# Management Briefing for Second Quarter of Fiscal Year 2024

IHI

### **IHI** Corporation

Hiroshi Ide Representative Director, President, and Chief Executive Officer



- 1. Progress with Group Management Policies 2023
- 2. Business Portfolio and Balance Sheet Reforms
- 3. Growth Businesses (Civil Aero-Engines, Defense, and Space)
- 4. Development-Focus Businesses (Fuel Ammonia Value Chain)

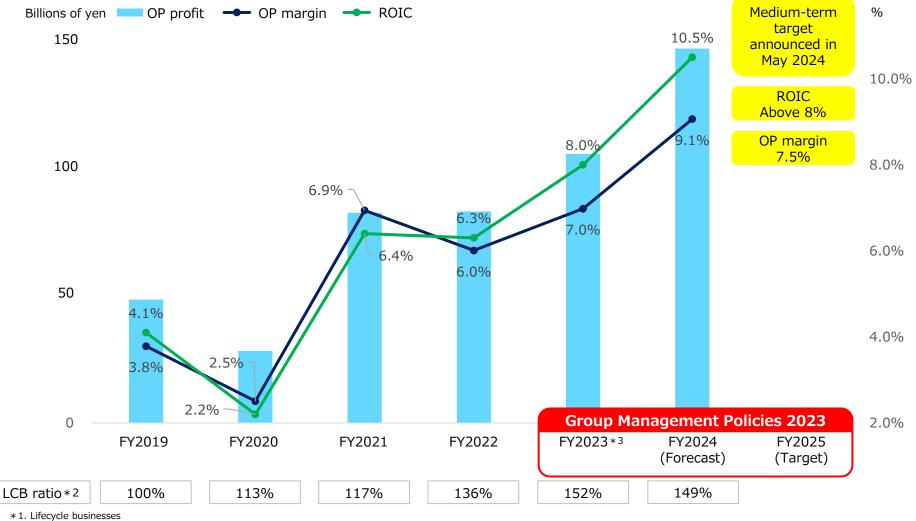
1. Progress with Group Management Policies 2023



## **Progress with Group Management Policies 2023**



# Boosted profitability on Civil Aero-Engine and LCB\*1 expansions and achieved medium-term target ahead of schedule



<sup>\*2.</sup> LCB revenue after excluding Civil Aero-Engine, Defense, and Space businesses, with base year set at 100% for fiscal 2019

<sup>\*3.</sup> Excluding impact of Special factors in fiscal 2023

# **Progress with Group Management Policies 2023**



# While profitability benchmark EBITDA grew significantly, faced issues with operating cash flow levels and cash conversion cycle



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<sup>\*1.</sup> Excluding impact of Special factors in fiscal 2023, \*2. Cash conversion cycle, \*3. Expenditures related to the additional inspection program for PW1100G-JM engines : 50 billion Yen

# **Attaining Group Management Policies 2023 Goals**

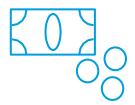


# Accelerate reforms and strengthen growth foundations to support next medium-term plan and beyond



# Overhaul business portfolio

- ✓ Accelerate cash and talent shifts to growth and development-focus businesses
- Restructure businesses with underperforming profitability and capital efficiency



### **Restructure balance sheets**

- ✓ Make capital costs and returns a greater management priority
- ✓ Swiftly restore financial health by shrinking working capital, selling assets and divesting businesses



## **Change mindsets through DEI initiatives**

- Encourage employees to change their behavior and become" Change Agent "
- Empower all employees to leverage their strengths and accelerate change

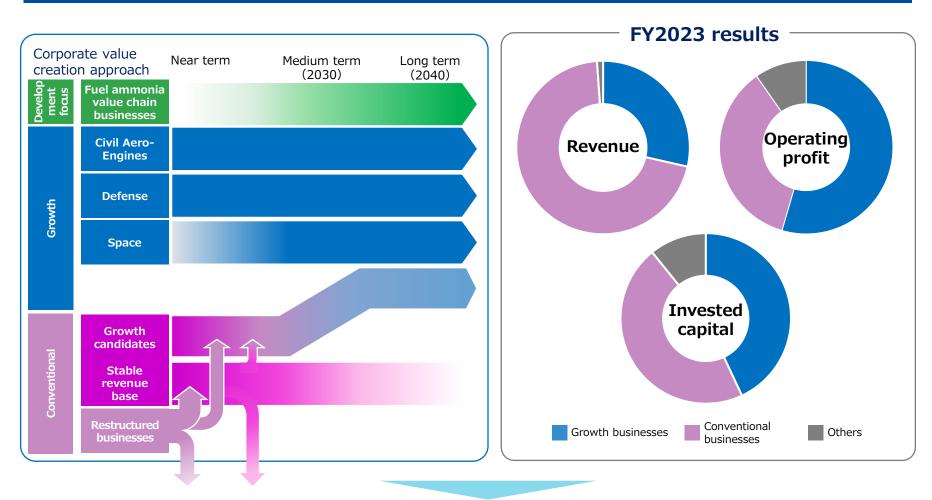
# 2. Overhauling Business Portfolio and Restructuring Balance Sheets



### **Envisioned Medium-to-Long-Term Business Portfolio**



# Overhauling business portfolio vital to realize vision and boost corporate value



- √ Growth businesses highly profitable, generating just under 60% of operating profit
- √ Conventional businesses not very profitable or efficient

### **Business Portfolio Assessment Criteria**



# Build portfolio that can deliver steady growth while controlling volatility

✓ Increase greater emphasis on stability and efficiency, in addition to strategic alignment and growth potential

### Strategic alignment

- Synergies with growth and development-focus businesses
- High entry barriers leveraging technological prowess
- Optimal business ownership

# Corporate value improvement

# Stability and efficiency

- Revenue, profitability, and cash flow generation capabilities
- Asset efficiency
- Market dominance

### **Growth potential**

- · Market growth potential
- Business growth potential

- Build more cash flow
- Strengthen financial position

## **Business Portfolio Strategy: Conventional Businesses**



# Determine the direction of restructured business by FY2024 and accelerate its implementation from FY2025

- ✓ Conventional businesses to generate stable revenue and cash flow base sustainably supporting Group's overall portfolio
- ✓ Restructure nonperforming businesses to enhance profitability and generate cash flow

**Business category** 

Portfolio reform approach

# Conventional businesses

### Stable revenue base

- ✓ Maintain and enhance profitability by expanding lifecycle businesses
- ✓ Harness market dominance to maximize cash flows

### **Restructured businesses**

- ✓ Restructure to eliminate downside risks
- ✓ Rebuild business strategies to enhance profitability, such as by strategically paring down regional and product portfolios
- ✓ Build a leaner operational structure through such steps as cutting fixed costs

#### **Business transfer**

✓ Achieving growth outside the IHI Group

(Business transfer scheduled)

**General-purpose boiler business** 

Materials handling system business

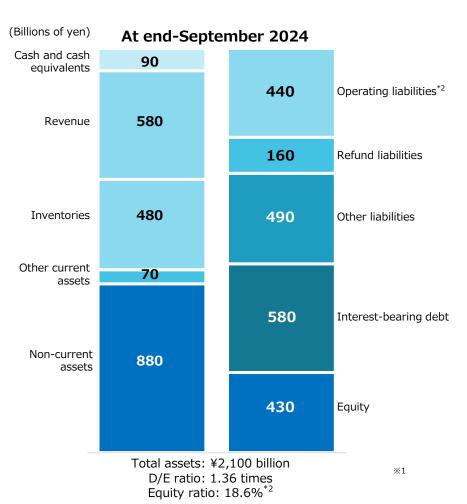
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### **Restructuring Balance Sheets**



# Optimize invested capital and focus on capital costs and returns

✓ Swiftly restore D/E ratio to around  $1.1^{*1}$  and boost equity ratio to at least 20%



### \*1. Equity ratio = Ratio of equity attributable to owners of parent

### **Reduce working capital**

Step up efforts to lower groupwide inventories

Accelerate accounts receivable collections and increase advances received

# Systematically divest assets

Investment properties
Sell all policy shareholdings(Listed shares)

### **Reform business structure**

Reduce invested capital in or divest low-ROIC businesses

<sup>\*2.</sup> Operating liabilities = Trade payables + Contract liabilities + Refund liabilities

## **Progress with Business Portfolio and Balance Sheet Reforms**



## Some reforms underway, will keep urgently pursuing improvements

### **Business portfolio reforms**

Announcement timing	Businesses	Overview
FY2023	Vehicular turbochargers	Fixed asset impairment and other structural reforms at IHI Charging Systems International GmbH (ICSI)
September 26, 2024	Vehicular turbochargers	Resolved to dissolve ICSI
		Will concentrate European vehicular turbocharger business at Italian subsidiary
		Will gradually transfer production to other foreign subsidiaries
October 28, 2024	General-purpose boiler business	Resolved to transfer shares of IHI General-purpose boiler Co., Ltd. (IBK) to TAKUMA CO., LTD.
		Scheduled to transfer 100% of IBK shares on April 1, 2025
November 6, 2024	Materials handling system business	Resolved to transfer IHI Transport Machinery Co., Ltd. (IUK) material handling system business to Tadano Ltd.
		Scheduled to be transferred on July 1, 2025

### **Balance sheet reforms**

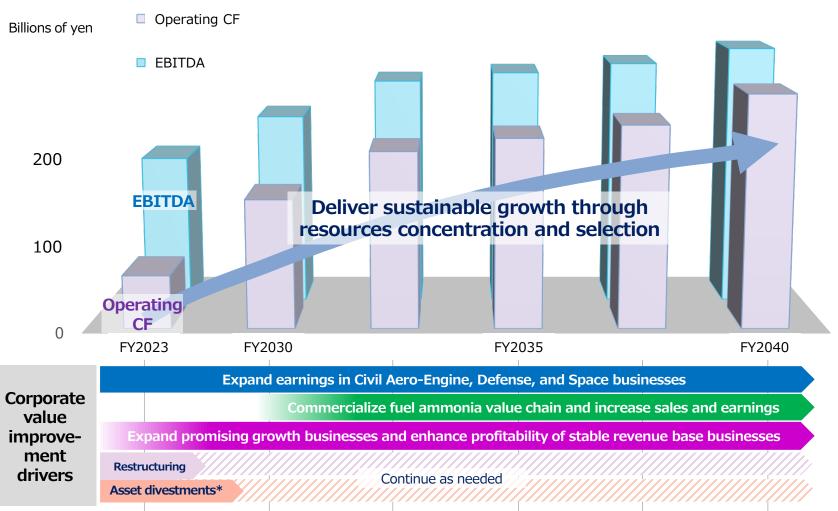
Announcement timing	Businesses	Overview
FY2023	Investment property sales	Sold property in Ayase, Kanagawa Prefecture
During FY2024	Investment property sales	Planning to sell stakes in properties in Toyosu, Tokyo

# **Generating Sustainable Value**



# Keep undertaking operating reforms and boost corporate value over medium to long terms

### **Operating CF and EBITDA**



\*Not included in figures above

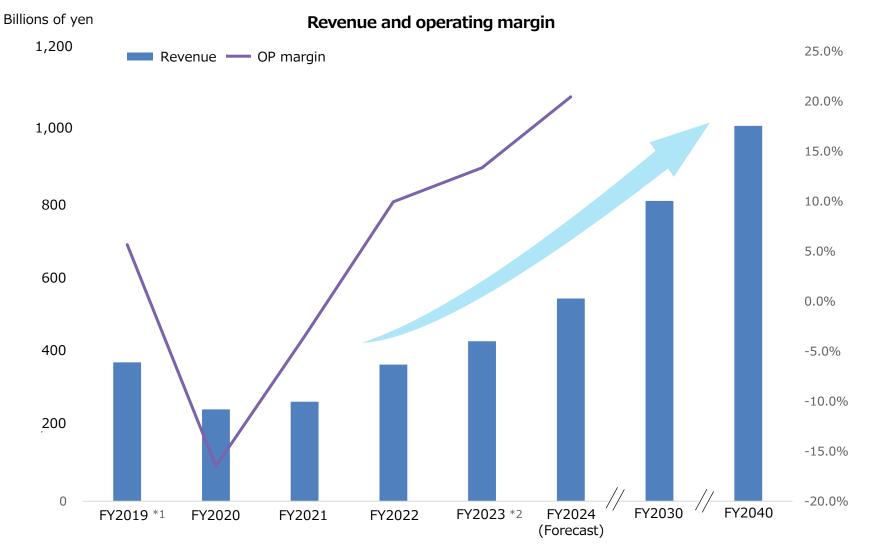
# 3. Growth Businesses

Civil Aero-Engines, Defense, and Space



# Civil Aero-Engine, Defense, and Space Business Growth Prospects IHI

### Targeting ¥800 billion in revenue by FY2030 and ¥1,000 billion by FY2040



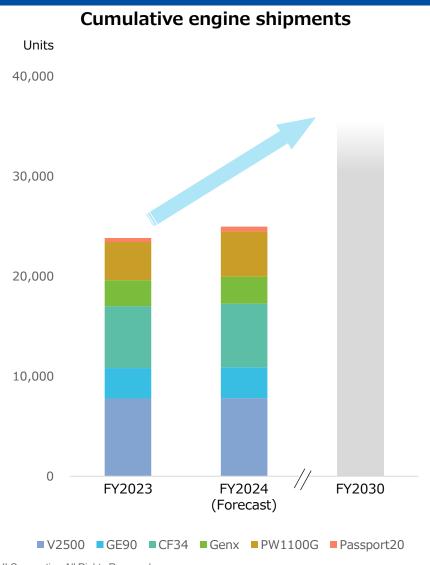
<sup>\*1</sup> International Financial Reporting Standards applied to fiscal 2019 figures.

<sup>\*2</sup> Excluding loss related to the additional inspection program for PW1100G-JM engines.

# Civil Aero-Engine Business: Business Scale Expansion

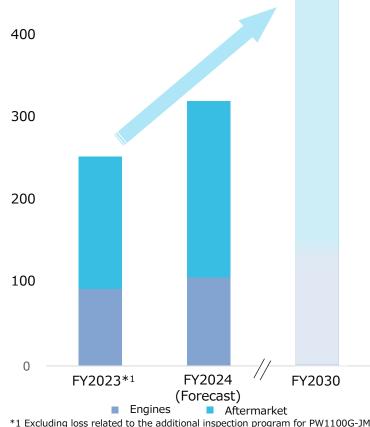


### Total engine shipments have steadily increased, with aftermarket revenue growth being even faster



### Civil aero-engine business revenue

Billions of yen 500



\*1 Excluding loss related to the additional inspection program for PW1100G-JM engines.

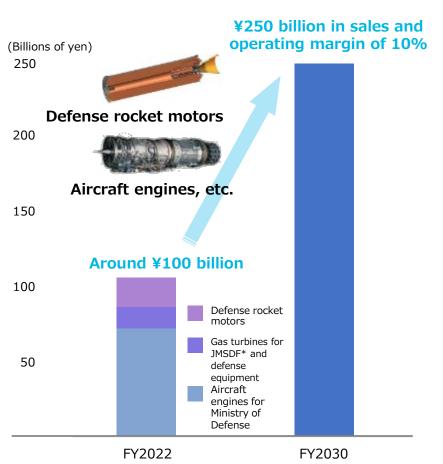
Note: Aftermarket encompasses spare parts + maintenance and parts repairs

## **Defense Business: Increase Scale and Profitability**

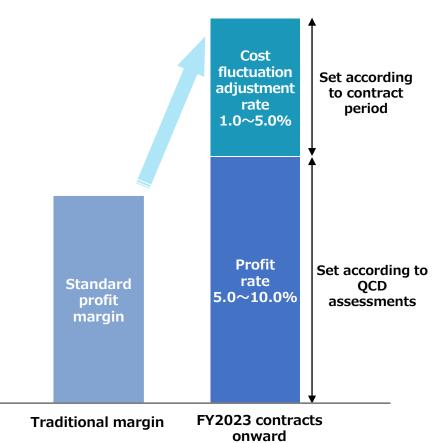


### FY2030 targets: Sales of ¥250 billion and operating margin of 10%

### IHI's defense business sales



# Enhance profit margins as part of defense industry policy



- Corporate efforts reflected in profit margins through Ministry of Defense evaluations of quality, cost, and delivery management
- Deploying a cost fluctuation adjustment rate absorbs the risk of cost increases from soaring prices and other uncontrollable factors

### **Defense Business: Strengthen Global Deployment**



Leverage long experience in developing and manufacturing defense engines to strengthen global deployment of defense business

### Export licensed domestic engine parts to U.S. original equipment manufacturer





Help strengthen alliance between Japan and United States by complementing IHI and original equipment manufacturer production capabilities

# Maintenance business for engines mounted on F-35 fighter jets



(From June 29, 2023, press release) acific, serving as regional

In Asia-Pacific, serving as regional maintenance depot alongside Australia

### International joint development for nextgeneration fighter aircraft (GCAP)



Playing a vital role by stepping up collaboration with the public and private sectors

Source:\*1 Ministry of Defense website https://www.mod.go.jp/j/policy/defense/nextfighter/index.html

## **Space Business: Grow through Public-Private Collaboration**



# Expand contributions to nation's space development and commercialize launch services

# IHI's rocket technologies



World-class liquid engine



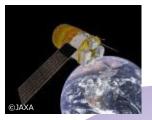
developed the turbo pump



fuel rocket

©JAXA

Government-led space development



Help transport materials to International Space Station

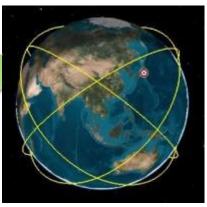


Participate in resupply missions to lunar orbiting crewed station

Expand into privatesector business



Enter launch services business



Expand satellite utilization business

# 4. Development-Focus Businesses

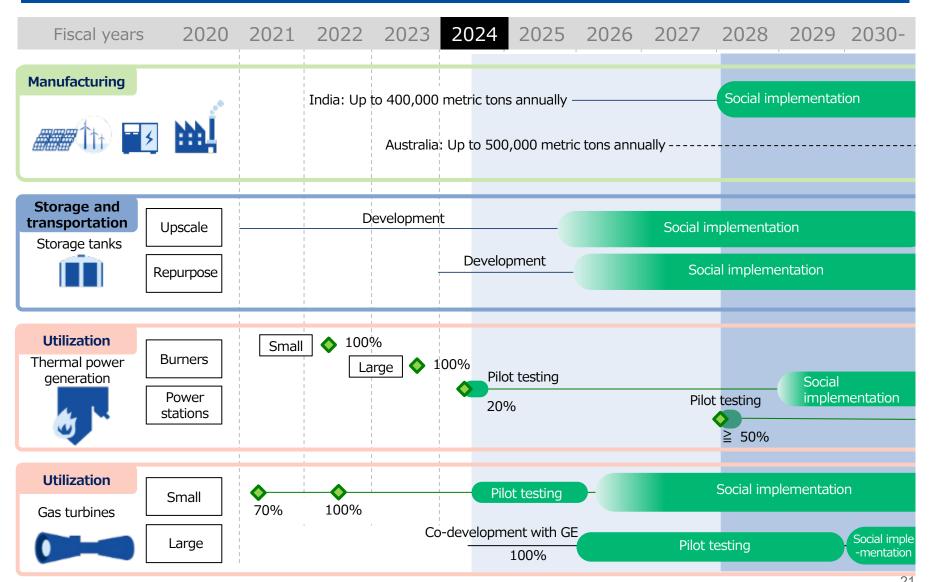
**Fuel Ammonia Value Chain** 



### **Development-Focus Businesses: Milestones**



# **Expected to accelerate social implementation of fuel ammonia from FY2028**



### **Development-Focus Businesses: Successes**



# Spearheading global efforts towards social implementation

#### **Production** Storage and transportation Utilization NΗ<sub>3</sub> **Boilers** NH<sub>3</sub> Renewable Shipping Receiving Water **Ammonia** Marine energy terminals terminals electrolyzers synthesis transport Vessel Gas turbines engines



ACME signing ceremony (image from IHI website)

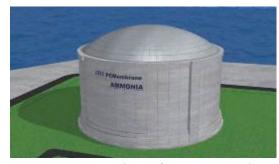
### Green ammonia production and supply

### **ACME (India)**

- Initiating production and supply in 2028
- Up to 400,000 metric tons annually

### **Australia**

- Exploring investments in production and sales
- Up to 500,000 metric tons annually



Computer-generated image of ammonia storage tank (image from IHI website)

### Ammonia storage tanks

- 2026: Social implementation of large tanks and complete LNG repurposing effort

### Large ammonia receiving terminals

- Selected for feasibility study by Japanese government
- Participating in work in Tomakomai, Soma, and Osaka
- Scheduled to be realized by 2030



Sakigake, an ammonia-fueled tugboat (image from IHI website)

# Ammonia fuel conversion for thermal power plants

- Completed world's first successful 20% fuel conversion demonstration
- 50% fuel conversion demonstration after 2028

### 2MW class ammonia-fueled gas turbines

- Conducting long-term durability testing to prepare for commercialization
- Social implementation in 2026

### Sakigake, an ammonia-fueled tugboat

- World's first such tugboat for commercial purposes
- Launched demonstration voyage in Tokyo Bay

# Development-Focus Businesses

# **Collaborating with Global Partners**

Storage and Transportation

Commissioned to study feasibility of large

Fukushima; Tomakomai, Hokkaido; and

ammonia supply hubs in Soma,

Sakai-Semboku, Osaka



### Storage and Transportation



Initiated discussions with Taiwan Fertilizer to establishing East Asian ammonia supply value chain

### Storage and Transportation



Agreed with Vopak to jointly study low-carbon ammonia terminal development and operation

#### Production



Initiated study with ENOC to explore feasibility of Dubai's first green ammonia production and sales project

#### Production



Partnered with ACME to explore green ammonia production and sales business in Oman

#### Utilization



Joined with Adani to launch combustion trials deploying ammonia combustion technology at Indian thermal power plants

#### Production



Reached basic agreement with ACME on supplying green ammonia from India to Japan

#### Utilization



Completed world's first 20% ammonia fuel conversion demonstration test at JERA's Hekinan Thermal Power Station

# New developments since previous report

### Utilization



Built *Sakigake*, the world's first ammonia-fueled tugboat

#### Utilization



Began discussions with PLN Indonesia Power for fuel conversion at coal-fired power plants

#### Utilization



Agreed with GE to develop large ammoniafired gas turbine

#### Production



Began exploring Indonesian green ammonia production and co-firing business with Pupuk

### Production



Began looking to invest in Australian green ammonia production and sales in Australia thorough joint venture of four Japanese and Australian companies

### Utilization



Finished ammonia and biomass combustion feasibility study with Malaysia's TNB Power Generation to decarbonize its coal-fired power stations

#### Utilization



Agreed with PETRONAS to commercially demonstrate world's first ammonia-fired gas turbine in Malaysia

#### Utilization



Partnered with Sembcorp Industries, and GE Vernova to explore ammonia combustion facilities retrofitting at Sembcorp's gas-fired Sakra Power Plant on Singapore's Jurong Island

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Creating value chains with partners worldwide

**Looking beyond "Group Management Policies 2023"** 





# By integrating, uniting, and enhancing the diverse technologies as the sources of our value, we forge new value for our customers moving beyond traditional products and services

Technology is the cornerstone of everything we do and the value we deliver. It spans everything from the regular to the revolutionary. We enhance the strength and value of our technologies by strategically combining them.

Historically, we have focused on delivering value through products. In coming years, we will concentrate more on value itself, seamlessly aligning it with what our customers seek. We remain committed to forging meaningful connections with the value we provide.





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Forward-looking figures shown in this material with respect to IHI's performance outlooks and other matters are based on currently available information, and therefore contain risks and uncertainties. Consequently, you should not place undue reliance on these performance outlooks in making investment decisions. Actual results could differ materially from those discussed in these performance outlooks due to several important factors. They include political environments in areas in which IHI operates, general economic conditions, and the yen exchange rate including its rate against the US dollar.