

Iwatani

Medium-Term Management Plan “PLAN27”

June 21, 2023

Iwatani Corporation

[Securities Code: 8088]

(Forward-looking statements)

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I. Review of the Medium-Term Management Plan “PLAN23”

II. Medium-Term Management Plan “PLAN27”

1. Business Environment

2. Relationship with Stakeholders

3. Long-Term Vision

4. Key Issues (Materiality) for the Realization of the Long-Term Vision

5. Position of Medium-Term Management Plan “PLAN27”

6. Management Targets and Capital Policies

7. Priority Measures

(1) Hydrogen Strategies

(2) Carbon-free Strategies

(3) Domestic Energy & Service Strategies

(4) Overseas Strategies

(5) Non-financial Strategies

Reference: Business Plans by Segment (Revenue Plans, Business Strategies, Investment Plan)

(1) Integrated Energy (2) Industrial Gases & Machinery (3) Materials

I. Review of the Medium-Term Management Plan “PLAN23”

- Management targets of PLAN23 achieved one year ahead of the plan

Theme

Establishing a hydrogen energy-based society
—Assuming challenges beyond the boundaries of business frameworks—

Basic Policies

Enhancing strategic investment to establish a carbon-free society; promotion of digitization

Basic Strategies

- Enhancing initiatives toward a carbon-free society
- Evolving into an energy & living total service provider
- Expanding international businesses

Management Indicators

	FY2022 Results	PLAN23 Targets
Ordinary Profit [excluding impact of LPG import price fluctuation]	¥47.0 billion [¥50.1 billion]	¥40.0 billion
Return on Equity (ROE)	11.2%	9% or higher

Investment Amount

	Result	PLAN23 Target
Cumulative Total Investment	¥110.0 billion	¥150.0 billion

I. Review of the Medium-Term Management Plan “PLAN23”

Major Results

1) Solid strengthening of business foundations



Helium center



Mineral sands concessions



Portable gas cooking stove production plant

- Strengthened overseas production and sales structure for industrial gases, portable gas cooking stoves, etc.
- Invested in new suppliers of resources

2) Development of a CO₂-free hydrogen supply chain

- Completed feasibility testing on sea transport and loading/unloading of liquid hydrogen between Japan and Australia via liquid hydrogen tankers
- Decided on the project's shipping location in Victoria (Australia) and receiving location in Kawasaki (Kanagawa, Japan) under the Green Innovation Fund



3) Execution of M&As

- Enelife
- Tokico System Solutions
- Aspen Air
- UM System



- Executed M&As that are essential for the growth strategies of individual businesses

Segment Summaries

- Integrated Energy** Achieved LPG customer base expansion target ahead of schedule
Steady growth in portable gas cooking stove/cassette gas canister
- Industrial Gases & Machinery** Continued growth with steady increase in sales volumes of air separation gas and LH₂, among others
- Materials** Sales and profits increased significantly due to stable supply of resources and focus put on eco-friendly products
- Agri-Bio & Foods** Declined in profitability due to difficulty of cost-shifting in response to increase in costs of frozen foods, etc.

Key Business Indicators

	FY2022 Results	PLAN23 Targets
LPG direct sales customers	1.10 million households	1.10 million households
Portable gas cooking stoves / cassette gas canisters	Gas cooking stoves: 4,291K units Gas canisters: 157M units	Gas cooking stoves: 6,500K units Gas canisters: 180M units
Air separation gas sales volumes	1.60 billion m ³	1.70 billion m ³
LH ₂ sales volumes	77 million m ³	90 million m ³

II. Medium-Term Management Plan “PLAN27”

II-1. Business Environment

Changes in Business Environment

Resources and Energy

- Securing stable supplies of resources and energy
- Growing geopolitical risks



Environment

- Measures against climate change and natural disasters
- Transition to carbon-free society



Society

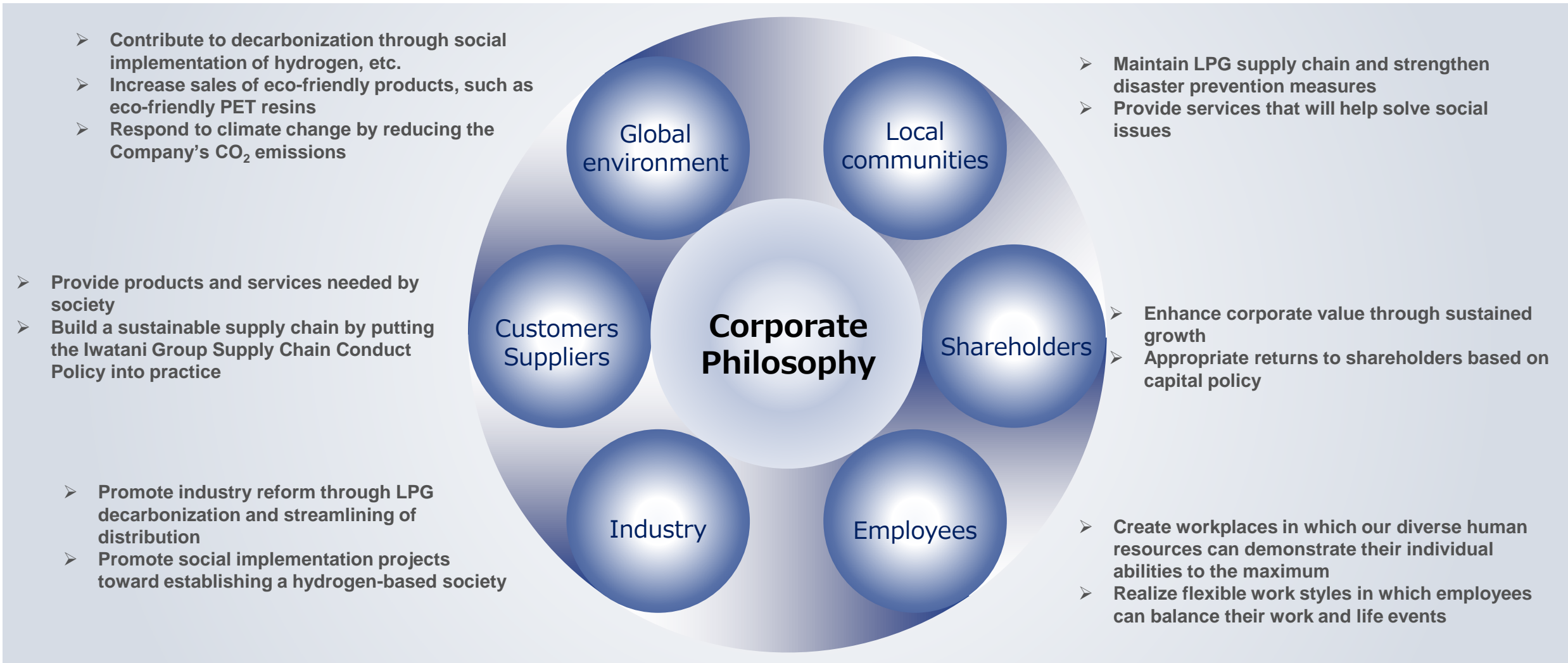
- Responses to depopulation and aging society
- Diversification of consumer values
- Growing demand for social sustainability



Tackle social challenges and capture growth opportunities

II-2. Relationship with Stakeholders

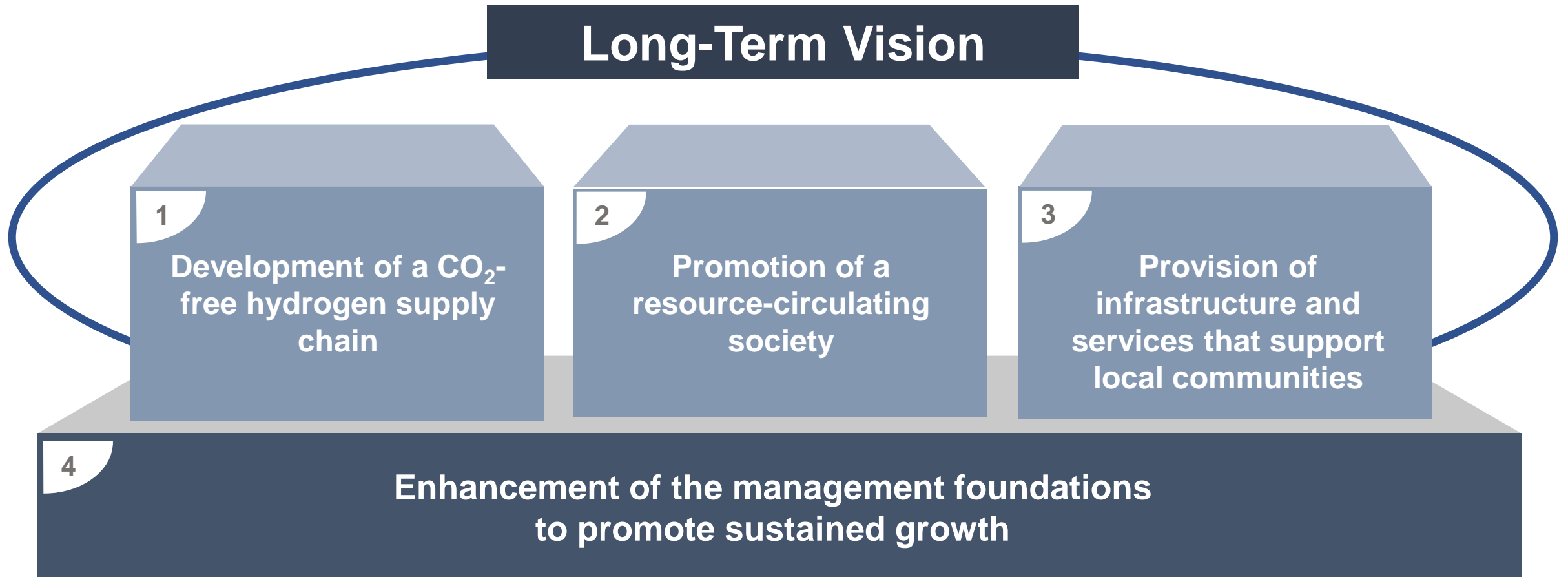
To realize the Corporate Philosophy, “Become a person needed by society, as those needed by society can prosper,” we will strive to build and strengthen our relationships with all stakeholders surrounding the Company and to fulfill our social responsibility.



II-3. Long-Term Vision

Our Vision for FY2030

Corporate group that continues to contribute to the creation of a more comfortable space on the Earth



II-4. Key Issues (Materiality) for the Realization of the Long-Term Vision

1

Create businesses that will lead to the realization of a sustainable society

- ▶ Promote commercialization of a CO₂-free hydrogen supply chain
- ▶ Develop and expand low-/zero-carbon solutions
- ▶ Deliver stable supplies of resources and strengthen resource-circulating businesses

2

Provide infrastructure and services that will enrich people's lives

- ▶ Maintain resilient LPG supply chains and strengthen disaster prevention measures
- ▶ Embody Iwatani GateWay concept
- ▶ Extend cartridge gas business overseas and develop new products

3

Promote innovation with the use of technologies and expertise

- ▶ Develop and market technologies for the social implementation of hydrogen
- ▶ Establish and implement green LPG technology
- ▶ Develop applications for and strengthen quality control and safety of industrial gases

4

Develop an environment and systems in which diverse human resources can thrive

- ▶ Establish systems to enhance employee engagement
- ▶ Create workplace environments where diversity is accepted and valued
- ▶ Recruit and develop people who respond to change and continue to create value

5

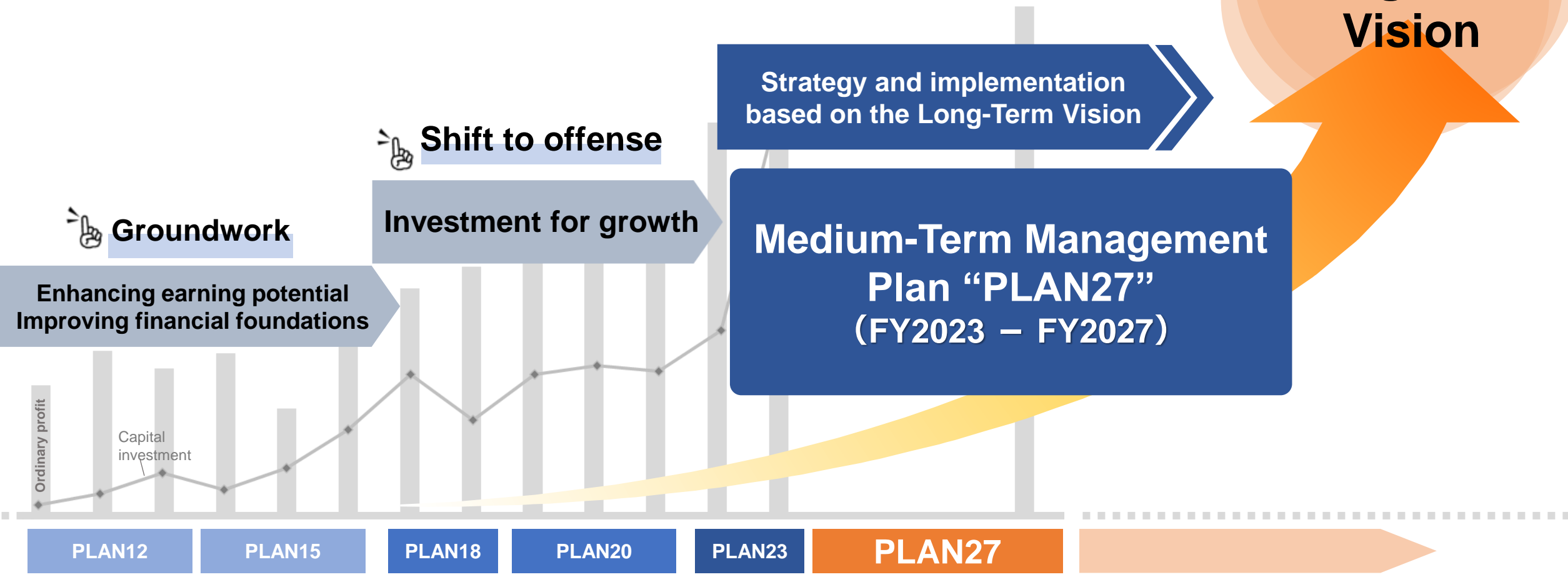
Develop more transparent governance

- ▶ Fulfill the functions of the Board of Directors and secure its diversity
- ▶ Promote dialogue with stakeholders
- ▶ Strengthen risk management system

Key period for ensuring the realization of the Long-Term Vision

“Creation of a more comfortable space on the Earth is what Iwatani wishes and strives for.”

Long-Term Vision



Theme

Establishing a hydrogen energy-based society

Basic Policy

Business expansion to achieve “solutions to social issues” and “sustained growth”

▶ Management Targets

Operating profit

¥65.0 billion

ROE

10% or higher

ROIC

6% or higher

▶ Capital Policies

5-year cumulative investment

¥470.0 billion

Returns to shareholders

Payout ratio* of **20%** or higher Progressive dividend

* Based on net income (excluding impact of LPG import price fluctuation)
FY2027 target

II-6. PLAN27 Management Targets and Capital Policies

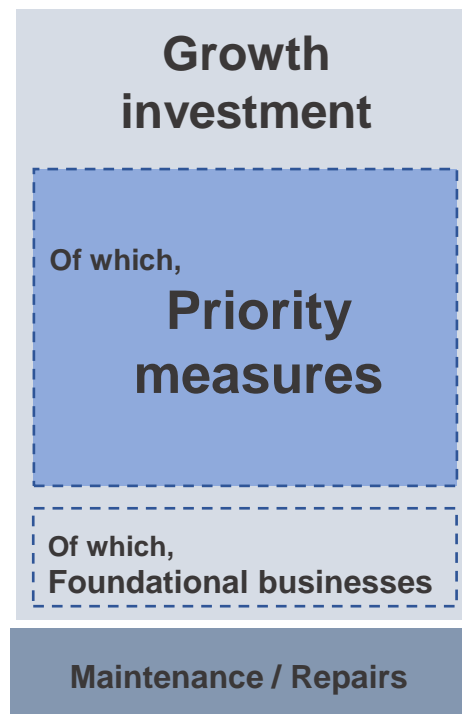
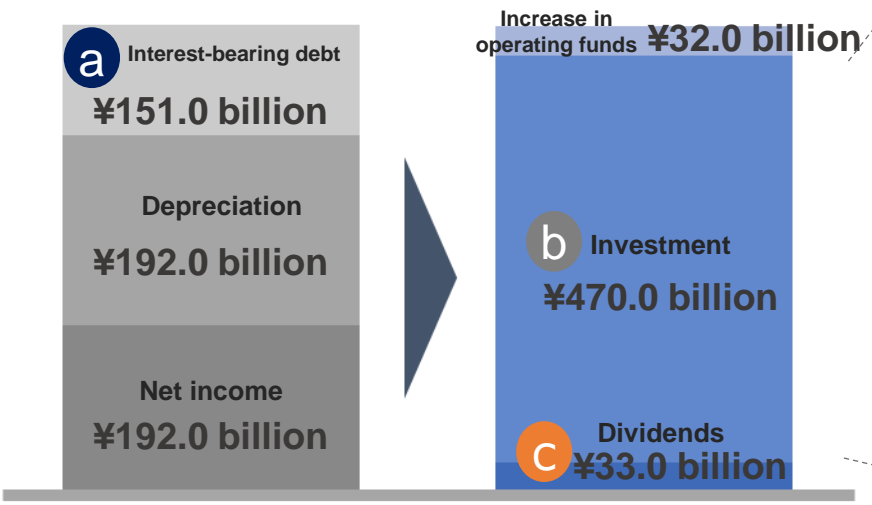
■ Promote proactive investment by securing cash flow from operations and using interest-bearing debt

PLAN27 Basic approach to capital allocation

- a** Secure financial soundness and use financial leveraging (net DER of 0.7 or less)
- b** Proactive investment toward the realization of a hydrogen energy-based society and sustained growth
- c** Progressive dividend with a target payout ratio of 20% or higher

▶▶ 5-year Cumulative Investment **¥470.0 billion**

Proactive investment in priority measures for further growth



Amount	Content
¥420.0 billion	
¥320.0 billion	<ul style="list-style-type: none"> ✓ Development of CO₂-free hydrogen supply chains ✓ Promotion of low-/zero-carbon business ✓ Expansion of domestic energy business ✓ Growth investments overseas
¥100.0 billion	Expansion of domestic supply capacity of air separation gases, etc.
¥50.0 billion	Repairs of LPG plants, etc.

II-6. PLAN27 Management Targets and Capital Policies

- Strive for sustained growth in corporate value with growth investments while securing financial soundness

Increase in cash flow from operations	▶ Develop businesses that generate stable cash
Capital structure optimization	▶ Secure financial soundness and use financial leverage – Secure financing capability by maintaining ‘A’ rating from external agencies – Use interest-bearing debt with a cap of net DER 0.7
Promotion of growth investment & Improvement of profitability	▶ Proactive investment that will help expand profit ▶ Investment in development of liquid hydrogen supply chain ▶ Selection of investments that takes profitability into account
Returns to shareholders	▶ Increase dividends steadily in line with growth while securing investment capital (Progressive dividend targeting a payout ratio of 20% or higher in FY2027)

	FY2022	FY2027
ROE	11.2%	▶ 10% or higher
ROIC	6.8%	▶ 6% or higher
Net DER	0.35	▶ Approx. 0.6*
Interest-bearing debt	¥139.4 billion	▶ Approx. ¥290.0 billion*
Dividends	¥95	▶ Approx. ¥160*

*Estimates

[Capital structure]

Our policy is to use interest-bearing debt instead of equity finance if the implementation of hydrogen in society progresses steadily and additional investments are to be made.

- (1) Hydrogen Strategies**
- (2) Carbon-free Strategies**
- (3) Domestic Energy & Service Strategies**
- (4) Overseas Strategies**
- (5) Non-financial Strategies**

II-7. Priority Measures

(1) Hydrogen Strategies

- ✓ Expand liquid hydrogen business that captures growing carbon-free-related demand
- ✓ Develop a CO₂-free hydrogen supply chain

(2) Carbon-free Strategies

- ✓ Expand business by promoting low-/zero-carbon solutions business
- ✓ Invest in the realization of a carbon-free society

(3) Domestic Energy & Service Strategies

- ✓ Expand market share and streamline distribution by utilizing LPG business infrastructure
- ✓ Provide services that contribute to solving social issues of local communities

(4) Overseas Strategies

- ✓ Leverage strengths of individual segments to expand business in respective regions

[Priority measures: Increase in net sales and operating profit]

(Billions of yen)

FY2022-2027 increase	
Net sales	+47.0
Operating profit	+4.0

PLAN27 Investment

¥178.0 billion

FY2022-2027 increase	
Net sales	+88.0
Operating profit	+3.0

PLAN27 Investment

¥15.0 billion

* Net sales, operating profit, and investment related to hydrogen business are included in Priority Measures (1) Hydrogen Strategies.

FY2022-2027 increase	
Net sales	+48.0
Operating profit	+4.0

PLAN27 Investment

¥33.0 billion

FY2022-2027 increase	
Net sales	+99.0
Operating profit	+7.0

PLAN27 Investment

¥94.0 billion

* Net sales, operating profit, and investment related to hydrogen business overseas are included in Priority Measures (1) Hydrogen Strategies.

(1) Hydrogen Strategies

Hydrogen Strategies

PLAN27 Hydrogen Strategies

- 1. Expand liquid hydrogen business that captures growing carbon-free-related demand
- 2. Develop CO₂-free hydrogen supply chains

Iwatani's accumulated strengths

- Experience in hydrogen sales since 1941
- Handling technologies/Transport network

Challenges

- Technological challenges
- Infrastructure development
- Cost reduction

Uncertainty of hydrogen demand

PLAN27 "Three Challenges"
Advance with partners in Japan and overseas

Manufacture	Expand domestic sources of liquid hydrogen	Expand supply capacity
Transport	Overseas CO ₂ -free hydrogen supply chain	Reduce costs
Use	Transport/Industry/Power generation Demand creation	Expand market

Toward hydrogen-based society in FY2030

Demand creation

Iwatani

Mass supply system development

Liquid hydrogen supply

Hydrogen Strategies (1) Expand liquid hydrogen business

Strategy (1) Expand liquid hydrogen business that captures growing carbon-free-related demand

Use

Promote decarbonization with hydrogen

Capture hydrogen demand for decarbonization

- ☞ Provide hydrogen supply to meet customer needs for decarbonization in their business activities
- ☞ Develop and provide applications such as mixed-combustion type hydrogen burners



H2 KIBOU FIELD
Source: Panasonic Corporation



Hydrogen-powered hybrid train "HYBARI"
Source: East Japan Railway Company



Hydrogen cutting machine / Mixed-combustion type hydrogen burner

Use

Build more hydrogen refueling stations and make them profitable

Promote HRS construction and cost reduction in Japan and overseas

- ☞ Establish hydrogen refueling stations (HRS) for commercial fuel-cell (FC) vehicles (trucks, buses, etc.)
- ☞ Reduce operating costs (Promotion of self-service, etc.)



HRS for FC buses



HRS for FC trucks



HRS in the United States

Manufacture

Increase manufacturing capacity to meet growing demand Embark on CO₂-free hydrogen production in Japan

- ☞ Construction of a new liquid hydrogen production plant to meet growing demand
- ☞ Commercialization of hydrogen production from waste plastics



Transport

Make use of liquid-hydrogen handling technologies

- ☞ Use of gas handling technologies and transport network to deliver liquid hydrogen nationwide



Hydrogen Strategies (2) Develop CO₂-free hydrogen supply chains

Strategy (2) Develop a CO₂-free hydrogen supply chain

Manufacture Liquid Hydrogen Supply Chain Commercialization Feasibility Study Project
Transport Reduce cost of CO₂-free hydrogen with large-scale production and transport

Manufacture CO₂-free hydrogen production overseas
 Shift to multiple CO₂-free hydrogen supply chains

Implement Commercialization Feasibility Study Project with Green Innovation Fund (-FY2030)

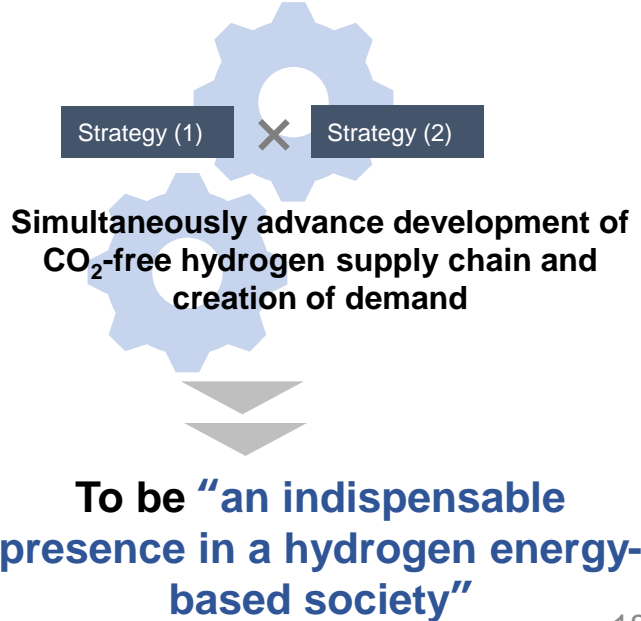
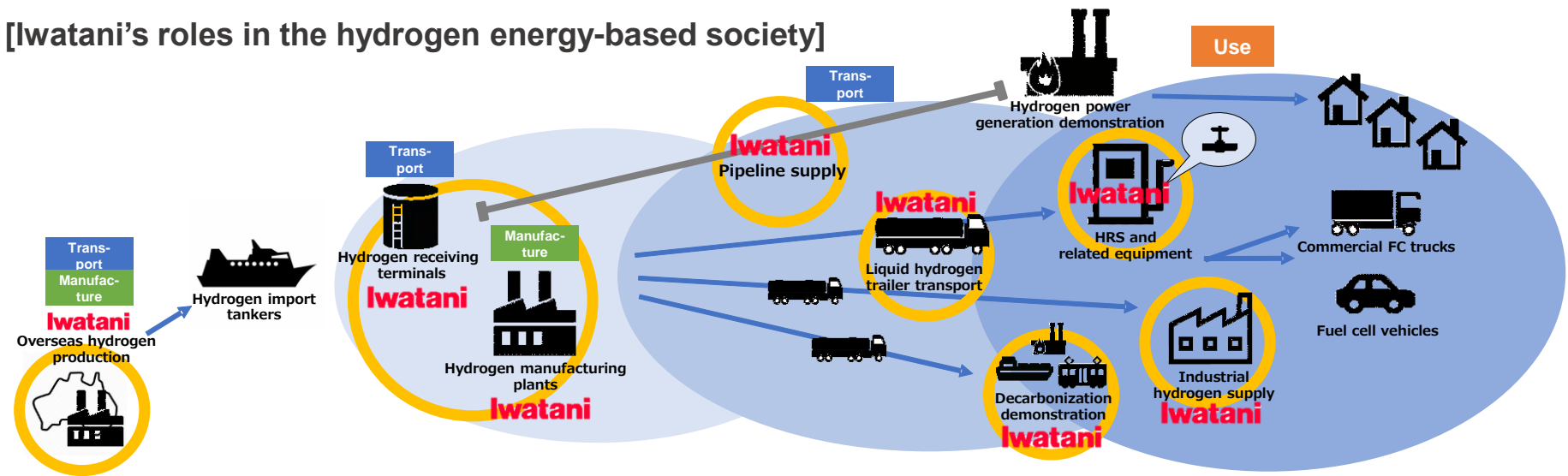
Promote initiatives to build additional supply chains toward the goal of commercialization

Iwatani's roles: Production of liquid hydrogen overseas and evaluation of terminals in Japan and abroad
 Coordination with demand side, drawing on our customer base

- Green hydrogen production in Australia
 ⇒ Feasibility study conducted by five companies including Stanwell Corporation, Kansai Electric Power Co., Inc., Marubeni Corporation, and Keppel Corporation
- Evaluation of green hydrogen production in the United States



[Iwatani's roles in the hydrogen energy-based society]



- Make upfront investments to achieve significant cost reductions in anticipation of the coming age of large-scale hydrogen supply

PLAN27

Green Innovation Fund Project

Project period: FY2021-FY2030 (10 years)

- FY2024-**
Begin construction of receiving terminals
- FY2026-FY2027**
Complete receiving terminals and import tankers
- FY2027-FY2030**
Demonstration operation

- Development of supply chains in anticipation of large-scale liquid hydrogen supply

5-year Cumulative Investment
¥178.0 billion

FY2027
Sales volume
30,000 t/year
Net sales
¥92.0 billion

FY2030
Sales volume
300,000 t/year
Net sales
¥200.0 billion

- Achieve significant cost reductions

- Import price ¥30/Nm³
- FY2030 and beyond**
Begin commercial operation of CO₂-free hydrogen supply chain overseas

FY2023

Now

FY2022
Sales volume
14,000 t/year
Net sales
¥45.0 billion
Selling price at HRS
¥100/Nm³

Manufacture

¥115.0 billion

- Produce liquid hydrogen from waste plastics
- Build the 4th liquid hydrogen production plant
- Build plant in the United States

Transport

¥30.0 billion

- CO₂-free hydrogen supply chain overseas

Use

¥33.0 billion

- Invest in domestic HRS (expansion, related facilities)
- Build more HRS for FC trucks in the United States

(2) Carbon-free Strategies

Carbon-free Strategies

Realizing a carbon-free society through initiatives involving the entire Iwatani Group

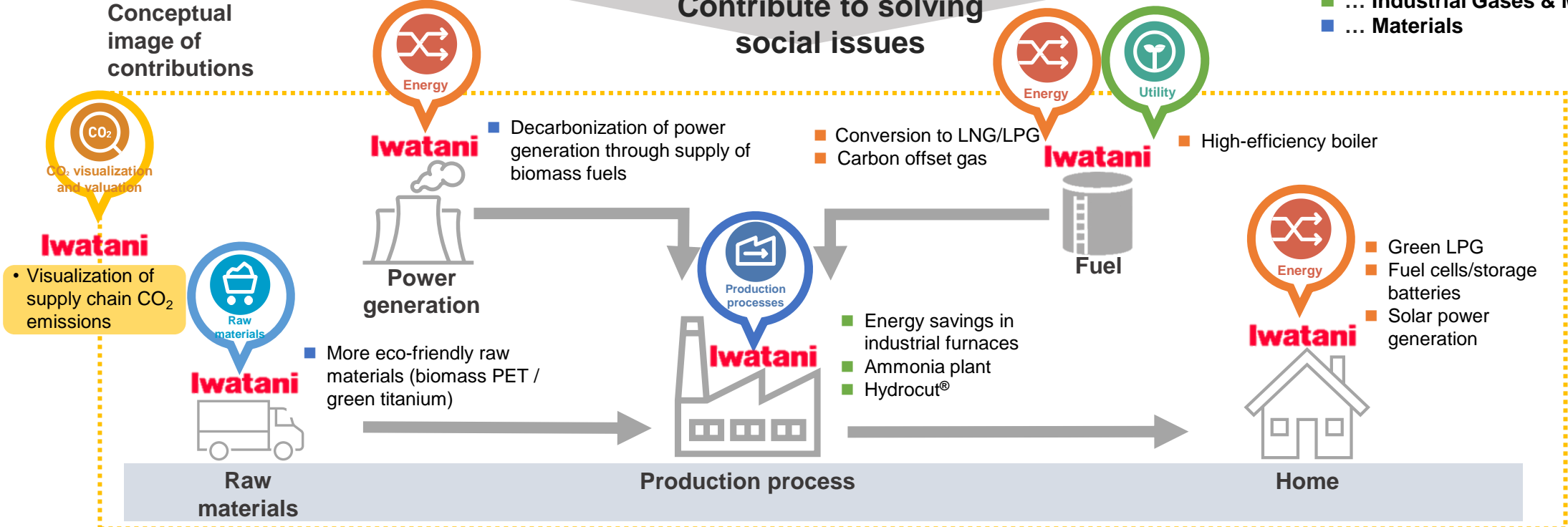
- Provide a wide range of low-/zero-carbon solutions, from industry to everyday life

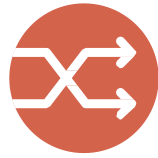
Low-/zero-carbon solutions based on our business foundations and technological capabilities



- ... Integrated Energy
- ... Industrial Gases & Machinery
- ... Materials

Contribute to solving social issues





Supply lower-CO₂ energy

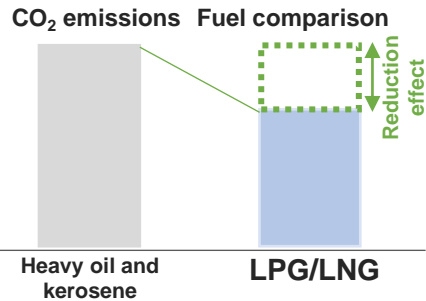
→ Promote low-/zero-carbon heat demand

Energy

Strategy Expand sales of LPG and LNG by promoting fuel conversion

● Promote fuel conversion

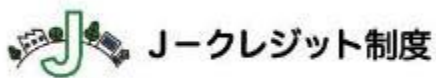
Applications Boilers, industrial furnaces, etc.



Reduce CO₂ emissions through fuel conversion from heavy oil and kerosene to LPG and LNG

● Convert resulting CO₂ emissions reductions to credits

Applications Carbon offset gas, in-house utilization, etc.



Convert CO₂ emissions reductions resulting from fuel conversion to credits (environmental value)



Supply green raw materials

→ Promote low-carbon products

Raw materials

Strategy Develop supply chains to expand sales of eco-friendly products

● Biomass PET resin

Applications Beverage bottles, films, sheets, etc.



Resin containing 30% materials derived from plants

Reduce CO₂ emissions by approx. 28% (Compared with PET resin derived from petroleum)

● Green titanium materials

Applications Titanium metal, titanium oxide pigments, etc.



Realize mining with a level of zero CO₂ emissions by using electricity from renewable energy

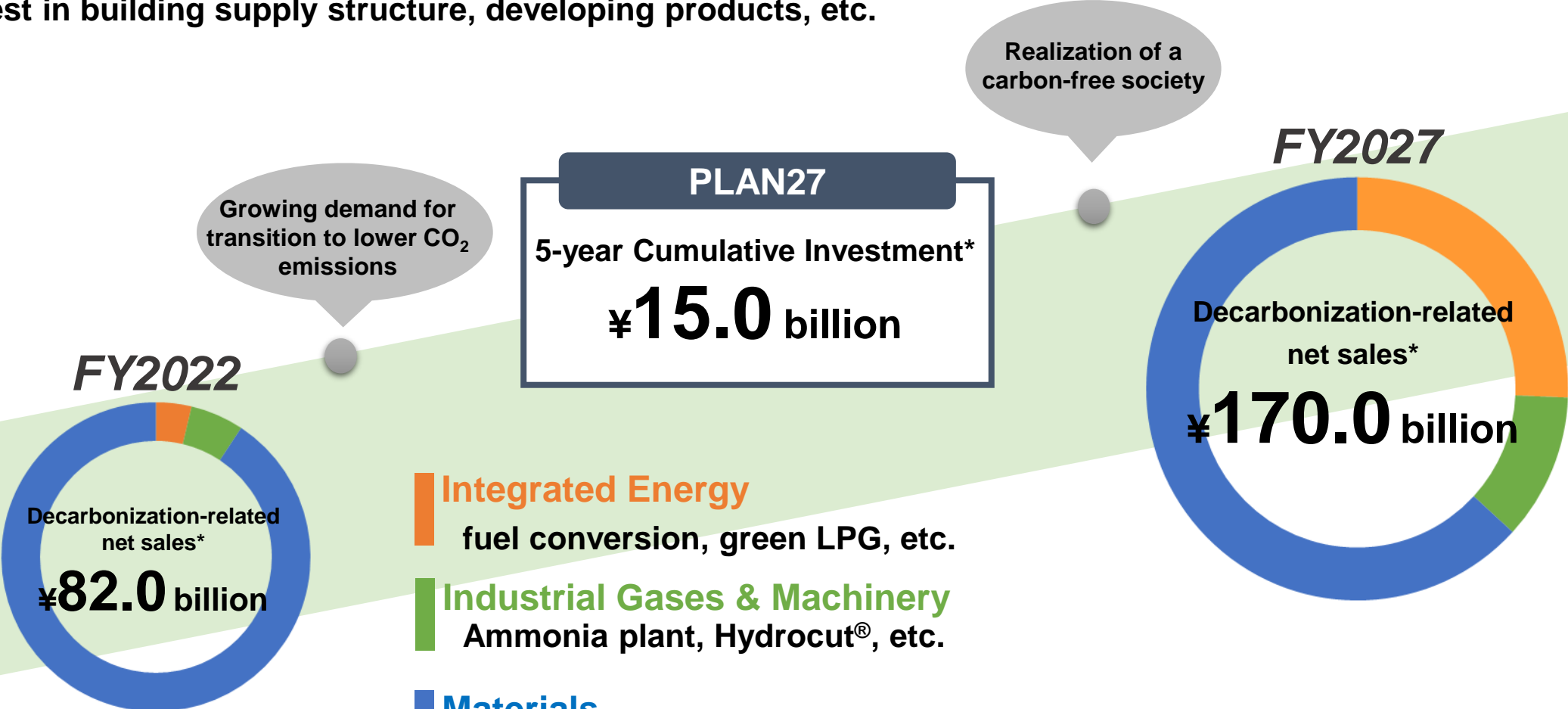
Prospective mining site of Nordic Mining ASA
* Supply scheduled to start in 2025

Carbon-free Strategies

(Net sales / Investment amounts)

Business expansion through helping customers decarbonize their business activities

- ✓ Promote low-/zero-carbon solutions business
- ✓ Invest in building supply structure, developing products, etc.

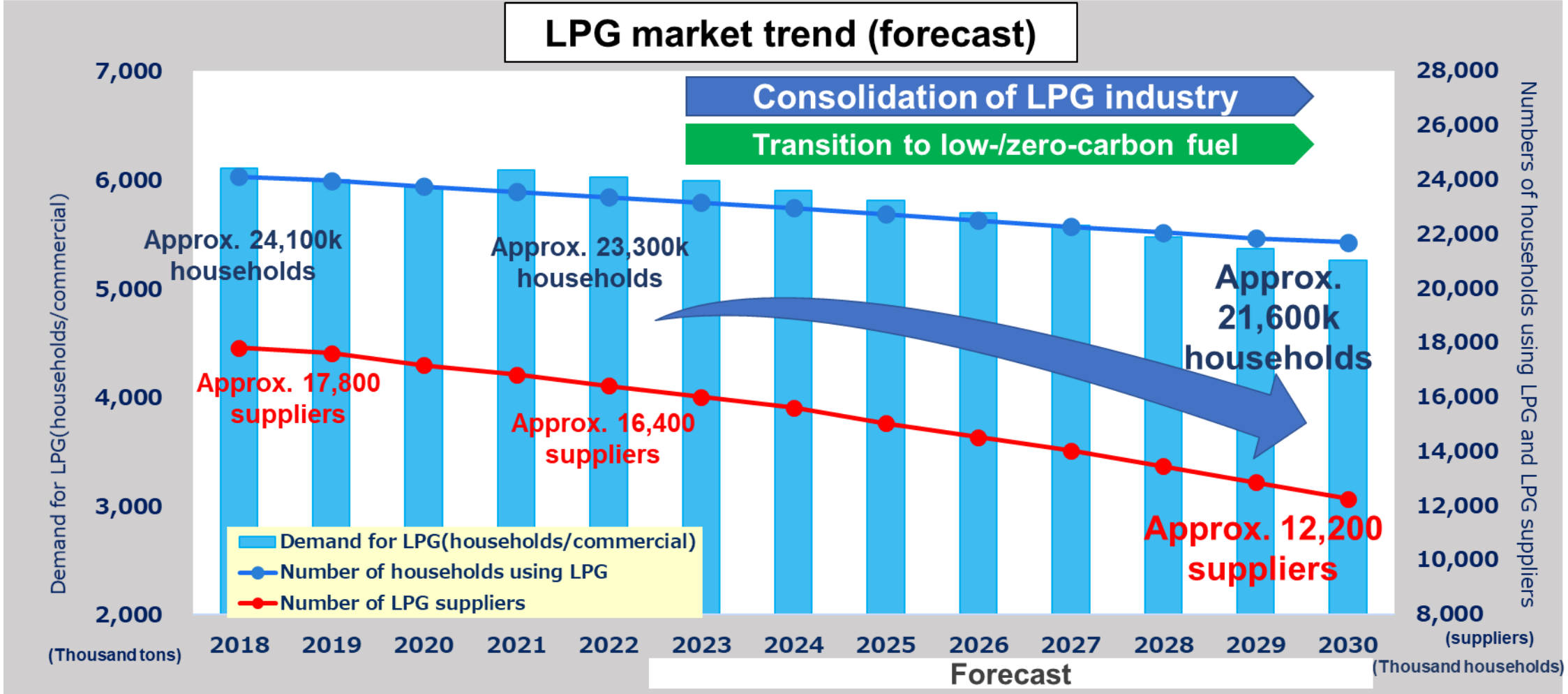


* Net sales and investment amounts related to decarbonization do not include those related to hydrogen. Net sales and investment amounts related to hydrogen are stated in "Priority Measures (1) Hydrogen Strategies."

(3) Domestic Energy & Service Strategies

Domestic Energy & Service Strategies

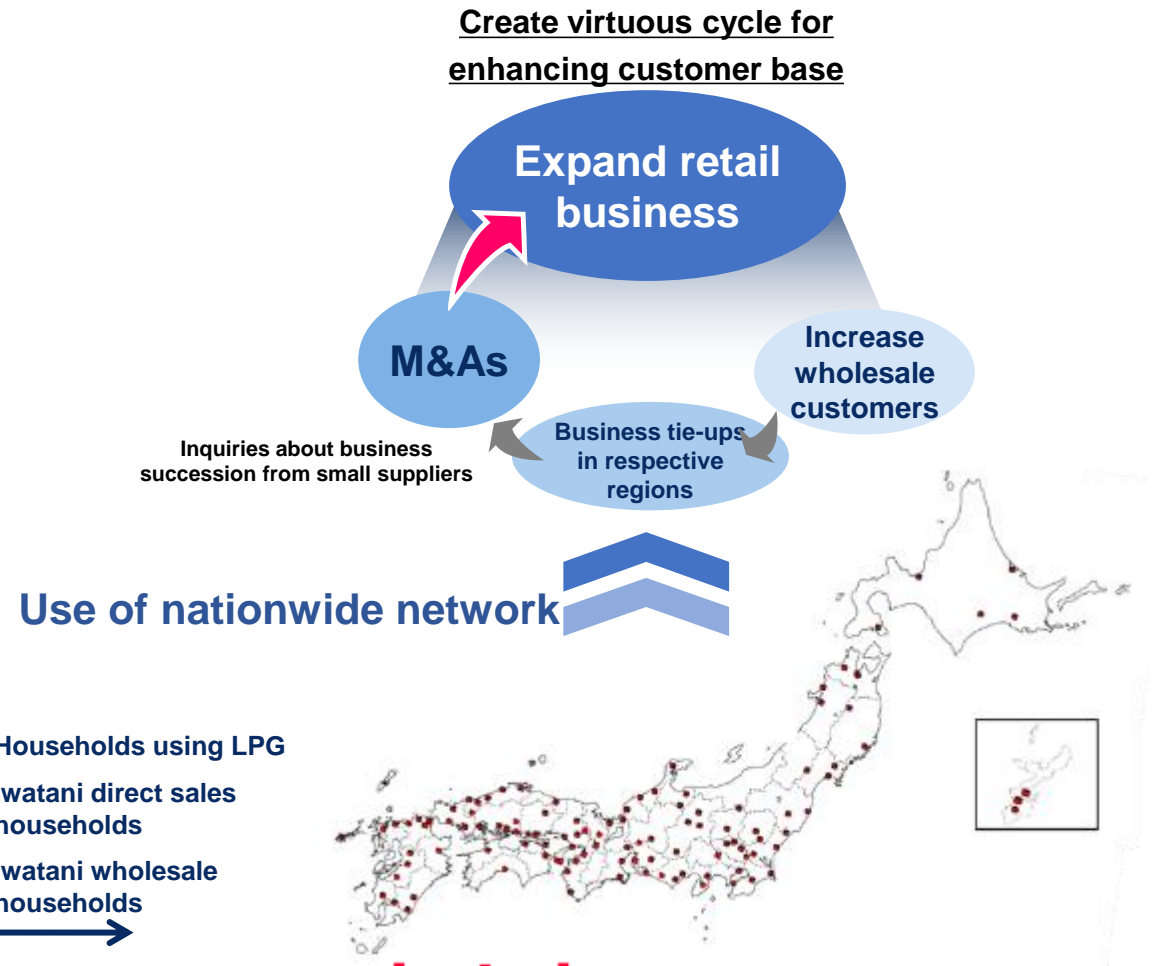
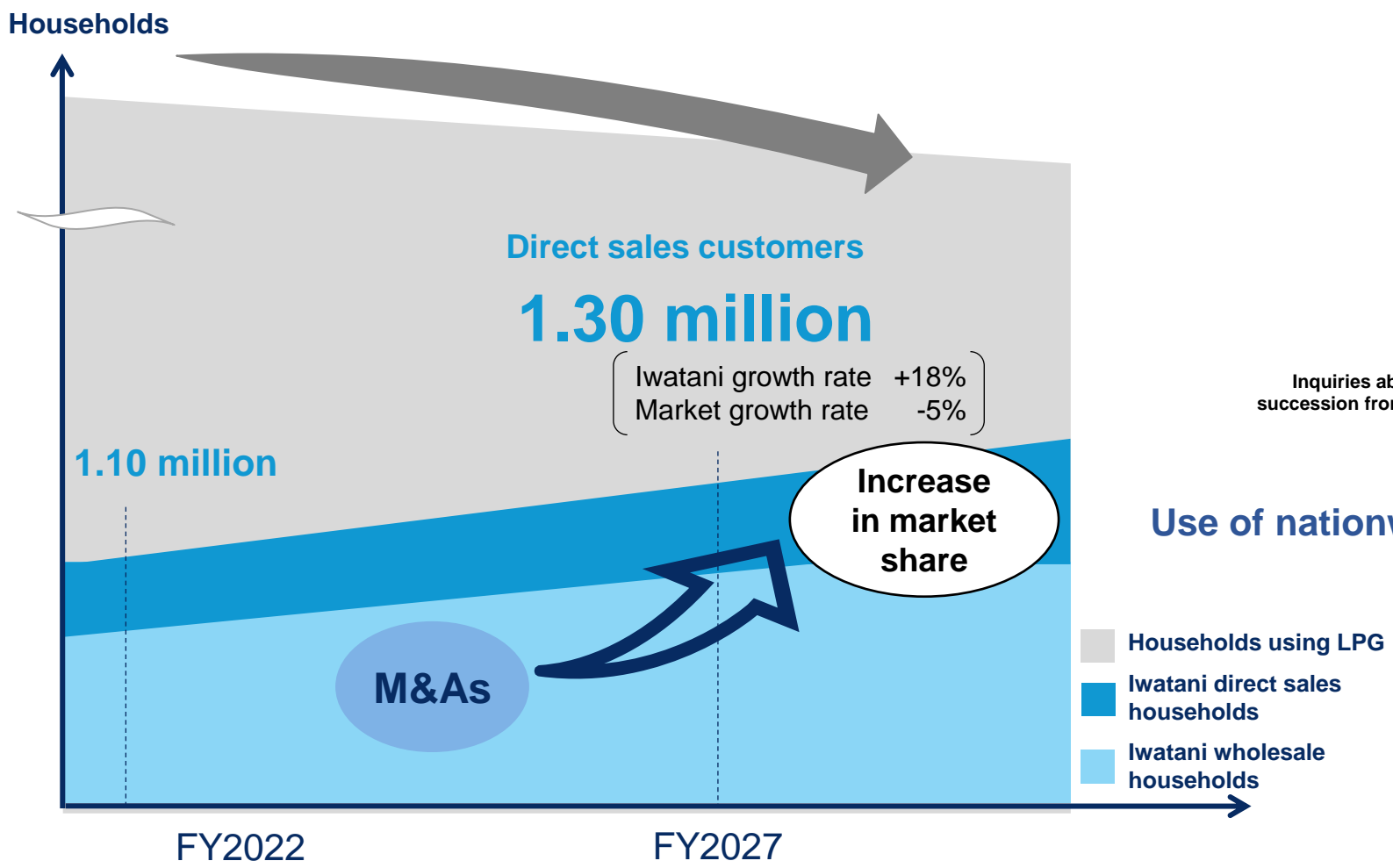
- Decline and consolidation of LPG providers continue amid the gradual decline in the number of households using and demand for LPG



(*) Estimated by Iwatani Corporation based on LP-Gas Annual Report Facts & Figures (Sekiyu Kagaku Shimbun Sha)

Domestic Energy & Service Strategies

As the domestic LPG market shrinks, we will achieve sustained growth by increasing market share through M&As, leveraging our nationwide network.



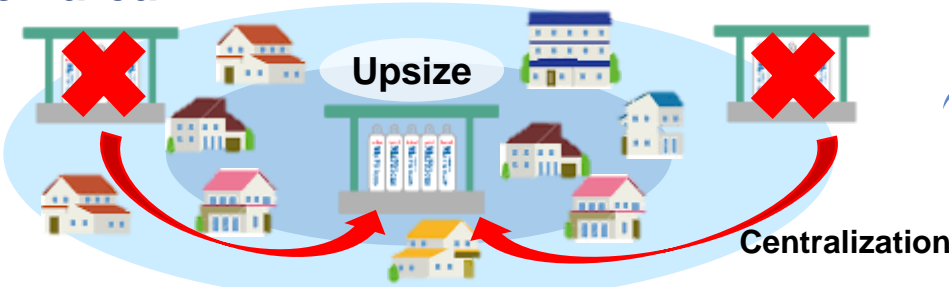
*As of March 31, 2023

Domestic Energy & Service Strategies

- Develop efficient supply infrastructure and increase profitability by streamlining delivery structure

Iwatani initiatives

Develop an efficient delivery structure through optimal placement of sites in each area



Maintain, expand, and reorganize own facilities



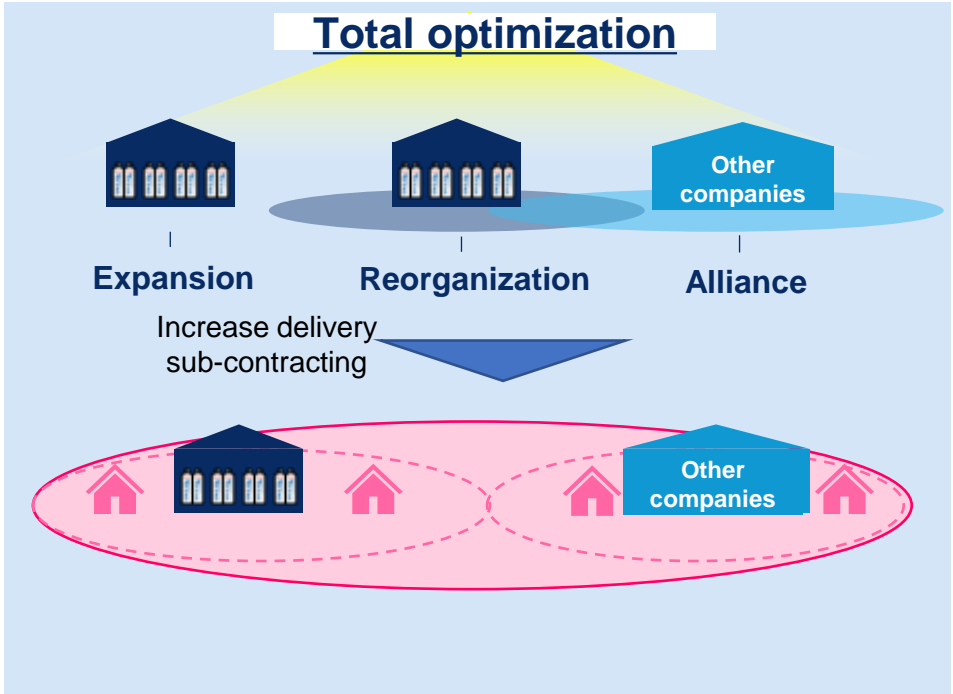
Use of remote automatic meter reading and truck dispatch planning systems

Dual-strategy promotion

Streamlining of delivery

Initiatives with other companies

Improve delivery efficiency through alliances (delivery sub-contracting) with other companies



Improve delivery efficiency through development of high-density delivery structure

Domestic Energy & Service Strategies

■ Help solve communities' social issues and become "an energy & living total service provider" that is essential to customers and communities

Local community problems

- Depopulation
- Aging population
- Disaster countermeasures etc.

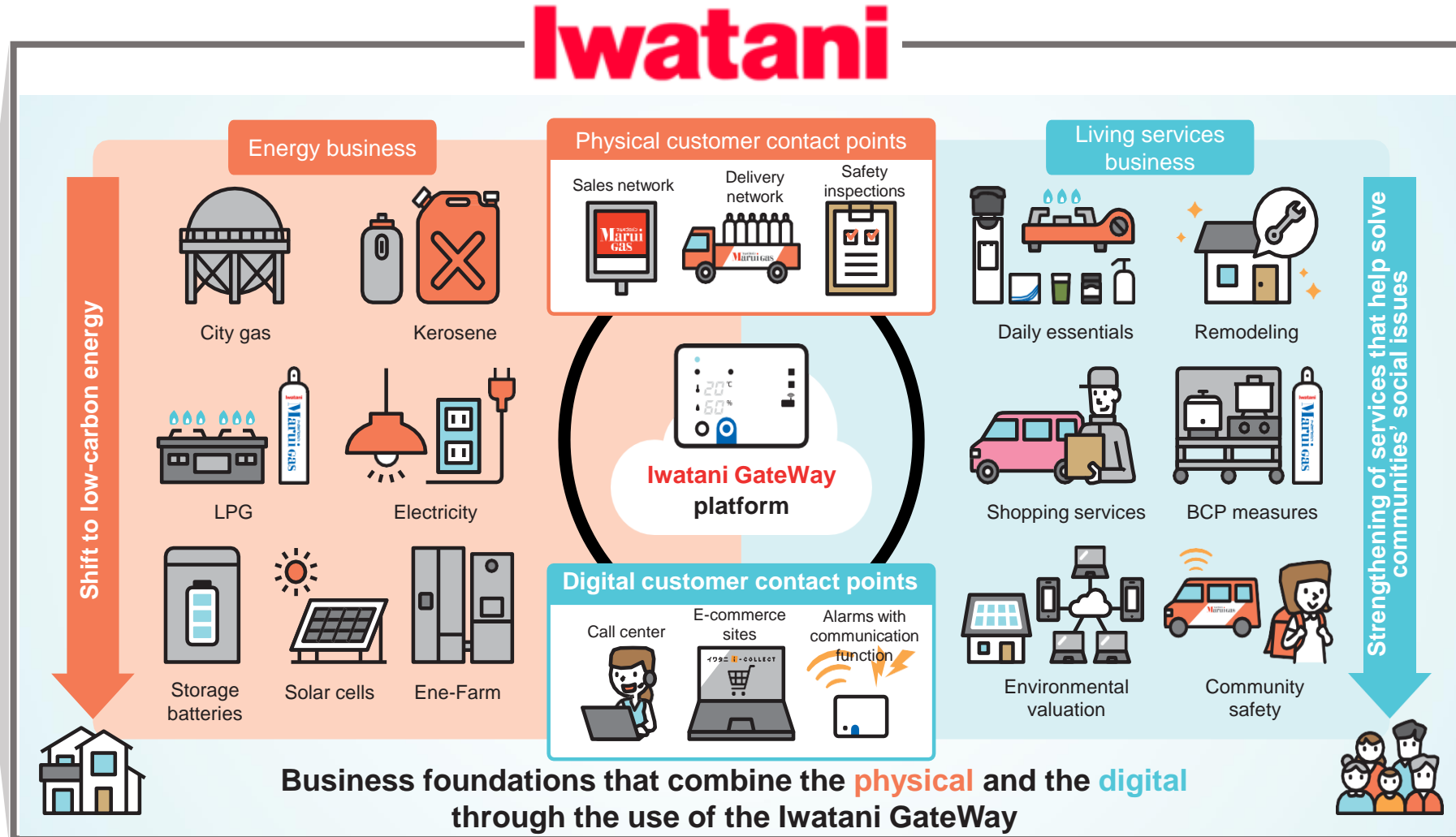


Help solve communities' social issues

Cooperation

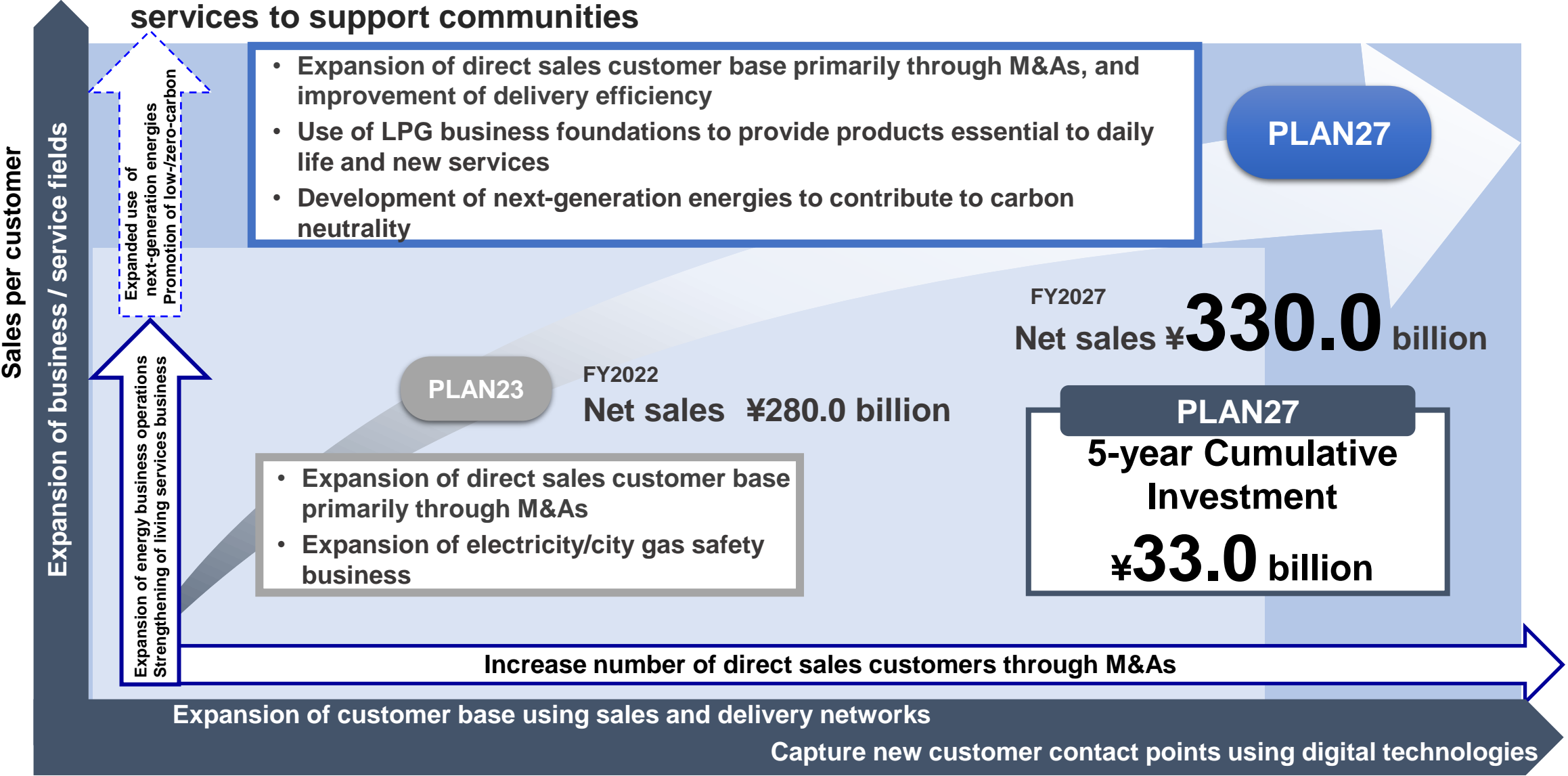


Business partners



Domestic Energy & Service Strategies (Net sales / Investment amounts)

■ Realize medium- to long-term growth by strengthening energy business and developing new services to support communities



(4) Overseas Strategies

Overseas Strategies

■ Overseas development based on domestic business foundations × Advance joint efforts among segments

Domestic Business Foundations

Overseas Network

Integrated Energy

- LPG/LNG**
 - Decarbonization expertise in industrial sector, such as fuel conversion
- Portable gas cooking stoves/ cassette gas canisters**
 - Ability to develop new products that can adapt to local food culture
 - Brand power of safety and reliability



Supply of industrial LPG/LNG and promotion of fuel conversion in China and Southeast Asia
 Expansion into the U.S. LPG market through acquisition of dealership
 Expand portable gas cooking stove and cassette gas canister production and supply facilities

Industrial Gases & Machinery

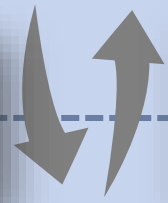
- Gases & Machinery**
 - Production/sales network for industrial gases
 - Proposal capabilities in machinery and equipment
 - Rare gases supply chain
- Hydrogen**
 - Handling technologies, brand power
 - Liquid hydrogen supply chain



Expand industrial gas production and supply facilities in China, the United States, and Southeast Asia

Materials

- Raw materials**
 - Procurement capabilities for eco-friendly products
 - Strong supply chains
- Resources**
 - Stable supply capability of mineral resources



Expand production capability of metal processing
 Explore mining lot for mineral resources
 Develop new areas of raw materials and resources procurement sources

Overseas Strategies

Business strategy based on regional characteristics

China

Business environment

Mega production/consumption market

Strategy

Sales expansion of key products

- Expand sales channels for portable gas cooking stoves/cassette gas canisters
- Expand production plants for air separation gases and hydrogen
- Expand supply facilities for specialty gases, such as helium
- Strengthen sales of industrial gases in growth fields
- Expand raw materials business in growth fields

Southeast Asia

Business environment

Fast-growing market

Strategy

Business expansion by increasing production and supply facilities

- Expand sales and production facilities for portable gas cooking stoves/cassette gas canisters
- Develop new business based on supply and safety expertise in LPG and LNG
- Expand supply facilities for specialty gasses, such as new refrigerants and helium
- Expand manufacturing plant for air separation gasses
- Expand manufacturing functions of metal processing business
- Expand procurement sources for biomass fuel

Australia

Business environment

Rich in energy and resources

Strategy

Explore procurement source

- Expand investment in development of liquid hydrogen supply chain
- Develop new mining lot for mineral sands
- Use carbon credits from afforestation activities

- ... Integrated Energy
- ... Industrial Gases & Machinery
- ... Materials



Overseas Strategies

Business strategy based on regional characteristics

North America

Business environment

World's largest industrial gases market

Strategy

Expand business, including through M&As

- Expand sales of cartridge gas products for outdoor market
- Consider entering LPG market through dealership acquisitions, etc.
- Expand HRS business
- Strengthen production and sales of air separation gases
- Expand supply facilities for helium and other specialty gases



Europe

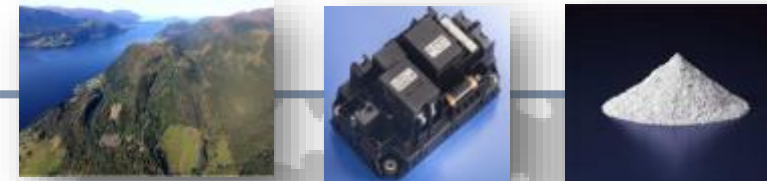
Business environment

Eco-conscious market

Strategy

Creation of resource circulation-based business

- Create resources and metal recycling/processing businesses
- Supply parts and raw materials to environment-related industries



Africa

Business environment

Rich in resources

Strategy

Explore new procurement sources for resources

- Expand procurement sources for mineral resources, such as rare earths and rare metals

- ... Integrated Energy
- ... Industrial Gases & Machinery
- ... Materials

Overseas Strategies (Net sales / Investment amounts)

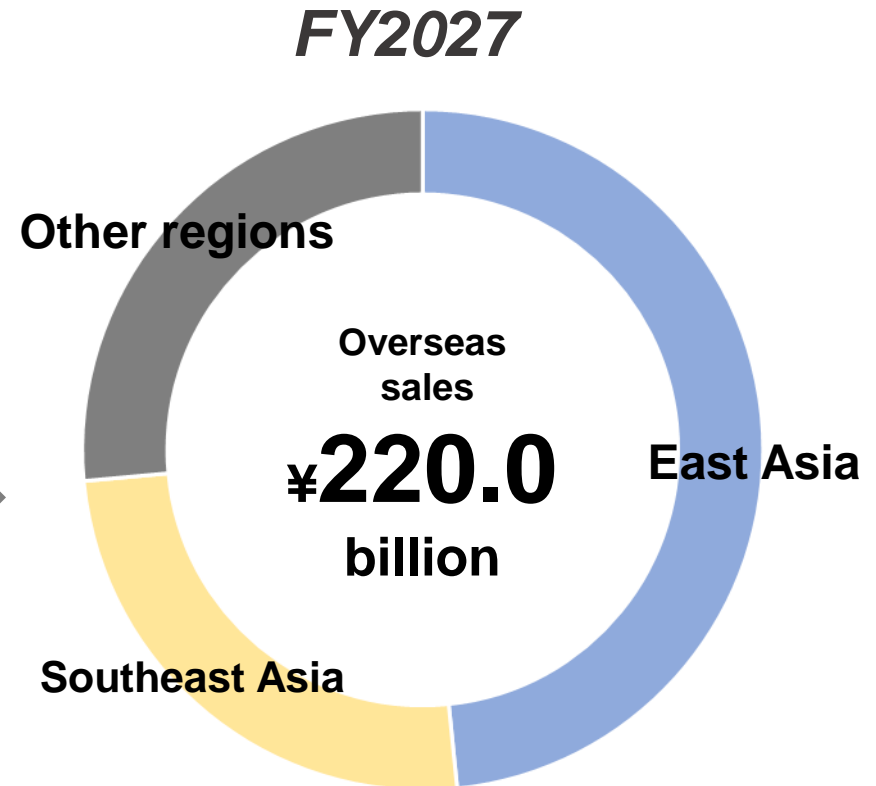
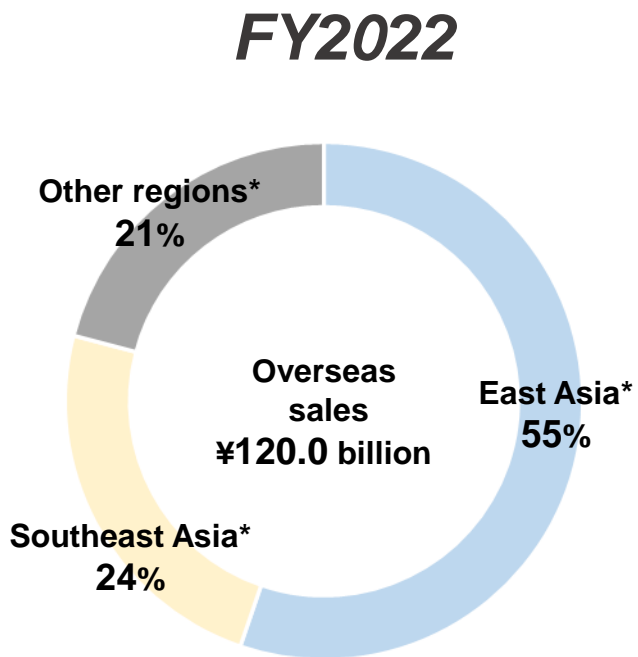
■ Leverage strengths of individual segments to expand business in respective regions

Response to changes in world affairs

- ✓ Further strengthen stable supply system / Diversification of procurement sources
- ✓ Identify growth potential and changes in industrial structure in each region

Priority areas for expanding business foundation

- ✓ China: Delve deeper into mega market
- ✓ Southeast Asia: Expand production and supply facilities for growing markets with increasing populations
- ✓ Other regions: Venture into American market (world's largest industrial gasses market)



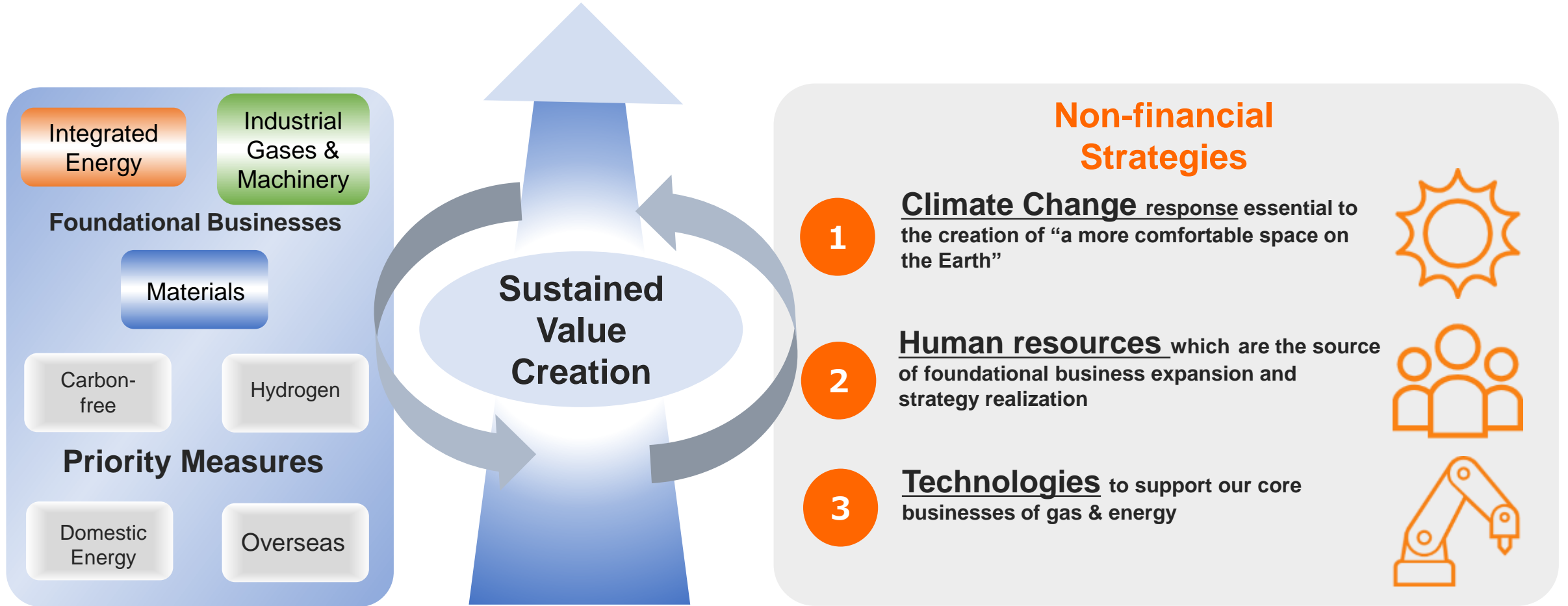
* East Asia: China, South Korea, Taiwan
 Southeast Asia: Singapore, Thailand, Malaysia, etc.
 Other regions: United States, Australia, etc.

(5) Non-financial Strategies

Non-financial Strategies – Positioning

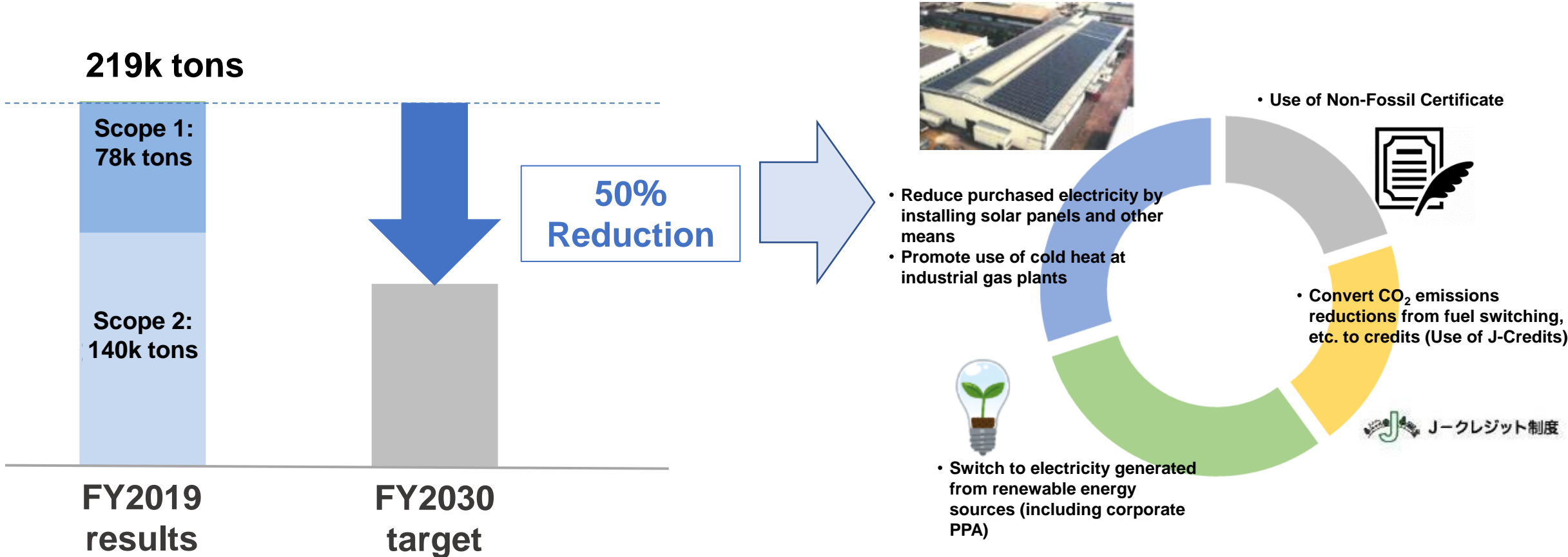
- Non-financial strategies are positioned as an indispensable pillar for the realization of PLAN27

Corporate group that continues to contribute to the creation of “a more comfortable space on the Earth”



Non-financial Strategies – Climate Change Response

- Achieve a **50%** reduction in CO₂ emissions from the Iwatani Group in Japan by FY2030 compared with FY2019 levels



Notes) Calculations of CO₂ emissions are based on the GHG Protocol. CO₂ emissions of major companies the Group acquired in FY2020 and beyond have been retroactively included in FY2019 results. The target is set on the assumption of the electricity emission factor for FY2030 as shown in the Japanese government's Global Warming Countermeasure Plan.

Note) The above graph shows the proportion of efforts to reduce CO₂ emissions and does not include the reduction impact of improvement in the electricity emission factor.

Non-financial Strategies – Human Resource Strategy

- Achieve organizational growth through recruitment, development, and active participation of our people

“An organization in which diverse **individuals** who continue to grow autonomously **thrive**”

Specific measures

Targets



- Recruit diverse people (international, digital, mid-career, gender)
- Create an environment in which employees accept diverse values and are able to engage in active roles while demonstrating their individual abilities to the full

Ratio of female managers

10% or more



- Training systems that encourage self-directed career building with the use of new training center
- Promote proactive reskilling
- Instill the Corporate Philosophy across the entire Group

Annual training costs per employee

¥150 thousand



- Ensure psychological safety
- Enhance employee engagement, including at Group companies
- Realize flexible workstyles that balance work and life events
- Maintain and promote good health

Percentage of childcare leave taken by male employees

100%

Non-financial Strategies – Technology Strategy

■ Enhance technological and safety capabilities that leverage Iwatani's strengths

Demonstrate technical capabilities and engineering functions to expand our business

Specialization

- Advance joint efforts within the Iwatani Group for the development of a liquid hydrogen supply chain
- Acquire expertise to make quick response to market needs

Strengthen and pass down technical capabilities

Technological capabilities

- Acquire knowledge and experience with the use of new in-house academy
- Promote gas and energy businesses by leveraging technological capabilities
- Pass down safety control technologies accumulated in production, transport, etc. of gases

Increase profitability with use of IP

IP strategy

- Secure competitive advantage by bringing research results from the Iwatani R&D Center and the Iwatani Advanced Hydrogen Technology Center to market
- Strengthen alliances by leveraging the Company's own intellectual property



Reference: Revenue Plans by Segment

(Billions of yen)

		FY2022	FY2027	Change	PLAN27 Investment
Integrated Energy	Net sales	393.2	484.0	+90.7	¥70.0 billion
	Operating profit	14.3	25.5	+11.1	
Industrial Gases & Machinery	Net sales	240.4	340.0	+99.5	¥270.0 billion
	Operating profit	16.5	25.5	+8.9	
Materials	Net sales	242.4	306.0	+63.5	¥60.0 billion
	Operating profit	12.6	17.5	+4.8	
Others/Elimination	Net sales	30.2	40.0	+9.7	¥70.0 billion
	Operating profit	-3.4	-3.5	-0.0	
Total	Net sales	906.2	1,170.0	+263.7	¥470.0 billion
	Operating profit	40.0	65.0	+24.9	

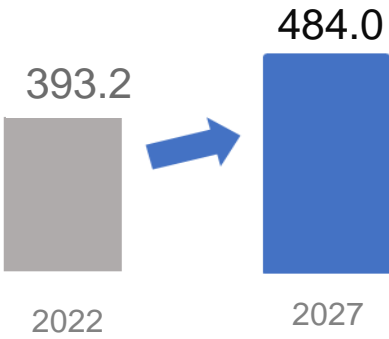
(1) Integrated Energy

(Billions of yen)

Targets

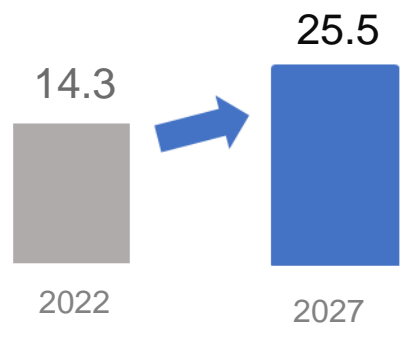
■ Net Sales

+ ¥90.7 billion

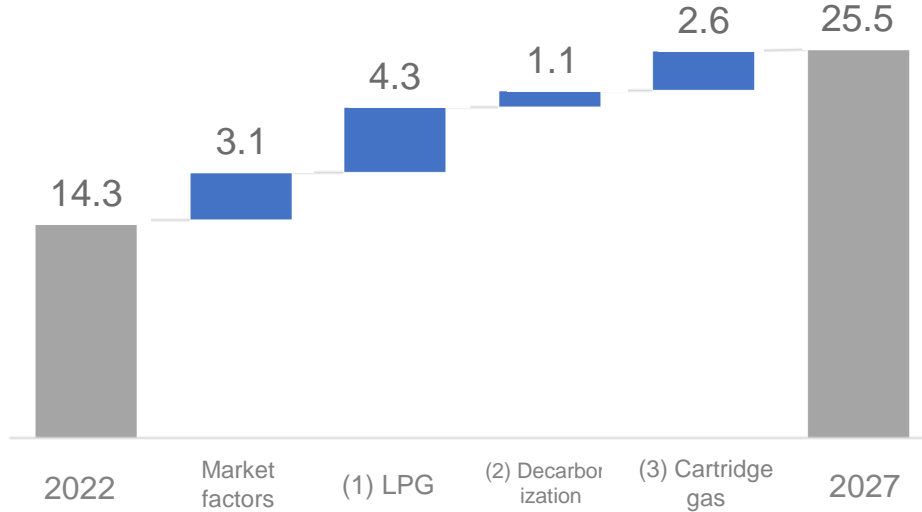


■ Operating Profit

+ ¥11.1 billion



Operating Profit Analysis



Major Measures

- Measure 1: Expand LPG business**
 - (1) Promote domestic energy & service strategies
 - (2) Expand sales of products essential to daily life
- Measure 2: Promote low-/zero-carbon businesses**
- Measure 3: Expand the cartridge gas business**

*Measure 1 (1) is described in Priority Measures (3) Domestic Energy & Service Strategies.

5-year Cumulative Investment

¥70.0 billion

Major Target

Number of LPG direct sales customers FY2027
1.3 million households
 (+18% compared with FY2022)

Integrated Energy (Business Environment)

Business Environment
in FY2030

(1) Energy demand

Population projections (Japan)

FY2020 126 million

↓

FY2030 119 million

(Source) National Institute of Population and Social Security Research

Contraction associated with population decline

Consolidation of retailers

(2) Domestic consumers

《Current》

- Acceleration of declining birthrate and aging population
- Diversification of values

↓

- ◆ Depopulation of local areas and manifestation of social issues
- ◆ Shrinkage of domestic market

**Shrinkage of market/
Diversification of values**

Diverse demand for services

Expansion into overseas markets with growth potential

(3) Decarbonization trend





- ◆ Growing interest in SDGs
- ◆ Low carbon/carbon neutral demand from trading partners and general consumers
- ◆ Progress in visualization of CO₂ emissions

Selection of energy business operators

LPG decarbonization

Integrated Energy

■ As well as promoting domestic energy & service strategies,* we will promote various measures to expand our business

	Themes	Measures	
Products essential to daily life	BCP products	<ul style="list-style-type: none"> Expand sales of emergency power generators, GHPs, etc. 	 
	Carbon neutral (CN) products	<ul style="list-style-type: none"> Promote customers' low-carbon and decarbonization initiatives with Ene-Farm, solar cells, and storage cells 	
	Strengthen BtoC	<ul style="list-style-type: none"> Expand sales of products essential to daily life, such as portable gas cooking stoves and home delivery water 	
Low-/zero-carbon businesses	Fuel conversion/Low-carbon plant	<ul style="list-style-type: none"> Propose fuel conversion to low-carbon fuels and cogeneration facilities 	
	Next-generation energies	<ul style="list-style-type: none"> Expand sales of carbon offset LPG Develop hydrogen-mixed fuel and expand the green power business 	
Cartridge gas	Strengthen domestic business	<ul style="list-style-type: none"> Create new demand by developing outdoor products 	
	Expand into emerging markets	<ul style="list-style-type: none"> Further expand sales to Southeast Asia, starting with the production facility in Thailand 	


*See Priority Measures (3) Domestic Energy & Service Strategies.

Integrated Energy

Expand sales of products essential to daily life

Propose products essential to daily life and services that meet customer needs by leveraging our LPG customer base

Emergency generators, GHPs **BCP products**



Propose a wide range of products that contribute to BCP measures

Fuel cells, solar cells, storage cells
High-efficiency water heaters **CN products**




Expand sales of products that respond to carbon-free society (electrification, etc.)

Products essential to daily life **BtoC products**




- Develop attractive new products
- Develop new sales channels

Remodeling/home equipment-related **Lifestyle services**



Enhance after-sales service

Customer solutions **Lifestyle services**




House cleaning, vacant house renovations, etc.

Product sales




Service provision

Community safety service **New service**



Sell a package of monitoring services for children and seniors and the provision of LPG

Detecting frail elderly **New service**

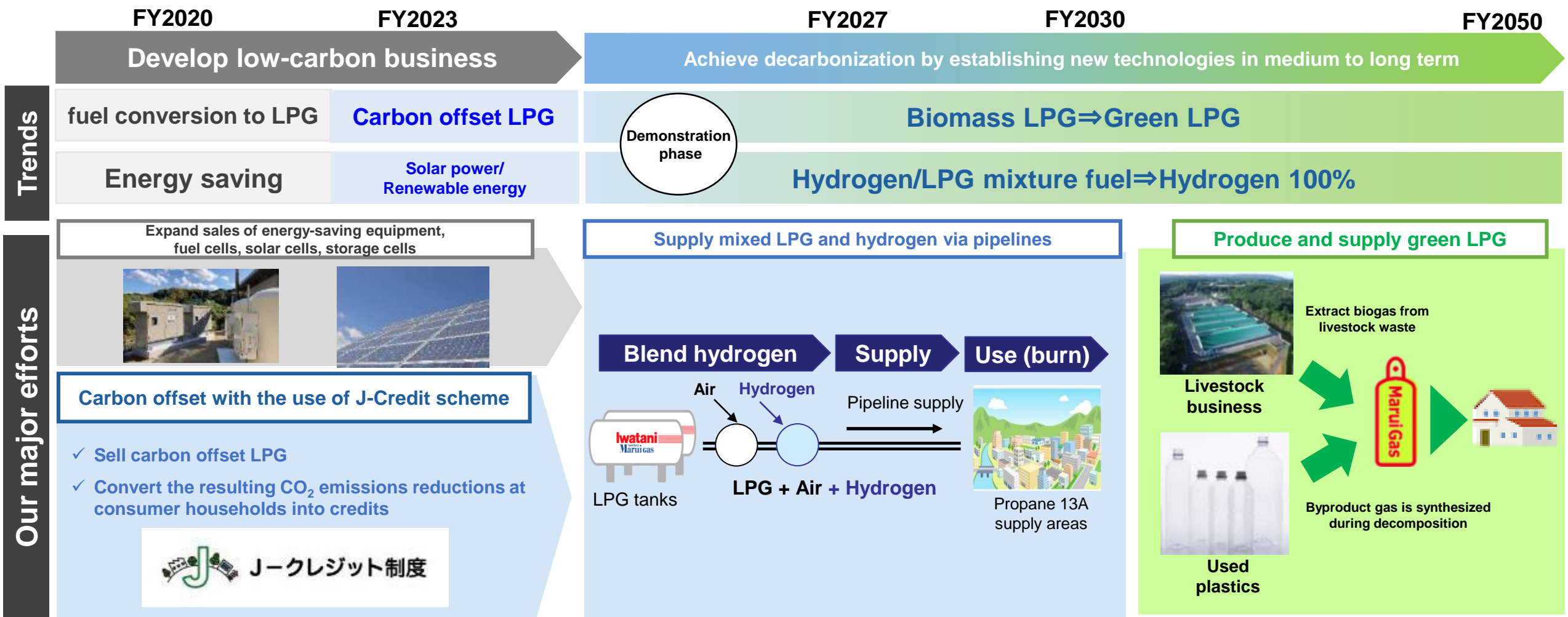


Use electricity and gas usage data to monitor the health of elderly people living alone

Integrated Energy

■ Promote low-/zero-carbon businesses

Take the lead in promoting decarbonization as a leading LPG company



Integrated Energy

Expand cartridge gas business (domestic strategy)

Increase profitability by expanding the domestic market and reducing business costs

	FY2022 Sales Results	FY2027 Sales Targets	Change from FY2022
Portable gas cooking stoves	2.20 million units	3.40 million units	+54%
Cassette gas canisters	98.00 million units	130.00 million units	+32%

Measures to expand the domestic market

Develop new demand and deepen existing demand

▶ Develop and sell new outdoor products



Outdoor brand "FOREWINDS"

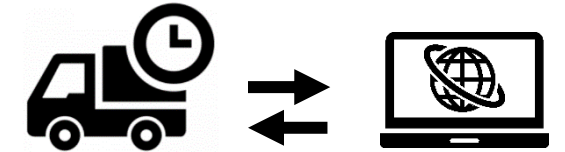
▶ Introduce products with superior design and functionality



Utilization of outdoor shops

Measures to reduce business costs

▶ Improve efficiency of delivery and order placement
Review of logistics system



▶ Review and consider consolidation of the dealership network

Iwatani



- General retailers
- e-Commerce stores

Integrated Energy

Expansion of cartridge gas business (overseas strategy)

	Business Environment	Our Strategy
Southeast Asia	Cheaper competing products are becoming popular, but safety is an issue	Develop new products that meet local needs
China	Market has matured, and e-commerce sales are growing	Strengthen sales channels and sales of outdoor products
EU, USA and Australia	Demand for outdoor products is growing	Strengthen sales of outdoor products
India and others	Untapped markets	Consider entering the markets

Portable gas cooking stove production facilities and major regional sales plans



FY2027 overseas sales targets

- ✓ Portable gas cooking stoves **4,700K units**
(+118% compared with FY2022)
- ✓ Cassette gas canisters **120,000K units**
(+96% compared with FY2022)

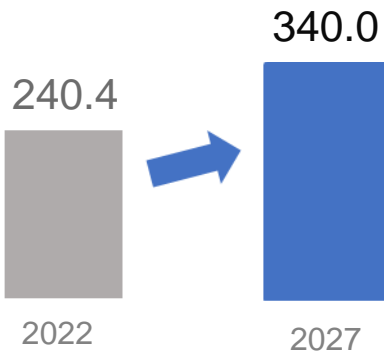
(2) Industrial Gases & Machinery

Industrial Gases & Machinery

Targets

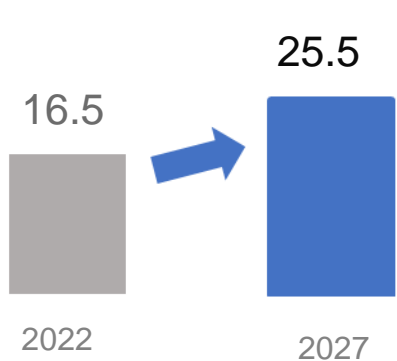
■ Net Sales

+ ¥99.5 billion



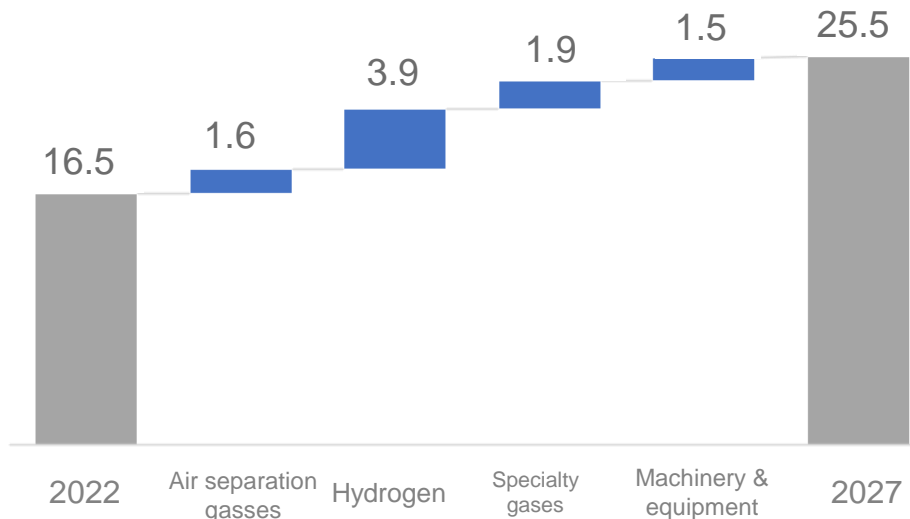
■ Operating Profit

+ ¥8.9 billion



(Billions of yen)

Operating Profit Analysis



Major Measures

Measure 1: Further expand our business in priority regions (Japan, United States, China, Southeast Asia)

Measure 2: Venture into new growth fields (1: Regenerative medicine; 2: Onshore aquaculture; 3: Decarbonization)

*Hydrogen is described in Priority Measures (1) Hydrogen Strategies

5-year Cumulative Investment

¥270.0 billion

Major Target

**Air separation gases
FY2027 2.0 billion m³
(+25% compared with FY2022)**

Industrial Gases & Machinery (Business Environment)

Business Environment
in FY2030

(1) Economic growth in each region

- USA** World's largest industrial gases market; still growing
- China** Expected to grow into a country with the world's top GDP
- Southeast Asia** High-growth region where manufacturing is thriving

(*Industrial gases demand correlates with GDP growth rates.)



Growing demand for industrial gases in growth regions

Expansion of market size in USA, China, and Southeast Asia

(2) Changes in industrial structure in Japan

◆ Manifestation of social issues and return of industries to Japan will create new demand and growth industries.

- Decarbonization of industry → Demand for hydrogen as an alternative to fossil fuels
- Sustainable resources use → Demand for food supply with aquaculture
- Economic security → Return of semiconductor industry, etc. to Japan

Growth of new industries for solutions to social issues

Emergence of new growth fields (decarbonization, regenerative medicine, onshore aquaculture)

Return of industries to Japan (semiconductors, storage batteries, robotics)

Industrial Gases & Machinery

1) Further expand our business in priority regions

While strengthening domestic revenue base, we will expand production and sales of industrial gases and machinery in global market.

Japan

**Focus on growth fields such as decarbonization demand
Expand sales of machinery and equipment
(decarbonization and automation)**

- Business environment** Rising energy costs, growth of decarbonization field, changes in industrial structure
- Investment** Growth investment in existing and new businesses

United States

Full-scale entry into market through M&As of industrial gas businesses and further business expansion

- Business environment** World's largest industrial gases market
- Investment** Development of industrial gas plants
M&As of industrial gases dealerships

Four Priority Regions

China

Expand business area and product range

- Business environment** Mega market that continues to grow
- Investment** Expansion of industrial gas plants (venture inland)

Southeast Asia

**Enhance supply capacity of industrial gases and expand product range
Expand sales of machinery and equipment
(robotics and semiconductor related)**

- Business environment** Market expansion due to population growth
- Investment** Expansion of industrial gas plants to meet growing demand
M&As of industrial gases dealerships

Industrial Gases & Machinery

1) Further expand our business in priority regions

Further expand core businesses by identifying market needs both in Japan and overseas

Themes

Measures

Air separation gases

Growth areas / targets

- Semiconductors
- Electric furnaces
- Medicine
- Electric Vehicles
- Electronic components
- Onshore aquaculture

Strengthen supply system

Develop new areas

- Strengthen supply capacity of air separation gases in growth regions
- Develop demand in new areas such as regenerative medicine and onshore aquaculture



Specialty gases

Growth areas / targets

- Beverage
- Semiconductors
- Medicine
- Chemicals
- Decarbonization
- New refrigerants

Strengthen helium business

Expand sales in growth market

- Diversify procurement sources and increase procurement volume
- Strengthen logistics system
- Delve deeper into growth areas such as decarbonization and semiconductor



Machinery, equipment, etc.

Growth areas / targets

- Decarbonization
- Pharmaceuticals
- Automation/robotics
- Power semiconductors
- Electronic components

Delve deeper into decarbonization-related demand

Strengthen total proposal capability

- Develop decarbonization-related products such as mixed-combustion type hydrogen burners and increase their sales
- Promote total proposals for mainstay products such as robotics and machine tools as well as other products, focusing on solutions to customers' issues



Industrial Gases & Machinery

2) Venture into new growth fields

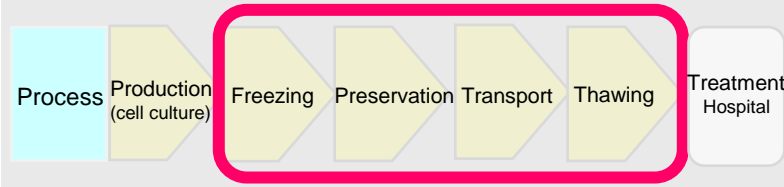
Develop new growth fields in addition to expanding the existing business in Japan

1 Regenerative medicine

Aim to establish industry standards for distribution while peripheral industries are expected to expand

De facto standard of distribution

Develop cold chain at **-150°C**



2 Onshore aquaculture

Contribute to sustained use of marine resources with supply of gas and facilities and R&D

Establish and expand business models

Domestic market → To overseas markets



Coordination across business divisions

Integrated Energy:
Emergency power generators

Materials: Related products

Iwatani R&D Center: R&D

2) Venture into new growth fields

Sales expansion through proposals for industrial machinery and equipment that lead to low-carbon and decarbonization required of all industries

3 Decarbonization

Provide low-/zero-carbon solutions

- ✓ Capture demand from transition to hydrogen and ammonia from fossil fuels used in heat treatment



Hydrogen-related products

- ✓ Expand sales of new products that contribute to reduction of CO₂ generated in manufacturing processes



Mixed-combustion type hydrogen burner



Hydrogen cutting machine

Ammonia facilities

- ✓ Leverage the track record of delivery to thermal power plants and expertise in dealing with Electricity Business Act to respond to demand for decarbonization demonstration trials



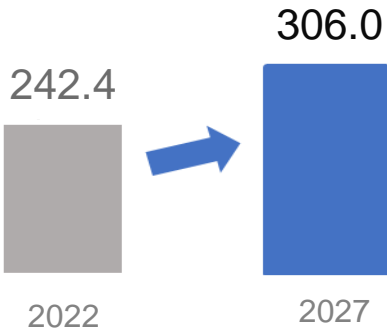
Ammonia facilities

(3) Materials

Targets

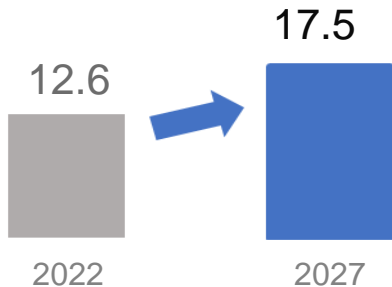
■ Net Sales

+ ¥63.5 billion



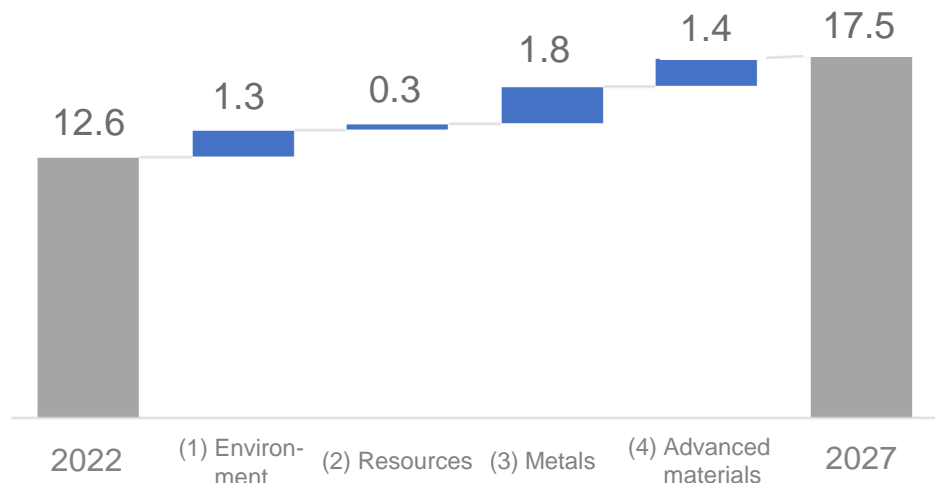
■ Operating Profit

+ ¥4.8 billion



Operating Profit Analysis

(Billions of yen)



Major Measures

- Measure 1: Expand environmental solutions business
- Measure 2: Invest in critical mineral resources
- Measure 3: Expand metal processing business
- Measure 4: Promote development and commercialization of advanced materials

5-year Cumulative Investment

¥60.0 billion

Major Targets

Bioplastics

FY2027 100K tonnes
(+94% compared with FY2022)

Biomass fuel

FY2027 1,050K tonnes
(+220% compared with FY2022)

Materials (Business Environment)

Business Environment in FY2030

(1) Low-carbon society

《Current》

The volume of natural resources that humans use each year is equivalent to 1.8 planet Earths.

(Source: World Wide Fund for Nature (WWF))



- ◆ Lifestyle that does not exceed the Earth's natural ability to regenerate

Advent of a low-carbon society

Accelerate initiatives that will lead to the resource-circulating society

Growing demand for eco-friendly products

(2) Economic security

《Current》

The Economic Security Promotion Act enacted (May 2022)

- Growing complexity of international affairs
- Changes in socioeconomic structure



- ◆ Strengthen supply chain for critical products
- ◆ Promote development of key advanced technologies

Ensure economic security

Accelerate development of resources toward diversification of procurement sources

(3) IoT society

Expansion of electronics industry



- ◆ Expansion of the electronic component market in which Japanese manufacturers are competitive

Society in which all things are connected

Increase in semiconductor production / Accelerated development of advanced semiconductors (Power semiconductors, MLCC)

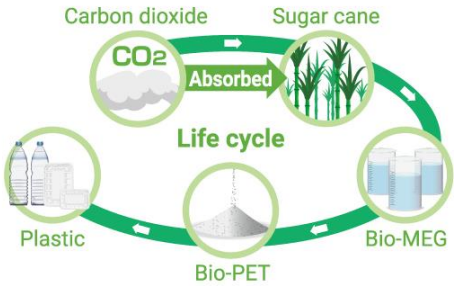
Materials

1) Expand environmental solutions business

Provide solutions that will contribute to the development of the resource-circulating society

(1) Build a resource circulation framework

Bioplastics



Invest and participate in green refinery business

- Main products
- 100% Bio-PET
 - Bio-PP/PE
 - Biodegradable resins

Resource recycling



Secondary metal (copper)

Build recycling business with partners

- Main products
- PET
 - Secondary metals (copper, gold, silver, etc.)
 - Battery materials

(2) Strengthen sales of eco-friendly products

Biomass fuels



Wood pellets

Expand procurement sources
Build supply chains

- Main products
- PKS
 - Wood pellets
 - Bio-aviation fuel

Battery materials



Strengthen procurement capability in line with expansion of secondary battery market

- Main products
- Cobalt
 - Manganese
 - Nickel

Materials

2) Invest in critical mineral resources

Expand procurement and production functions based on customer needs to build stronger supply chains (titanium ore, zircon sand)

Customer needs	Strong overseas demand Response to domestic customers who want environmental value
Measures	Diversify procurement sources and production bases and make them greener

3) Expand metal processing business

Strengthen production and processing functions to meet growing demand

Customer needs	Growing air conditioning market in Asia ⇒ Increasing demand for processed wire products
Measures	Expand processing functions

4) Promote development and commercialization of advanced materials

(1) Commercialize advanced electronic materials
Gallium oxide, nano nickel, etc.

Nordic Mining ASA
(Scheduled to start supply in FY2025)
Supply titanium ore with low environmental impact

Iwatani Australia
Respond to strong overseas demand

Major resources supplier
Stable supply to Japan

Strengthen production capability of our plant for processed wire products (Thailand)

Legend:
● ... (1) Mineral resources business
● ... (2) Overseas metal processing business

(2) Promote joint development with academia and private sector
Regenerative medicine-related, etc.

Reference: Investment Plan (Breakdown of total ¥470.0 billion in 5 years)

(1) By measure

		Measures	Amount	Main contents
Priority Measures		Hydrogen Strategies	178.0	Develop CO ₂ -free hydrogen supply chains both in Japan and overseas
		Carbon-free Strategies	15.0	Develop eco-friendly products supply chains (Gases, raw materials, etc.)
		Domestic Energy & Service Strategies	33.0	Retail businesses M&As / Acquire customers
		Overseas Strategies	94.0	New plants for portable gas cooking stoves and cassette gas canisters Strengthen production and supply capabilities of industrial gases Stable supply of resources
	Foundational Businesses Growth Investment	100.0	Expand domestic supply capabilities for air separation gases, etc.	
	Maintenance/Repairs	50.0	Repair LPG plant, etc.	

(2) By business

(Billions of yen)

Business	Amount	Main contents
Integrated Energy	70.0	Retail businesses M&As / Acquire customers New plants for portable gas cooking stoves and cassette gas canisters
Industrial Gases & Machinery	270.0	Develop liquid hydrogen supply chains Strengthen production and supply capabilities of industrial gases
Materials	60.0	Stable supply of resources Invest in strengthening of supply chains
Others	70.0	Investment in systems, new training centers, etc.

(3) By region

Region	Amount	Main contents
Japan	295.0	Growth investments in foundational businesses / maintenance / repairs
East Asia	23.0	New plants for portable gas cooking stoves and cassette gas canisters
Southeast Asia	29.0	Strengthen production and supply capabilities of industrial gases
Other regions	123.0	Investment in hydrogen/resources (USA/Australia)

Iwatani