

# DAIFUKU

## Inspiring Society and the Future

Material handling refers to the efficient storage, transport, sorting and picking of goods.

Its essence lies in using automation technologies to reduce heavy work and repeated processes and create new value.

Starting with the use of leverage, pulleys and casters, material handling has developed dramatically through innovations in dynamic and information processing technologies.

It is now a system that supports the foundations of society, and as such is always close to the lives of people.

Daifuku will continue its Groupwide efforts to “inspire society, deliver prosperity and enhance well-being through our core competence—automated material handling technology.”

## Path of Value Creation

### A sound corporate culture that cultivates a chain of innovation

Since its founding in 1937, Daifuku has been committed to remaining at the forefront of the times and to meeting customers’ needs as a manufacturer and integrator of material handling systems and equipment. Underlying this is the following ① to ③, our traditional corporate cultures (so-called corporate DNA).

#### ① Responding to customers’ needs with sincerity

**Our business cannot exist without maintaining customers’ systems in operation.**

In 1959, we delivered an automobile production line system to Japan’s first passenger automobile factory. Any failure in the system we delivered would bring the customer’s business activities to a halt. Under this severe pressure, we learned that our products must never cause production lines to stop under any circumstances.

#### ② A spirit of development in pursuit of cutting-edge technologies

**Becoming an all-around material handling machinery provider. From human power to machines—modernization of material handling**

Until around the 1940s, most materials at ports were handled by stevedores who carried cargoes on their shoulders, straining at the task. Daifuku began to introduce a range of material handling machinery designed to reduce physical burdens and enhance productivity, to the market.

In 1947, the then president Kenjiro Masuda, who served in that role from 1947 to 1949 and from 1953 to 1967, was seeking a future direction for the Company. He made a decision to pursue the modernization of material handling. This marked Daifuku’s “Year One of Material Handling.”



Stevedores carrying cargo (photo credit: Museum of Logistics)

**A**

**In time, a need will arise, even where none exists today. Motorization as the road to fortune and dramatic growth**

“In the future, conveyors will not simply move or carry goods. They will develop into systems with advanced functions. Although they do not sell now, the day will surely come when they will be needed.” With this belief in the late 1950s, Masuda sought advanced conveyor system technologies for automobile factories from Jervis B. Webb Company, a U.S. material handling company that is now part of the Daifuku Group.



Japan’s first passenger automobile factory

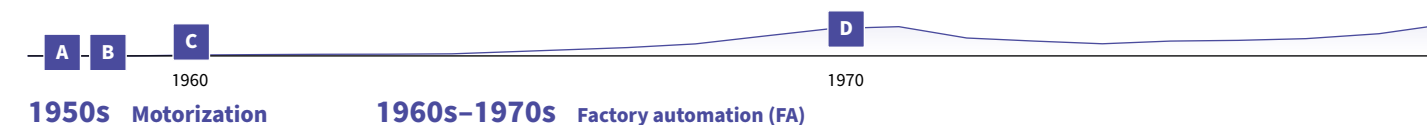
**B**

#### ③ Diverse and positive corporate culture

**Confidence in management from the early days**

In those difficult postwar years, wages were overdue by up to 75 days. The sight of Masuda rushing around trying to raise money to pay their salaries increased the confidence employees had in the Company. At that time, factory staff were paid daily wages while office staff received monthly wages. Masuda abolished this and introduced a new system of paying all staff on a monthly basis, removing a wall that had existed within the Company. His successor, Toshio Hiroasawa, who served as president from 1967 to 1977, worked hard to improve the treatment of employees, introducing programs that were novel at that time, such as the five-day work week and mandatory retirement at the age of 60.

#### Sales trends



## 1 Responding to customers' needs with sincerity

### Providing quality products and services in response to advancing material handling needs E

The 1980s saw a rapid increase in demand for cleanroom transport systems for semiconductor factories, resulting from the spread of personal computers.

In 2002, Daifuku received a first order for a fifth-generation LCD panel transport and storage system. This system later evolved into a transport system for glass substrates for large-screen TVs. We provide customers with one-stop services that encompass everything from proposals for logistics strategies to maintenance of distribution centers and other facilities. After e-commerce and other services rapidly proliferated, needs increased for material handling for high-mix, low-volume and high-frequency transport. We faced a need to provide solutions for temperature management in cold chains and hygiene management ensuring food safety and reassurance.



Cleanroom transport systems for semiconductor factory



Automated sorters in a distribution center

### Global increase in the movement of people and goods G

In 2007, Webb joined the Daifuku Group through M&A, enabling us to enter the airports sector. We have since expanded the business mainly to overseas markets. In 2018, we won our first project in Japan.

In recent years, airport security checks have become increasingly stringent, and boarding procedures are taking longer and longer. There is brisk demand for smart airports, such as self-service baggage check-in, facial recognition for passport control, automation of passengers' procedures, and curtailment of time for security checks.



Self-service baggage check-in system

### Developing and providing logistics solutions to help build new lifestyles H

Changes to systems in society and people's lifestyles are accelerating. Customers are faced with issues such as the expansion of e-commerce, advances in digitalization, the trend towards electric vehicles, mounting awareness of the environment, society and governance (ESG) issues, rising labor expenses and labor shortages. Daifuku will flexibly and sincerely continue to respond to their new needs.

## 2 A spirit of development in pursuit of cutting-edge technologies

### The "living" warehouse brings a distribution revolution C

In the 1960s, the volume of cargo began to exceed the handling capacity of delivery centers and it became common to see piles of goods waiting to be delivered. At that time, Daifuku began to explore new fields and developed the Rackbuil system, a pioneering automated warehousing technology in Japan, with the first system in 1966. Rackbuil was dubbed a living, moving warehouse and a revolutionary system that changed the concept of warehouses. It instantly became the Company's mainstay product.



The first delivered Rackbuil system

### Cultivating Daifuku's sustainability through industrial park plans D

In 1970, Daifuku acquired a vast site measuring about 1.2 million square meters with the idea of building an industrial park in the town of Hino-cho, in Shiga Prefecture. Today, this is the home of our Shiga Works. With an emphasis on harmony with the natural environment and ties with the community, we started building a production site with a function of developing a rich humanity. The Works has become one of the world's largest production centers of material handling systems, boasting 12 factories. We are working to build a sustainable society, for instance with the Yui Project launched in 2014 to preserve biological diversity.



Yui no Mori the forest  
Yui no Mori was developed as part of efforts to protect biodiversity. In addition to protecting the endemic red pine forests and a rare species of salamander, Yui no Mori is used as a place of learning, both inside and outside the Company.

### Society supported by non-stop logistics F

Today, companies are facing challenges related to how to ensure non-stop logistics, and how to restore them quickly if they do stop. Daifuku offers preventive maintenance and regular inspection services for systems and operates a 24/7 system support center to ensure stable operation of customers' facilities.

Since the 1995 Great Hanshin-Awaji Earthquake, severance of supply chains and the stagnation of physical distribution caused by natural disasters are now recognized as a major risk to society. We are working to introduce quake-absorbing systems to logistics facilities in a bid to help customers achieve a rapid recovery in business activities and to maintain the foundations of society.



Daifuku's own sway-control technology developed at its high-rise testing tower within the Shiga Works

## 3 Diverse and positive corporate culture

### A good mentor

Kenjiro Masuda served as president for a total of 17 years and six months, and subsequently also served as chairman and advisor. Until just before he passed away at the age of 97 in 1996, he would speak about business vigorously. Our current management team occasionally heard his instructions when they were young. He was also a man of the pen. His contribution to the Company newsletter for six years acted as a core of the chronicle of Daifuku's 50 years. Our corporate history vividly describes our 50 years of history based consistently on his views.

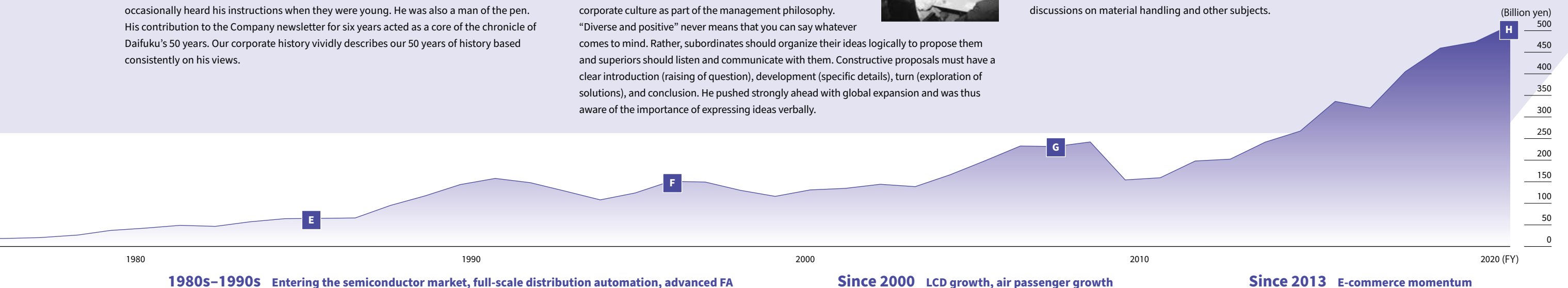
### Provide proposals with clear introduction, development, turn, and conclusion

Katsumi Takeuchi served as president from April 2002 to March 2008. He always defined the creation of a diverse and positive corporate culture as part of the management philosophy. "Diverse and positive" never means that you can say whatever comes to mind. Rather, subordinates should organize their ideas logically to propose them and superiors should listen and communicate with them. Constructive proposals must have a clear introduction (raising of question), development (specific details), turn (exploration of solutions), and conclusion. He pushed strongly ahead with global expansion and was thus aware of the importance of expressing ideas verbally.



### Active discussions based on customer needs

We receive a large number of orders for different projects. Accordingly, younger personnel have opportunities to work on the front lines. When conditions are difficult, they may need deliberations inside the Company at times. They are often seen involved in intense discussions on material handling and other subjects.



## A spirit of seeking constant advancement in everything behind the company creed

In January 1964, the then president Kenjiro Masuda formulated Daifuku's company creed of *Hini Arata*\* ▶ Page 5. He explained his thinking, which was incorporated into the creed of Hini Arata.

It embodies our aspiration, shown below.

\* Cited from *The Great Learning*, one of the Four Books in Chinese Confucianism

*With respect to humanity, it means to develop character and build up skills. As for the mind, it means enterprise, cultivation, patience, emphasis and service. It aspires to constant advancement in everything; for example, development and training of skills, improvement of efficiency and productivity in work, prosperity for the company, and greater happiness at home. As long as you carry out new activity day by day, you will always be young in spirit and the company will prosper eternally.*

*There is no guarantee that today's leading industry or business will stay successful forever. The most important thing is to always keep in mind that businesses will fail. We should review our actions every day and change them for the better. We have therefore chosen Hini Arata as our company creed. It is the practice we must learn to ensure our corporate survival.*

This notion has been passed down to us today. It serves as a foundation that supports the Daifuku Group's development.

## Corporate Policies

### Company creed



Today we are doing better than we were yesterday.  
Tomorrow we will be growing ahead of where we are today.

### Management philosophy

## Automation that Inspires

Inspire society, deliver prosperity and enhance well-being through our core competence—automated material handling technology.

We will

- 1 strive to realize a sustainable society that minimizes burdens on people and the environment, respects human rights, and encourages responsible manufacturing.
- 2 work together with customers around the world to create optimal smart logistics solutions that incorporate innovative technologies.
- 3 ensure a fair and open corporate culture that respects diversity and allows each individual to excel. Further, we will strengthen our fundamental management practices globally to have a high level of transparency.

### Group Code of Conduct

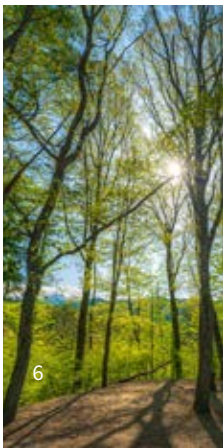
#### Basic Stance

We will act in accordance with applicable laws rules, regulations, social norms and ethics.

We will place safety as a major premise in all aspects of our business activities.

We will remain committed to the creed of "Hini Arata" as we take on new challenges and make changes for the better.





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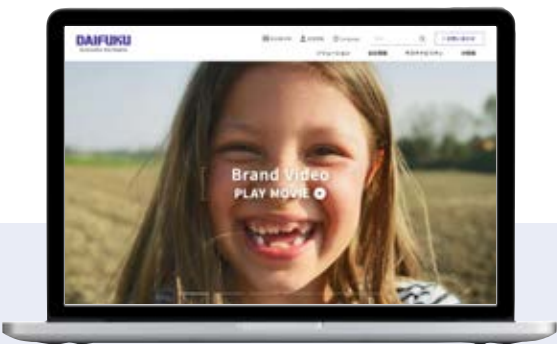
## Editorial Policy

This report presents a brief summary of material information particularly relevant to the Daifuku Group's value creation in line with international frameworks, including IFRS Foundation and Global Reporting Initiative (GRI) standards. See the Company website for more detailed information: [www.daifuku.com](http://www.daifuku.com)

The report covers 70 companies, including the parent company, 69 consolidated subsidiaries, and one equity-method affiliate (as of March 31, 2022).

**Period covered: Fiscal 2021 (April 2021–March 2022)**

Whenever it is appropriate to include historical background information and data or recent examples, reporting may include matters outside this time period.



### Disclosed Information

For details about Daifuku, see the following.

#### Corporate

- Corporate Site**  
[www.daifuku.com](http://www.daifuku.com)
- DAIFUKU PROFILE**  
[www.daifuku.com/ir/library/profile](http://www.daifuku.com/ir/library/profile)

#### Business

- Intralogistics**  
[www.daifuku.com/solution/intralogistics](http://www.daifuku.com/solution/intralogistics)
- Cleanroom**  
[www.daifuku.com/pro/efa](http://www.daifuku.com/pro/efa)
- Automotive**  
[www.daifuku.com/pro/aps](http://www.daifuku.com/pro/aps)
- Airport**  
[www.daifuku.com/pro/aps](http://www.daifuku.com/pro/aps)
- Electronics** (Contec Co., Ltd.)  
[www.contec.com/about-contec](http://www.contec.com/about-contec)

#### Financial

- Investor Relations**  
[www.daifuku.com/ir](http://www.daifuku.com/ir)
- Securities Report**  
[www.daifuku.com/ir/library/statements](http://www.daifuku.com/ir/library/statements)

#### Non-Financial

- ESG Data**  
[www.daifuku.com/sustainability/data/esg-data](http://www.daifuku.com/sustainability/data/esg-data)
- Daifuku's Sustainability**  
[www.daifuku.com/sustainability/management](http://www.daifuku.com/sustainability/management)
- Sustainability Action Plan**  
[www.daifuku.com/sustainability/management/plan](http://www.daifuku.com/sustainability/management/plan)
- Corporate Governance**  
[www.daifuku.com/ir/policy/governance](http://www.daifuku.com/ir/policy/governance)

A portrait of Hiroshi Geshiro, President and CEO, standing in front of a large indoor plant. He is wearing a dark suit, a white shirt, and a blue patterned tie. He has his hands clasped in front of him and is smiling.

# CEO Message

## Advancing Our Presence in Society with Our Automated Material Handling Technology

**Hiroshi Geshiro**  
President and CEO

▶ Page 5

Management Philosophy

### Inspiring people with material handling technology rooted in our new management philosophy

In October 2021, the Daifuku Group revised its management philosophy to “Automation that Inspires.” The development of our current three-year business plan, Value Transformation 2023, and the new steps forward that will come with it, are what inspired us to update our well-established management philosophy to better suit the times. As part of the revision process, we set up a project team of officers from each business unit and the Corporate Functions unit. From there, we took some time to confirm the Group’s reason for being. Thanks to this action, as well as numerous discussions with the presidents and executives of subsidiaries outside Japan, we reaffirmed, to no one’s surprise, that Daifuku’s reason for being is material handling—the efficient storage, transport, sorting, and picking of objects. Material handling originates from the desire to reduce heavy labor and repetitive tasks and enable people to focus on more creative work. This is our mission.

Material handling calls for the movement of a variety of objects in a rapid, accurate, and efficient manner. As the declining birthrate and an aging population causes a contraction in the workforce, we see machines increasingly being entrusted with tasks they are capable of performing. In light of this trend, we want to use our automated material handling technology to help inspire society, deliver prosperity, and enhance well-being. By extension, we aim to be a company that leaves a strong impression on people. This idea is contained within “Automation that Inspires.”



We need innovation with a view toward changing society. Conversely, there are aspects integral to Daifuku’s corporate culture, its so-called corporate DNA, that we cannot and must not change. One is the drive to complete a project, regardless of its difficulty, and ensure the operation of our customers’ facilities no matter what it takes. Another is the need to maintain a free and open corporate culture that allows employees to express their opinions, no matter their position. We need to preserve these ideals all the more if we are to create things that the world has never seen, and if we are to realize our dream of working to deliver new convenience to customers and the consumers they serve.

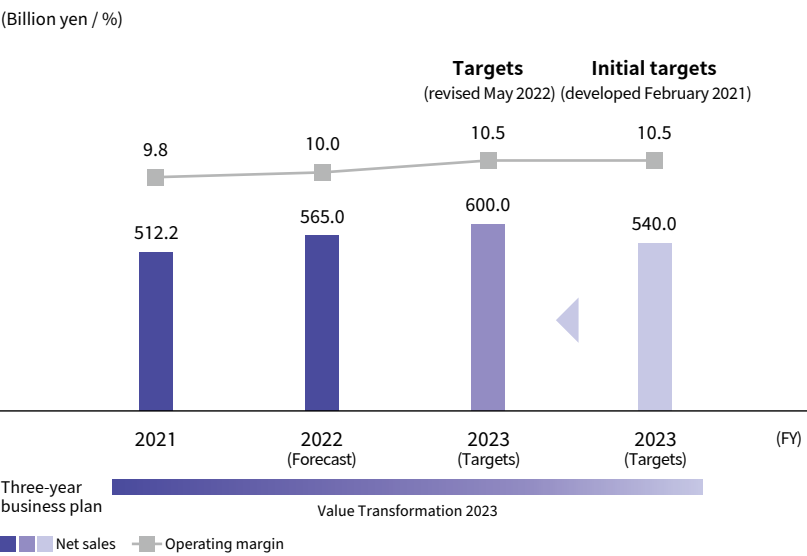
The COVID-19 pandemic has brought with it remote communication and other changes to the ways people live, as well as changes to the way we sell and consume, which includes e-commerce among other means. These changes will likely continue in the new normal of a post-COVID-19 world. We hope that Daifuku can be an integral part of society in these coming times, and continue to provide new value and inspire people.

Consolidated orders and sales reach new record highs

In fiscal 2021, the first year of Value Transformation 2023, we achieved orders received of 589.0 billion yen, net sales of 512.2 billion yen, and operating income of 50.2 billion yen, setting record highs in both orders and sales. These results were driven by the Intralogistics business, which deals with manufacturing and distribution systems, as well as by the strong performance of the Cleanroom business, which deals with cleanroom production line systems. In particular, demand for capital investment in semiconductor production lines—part of the Cleanroom business—exceeded the expectations set when we developed Value Transformation 2023, and we expect this high level of performance to continue going forward. In light of these results, we have revised our consolidated net sales target for fiscal 2023, the final year of Value Transformation 2023, from 540 billion yen to 600 billion yen.

Meanwhile, our operating margin in fiscal 2021 was 9.8%, which puts us on track to reach our fiscal 2023 target of 10.5%. Even during the pandemic, sales and income increased in consecutive years. The biggest contributors to this achievement are our employees, with their ingenuity and hard work. We will continue to move forward with management that draws on the power of our employees to meet our targets.

Net sales and operating margin



The cornerstones of management —keys to sustainable growth

To coincide with the adoption of our three-year business plan, we developed the Sustainability Action Plan after revising the material issues (materiality) addressed in its predecessor, the CSR Action Plan. We need to treat the creation of products and systems that contribute to society with the same importance as the pursuit of net sales and profits. We look at both of these plans as wheels—if only one wheel is spinning, it will spin idly. However, if both wheels are spinning in synchronization, then we have forward movement. If we treat the three-year business plan and the Sustainability Action Plan as the “cornerstones of management,” and use them to move forward, we will create value unique to the Group.

Since introducing our proprietary Daifuku Eco-Products Certification Program in fiscal 2012, we have been committed to providing products while being mindful of their environmental impact. The mega solar farm we installed at the Shiga Works in 2013, which generates up to 4,438 kW, is just one example of our efforts to support the coming generation, and was undertaken long before environmental, social, and governance (ESG) initiatives began to draw the attention of society. As another example, we maintain a policy for developing new products with more efficient power consumption when compared with existing products. This is important since these systems operate at customer locations for long periods of time. On occasion, a customer might ask whether this is all truly necessary. However, this development policy adds to the Group’s competitive advantage.



The Group's sustainability management remains consistent throughout the supply chain, from consulting for logistics systems, design, and installation to after-sales services. This allows us to provide suppliers of parts and other items with advice and support, which helps us work together to reduce CO<sub>2</sub> emissions. It also means that recyclable materials compose at least 90% of the products and systems we provide customers, ensuring they do not become harmful substances when they are disposed of in the future.

We will remain mindful of sustainability so that we continue to provide unique products and services with the value sought by society and customers.

## The progress of Value Transformation 2023 and our external conditions

Since its founding, the Group has developed Japan's first high-rise automated warehouse and the world's first electrified monorail system with a non-contact power supply, among a variety of other innovative projects. Even in the present day, as e-commerce and other services have become more widespread and life has become more convenient, we have a strong desire to set things in place that will make life better for the coming generation. To turn this desire into innovation across our businesses, we have appointed an officer responsible for advanced technology and new business development. Since April 2022, under the leadership of this officer, we have been seeking out new businesses as we strive to strike a balance between helping realize a sustainable society and contributing to profits.

Standardizing products from the design stage to increase profitability is one of the major themes of the three-year business plan. Setting the precedent for this endeavor is the Intralogistics business, which has been committed to product standardization and streamlining of production and assembly for the last decade or so. This endeavor has involved steady research and trial and error, but the business has lowered costs by significantly reducing the number of parts, and has decreased the need for engineers to draw up blueprints from scratch by standardizing parts for common use across several products. These initiatives have resulted in greater profitability. We are currently promoting similar standardization efforts in the Cleanroom business, and are on track to reduce costs 30% by fiscal 2023.

In fiscal 2021, the prolonged COVID-19 pandemic caused disruptions in the supply chain. Thanks to early ordering and inventory stockpiling in each business in anticipation of this situation, we were able to deliver products and systems to our customers with little to no delay until around December 2021. However, since 2022 there has been an increase in supply and procurement restrictions, which has made it difficult to receive orders on time, even if the order was made in advance.

For this reason and others, the Group is moving forward with design changes that include switching to alternative parts and components. Moreover, in the past, products were shipped from our factories close to completion and were installed and adjusted on-location. Now, when it takes time to procure parts, we will bring the unit excluding the missing parts to the site and proceed with the installation work until the parts arrive. This measure takes advantage of a particular characteristic of our business, which is the long period between receiving an order and actual operation. If the supply of parts is delayed, we do not just wait for that part to arrive. Instead, we proceed with whatever work that can be carried out, and continue to make every effort to meet the completion deadline for the customer.

We are currently working to build a production control system that visualizes development, production, installation, and other processes in real time, for projects worldwide. Intensive data management, tracking progress and changes in costs will raise the efficiency of the process aimed at completing these projects. While we did make some progress in fiscal 2021, we are still en route to "complete visualization," and will continue to move forward with this effort in the Intralogistics business, which is leading the way in this respect, and then expand horizontally to the Cleanroom business and other businesses.

In March 2022, we conducted a takeover bid for our consolidated subsidiary Contec Co., Ltd. and made it a wholly owned subsidiary in May. In today's world of technological innovations such as AI and IoT, development and investment in the device business are essential for the Group's growth. In addition, Contec has advanced into fields such as environment/energy, medical care, and digital signage by taking advantage of the technology it has cultivated in electronic devices for factory automation. This makes it possible to offer products for a wide range of industries. Going forward, we will deepen our cooperation with Contec, with a focus on developing new products while also making use of each other's technology, know-how, customer foundations, and other management resources.

### Daifuku's long-term vision

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Daifuku Environmental Vision 2050

In February 2021, we unveiled Daifuku Environmental Vision 2050, which aims for a world in which material handling systems have zero environmental impact in 2050. I am confident that in 30 years' time we will still be thriving as the company of choice for our customers and other stakeholders, thanks to our efforts to reduce the environmental impact of our products and systems.

In fiscal 2021, these efforts included the installation of a photovoltaic system as part of the construction of a new factory outside of Japan and worked to introduce electricity from renewable energy sources, under the banner of "accelerating climate change and energy responses." Meanwhile, with a policy of "building a foundation to promote resource recycling," we will continue to promote operations at Company-owned factories with low environmental impact. We also set targets for each business unit to reduce their environmental impact, with the intent of assessing the degree of completion in the future.

Looking at the "cornerstones of management" I mentioned earlier, namely the three-year business plan and the Sustainability Action Plan, I would like to elaborate on the human resources strategy put forth in the latter. This is intended to affect the development of new businesses, as we plan to use this integration to assign employees to suitable positions. As part of that, in fiscal 2021 we integrated the Automotive business unit with the Airport business unit and are taking steps to make our pool of human resources more mobile. We will also need to train project managers. One cannot be a project manager without extensive knowledge and experience, in areas ranging from cost management to design and installation, as well as having a good understanding of our partner companies. Therefore, we provide systematic education to train the next generation of project managers. Outside of Japan, we are working to construct a project management system that will ensure that projects are not dependent on any one person, something that is possible because the mobility of human resources outside Japan is high overall.

We will also focus on developing and promoting diverse human resources. The number of female employees and managers of our company increases with each passing year, but we need make drastic changes to conscious and unconscious gender biases to ensure they can be even more active in their roles. We are also considering appointing officers who are foreign nationals.

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Risk Management

### Enhancing risk management and Group governance

Risk management is also important if Daifuku is to achieve sustainable growth. Geopolitical risks and the resulting procurement risks have come to light in recent years, adding to cyberattack and compliance-related risks. To address these issues, we established the Risk Management Committee in April 2022, with the head of each business unit serving as members. As chair of the Committee, I will work to ensure it operates effectively and manages Group risks.

Regarding Group governance, the three-year business plan calls for "rebuilding Group management." Therefore, we are planning to evolve our governance system by strengthening the supervisory functions of our subsidiaries and reorganizing in order to optimize business operations. As for communication with Group companies, I feel that communication is more active now than it was prior to COVID-19. Instead of being hindered by the difficulty of traveling to worksites, it has become standard to hold meetings online, unrestricted by place or time. We plan on continuing to take advantage of these benefits in the future, as we work to enhance Group governance further.

In fiscal 2020 and fiscal 2021, the Daifuku Group increased both sales and income despite the pandemic. Moreover, fiscal 2021 marked the eighth consecutive year that the Group was the global leader in net sales for material handling systems. I take this as a sign of society's high demand for automated logistics systems as well as the great expectations being placed upon us. In fiscal 2022, we will continue our efforts to increase sales and income and contribute to the realization of a sustainable society.

I ask for your guidance and encouragement as we go forward.



President and CEO



Our Business

Intralogistics

Manufacturing and distribution systems

Provides logistics systems that are optimized for each customer by configuring the best combination of automated storage, transport, sorting, and picking systems, to distributors including e-commerce, retailers, wholesalers, transportation, and warehousing, and to manufacturers including food, chemicals, and pharmaceuticals. We deliver the smart logistics sought by customers by incorporating cutting-edge technologies such as IoT and AI.



Cleanroom

Cleanroom production line systems

Provides cleanroom transport and storage systems essential in manufacturing semiconductors and flat-panel displays. We have delivered numerous systems to many of the world's leading electronics companies and component manufacturers. As a global supplier, we develop systems that respond to the evolution of accelerating technologies to ensure that we continue to improve our customers' operating rates.



Automotive

Automotive production line systems

For more than half a century, we have provided automobile manufacturers worldwide with systems that support their manufacturing operations. In the ever-evolving automobile industry, we use our extensive know-how and technologies to respond to sophisticated and diversified demand, as well as develop pioneering systems that support parts logistics and other areas in automobile manufacturing.



Airport

Airport technologies

Provides a broad range of solutions for airports, including baggage handling systems, automated baggage check-in systems, baggage screening systems, and software and controls. The business operates worldwide in collaboration with its Group affiliates in North America, Asia Pacific, and Europe.



Auto Wash

Car wash machines and related products

Provides mainly car wash machines and related products to filling stations and car dealers primarily in Japan and South Korea. The business offers a range of car wash models to ensure customers can choose features that meet their needs, including eco-friendly, ultra-quiet and water-saving functions among others.



Electronics

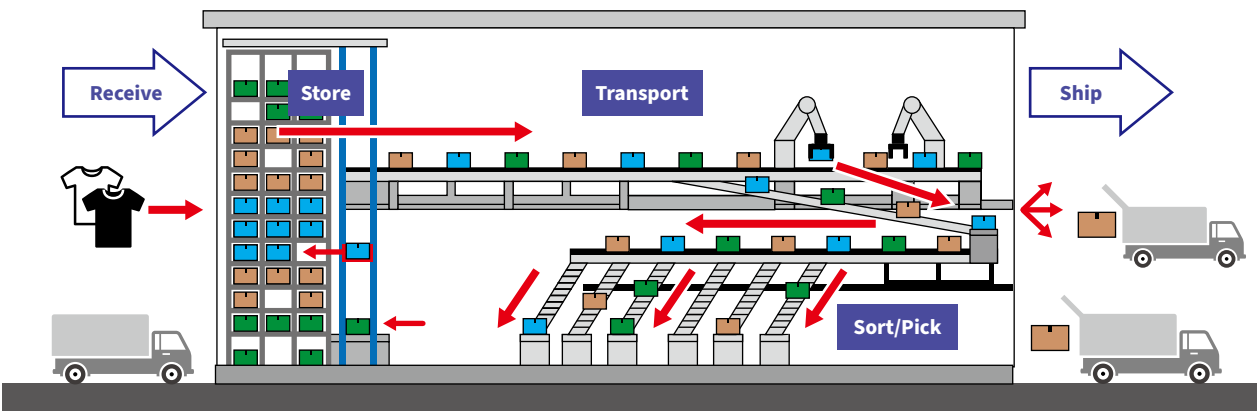
Provides industrial computers, measuring/control systems, and IoT solutions, through our subsidiary Contec Co., Ltd. Customers come from various industries, such as energy, medical, and railway.



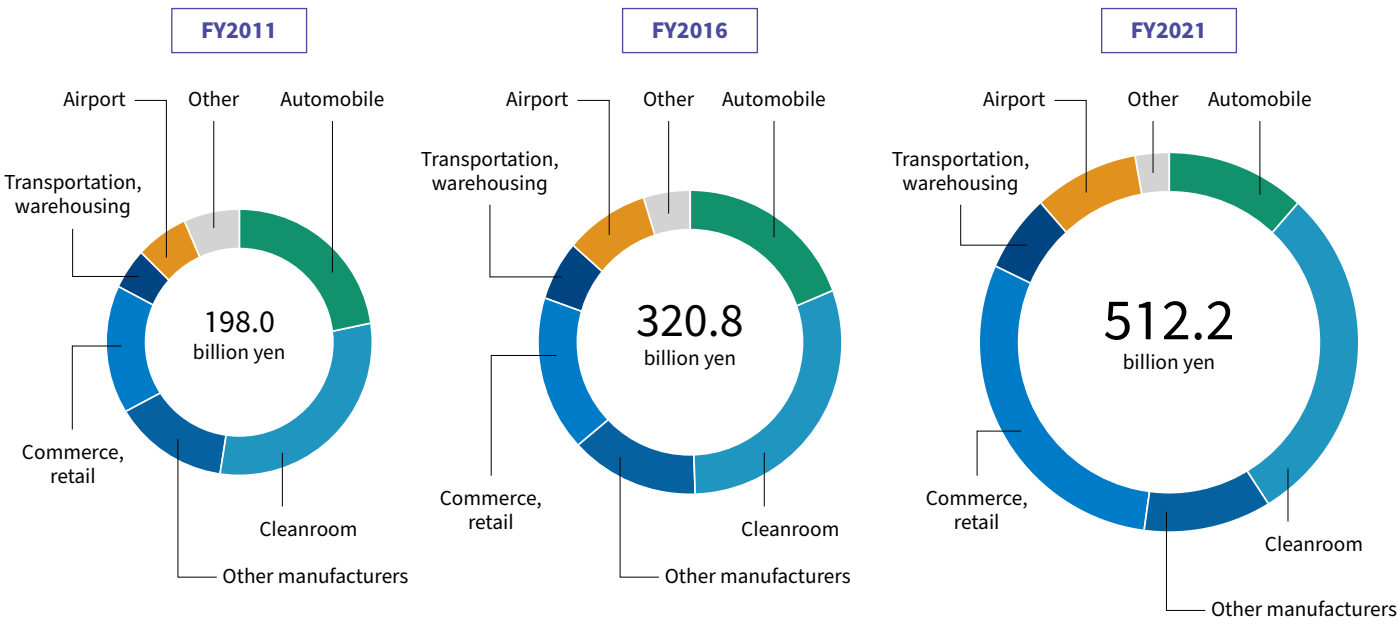
Our material handling technology creates values

At the core of Daifuku's business is automated material handling technology. Material handling refers to the efficient storage, transport, sorting, and picking of goods. A material handling system provides a smooth flow of goods by integrating equipment that has such functions and software that control and manage system operations. By providing a material handling system, it is our mission to reduce heavy labor and repetitive work and enable people to focus on more creative work. We will seek to create new value through our core competence—automated material handling technology. As the world's leading supplier and system integrator of in-house manufactured products, we will address diversified customer needs worldwide to inspire society, deliver prosperity, and enhance well-being.

Typical distribution center flow



Sales by industry

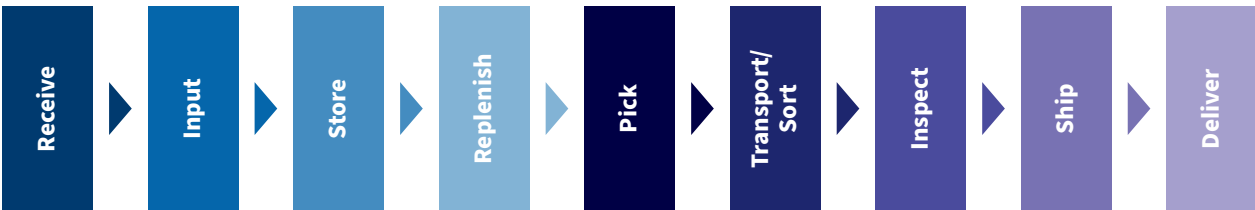


# Our Material Handling Solutions

## Intralogistics

### Cutting-edge distribution center using the latest technologies

Daifuku provides logistics solutions that meet the needs for automation and labor saving in various manufacturing fields such as food/beverage, pharmaceuticals, machinery/metal processing, electrical appliances, and daily necessities. In addition to the abundant experience and know-how that we have cultivated so far, we are maximizing the automation rate by working on new technologies.



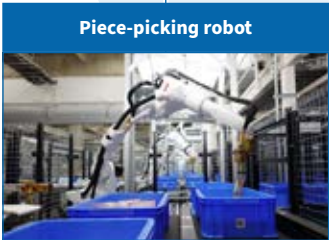
Provides products in a timely manner to piece-picking robots



Stores various-sized cardboard boxes and facilitates case shipping



Rapidly palletizes cases of various shapes and sizes



Accurately picks individual items of various sizes and weights



Picks cardboard boxes from a pallet retrieved from an AS/RS

## Cold Chain

Cold storage and low-temperature centers are in growing demand around the world following lifestyle changes and improvements in diet. This trend has been spurred by the increase in online purchases of frozen and chilled food amid rising air temperatures and the growing popularity of working from home. The number of items has been increasing recently and orders have been involving smaller and smaller lots. Accordingly, a shift to high-mix, low-volume distribution is taking place, and it is becoming more difficult to operate warehouses at full capacity without idle space. When the temperature in a refrigerated warehouse is at minus 25°C, the temperature difference from the outdoor air temperature might be 60°C or more. It is vital to use space in the warehouse effectively and to improve the working environment.

### Offering systems tailored to carton property

When shipping in units of cases, the most basic solution is to use a mobile rack (upper right photo). That minimizes the space required for forklift movement and enables storage efficiency that is much higher than fixed racks.

Low-temperature distribution centers are used for deliveries to supermarkets, restaurant chains and other stores. They need to be able to handle high-mix, low-volume operations at a high turnover rate, and they tend to stock goods that require tremendous labor for picking. As such, automated storage and retrieval systems (AS/RSs) are effective. Workloads inside a refrigerated warehouse, with the temperature at minus 25°C, can be physically burdensome, but can be slashed by providing a high-rise stairwell space within the building and by creating a picking station inside the cargo sorting space where the temperature ranges from minus 5°C to plus 5°C.



## Solutions for the e-commerce and mail order sectors

In e-commerce logistics, the scale and number of items vary depending on the operator. The extent of manual operation and that of automated operation vary with the customer. For all corporate customers, speed and accuracy are essential for the inspection of incoming goods, storage, collection, inspection of outgoing goods, packing and shipping.

### Shuttle vehicle mini load AS/RS

This system handles a number of types of plastic containers and cartons. It performs free allocation management to automatically adjust storage locations according to the load size. That paves the way for high-density storage. If a vehicle fails, maintenance can be performed with the vehicle detached. During the maintenance process, the system can remain in operation with the remaining vehicles, minimizing the impact on the overall process.



### Regular position picking system

This system automatically feeds stock containers and order collection containers to an operator. The operator needs only pick the required quantity of containers from those supplied in accordance with the instruction displayed. That minimizes disparities in productivity associated with operators' skill levels.

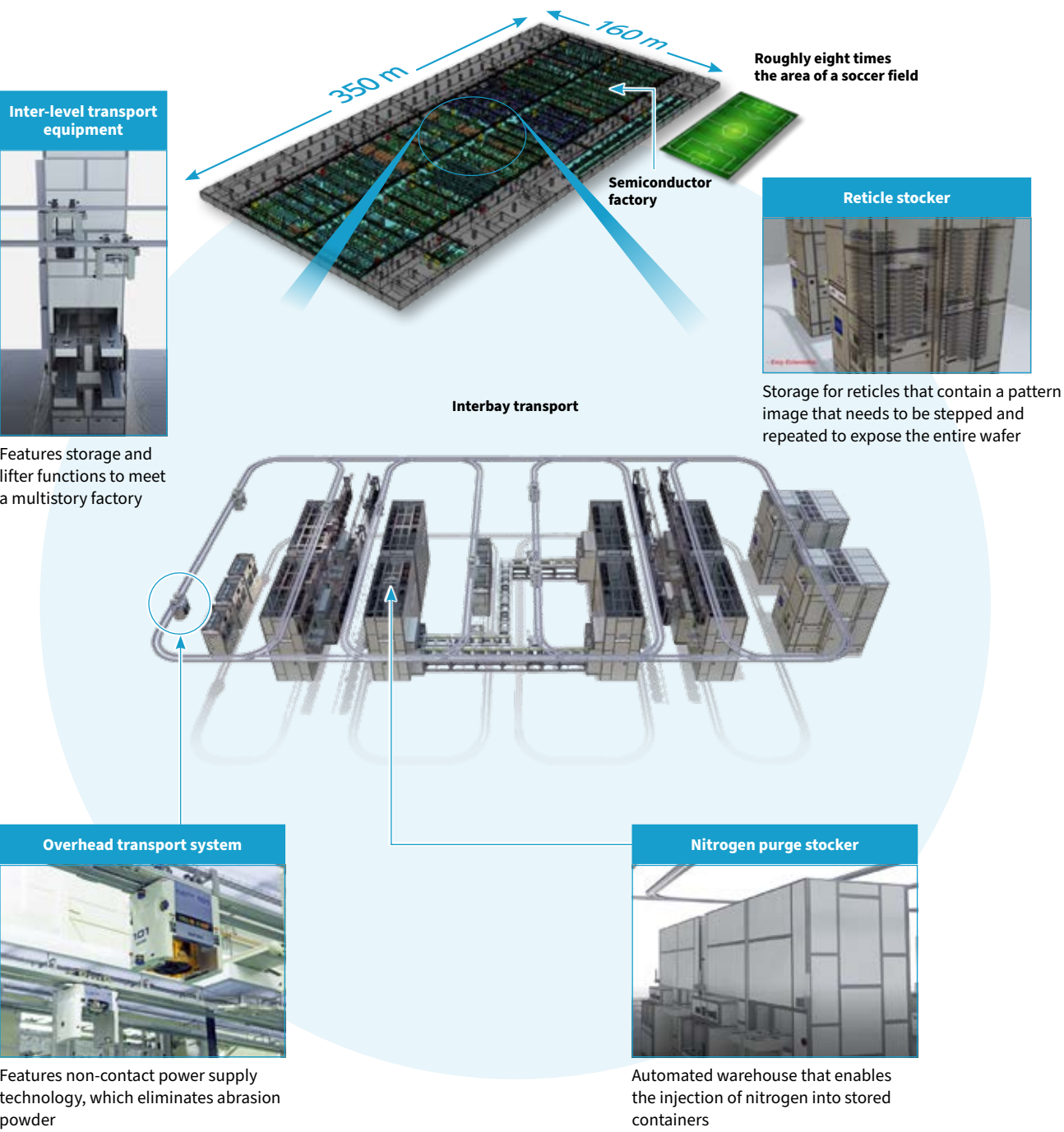




Cleanroom

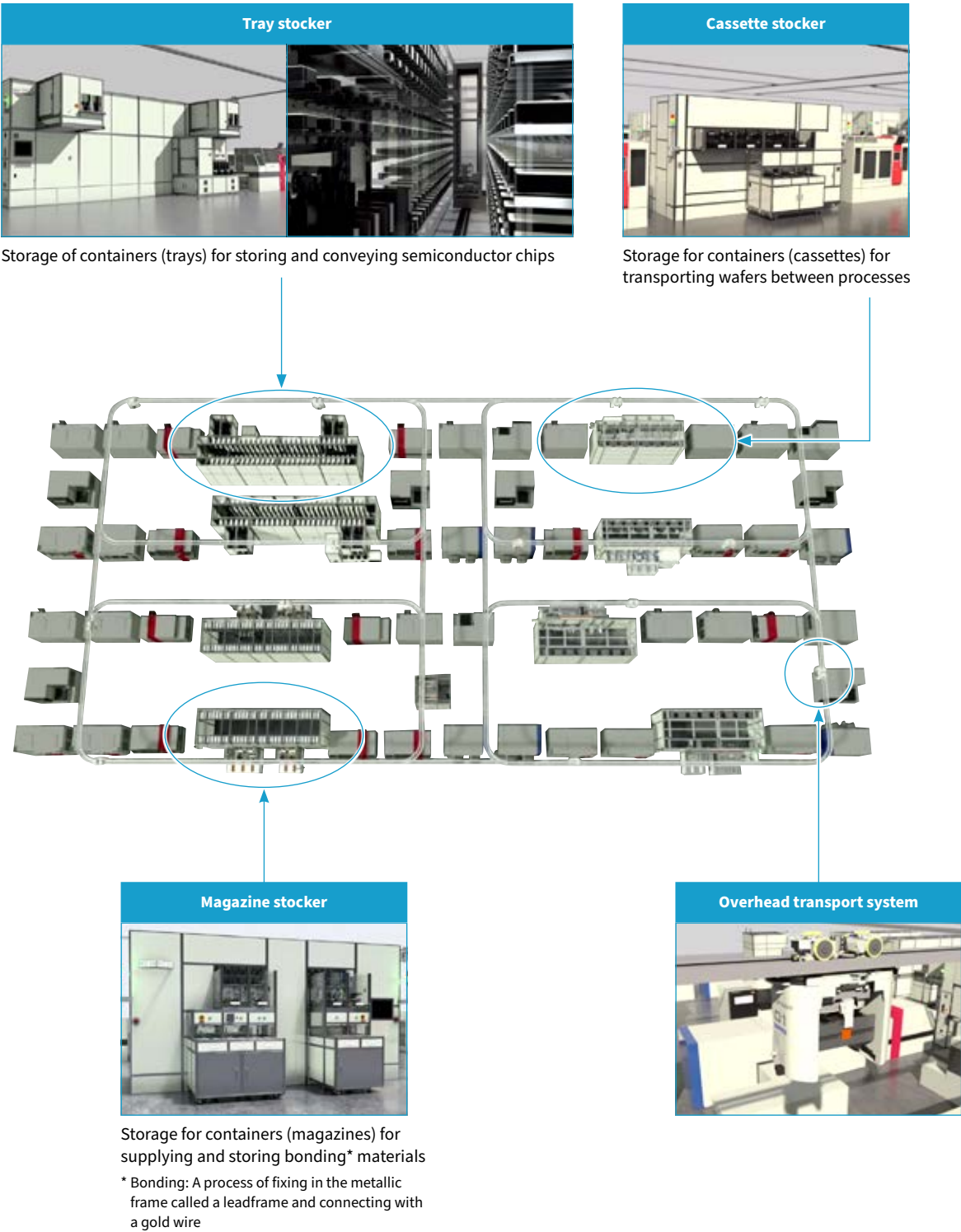
State-of-the-art semiconductor factory

A semiconductor factory performs around 1,000 manufacturing processes, and it takes two to three months from material input to completion and even more time for cutting-edge products. A large factory has interbay rail tracks with a total length of 20 to 30 km on the ceiling of the clean room as well as 1,500 to 3,000 wafer transport vehicles in operation 24/7. Wafers in process require very careful handling. As semiconductors are becoming finer, lower vibration levels are needed. Software for managing vehicle operations according to production plans is also becoming increasingly advanced and sophisticated.



Semiconductor back-end process factory

Customers have sought to reduce the semiconductor linewidth to 3 nanometers, and then to 2 nanometers. This miniaturization is nearing its limit. As a new solution, three-dimensional packaging technologies are advancing. With this approach, several semiconductor chips cut from wafers are vertically stacked and integrated. In the past, personnel were responsible for storage and conveyance between back-end processes in a non-clean room environment. New technologies require maximum cleanliness. As the objects to be conveyed become heavier, demand for automation is created.

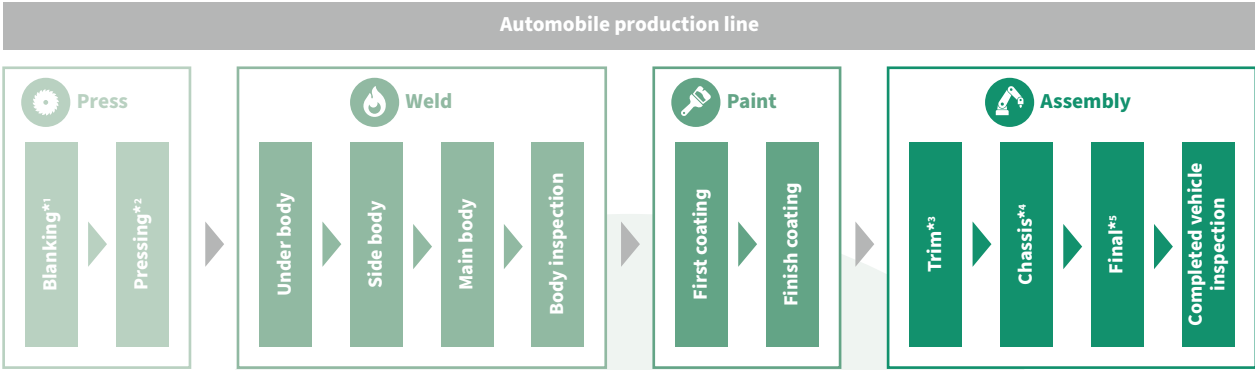




Automotive

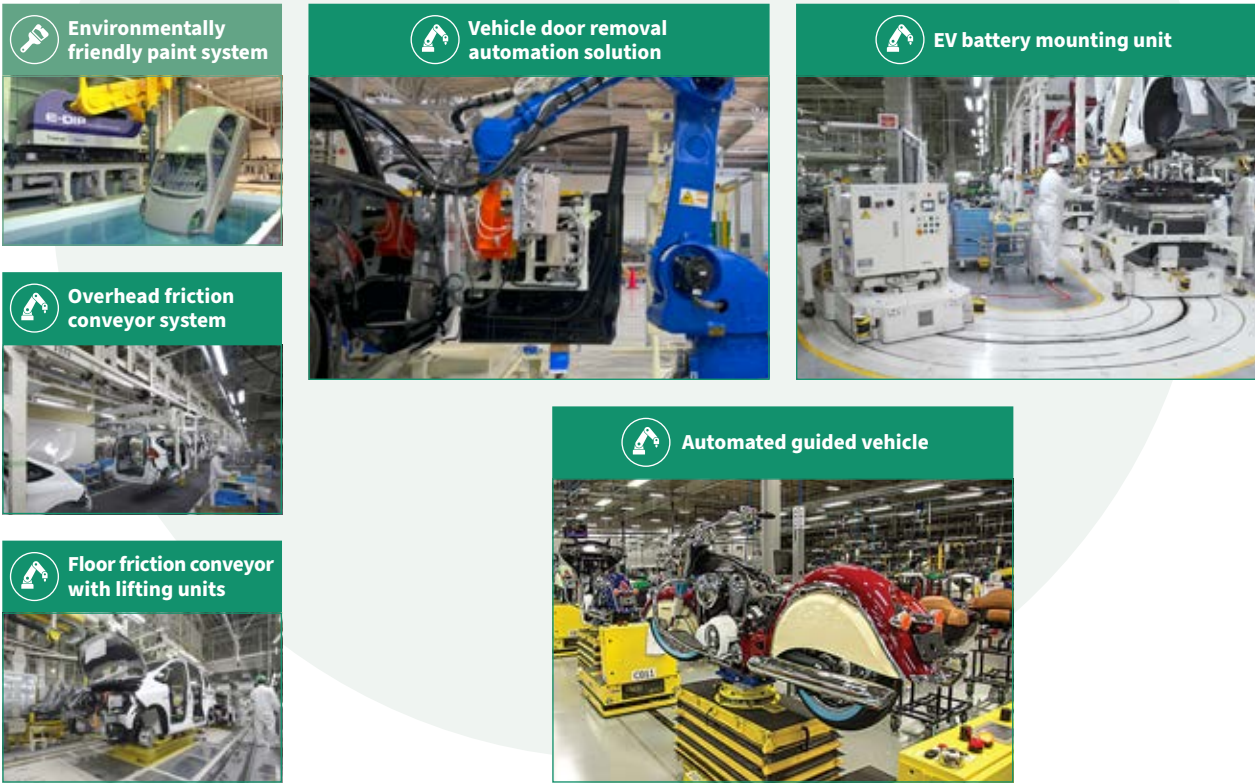
Automobile production line systems

We offer automated systems that enable labor saving in all processes of automobile production, including pressing, welding, coating, assembly, component storage and supply, engine testing and battery installation. They are ergonomically designed, for instance with a mechanism for lifting bodies to the height at which personnel can easily carry out their processes. Recent years have brought mounting demand for carbon neutrality. We are responding to the shift to electric vehicles (EVs).



- \*1 Blanking: A process of cutting a long single steel sheet to a required length with the use of a dedicated cutter
- \*2 Pressing: A process of forming the cut steel sheet into a 3D body component with the use of a pressing machine
- \*3 Trim: Process of attaching the accessories and parts to the car body
- \*4 Chassis: Process of attaching the accessories and parts to the car undercarriage
- \*5 Final: Process of adding the finishing touches

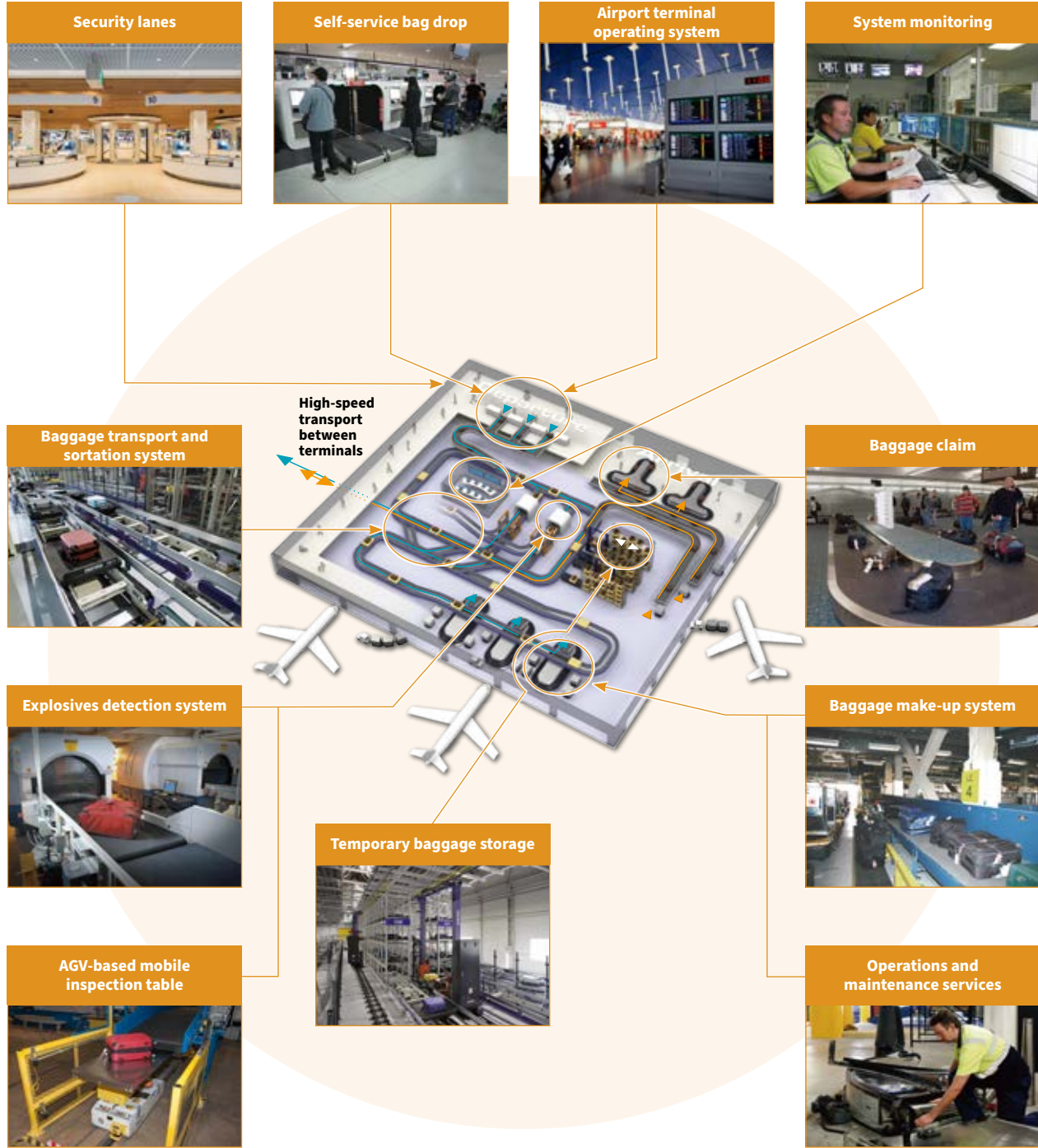
Virtual factory tour  
[www.daifuku.com/solution/automotive](http://www.daifuku.com/solution/automotive)



Airport

Solutions for airports

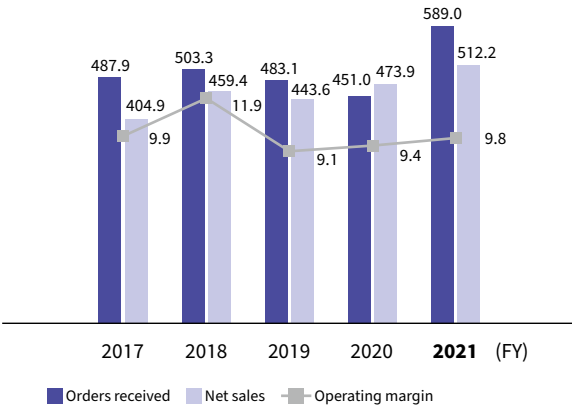
We provide material handling systems, such as baggage check-in, transport, sorting and temporary storage systems, as well as products incorporating digital technology, including airport terminal operating system and security lanes, in airports. We are also working to reduce lost baggage by increasing processing speed and accuracy. In terms of services, we engage in operations and maintenance services.



# Key Performance Indicators

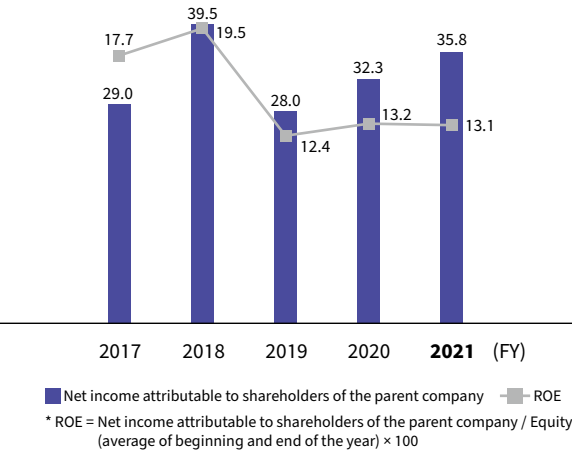
## Orders received, net sales, operating margin

(Billion yen / %)



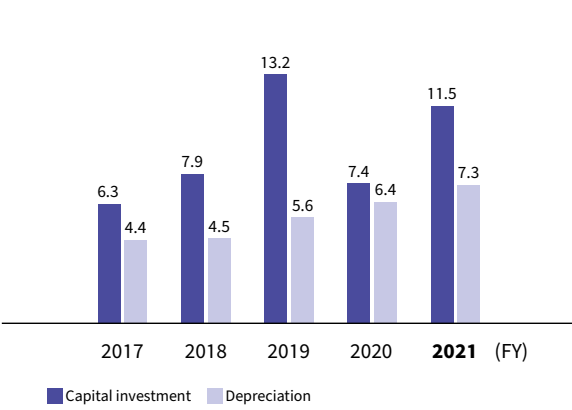
## Net income attributable to shareholders of the parent company, ROE\*

(Billion yen / %)



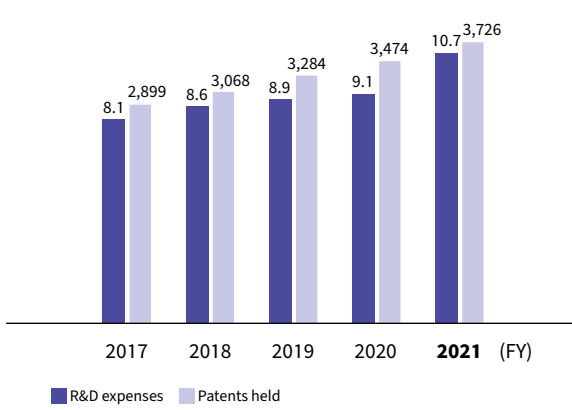
## Capital investment, depreciation

(Billion yen)



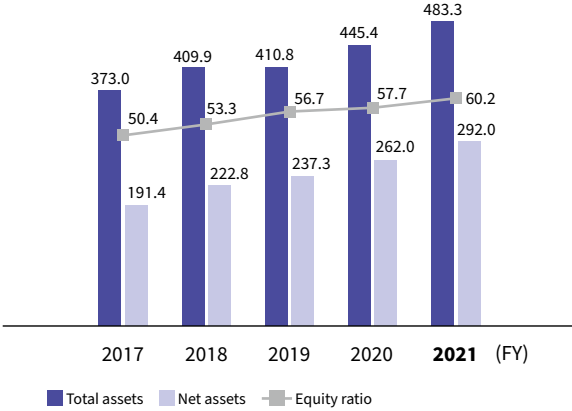
## R&D expenses, patents held

(Billion yen / Patents)



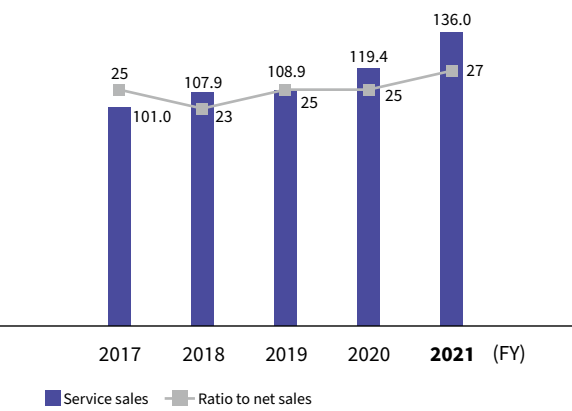
## Total assets, net assets, equity ratio

(Billion yen / %)



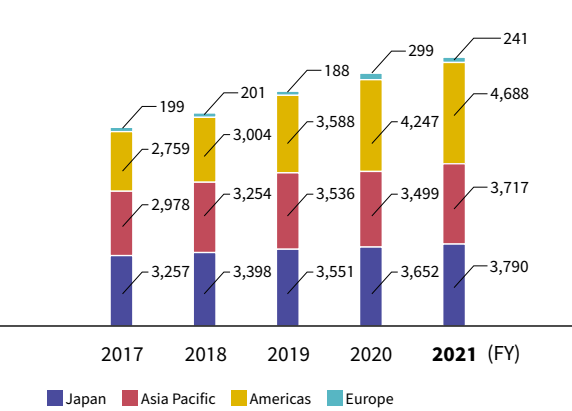
## Service sales, ratio to net sales

(Billion yen / %)



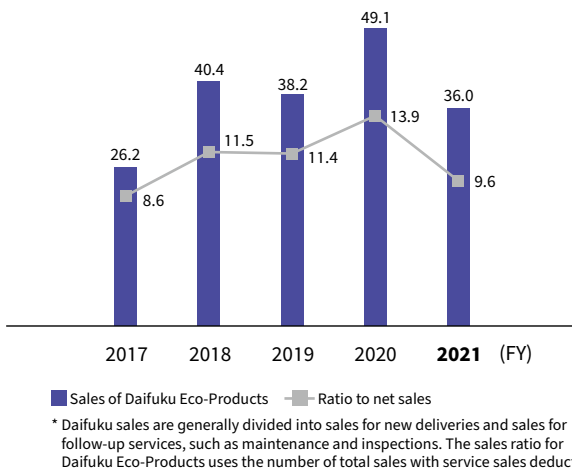
## Employees by region

(People)



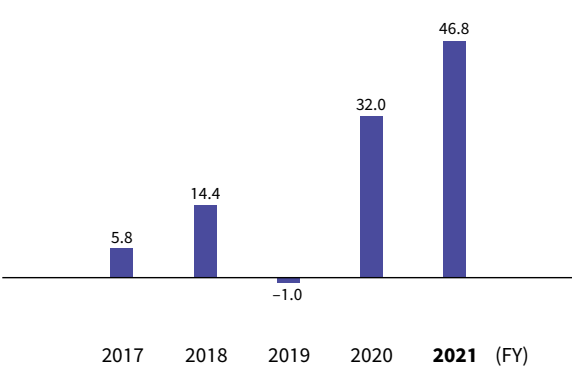
## Sales of Daifuku Eco-Products\*, Daifuku Eco-Products sales ratio

(Billion yen / %)



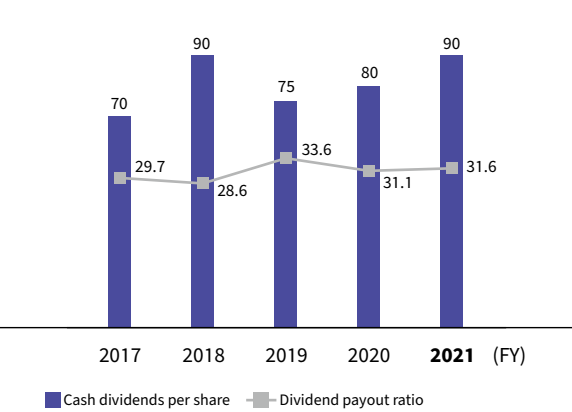
## Free cash flows

(Billion yen)



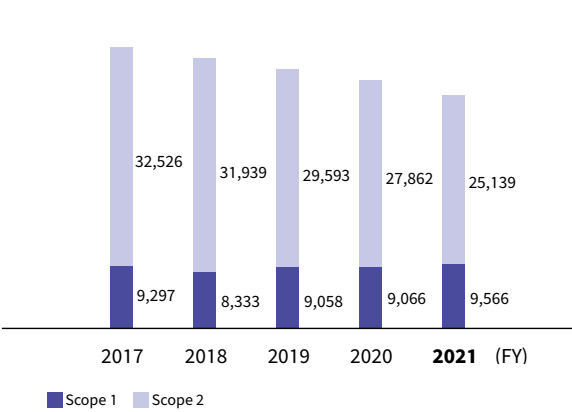
## Cash dividends per share, dividend payout ratio

(Yen / %)



## CO<sub>2</sub> emissions (Global)

(t-CO<sub>2</sub>)



## Waste generated\*, recycling rate of waste\* (Japan)

(t / %)

