

‘Group Management Policies 2023’



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IHI Corporation

President and Chief Executive Officer
Hiroshi Ide

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Thorough Business Structure Reform

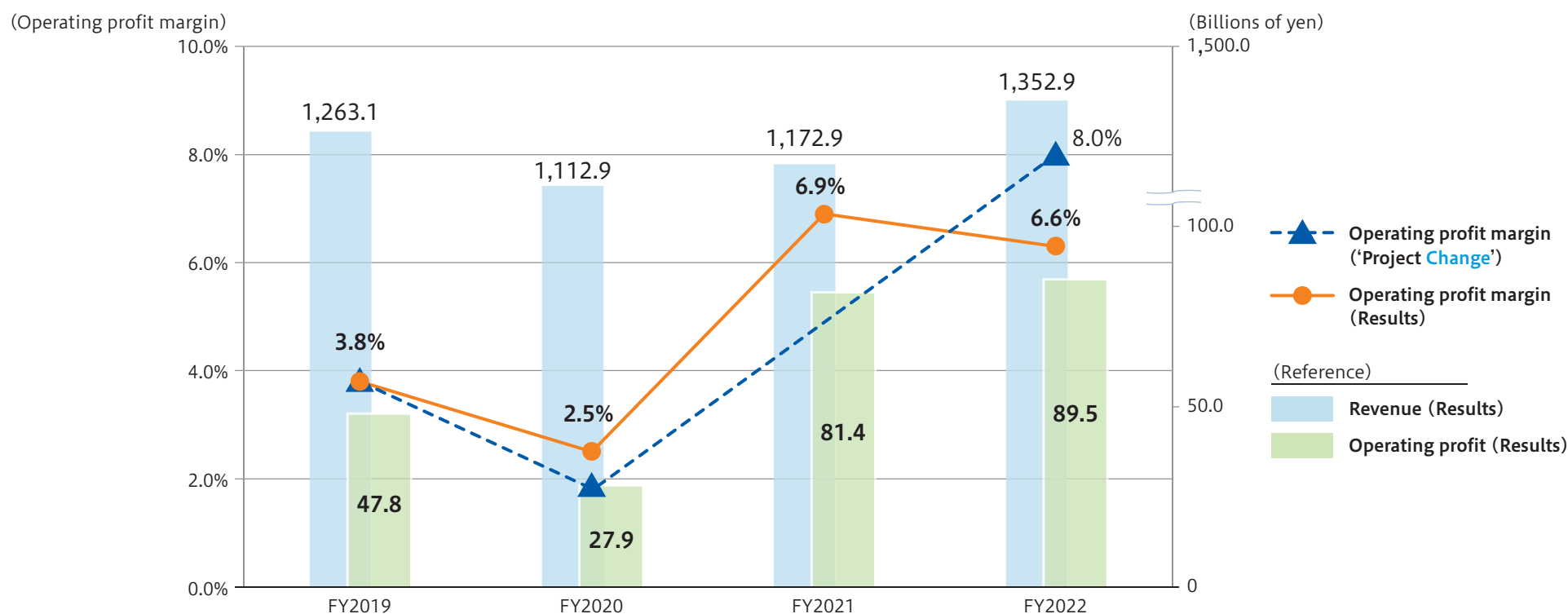
Capability of Realizing **Transformation**

Resource Allocation and Management Targets

Review of 'Project Change'

Results of 'Project Change'

- Given the impact of COVID-19 pandemic, we have been working on returning to growth trajectory positioning it as a preparation period for reforming businesses in response to operating climate changes. We posted record-high operating profit by transforming the business model from product and service businesses to Lifecycle businesses and strengthening the cost structure.



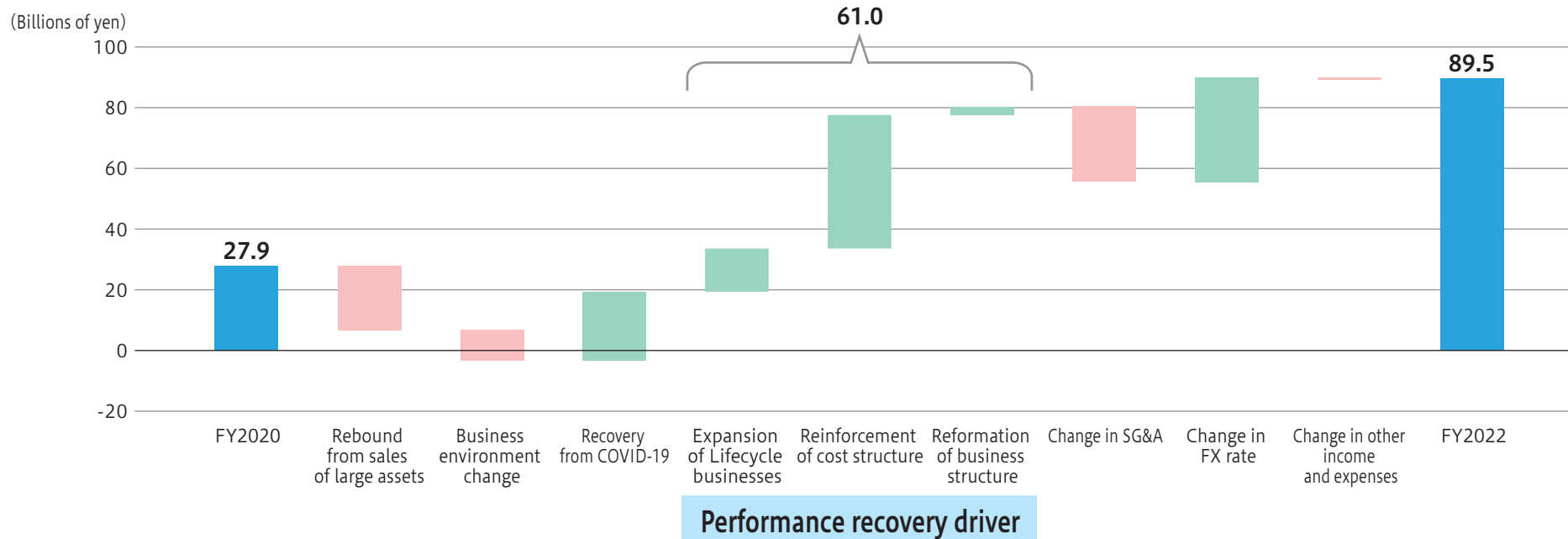
ROIC	4.1%	2.2%	6.4%	6.9%
FX rate	109.19yen	106.40yen	112.68yen	134.32yen

ROIC (after tax) : (Operating profit + Interest and dividend income) after tax / (Equity attributable to owners of parent + Interest-bearing liabilities)

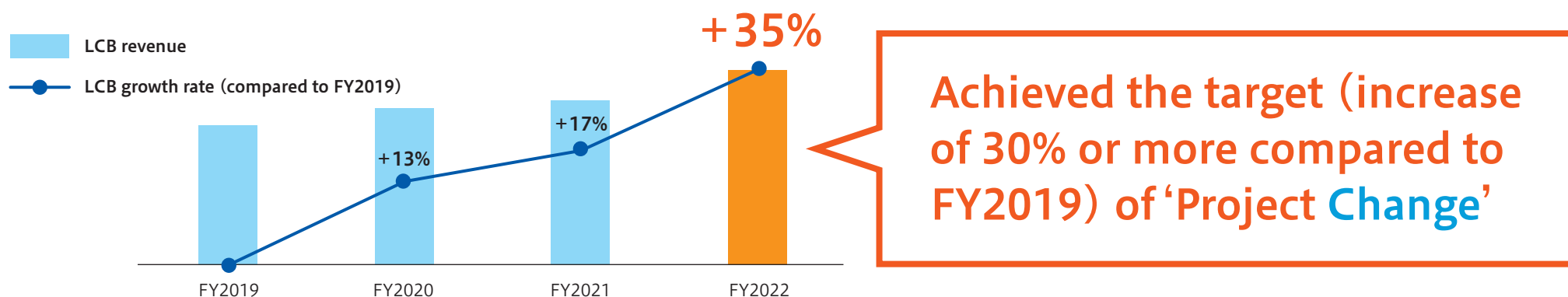
Results of 'Project Change'

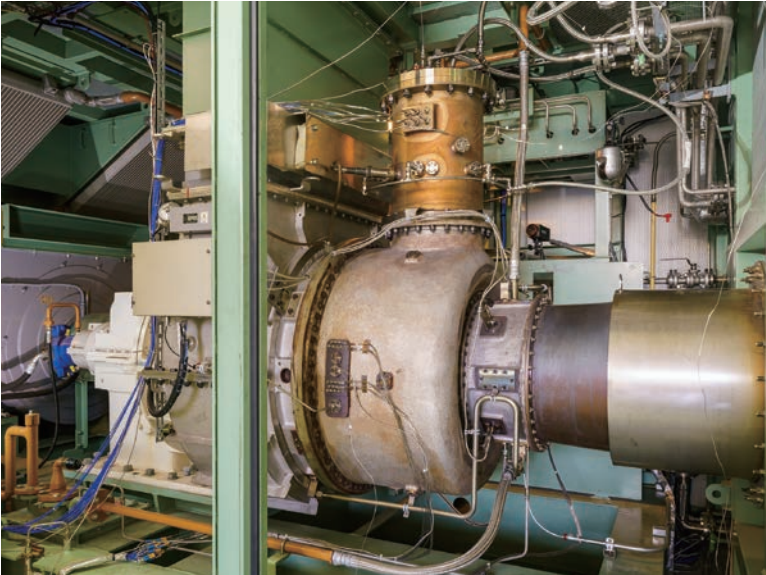
IHI

Factors in operating profit changes (FY2020~FY2022)



Change in LCB revenue (*)Excluding Aero Engine, Space & Defense business fields





Carbon solutions

IHI Achieves World's First CO₂-free Power Generation with a Gas Turbine Completely Fueled Using Liquid Ammonia

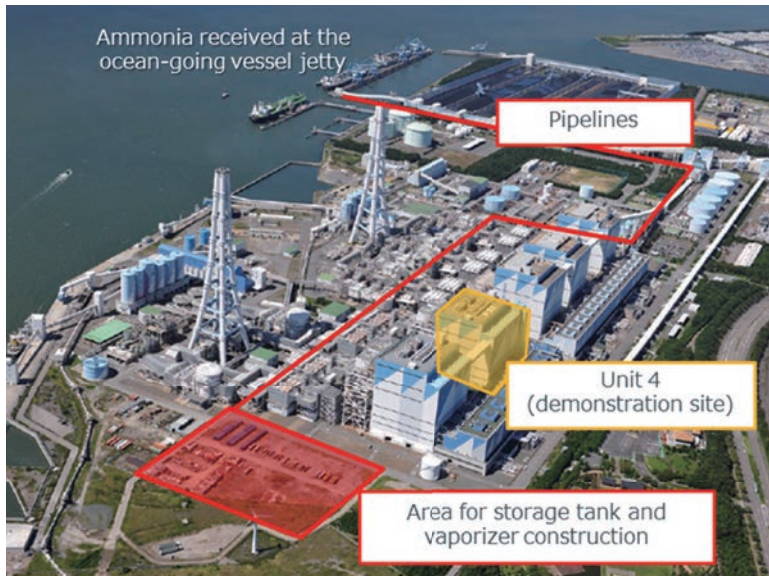
- Realized CO₂-free power generation using a 2,000 kW-class gas turbine that uses only liquid ammonia as fuel
- Succeeded in reducing greenhouse gas emissions during combustion by over 99%
- Aiming for practical use in 2025 by improving operability as well as conducting durability evaluations over a long duration



Carbon solutions

GE and IHI Sign Memorandum of Understanding to Develop Gas Turbines That Can Operate on 100% Ammonia

- Under the MOU, the companies will cooperate to develop 100% ammonia capable combustion system
- Modification of existing large GE gas turbine power plants to use ammonia
- Also to meet the demand for new large ammonia gas turbines



Carbon solutions

Lifecycle businesses

Ammonia Co-firing Demonstration Project at Hekinan Thermal Power Station

- Significant progress in large-scale demonstration project to establish technology in which fuel ammonia is co-fired
- Steady progress being made in adjustments to necessary facilities and the demonstration project till now
- As a result, the start of large-scale co-firing of fuel ammonia (fuel ratio of 20%) has been brought forward by about a year to FY2023



Carbon solutions

IHI Invests in US Company NuScale Power, LLC and Participates in Its Small Modular Reactors (SMR) Project

- Joint investment with Japan Bank for International Cooperation and JGC Holdings Corporation
- NuScale Power's SMR technology's design certification review has been completed, the first in the United States
- IHI will leverage its expertise in designing and producing main machines for nuclear power plants in the SMR project

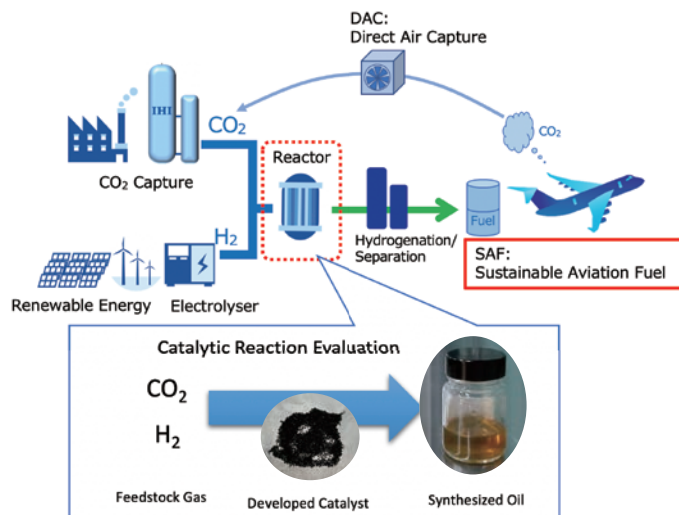


Carbon solutions

IHI Receives Order for the First Time for Standard Methanation Machine that Uses CO₂ and H₂ as Raw Materials for TOHO GAS's Chita LNG Terminal

- Joint research and development of catalysts with a research institution affiliated with the Singapore Agency for Science, Technology and Research (A*STAR)
- The synthetic methane (e-methane) produced can be used as fuel for city gas, etc.
- Plan to carry out demonstration tests from FY2023 to FY2026 in anticipation of large-scale implementation in society

IHI's SAF Concept



Carbon solutions

Aero engine, space

Technology Developed for SAF Synthesis Verified as Achieving Top-ranking Yield Worldwide in Production of Hydrocarbons Derived from CO₂

- Joint research and development of catalysts with a research institution affiliated with the Singapore Agency for Science, Technology and Research (A*STAR)
- New catalyst developed for SAF synthesis, which has achieved liquid hydrocarbon yield of 26% in catalyst reaction tests
- Effective exploration and calibration of test conditions such as catalyst composition and reactive conditions leveraging AI technology



Aero engine, space

IHI Signs MOU with a Global Aerospace and Defense Technology Company to Work Together on Artificial Satellites

- Started collaborating with Northrop Grumman Corporation, which is a global leader in detection and identification of space objects
- Aim to provide small, highly maneuverable satellites to Japan for Space Domain Awareness (SDA)
- To utilize Northrop Grumman's existing satellite buses and IHI's space situational awareness data services



Aero engine, space

IHI Participates in Tri-national Next-Generation Fighter Development Program

- Engine for the next-generation fighter development program to be jointly developed by Japan, the United Kingdom, and Italy
- IHI will work closely with the government and related companies and play a vital role in the collaboration
- To contribute to developing and turning out human resources and highly skilled engineers who can succeed globally in the future

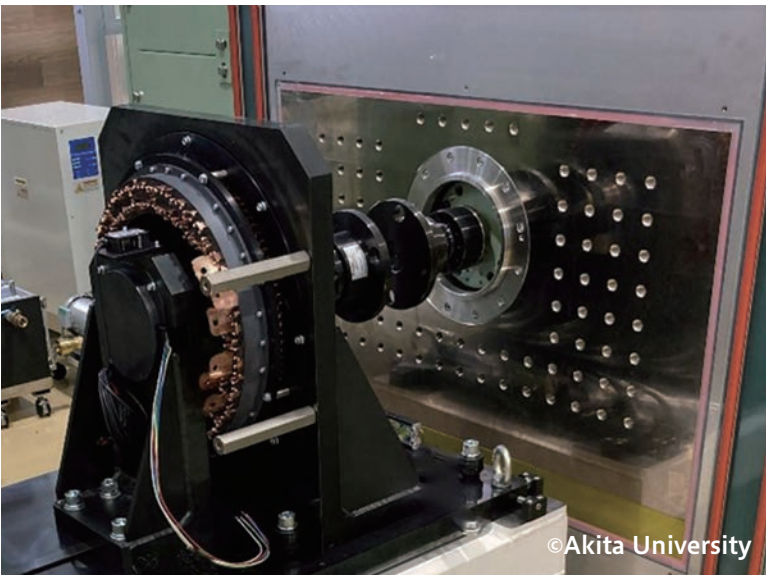


Aero engine, space

Lifecycle businesses

Tsurugashima Works, the New Base for Civil Aero Engine, Starts Operations

- Started operations of new plant for expanding the civil aero engine business centered on lifecycle business
- Introduced new technologies such as IoT and AI under solid quality control system dedicated for civil aero engine maintenance
- Aims to achieve world's highest standard in aviation safety quality and efficient maintenance service

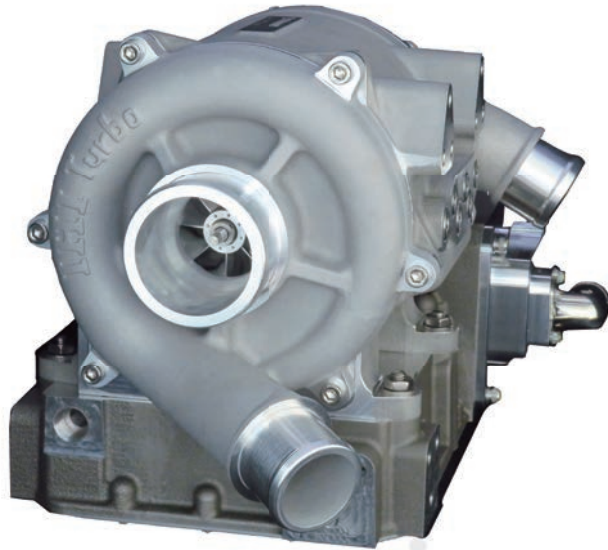


Aero engine, space

Carbon solutions

IHI Succeeds in Developing a Prototype of a High-Power Electric Motor for Aircraft Propulsion Systems

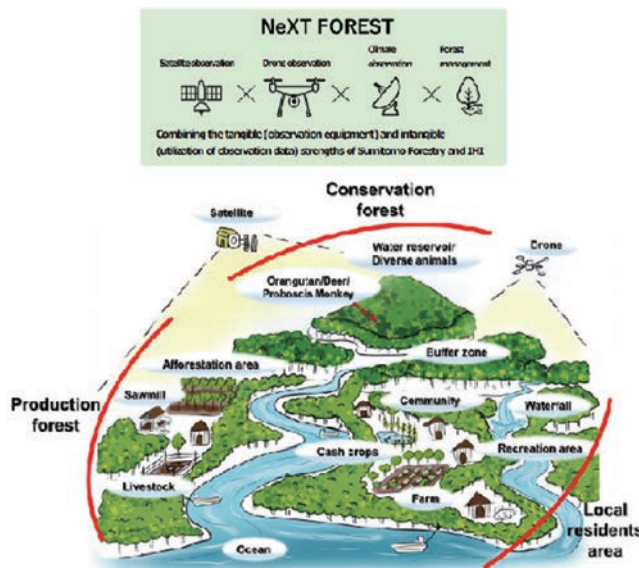
- IHI, in collaboration with local companies in Akita Prefecture and others, succeeded in developing a prototype of a 250-kW high-power electric motor for aircraft propulsion systems
- Envisages the motor's output to be increased to more than 1MW and installed as electric hybrid propulsion system in medium-sized passenger aircraft
- While aiming for practical use in the 2030s, IHI will also work on the electrification and optimization of the entire aircraft system



Carbon solutions

IHI's Electric Turbocharger to be Installed in Fuel Cell System for Commercial Vehicles (Manufactured by AVL List GmbH)

- AVL is a major global automobile power train engineering company
- IHI's electric turbocharger to be installed in the HyTruck fuel cell system that will be installed in the demo truck being developed by AVL in 2023
- IHI's electric turbocharger, with its small size and power savings, contributes to miniaturization and higher efficiency of fuel cell systems



Carbon solutions

Maintenance and disaster prevention and mitigation

IHI and Sumitomo Forestry Establish a Tropical Peatland Consulting Company

- Sumitomo Forestry Co., Ltd. and IHI established a joint venture company NeXT FOREST
- Started consulting service for appropriate management of peatlands
- Introduced a monitoring system that combines the data accumulated by Sumitomo Forestry and IHI's weather monitoring technology

‘Group Management Policies 2023’

● Policies and Results of 'Project Change'

- Preparation period for business transformation
- Creating a new business main pillar as Aero engines

▶ Return to growth trajectory

- Transforming the business model from product and service businesses to Lifecycle businesses (LCB)



Record-high levels
for operating cash
flow (FY2021) and
operating profit
(FY2022)

- Reformation of cost structure

▶ Growth business creation

- Initiatives for the fuel ammonia value-chain business as a new business model

**Preparations in place
for business transformation**



● Business Environmental awareness

Society where
installity
becomes the
norm



Need to further
enhance
corporate
strength

● Significance of this management policy

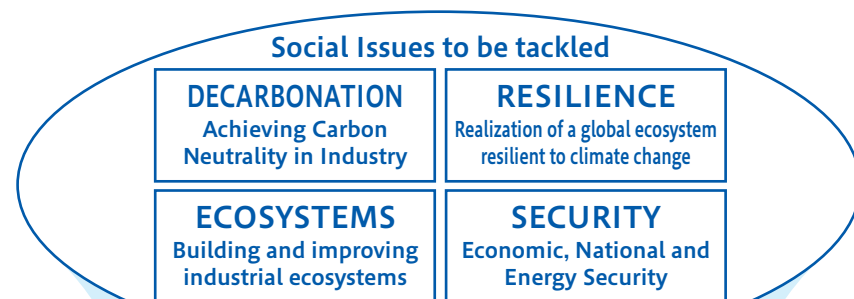


Full-scale business transformation
to achieve strong sustainable growth



Accelerating transformation into a
company that can quickly respond to
disruptive environmental changes

• Group Corporate Strategy



Providing value chain throughout the Lifecycle of customer's business

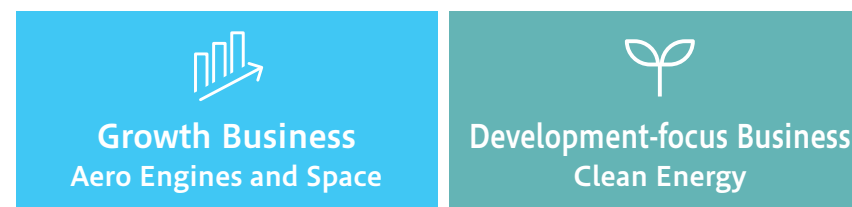
Building up the entire value chain

Technology

Insight

• Key points for the 'Group Management Policies 2023'

- Leaping forward to become a sustainable high-growth company through a **bold shift of management resources** to growth areas



Allocating management resources (cash and human resources)



• Capability of realizing transformation

Developing and recruiting human resources to facilitate transformation

Advancement of digital infrastructure

- **Lead the growth of the corporate** by pursuing business and production transformation, in addition to strengthening and expanding the civil aero engine and defense business.
- **Creating new businesses** from the viewpoint of Lifecycle and value chain

Expanding businesses
from the viewpoint of lifecycle
and value chain

Initiatives for Next-generation aircraft

- Light weight composite material
- Electrification
- SAF/synthetic fuels

Environmentally friendly and economically viable aircraft to achieve carbon neutrality

Strengthening
existing businesses

Business environment
Recovery from pandemic and return to growth
Expanding demand in defense market

Aero Engine business

- Develop Advanced gas turbine technologies
- Develop Next-generation fighter engine
- Incorporate IHI's own technologies to next-generation aero engines
- Establish New engine maintenance site
- Enhance Low material business



Improve profitability and asset efficiency by transforming
production systems and business structures

Rocket business

- Expand production systems to meet increasing defense demand
- Enhance competitiveness of Solid rocket motors
- Establish Rocket launching service

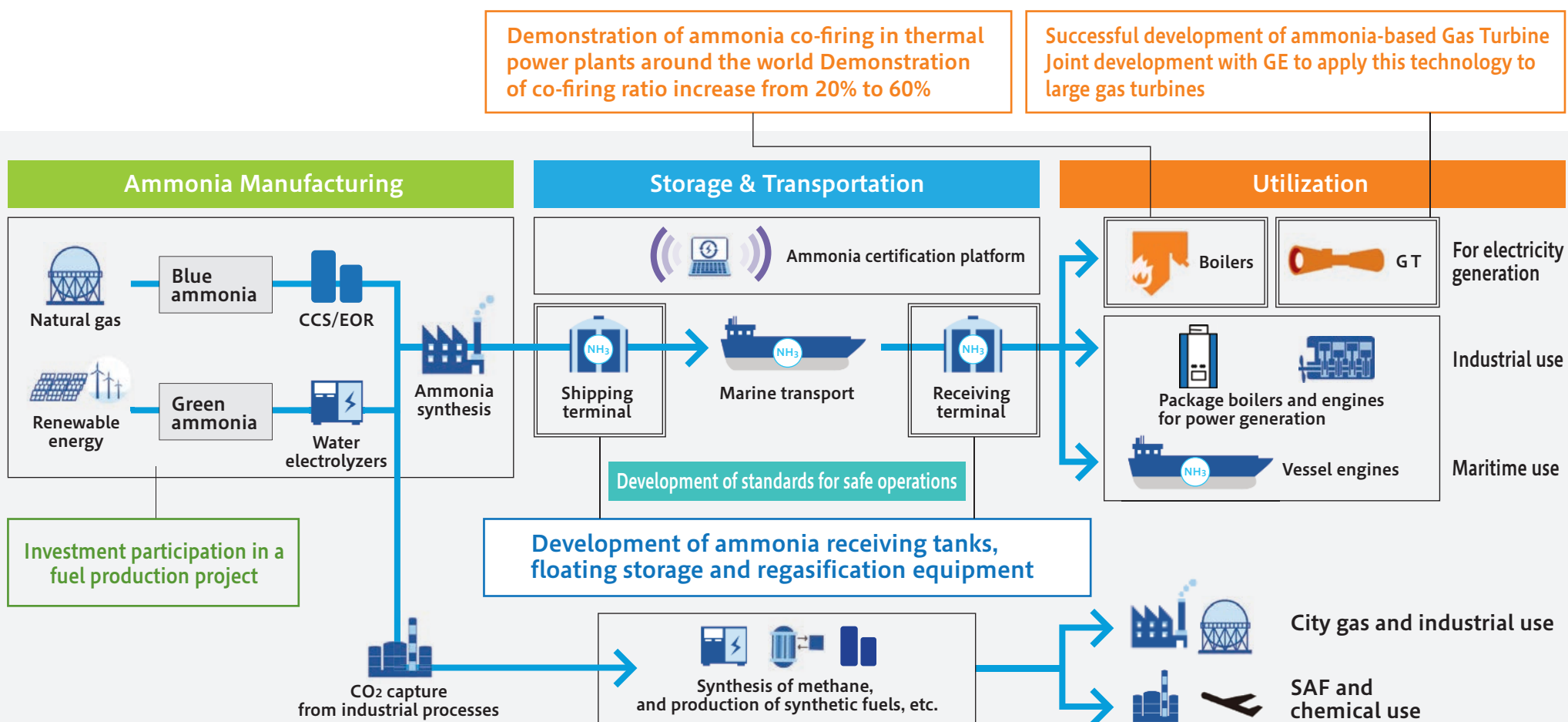


Initiatives for Space, Land and Underwater data utilization

- Defense systems
- Ship surveillance and forest management collaborating with satellite utilization partners

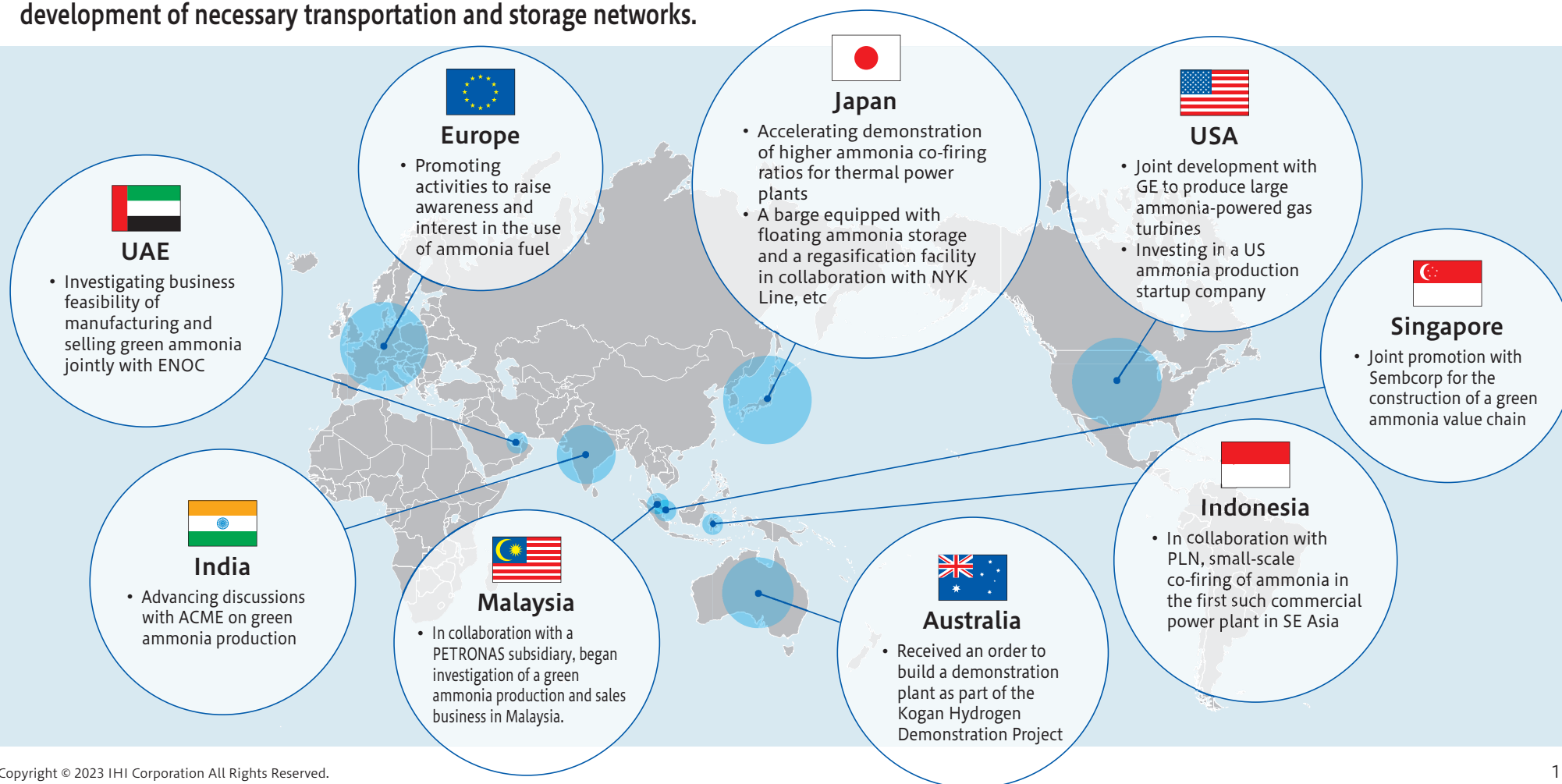
Development-focus Business: Clean Energy

- **Building it into** a business that will be main pillar as Aero Engines, Space
- We will work to **create and improve our entire value chain**. This includes power generation equipment such as Gas Turbine that utilizes world-leading ammonia combustion technology, as well as our storage and receiving terminals with top-tier performance.
- While investigating investment in fuel manufacturing projects, we will utilize our engineering capabilities to build a new business model.



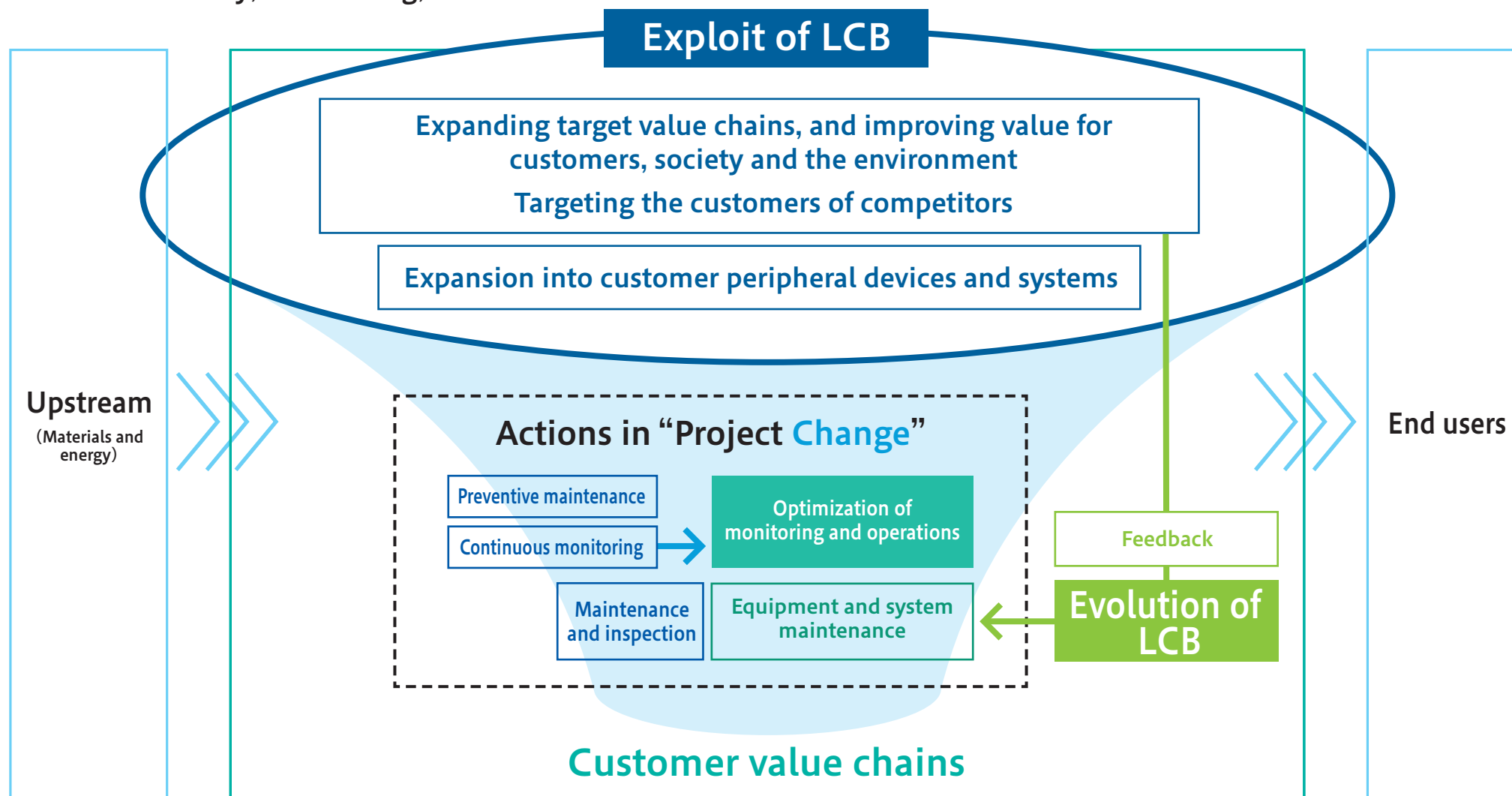
Amid rising energy prices, interest in the use of fuel ammonia is growing faster worldwide.

- We will accelerate the creation of a network for fuel ammonia utilization with partners in Japan, the United States, Europe, and Asia.
- We will help to realize this kind of value chain by promoting discussions with European and US companies involved in ammonia handling as well as with companies in regions where renewable energy is produced. These discussions will cover production of fuel ammonia and the development of necessary transportation and storage networks.



Core Businesses: Growth Strategy Centered on Exploit and Evolution of Lifecycle Businesses^(LCB)

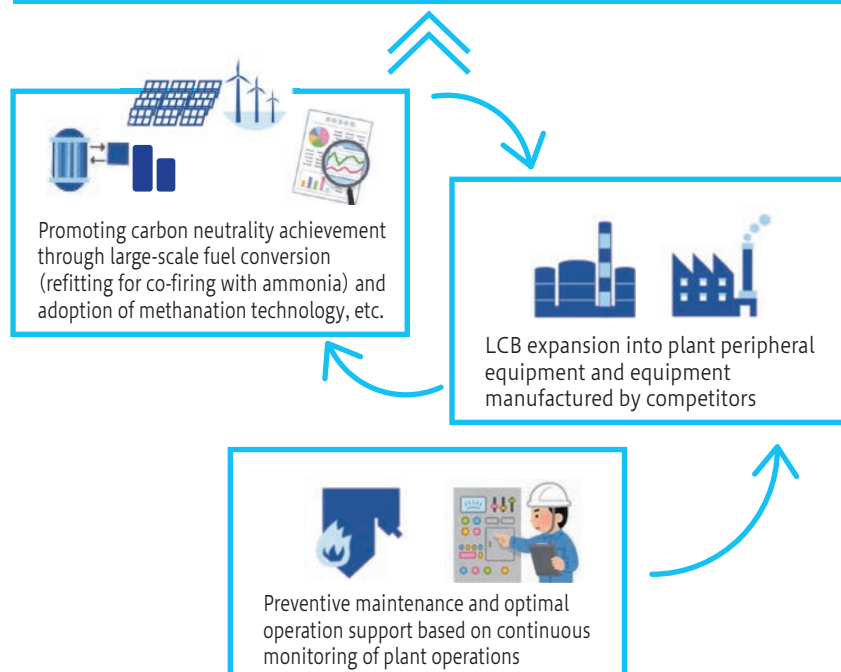
Expanding and improving the customer's value chain, by going beyond just equipment and system sales and maintenance
Positive-spiral initiatives for
<carbon neutrality, labor saving, and resilience enhancement>



Core Business: Exploit and evolution of Lifecycle Businesses (LCB) — Examples **IHI**

Exploit and Evolution of LCB by operation optimization of entire plants and clean energy

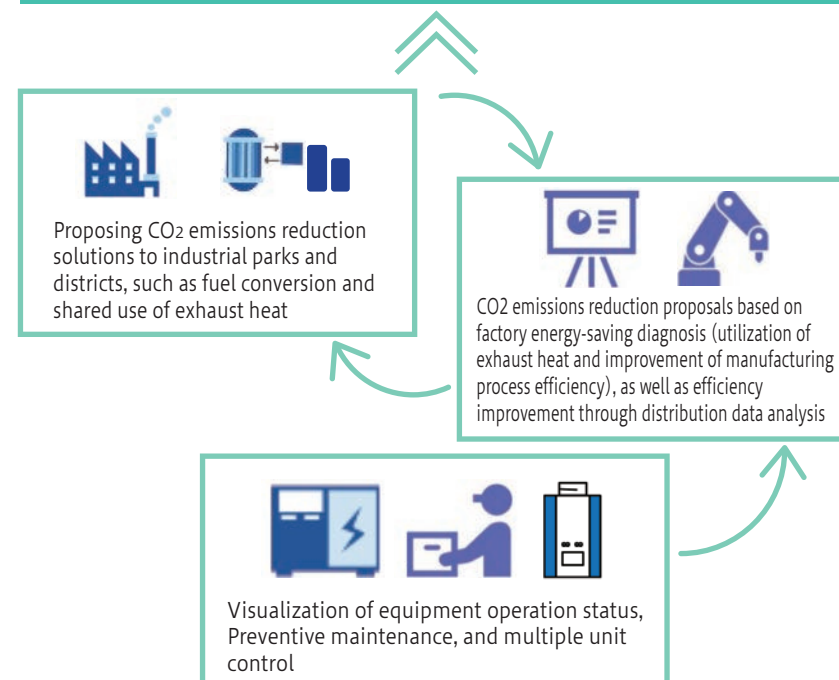
Promoting efficient operations and carbon-neutrality achievement measures for **customers in the power generation sector**



Realizing operation optimization for entire plants based on data analysis, and promoting carbon neutrality achievement in the customer value chain by using clean energy

Exploit and Evolution of LCB through CO₂ emissions reduction, automation and labor saving in factories and industrial parks

Improving value for multiple **industrial customers** by making optimization proposals tailored to the region and industry concerned



By visualizing equipment operation data, the aim is to achieve efficient energy use, automation, and labor savings.
Realize carbon neutrality and solve labor shortages by proposing fuel conversion and shared use of exhaust heat to industrial parks and regions.

Core Businesses: Thorough Business Structure Reform

- Focusing on **strengthening the cash generation capabilities**
by growth strategy based on Exploit and Evolution of LCB, and Structural reforms
- By emphasizing these efforts, we will free up management resources to invest in Growth and Development-focus Businesses.

Enhancing business strength to enable quick response to disruptive environmental changes



Operational process reformation and Advancement of digital infra to improve business efficiency and reducing fixed and variable costs

Improving the cash conversion cycle and generating operating cash flow

Strengthening risk management

Business portfolio optimization



Business restructuring to secure profitability and efficiency

Management centered on ESG values

Climate change adaptation
and mitigation

Diversity,
Equity & Inclusion
Human rights

Earning the trust
of stakeholders

Developing and recruiting
Innovative human resources
that achieving business and
corporate structure transformation



Directions

Focus on Agile and Continuous self-transformation of the
management and personnel and to make it part of the
corporate culture



(1) Acquiring global-level expertise
and management skills and making
it part of the corporate culture

(2) Implementing measures to
improve engagement and
well-being

- Providing re-skilling opportunities for all employees
- Support for self career development

**Advancement of digital
infrastructure**
that essential for business
transformation



Directions

Aiming to improve customer value while maximizing
business value



(1) Digital infrastructure for
creating a new business model
with global competitiveness

(2) Digital infrastructure for
dramatic production and
business process reforms

Resource Allocation and Management Targets

Resource allocation

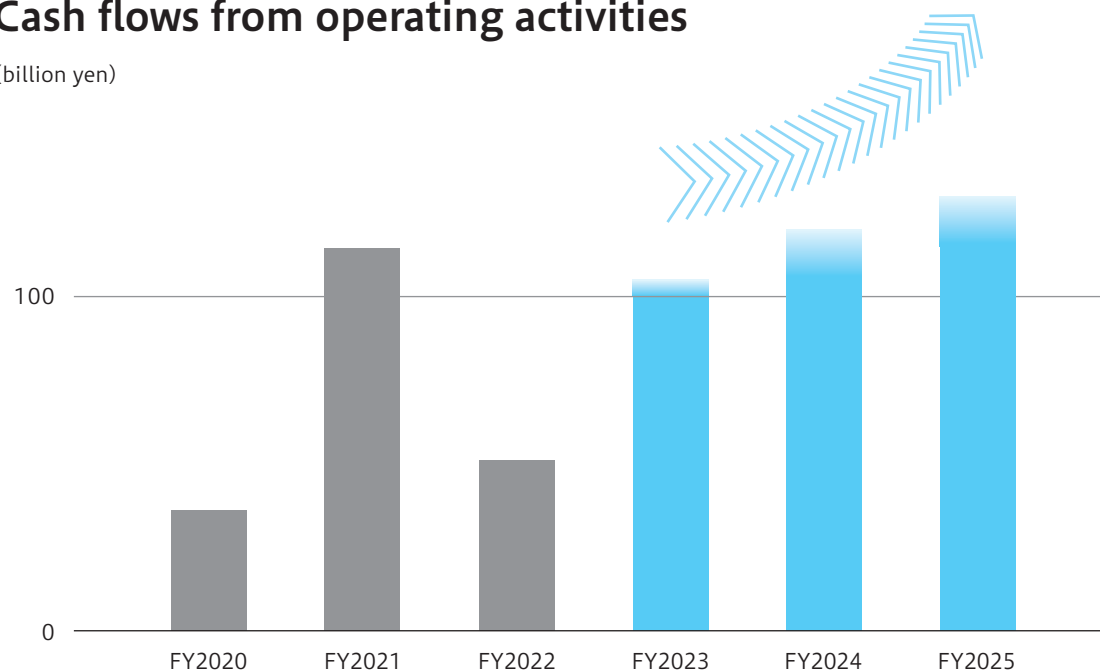


Aiming to generate ongoing operating cash flow of 100 billion yen or more

About half of the total investment budget of 500 billion yen will be invested in Growth and Development-focus Businesses

Cash flows from operating activities

(billion yen)



Management targets



	FY2025
Operating profit margin	7.5%
ROIC	8% or higher
Cash Conversion Cycle	100 days
(Reference) Revenue	1.7 trillion yen

Shareholder returns

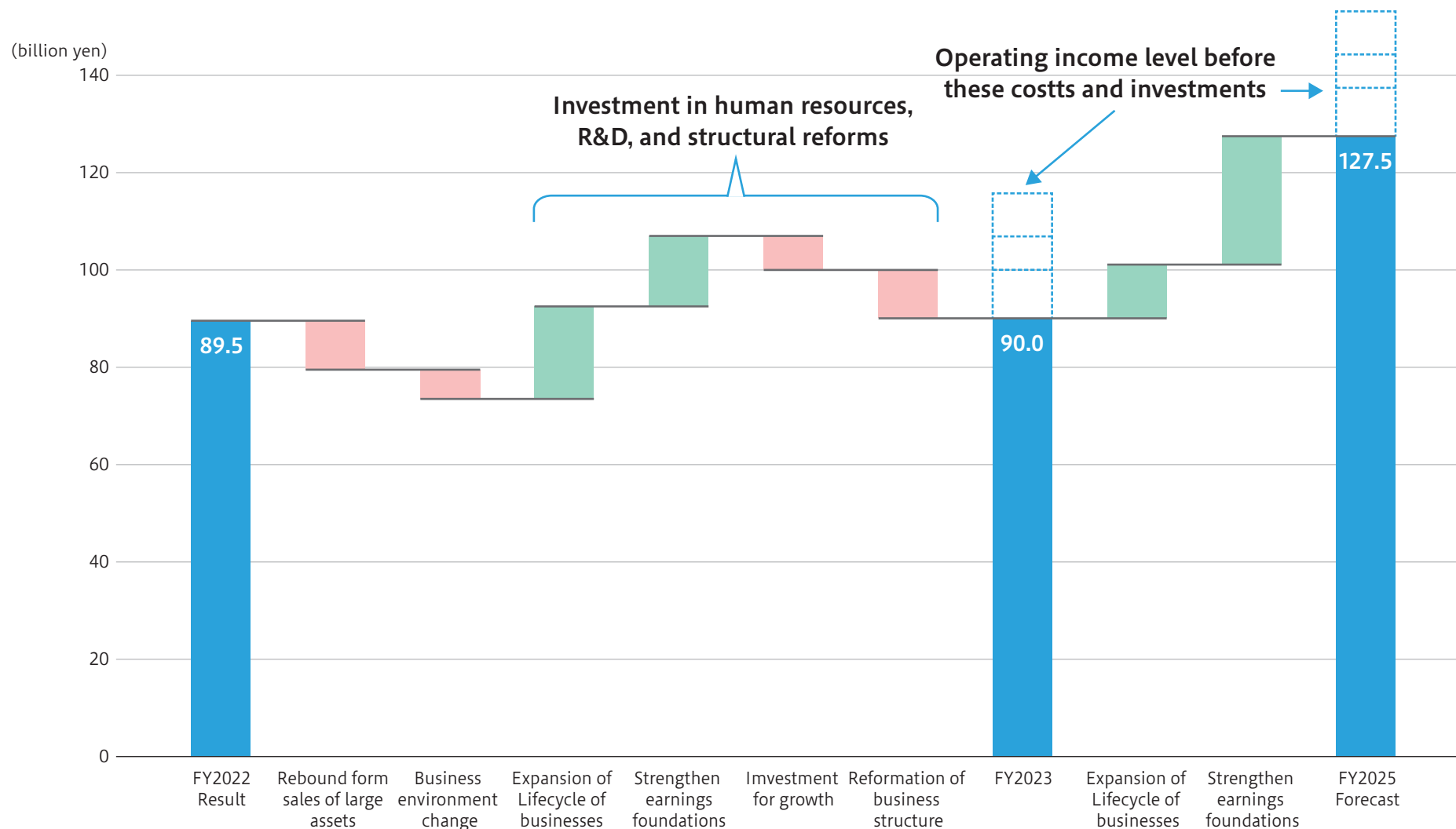


Aiming for a consolidated dividend payout ratio of **30%** based on a basic policy of stable dividends

ROIC (after tax) : (Operating profit + Interest and dividend income) after tax / (Equity attributable to owners of parent + Interest-bearing liabilities)
Cash Conversion cycle: Working capital / Revenue × 365 days

Resource Allocation and Management Targets

Factors in operating profit changes (FY2022~FY2025)



Resource Allocation and Management Targets

Forecast of Operating Profit Margin by Business Domain

(Billion yen)

	Operating profit/ Operating profit margin			Revenue		
	FY2022 (Results)	FY2023 (Forecast)	FY2025 (Targets)	FY2022 (Results)	FY2023 (Forecast)	FY2025 (Targets)
Resources, Energy & Environment	26.2 7.1%	26.0 6.8%	31.0 7.2%	371.3	380.0	430.0
Social Infrastructure	17.0 9.9%	13.0 6.8%	18.0 8.6%	171.0	190.0	210.0
Industrial Systems & General-Purpose Machinery	18.0 4.1%	24.0 5.2%	40.0 7.5%	436.5	460.0	530.0
Aero Engine, Space & Defense	43.7 12.0%	51.0 11.9%	60.0 11.5%	364.1	430.0	520.0
Other	1.3	3.0	3.0	54.2	50.0	50.0
Adjustments	-16.8	-27.0	-24.5	-44.4	-60.0	-40.0
Total	89.5 6.6%	90.0 6.2%	127.5 7.5%	1,352.9	1,450.0	1,700.0

FX rates | 134.32 JPY/USD | 130.00 JPY/USD | 130.00 JPY/USD | 134.32 JPY/USD | 130.00 JPY/USD | 130.00 JPY/USD |

IHI

Realize your dreams