

Management Overview of Fiscal Year 2023

(ended March 31, 2024)



May 8, 2024

IHI Corporation

Hiroshi Ide

Representative Director, President, and Chief Executive Officer

- 1. Progress with Group Management Policies 2023**
- 2. Medium- and Long-Term Business Portfolio Stance**
- 3. Growth Businesses (Civil Aero-Engines, Defense, and Space)**
- 4. Development-Focus Businesses (Fuel Ammonia Value Chain)**
- 5. Looking beyond “Group Management Policies 2023”**

Progress with Group Management Policies 2023

Advanced in each business category toward medium-and long-term growth objectives

Development -focus businesses

- **Steadily developed fuel ammonia value chain business**, notably by conducting the world's first fuel 20% ammonia substitution demonstration test at JERA's Hekinan Thermal Power Station

Growth businesses

- **Fully accounted for costs of additional inspection program for PW1100G-JM engines in fiscal 2023**
- **No change in expected number of aircraft on ground or related compensation and additional maintenance costs under program excluding forex impact**
- **Civil aero-engine business entered growth phase, while defense, space, and civil aviation maintenance, repair, and overhaul work expanded steadily**

Core businesses

- **Lifted lifecycle business revenues and orders by 50% from fiscal 2019 level, and seek further profitability gains**
- **Accelerated transformation of low-profit businesses into lean entities through structural reforms, business portfolio reviews, and other initiatives**

**Thorough companywide initiatives to bolster operating cash flow
Investments to foster medium- and long-term growth
while maintaining financial discipline**

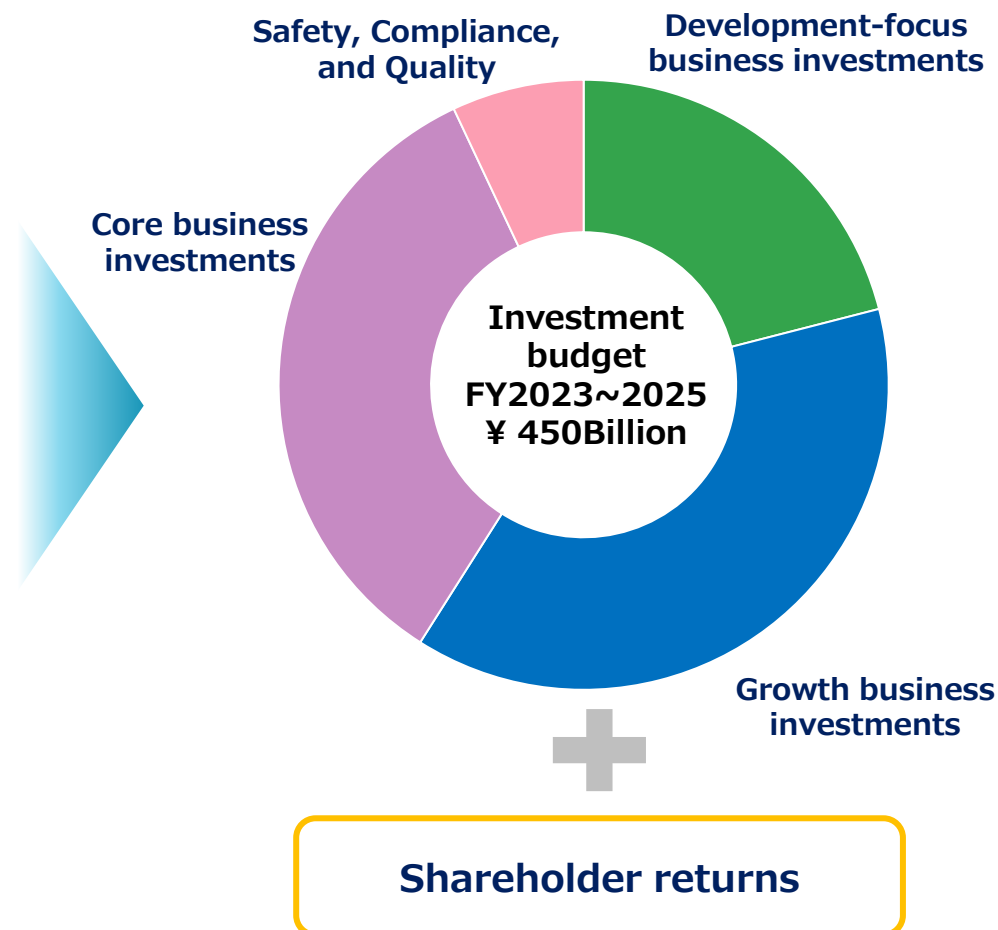
Strengthen operating cash flows

Key initiatives

- Expand civil aero-engine and defense businesses
- Expand profitability through lifecycle businesses
- Reduce working capital

Overhaul business portfolio

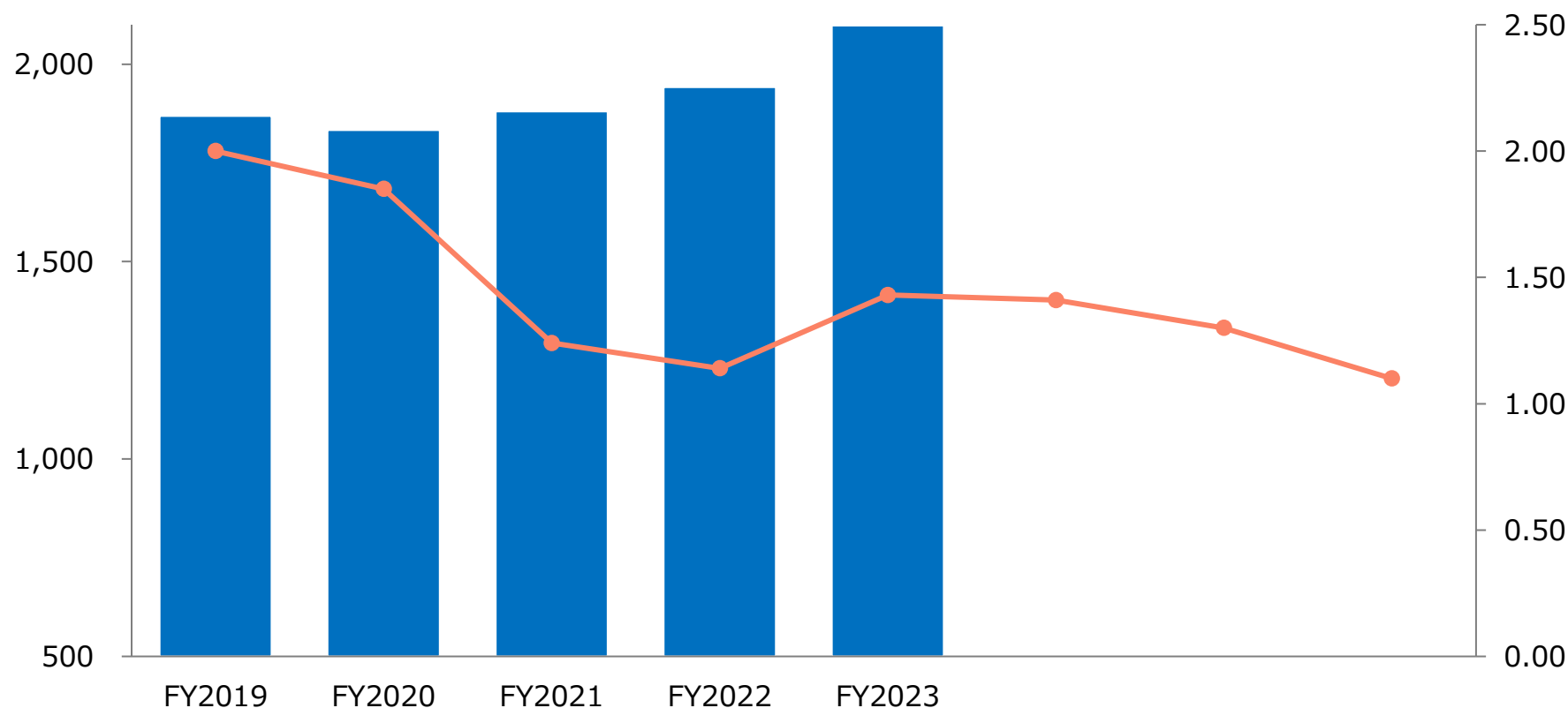
Divest assets



Strengthening the Balance Sheet by Profit Growth, Streamlining the Business Portfolio and Asset Sales

(Billions of yen)

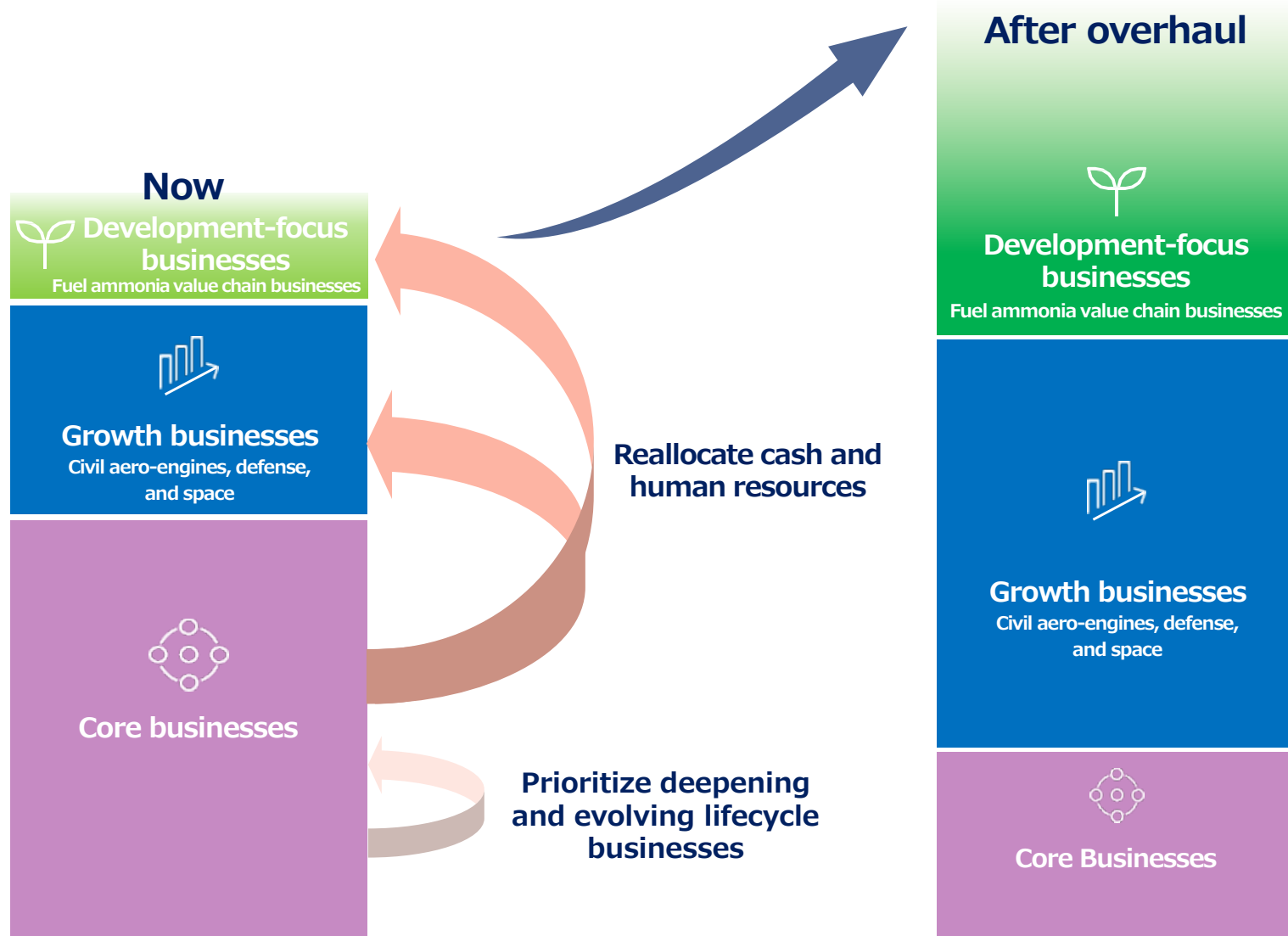
■ Total assets (left axis) —●— Debt-to-equity ratio(right axis)



Note: FY2023 represents the year ended March 31,2024

Medium- and Long-Term Business Portfolio Stance

Development-focus and growth businesses to underpin medium- and long-term expansion



Medium- and Long-Term Business Portfolio Stance

IHI

Pursue sustainable growth by overhauling businesses

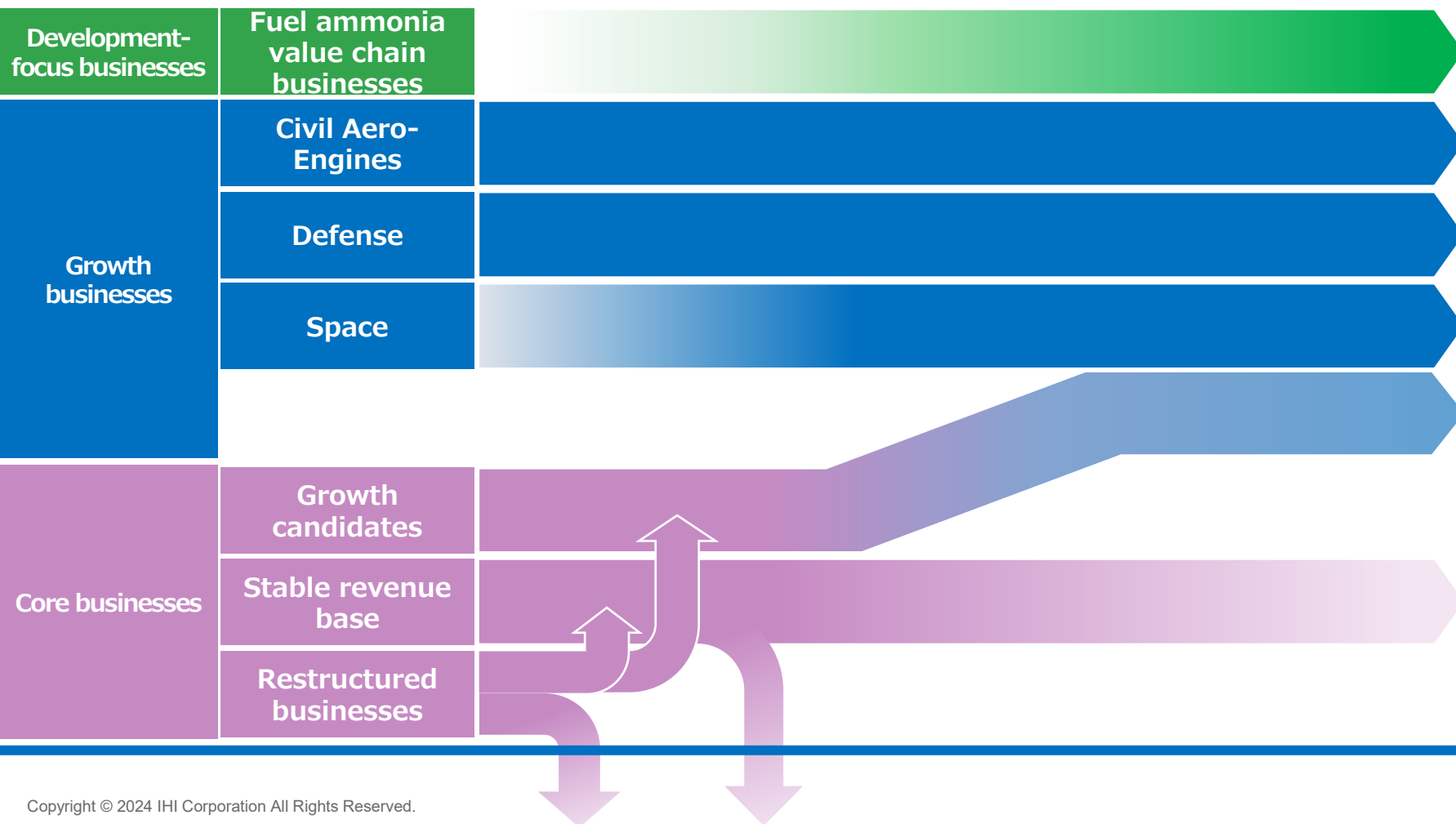
IHI Group

Envisaged corporate
value creation

Near term

Medium term
(2030)

Long term
(2040)



Growth Businesses

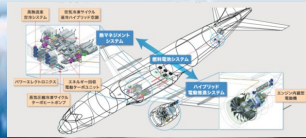
(Civil Aero-Engines, Defense, and Space)

Growth Businesses Overview for Civil Aero-Engines, Defense, and Space

Supply core propulsion technologies from space to the oceans



Hydrogen fuel cell electric propulsion aircraft



Hybrid electric propulsion aircraft



©Airbus

Source: *4

Civil aircraft



Source: *5

Revolutionary aircraft



Source: *6

Guided missiles



Source: *3

Fighter jets

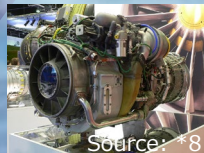


Defense engines



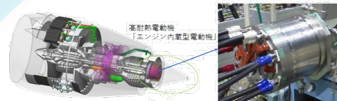
Courtesy of GE Aerospace

Civil aero-engines



Source: *8

Helicopter engines



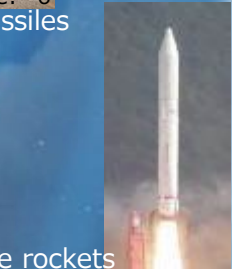
Electrification technologies



Hydrogen propulsion technology



Solid-fuel rockets



Space rockets



Source: *2

Helicopters

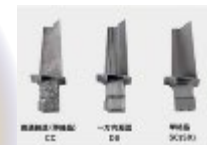


Source: *7

Gas turbines for marine vessels



Lightweight technologies



Material technologies



Turbopumps



©JAXA

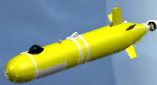


©JAXA

Satellites and probes



Satellite thrusters



Unmanned underwater vehicles



Source: *1

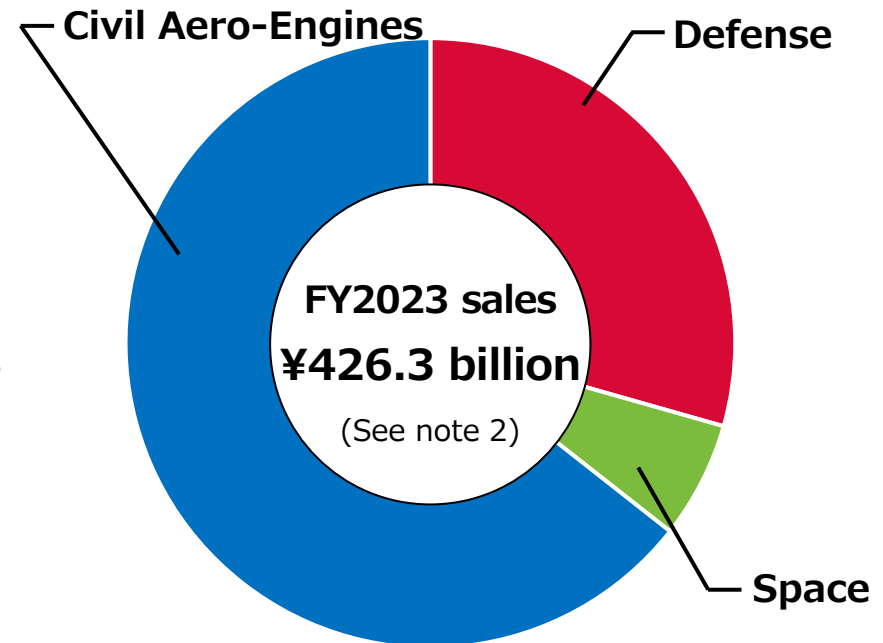
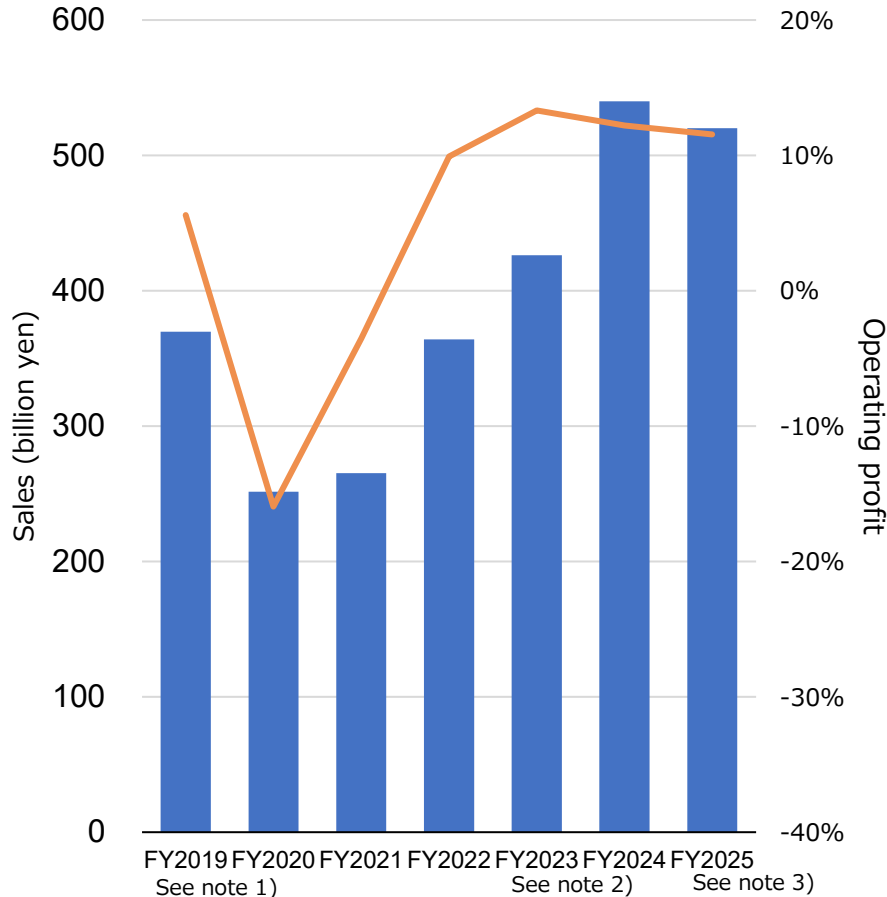
Ships of the Japan Maritime Self-Defense Force

Propulsion

Note: See Appendix 2 on slide 28 for sources

Growth Businesses Overview for Civil Aero-Engines, Defense, and Space

Sales and operating profits have grown significantly,
exceeding pre-pandemic levels



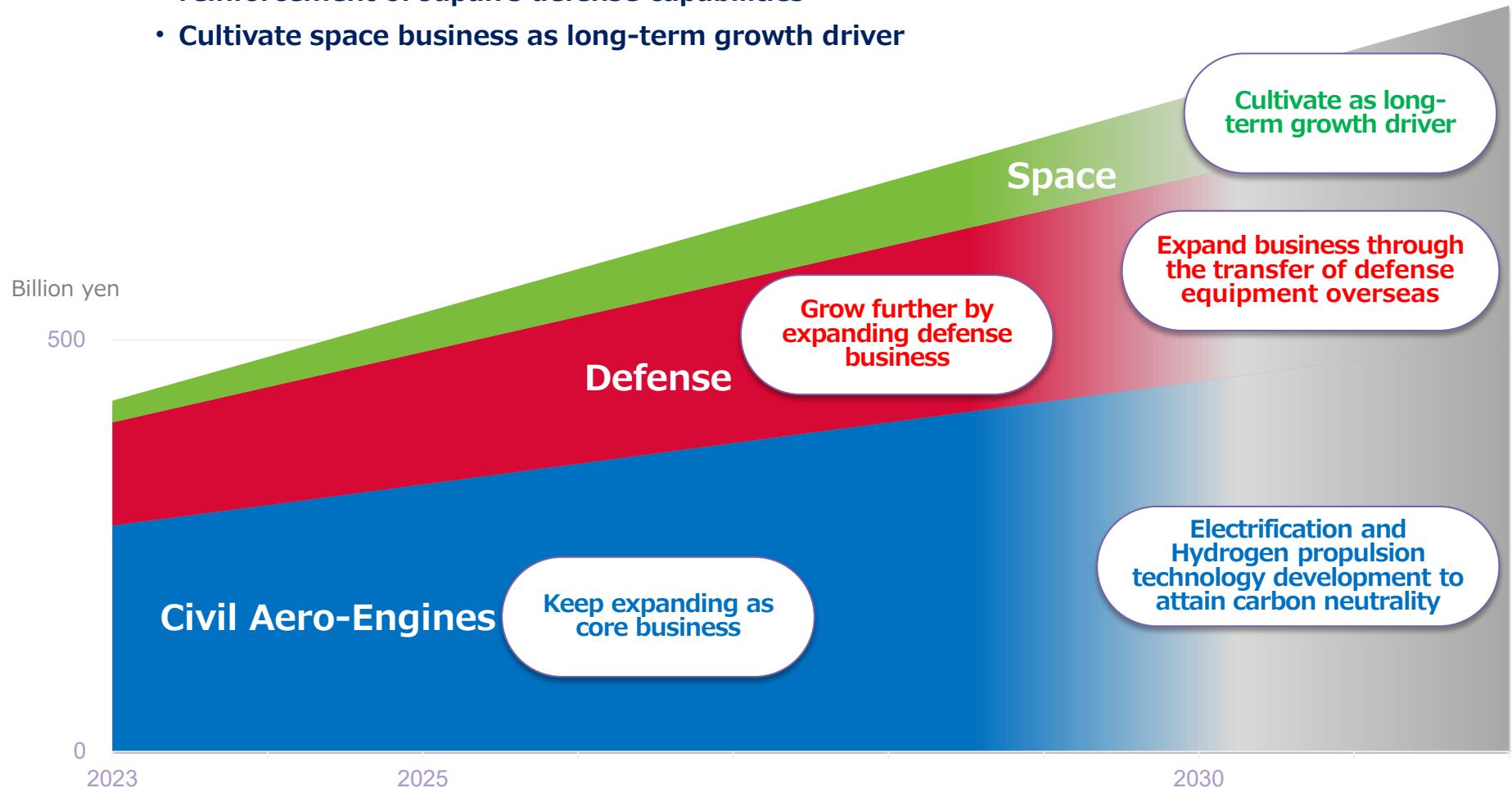
Note 1: FY2019 figures is based on IFRS

Note 2: Excluding impact of PW1100G-JM powder metallurgy issue in FY2023

Note 3: FY2025 forecasts disclosed in Group Management Policies 2023 subject to revisions based on future exchange rate fluctuations

Pursue sustainable growth in civil aero-engine, defense and space segments

- Generate steady growth in civil aero-engine business to meet rising air travel demand
- Expand defense business in response to Japan's Basic Defense Policy , "Fundamental reinforcement of Japan's defense capabilities"
- Cultivate space business as long-term growth driver



Note: Excluding impact of PW1100G-JM powder metallurgy issue in FY2023

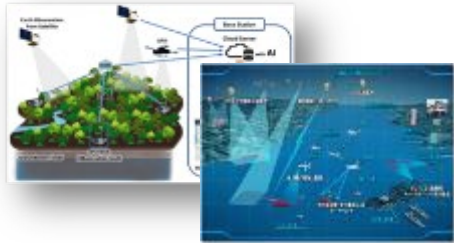
Growth Businesses Future-Oriented Initiatives

Expand and create new businesses by synergizing technologies and expertise in civil and defense business

Cultivate business through dual use in defense and civil sectors

Apply satellite data in:

- Forest management
- Multi-domain surveillance systems combined with unmanned vehicles



Apply solid-fuel rocket technology in:

- Satellite launch business
- Defense rocket motors



Business structure
(create added value)

Vertically integrated supply chain

Materials production

Parts machining

R&D and engineering

Manufacturing

Spare parts, maintenance & repair

Operational support

Lifecycle businesses

Operate globally by sharing civil aero-engine through defense expertise

Engine parts exports
(Transfer of defense equipment overseas)



F135 engine maintenance

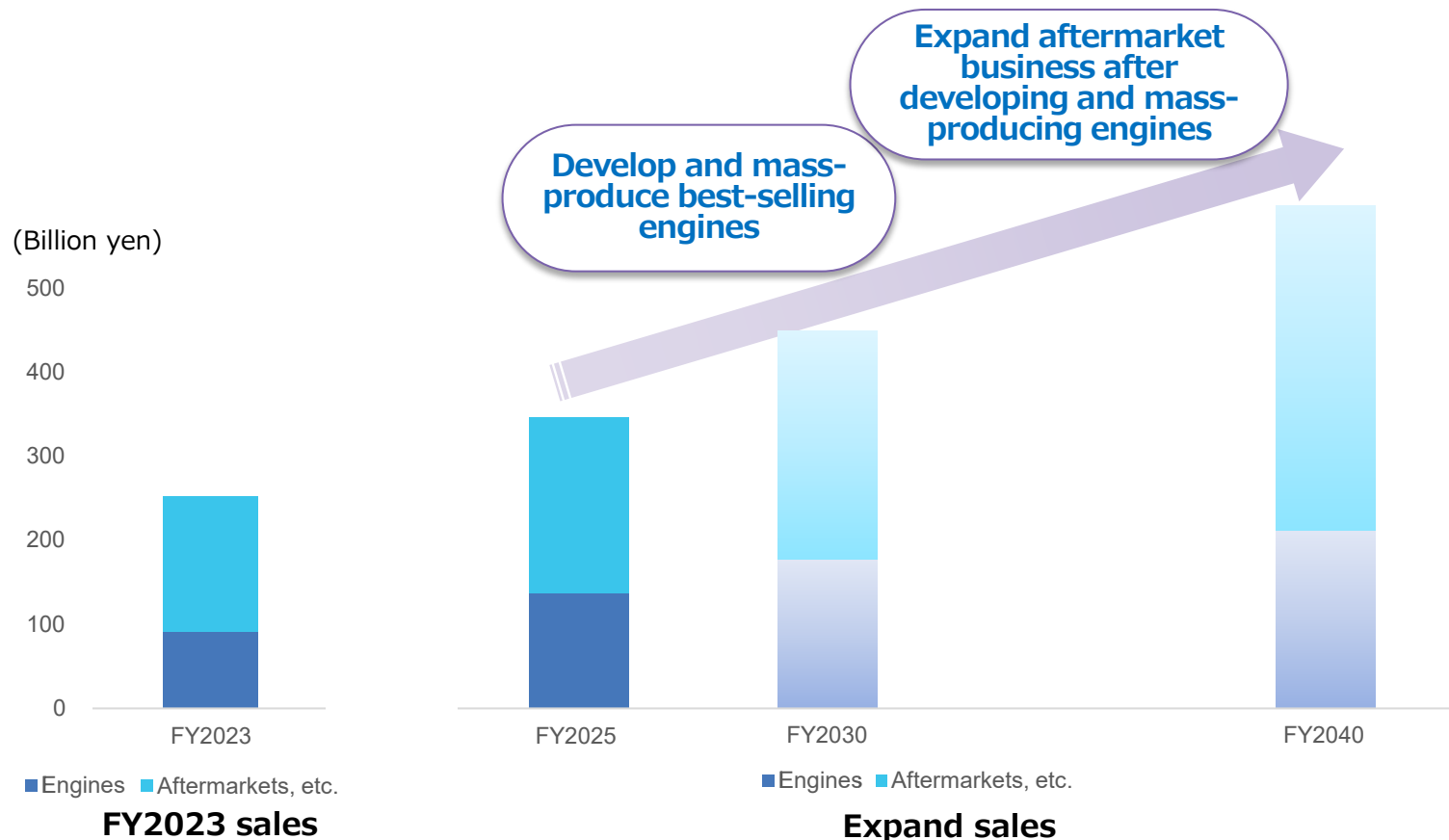


Next-generation fighter aircraft
(Global Combat Air Programme)



Expand sales and improve profitability by linking development and mass production to aftermarket business

- Spare parts sales rebounding, particularly for small and medium-sized models, on air travel growth
- Seeking to enhance sales and profitability by leveraging virtuous circle in aftermarket business for engine development and mass production programs in which IHI has participated



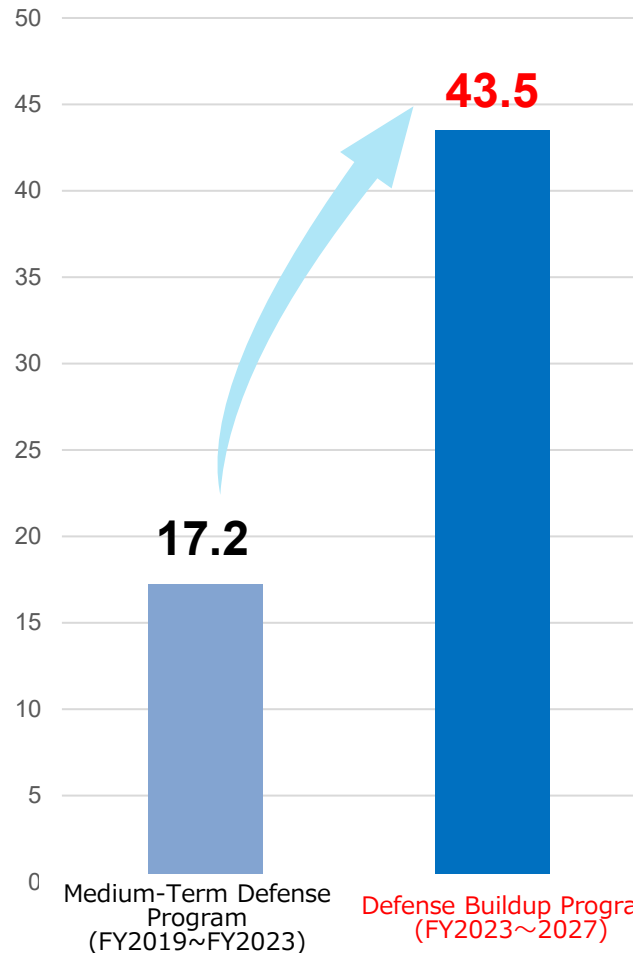
Leverage technological prowess to contribute to “Fundamental reinforcement of Japan’s defense capabilities”

- Japanese government aims to increase defense budget to 2% of GDP by FY2027

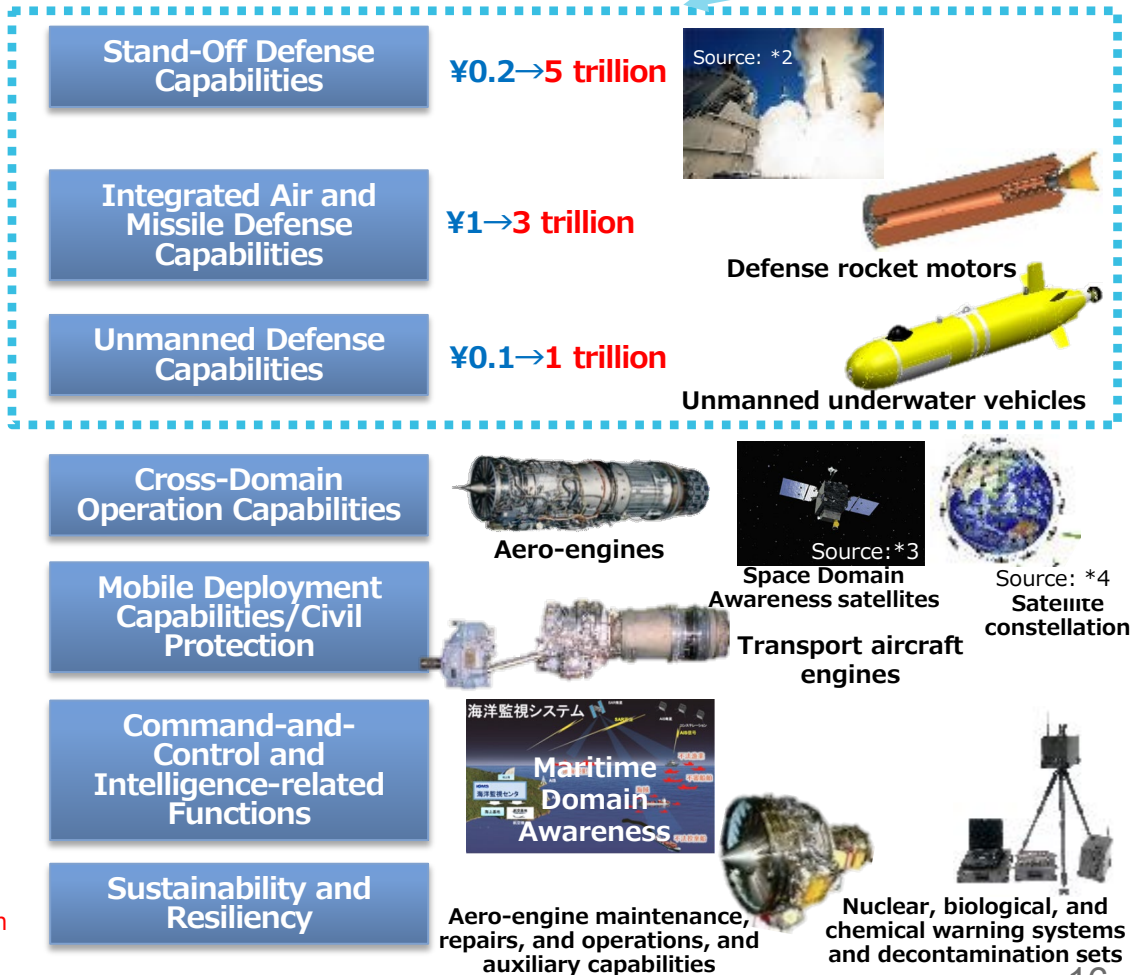
Large budget allocations, especially in areas within IHI core competencies

Defense buildup program budgets

(Trillion yen)



Seven priority programs to Fundamental reinforcement of Japan’s defense capabilities

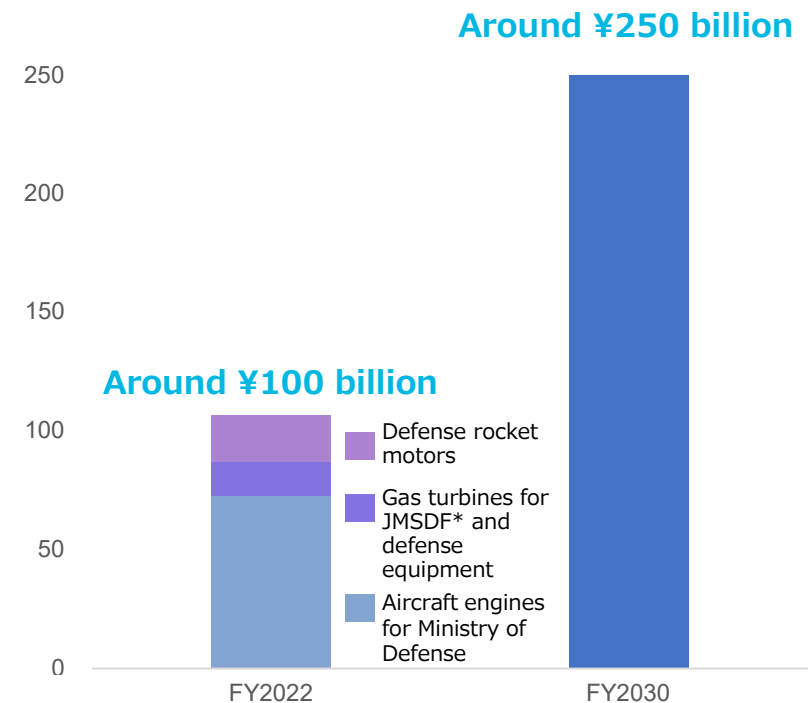
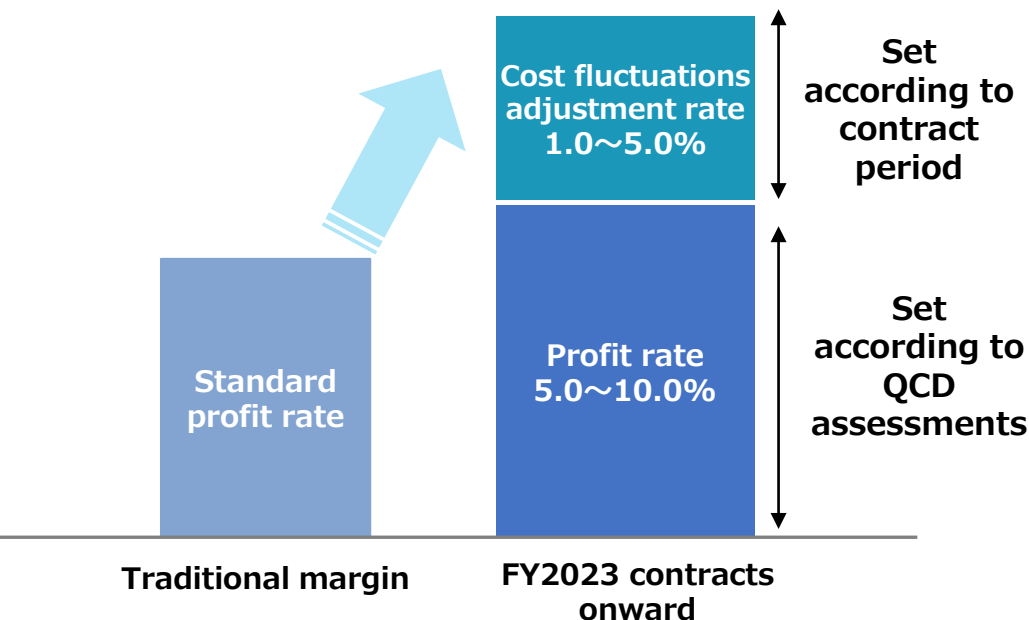


Expanding sales and securing appropriate earnings in light of defense budget growth and institutional reforms

Enhancing profit margins as part of defense industry policy

IHI's defense business sales

Targeting 2.5-fold sales growth and 10% profit margin compared with FY2022 levels



* Japan Maritime Self-Defense force

- 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 higher prices and other uncontrollable factors

Enhance collaboration with government and British and Italian companies to advance program

- IHI has participated as engine provider since 2020 in Ministry of Defense's next-generation fighter aircraft development project
- Under GCAP, will play a vital role by stepping up collaboration with the public and private sectors
- Exercise our engineering capability to ensure GCAP's success and contribute to Japan's security and industrial advances



Computer-generated image sourced from *1 in Appendix 2

Development-Focus Businesses

(Fuel Ammonia Value Chain)

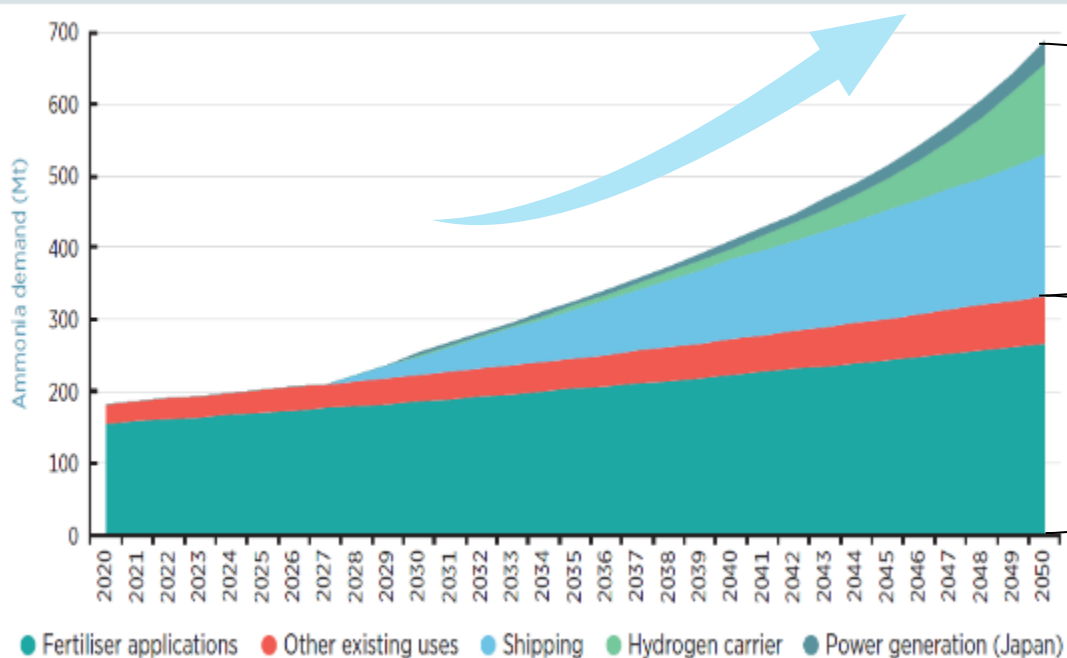
Development-Focus Businesses

Long-Term Expansion of Ammonia Market

Global ammonia demand expected to reach 700 million metric tons by 2050

Global ammonia demand

Figure 2 Expected ammonia demand up to 2050 for the 1.5°C scenario



New markets (around 400 million metric tons by 2050)

- ✓ Power generation
- ✓ Hydrogen carriers
- ✓ Shipping

Existing markets (around 300 million metric tons by 2050)

- ✓ Other existing uses
- ✓ Fertilizers applications

Source : IRENA Innovation Outlook Ammonia 2022

Development-Focus Businesses

Fuel Ammonia Value Chain Goals

Leveraging technological prowess across entire value chain
and aiming to expand revenues and maximize earnings
upstream, midstream, and downstream

Manufacturing

Storage and transportation

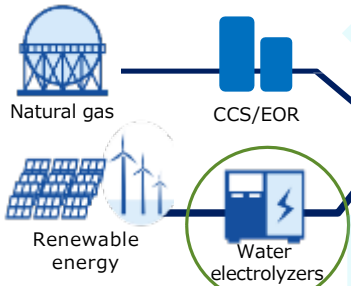
Utilization

Ammonia production technologies

Ammonia receiving and storage technologies

Ammonia combustion technologies

Blue ammonia



Green ammonia



Power generation



Land engines

Industrial use



Vessel engines

Maritime use

Fuel supply business

Fuel handling business

Equipment supply and after-service business

Build value chain with global partners

Development-Focus Businesses

Progress with Ammonia Value Chain Businesses

Fuel ammonia value chain business sales

Billions yen

500

0

FY2023

FY2030

FY2040

FY2050

Production

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



Utilization

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



Utilization

Undertook ammonia co-firing tests at JERA's Hekinan Thermal Power Station



Storage and shipping

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



Production

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



Production

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



Production

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



Utilization

Agreed with GE to develop large ammonia-fired gas turbine



Production

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



Utilization

Agreed with PETRONAS unit 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



Utilization

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



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.



The IHI Group creates Value Chains

Appendix



✓ Business Area Briefings (on September 27, 2023)

- [Resources, Energy & Environment](#)
- [Social Infrastructure](#)
- [Industrial Systems & General-Purpose Machinery](#)
- [Aero Engine, Space & Defense](#)

Appendix 2: Links for Sources (some in Japanese only)

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- *1 Maritime Self-Defense Force website <https://www.mod.go.jp/msdf/equipment/ships/ddh/izumo/>
- *2 Maritime Self-Defense Force website <https://www.mod.go.jp/msdf/equipment/rotorcraft/patrol/sh60k/>
- *3 Air Self-Defense Force website <https://www.mod.go.jp/asdf/equipment/sentouki/F-15/index.html>
- *4 AIRBUS <https://mediacentre.airbus.com/element?id=542614>
- *5 Wikimedia Commons https://commons.wikimedia.org/wiki/File:Boeing_SUGAR_Volt_concept_aircraft_2010.jpg
- *6 Air Self-Defense Force website <https://www.mod.go.jp/asdf/equipment/other/Patriot/index.html>
- *7 GE Vernova <https://www.gevernova.com/gas-power/products/gas-turbines/lm2500>
- *8 Wikimedia Commons https://commons.wikimedia.org/wiki/File:CT7_T700_P1220751.jpg (Copyright: David Monniaux)

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- *1 Air Self-Defense Force website <https://www.mod.go.jp/asdf/equipment/other/Patriot/index.html>
- *2 Maritime Self-Defense Force website <https://www.mod.go.jp/msdf/equipment/ships/ddh/izumo/>
- *3 Air Self-Defense Force website <https://www.mod.go.jp/asdf/equipment/sentouki/F-15/index.html>
- *4 Ministry of Defense website <https://www.mod.go.jp/j/policy/defense/nextfighter/index.html>

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- *1 Based on Medium-Term Defense Program (FY2019~FY2023) and Defense Build-Up Program
- *2 Maritime Self-Defense Force website <https://www.mod.go.jp/msdf/release/202211/20221121-1.pdf>
- *3 Northrop Grumman <https://wpcontent.ot5o9s93syrb.net/wp-content/uploads/GEOStar-1-DS-64.pdf>
- *4 Cabinet Office website https://www8.cao.go.jp/cstp/anzen_anshin/20221021_meti_3.pdf

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



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.