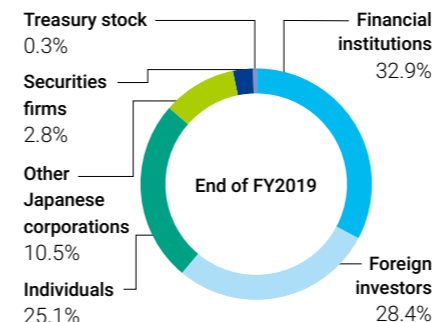
**Method of Public Notice**

The Company's public notices are available through electronic distribution. Website: <https://www.nyk.com/ir/stock/koukoku/>  
However, in the event that electronic distribution is impossible, due to an accident or other unavoidable circumstances, the Company's public notices will appear in the *Nihon Keizai Shimbun* published in Tokyo, Japan.

**American Depositary Receipts (ADR)**

Symbol: NPNYY  
CUSIP: 654633304  
Exchange: OTC  
Ratio (ADR: shares of common stock): 5:1  
Depository:  
BNY Mellon Shareowner Services  
P. O. Box 505000  
Louisville, KY 40233-5000  
Toll-free:  
(Within the U.S.) 888-BNY-ADRS (888-269-2377)  
(From overseas) 1-201-680-6825  
Website: <http://www.mybnymdr.com>

**Shareholder Composition**

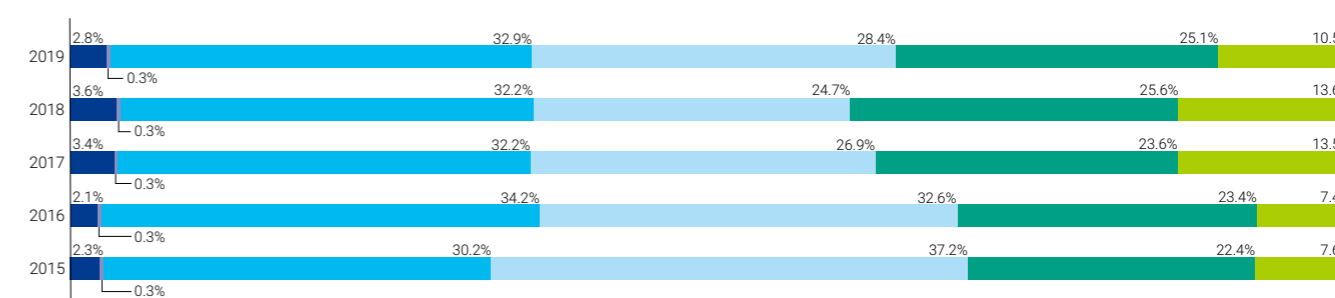


**Principal Shareholders (As of March 31, 2020)**

Name	Number of shares held
The Master Trust Bank of Japan, Ltd. (Trust Account)	13,483,500
Japan Trustee Services Bank, Ltd. (Trust Account)	11,361,800
Minami Aoyama Real Estate Inc.	4,231,900
Mitsubishi Heavy Industries, Ltd.	4,103,831
Meiji Yasuda Life Insurance Company	3,447,326
Japan Trustee Services Bank, Ltd. (Trust Account 5)	3,221,800
Japan Trustee Services Bank, Ltd. (Trust Account 9)	3,062,500
Tokio Marine and Nichido Fire Insurance Co., Ltd.	2,894,578
JP Morgan Chase Bank 385151	2,831,404
Japan Trustee Services Bank, Ltd. (Trust Account 7)	2,728,200

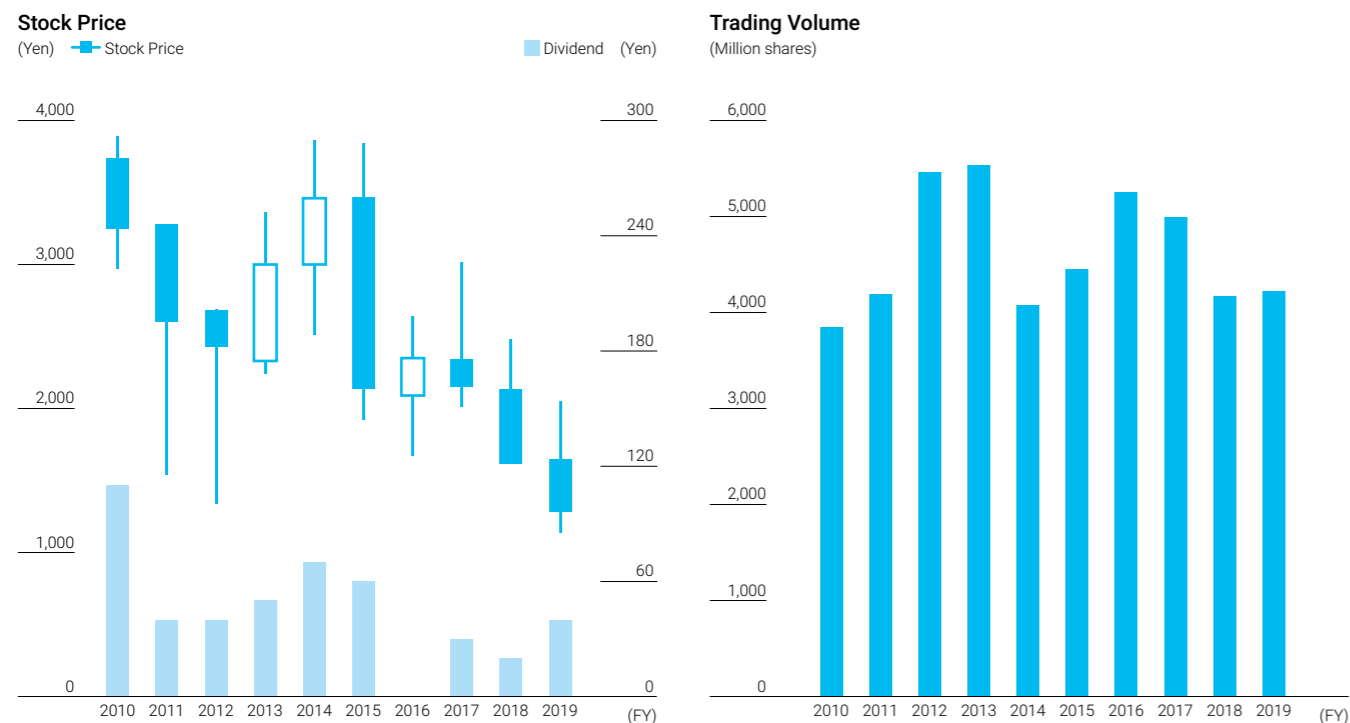
**Shareholder Composition**

(End of fiscal year)



**Stock Price Range and Trading Volume**

\* On October 1, 2017, NYK conducted a 1-for-10 reverse stock split. The amounts in the below graph take into consideration the effect of this reverse stock split.



**External Evaluations**

**ESG Indexes**

THE INCLUSION OF Nippon Yusen Kabushiki Kaisha IN ANY MSCI INDEX, AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP ENDORSEMENT OR PROMOTION OF Nippon Yusen Kabushiki Kaisha BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

**Other Awards and Certifications**

Please visit the website below for more information about each evaluation, award, and certification.

<https://www.nyk.com/english/csr/evaluate>





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Telephone: +81-3-3284-5151

**Website:** <https://www.nyk.com/english/>