

Mid-Term Business Plan 2020



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Mitsui E&S Holdings Co., Ltd.



Mitsui E&S Holdings Co., Ltd.

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1. Mitsui E&S Holdings Group Philosophy

The Mitsui E&S Group has renewed its own awareness of the reasons for which it exists in view of changes in the surrounding circumstances as well as its own reforms and has revised its Management Policy and Standards of Conduct.

Company Philosophy

The company philosophy shapes the raison d'être and mission of the company.

To continue working as a company trusted by society and individual through products and services we offer

➤ Management Policy

The Management Policy sets out the direction of the company toward the realization of the Company Philosophy.

Achieve new value creation together with customers

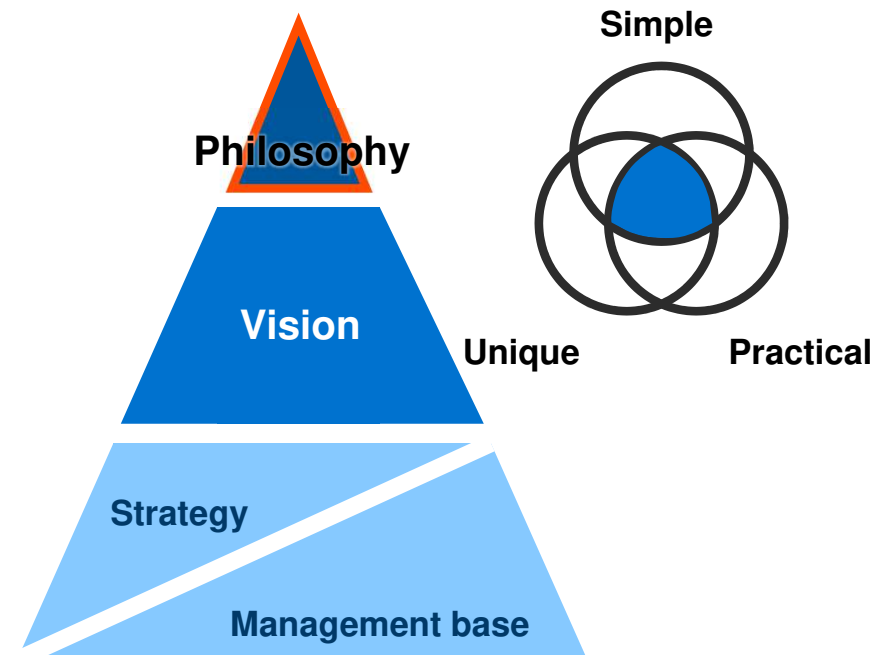
Seek a sound financial structure and steady profit

Construct an environment for working healthily and safely

➤ Standards of Conduct

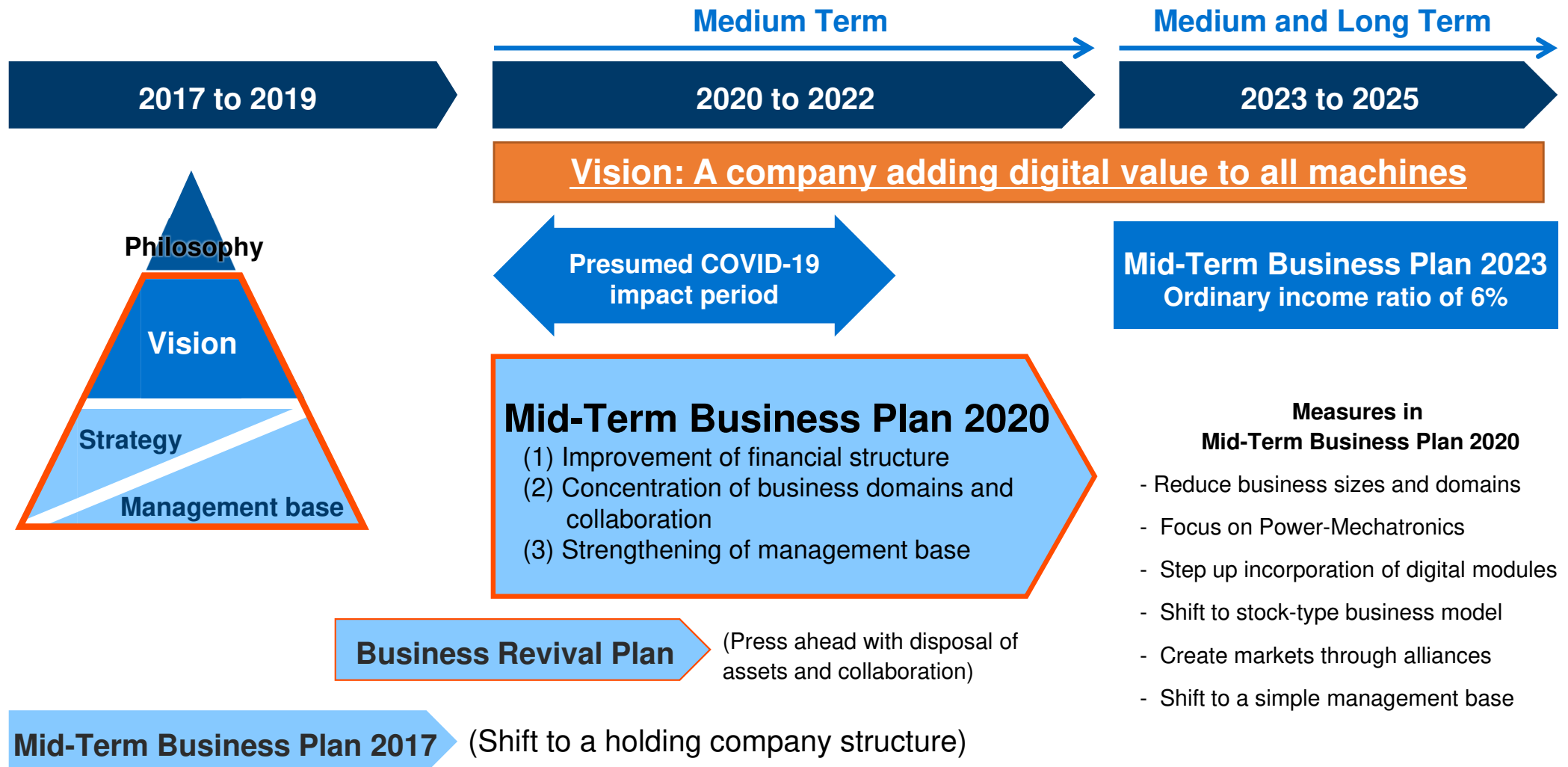
The Standards of Conduct provide the foundations for the actions of our employees.

Endeavor to provide simple, unique and practical products and services



2. Mitsui E&S Group's Vision and Strategy Structure

On the basis of structural improvements following the Business Revival Plan, we will clearly concentrate business and collaborate during the Mid-Term Business Plan 2020 to strengthen the foundation of our business. Using the knowledge and expertise we have cultivated, we aim to become a company adding digital value to all machines.



3. Review of Business Revival Plan

In addition to disposal of assets, personnel reduction and reassignment, we implemented an alliance strategy aimed at reforming the Group's business structure.

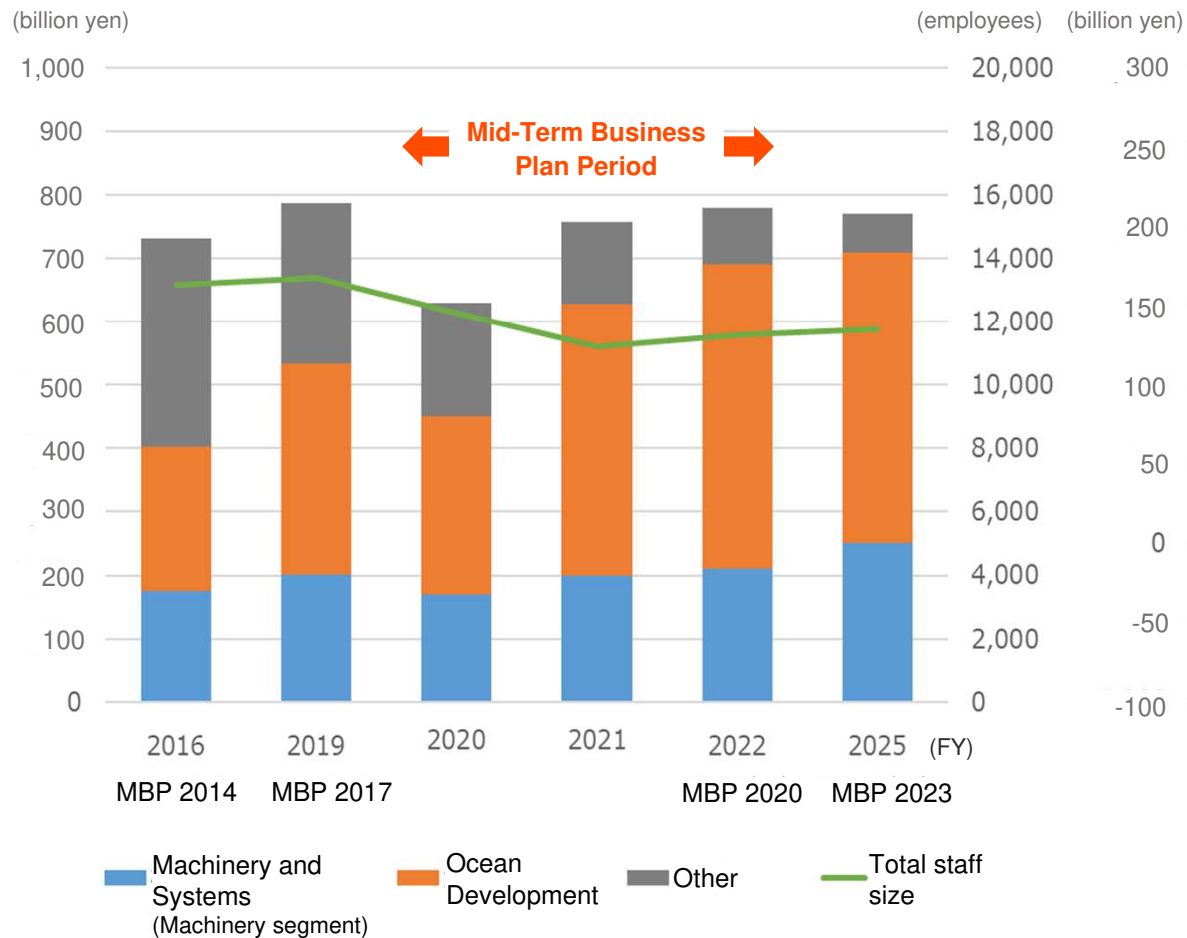
	Business Revival Subject	Target and Policy	Achievements	Issue	
Reinforcement of financial structure	Sell-off of businesses and assets	<ul style="list-style-type: none"> Ratio of net interest-bearing debt to EBITDA of less than 5 Total asset turnover of more than 0.8 	<ul style="list-style-type: none"> Businesses and assets worth around 100 billion yen sold off¹ Total asset turnover of 0.94 (Mar. 2020) 	<ul style="list-style-type: none"> Reduce interest-bearing debt Exit from unprofitable businesses 	
	Reduction of fixed costs	<ul style="list-style-type: none"> Transfer of around 1,000 employees 	<ul style="list-style-type: none"> Staff transferred inside and outside the Group Call for 200 voluntary separations at the Chiba Shipyard 	<ul style="list-style-type: none"> Reduce the functions of the head office 	
	Increase in equity capital	<ul style="list-style-type: none"> Attain equity ratio of at least 20% 	<ul style="list-style-type: none"> Disposal of business assets prioritized 	<ul style="list-style-type: none"> Carry out capital measures 	
Reform of business structure	Strengthening of the Machinery and Systems Business and the Ocean Development Business	<ul style="list-style-type: none"> Ordinary income ratio of more than 4% 	<ul style="list-style-type: none"> Shift focus to the Power-Mechatronics business 	<ul style="list-style-type: none"> Staff reassigned to increase resources of Research & Development and After-Sales Services 	<ul style="list-style-type: none"> Expand to overall marine propulsion systems Push ahead with incorporation of digital modules Expand businesses overseas
	Reorganization of the Shipbuilding Business		<ul style="list-style-type: none"> Create markets and increase profit ratio through alliances 	<ul style="list-style-type: none"> Split into the Naval Ship Business and the Marchant Ship Business Basic policy agreement with Mitsubishi Heavy Industries, Ltd. and Tsuneishi Shipbuilding Co., Ltd. 	<ul style="list-style-type: none"> Determine details about the framework for collaboration Establish new profitable businesses Expand businesses to overseas
	Reorganization of the Social Infrastructure Business		<ul style="list-style-type: none"> Businesses concentrated in Mitsui E&S Steel Structures Engineering Basic policy agreement with Sumitomo Mitsui Construction Co., Ltd. 		
	Reorganization of the Engineering Business	<ul style="list-style-type: none"> Finish business exit and staff reassignment 	<ul style="list-style-type: none"> Governance structure reconstructed by the Engineering Business Management Dept. 	<ul style="list-style-type: none"> Carry out civil engineering projects of power plant Slash work costs 	

¹ Business and asset sell-off: Showa Aircraft Industry Co., Ltd., Mitsui E&S Plant Engineering Inc., land for the Chiba Shipyard, renewable energy facilities and others

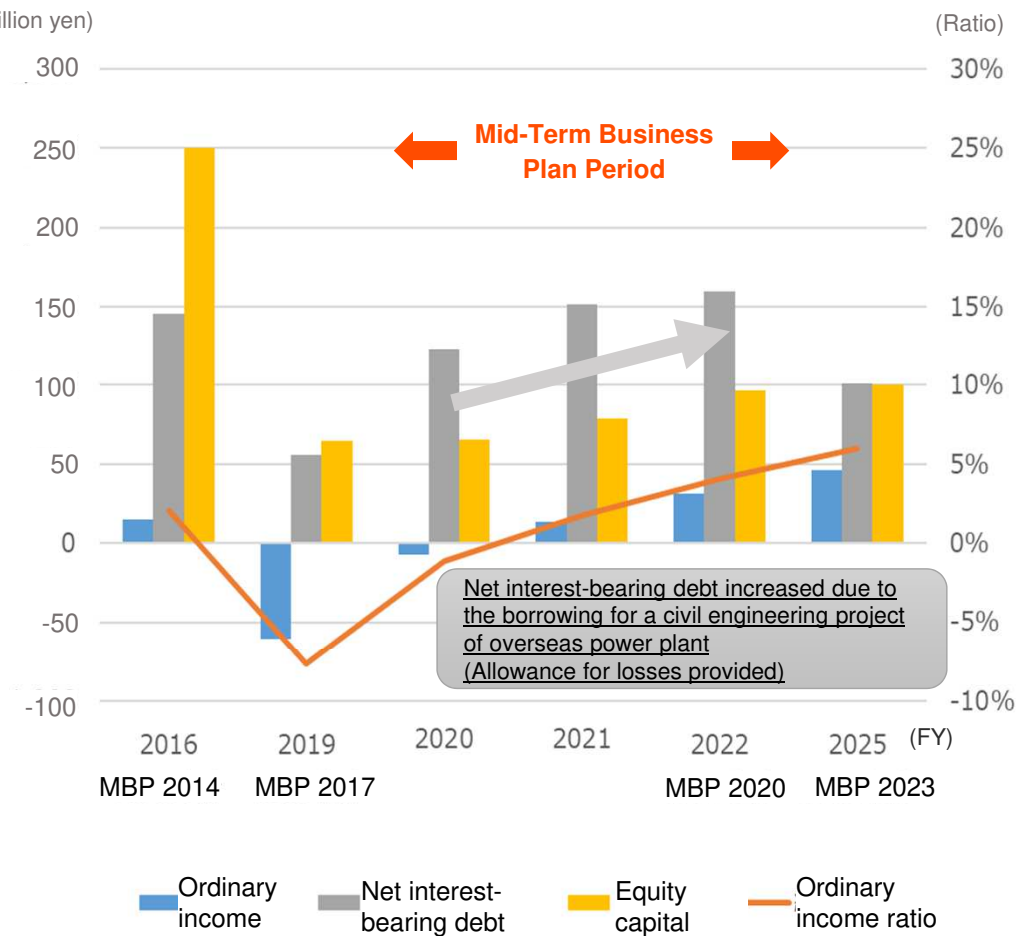
4. Outlook of Financial Structure in Mid-Term Business Plan 2020

We will focus on the business domains of Machinery and Systems and Ocean Development while collaborating in other businesses. We will reduce the sizes of business and staff to boost debt servicing capacity. The Mid-Term Business Plan 2020 set the consolidated net sales target at approx. 770 billion yen and the consolidated ordinary income ratio at 4%.

Trends in consolidated net sales and total staff size (by segment)



Trends in income and interest-bearing debt (consolidated)



* Net sales of the Ocean Development segment (MODEC) represents figures estimated by the Company on the basis of interviews.

5. Financial Targets and Investment Plan in Mid-Term Business Plan 2020

We will strengthen our financial structure through concentration on core domains and business reorganization.

Item	Target (for FY2022)	Viewpoint
Consolidated net sales	770 billion yen	<ul style="list-style-type: none"> • Work to achieve steady growth without seeking any specific scale
Consolidated ordinary income ratio	4%	<ul style="list-style-type: none"> • Improve income ratio by concentrating on high value-added core domains and by cutting costs
Total asset turnover	0.8 or more	<ul style="list-style-type: none"> • Increase capital efficiency by selling assets and reorganizing businesses
Ratio of net interest-bearing debt to EBITDA	Less than 5.0	<ul style="list-style-type: none"> • Appropriate cash flows created for the repayment of interest-bearing debt
Facility investments	42 billion yen*	<ul style="list-style-type: none"> • Investment in replacements in the core domains (Machinery and Systems) • Respond to the shift to teleworking.
R&D investments	14 billion yen*	<ul style="list-style-type: none"> • Invest in research and development for functional enhancement in the core areas (Machinery and Systems) (e.g. energy conservation, environmental friendliness and automation)
Financial investments	59 billion yen*	<ul style="list-style-type: none"> • Financial investments for development projects in consolidated group

* Total figure during the period of the Mid-Term Business Plan 2020

6. The Era of Power-Mechatronics

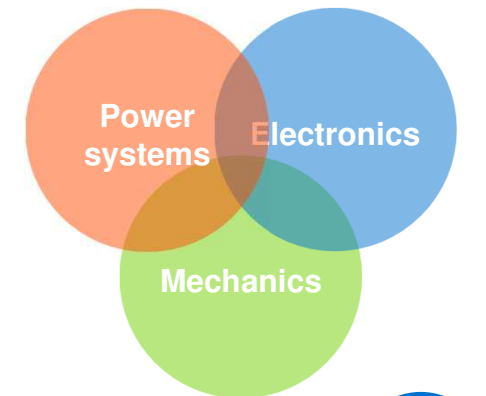
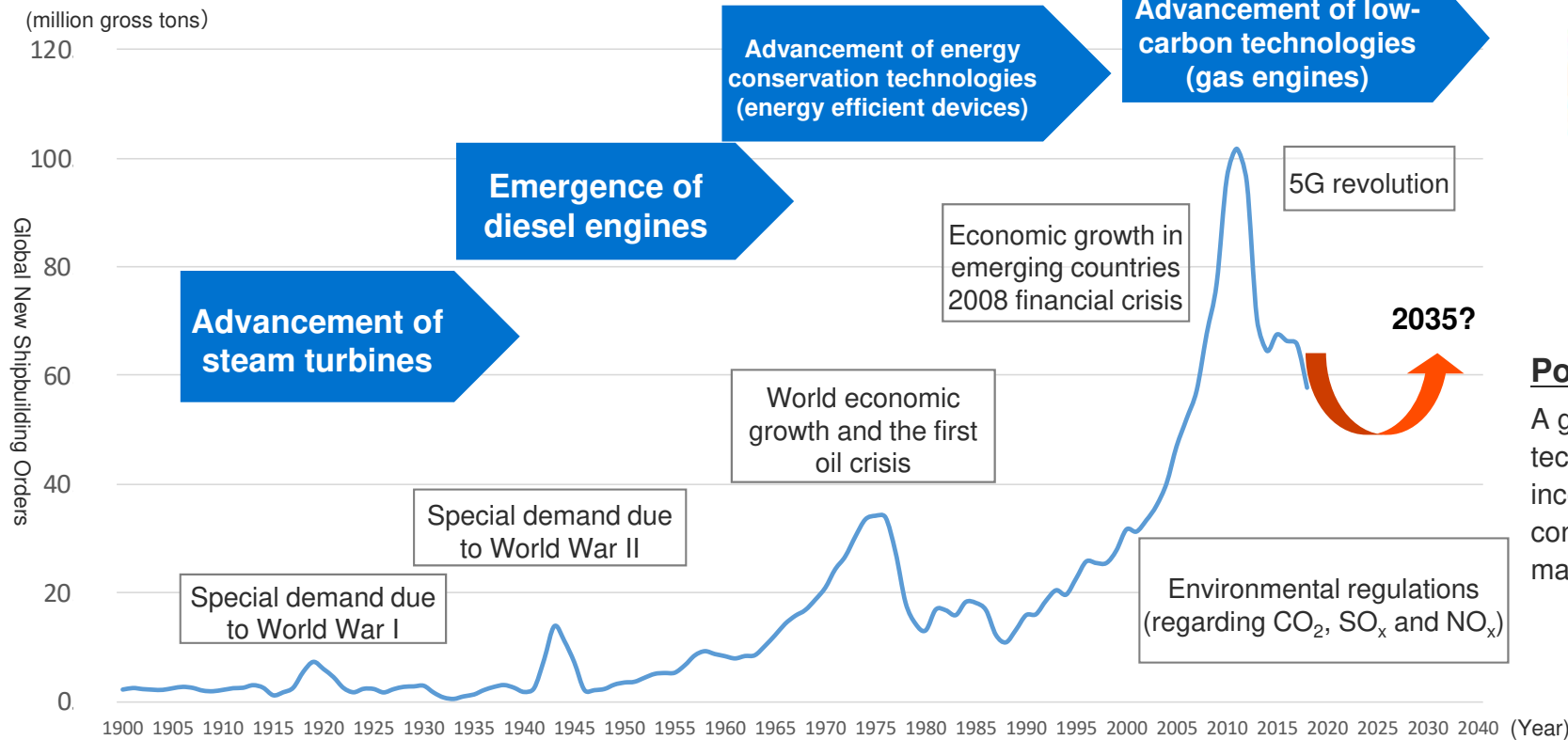
The business conditions of the marine equipment industry are closely linked to those of the shipbuilding industry. Trends in technology have changed while cyclical rises and falls have repeated in a cycle of roughly 25 to 35 years.

Towards 2035, a design paradigm shift will occur regarding low-carbon technologies and the transition to mechatronics.

The spread of Power-Mechatronics centering on electric and electronic engineering will digitalize all products and services, provide for their connection to the virtual space to dramatically increase freedom in system design, and help create revolutionary products and services.

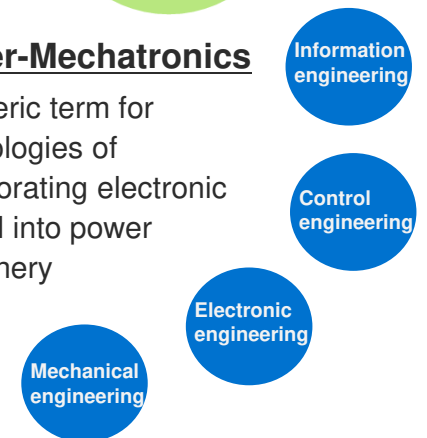
Digital technologies for remote steering and independent operation

The era of Power-Mechatronics
Design paradigm shift



Power-Mechatronics

A generic term for technologies of incorporating electronic control into power machinery



Sources: Lloyd's (for data in and before 1989) and IHS (for data in and after 1990)
Data in and before 1967 are on a launched tonnage basis and those in and after 1968 on a completed tonnage basis.

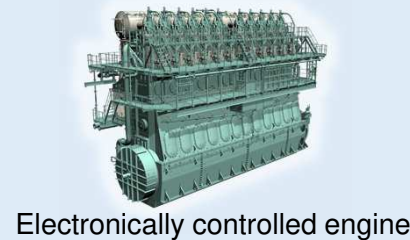
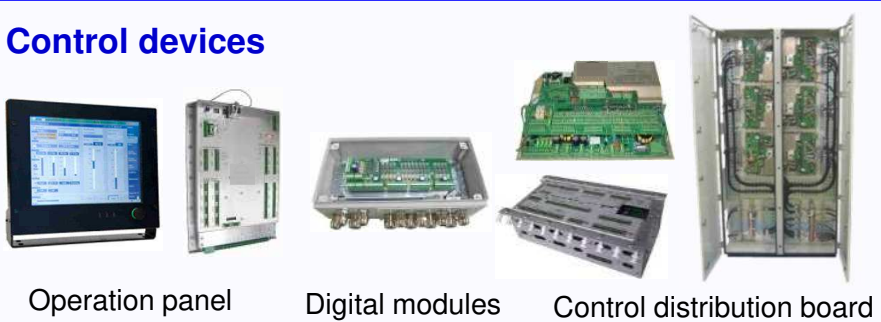
7. Power-Mechatronics Products and Digital Modules

According to the Company's definition, Power-Mechatronics products are power machinery (heavy electrical equipment and heavy machinery) including motors and engines equipped with electronic control components and digital modules. While products such as electronically controlled engines already exist, their technologies are still in the course of development. Further progress in the incorporation of digital modules and the integration of entire systems is awaited.

Power-Mechatronics Products

Related devices equipped with digital modules

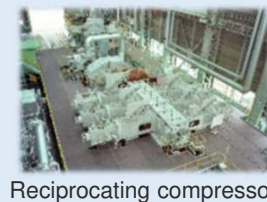
Control devices



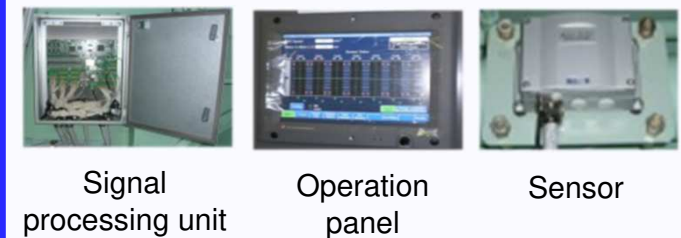
Fuel efficiency improvement devices



Data collection devices



Status monitoring devices



8. Power-Mechatronics Market Forecast

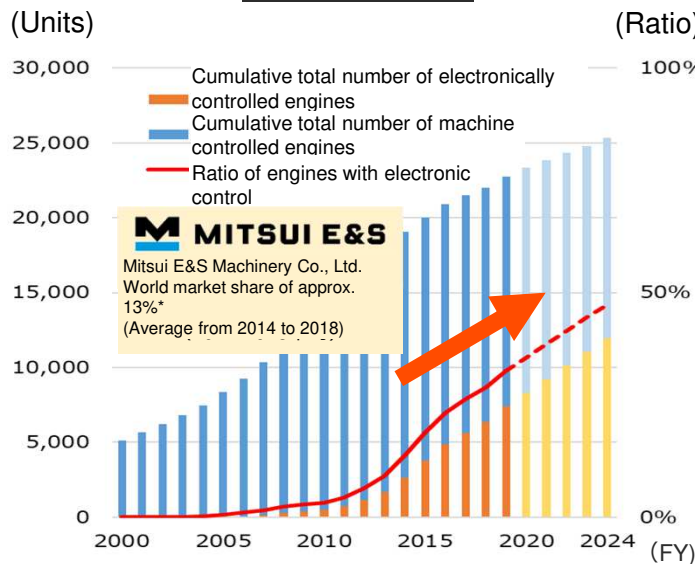
From the upwards trends of three products handled in the Machinery and Systems business portrayed below, opportunities to introduce Power-Mechatronics products to the market are expected to gather momentum in individual businesses. In addition, replacement demand is expected to continue in view of the introduction of 5G (increase in communication speed), environmental regulations and rapid technological evolution.

Marine propulsion systems business

Cranes & systems business

New technology business

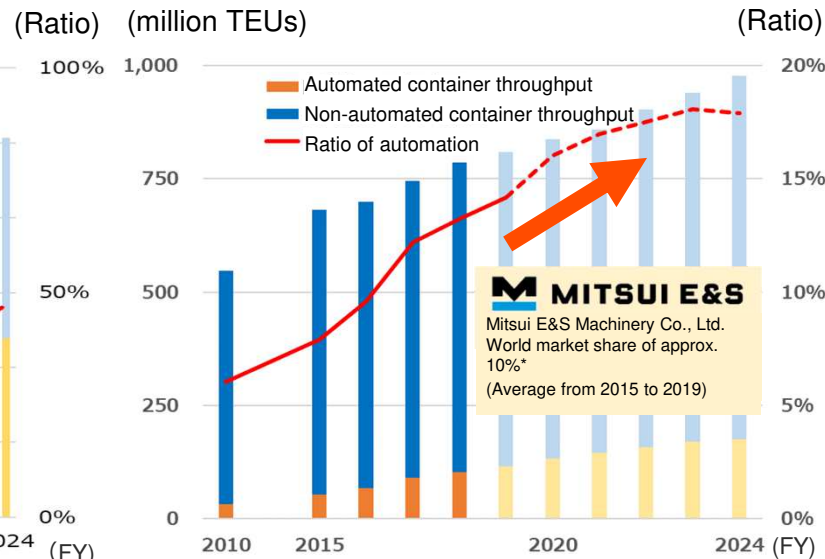
Trends in cumulative total number of marine diesel engines (limited to those licensed by MAN Energy Solutions) in the world and ratio of those with electronic controls



Source: MAN Energy Solutions: Reference List (2000-2019); The Company's forecast for 2020 and later years

Electronically controlled engines are becoming common.

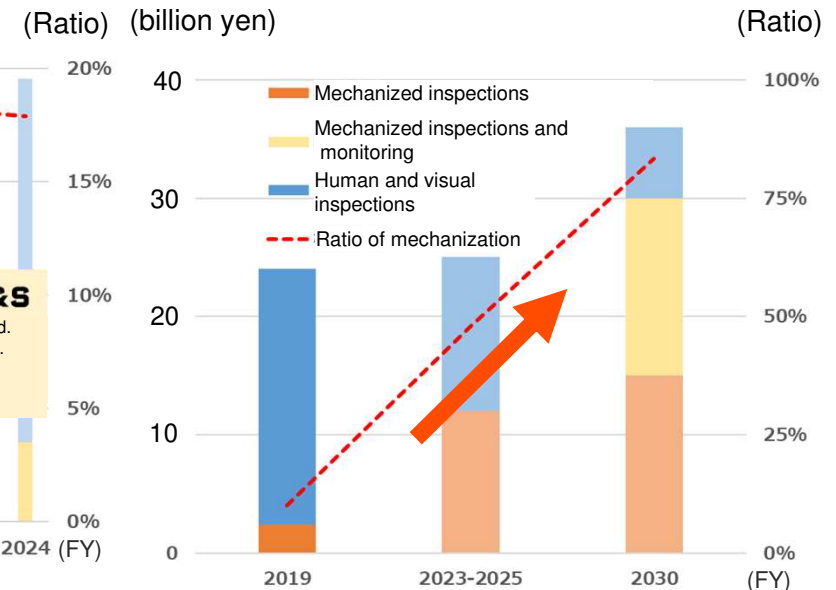
Trends in container throughput in the world and automation



Source: DS Research: Container Terminal Foresight 2024

Automation of container cranes is speeding up.

Radar business: Forecast of market size for road inspections (paving, roadbeds and tunnels) and ratio of mechanization



Source: Estimated by the Company

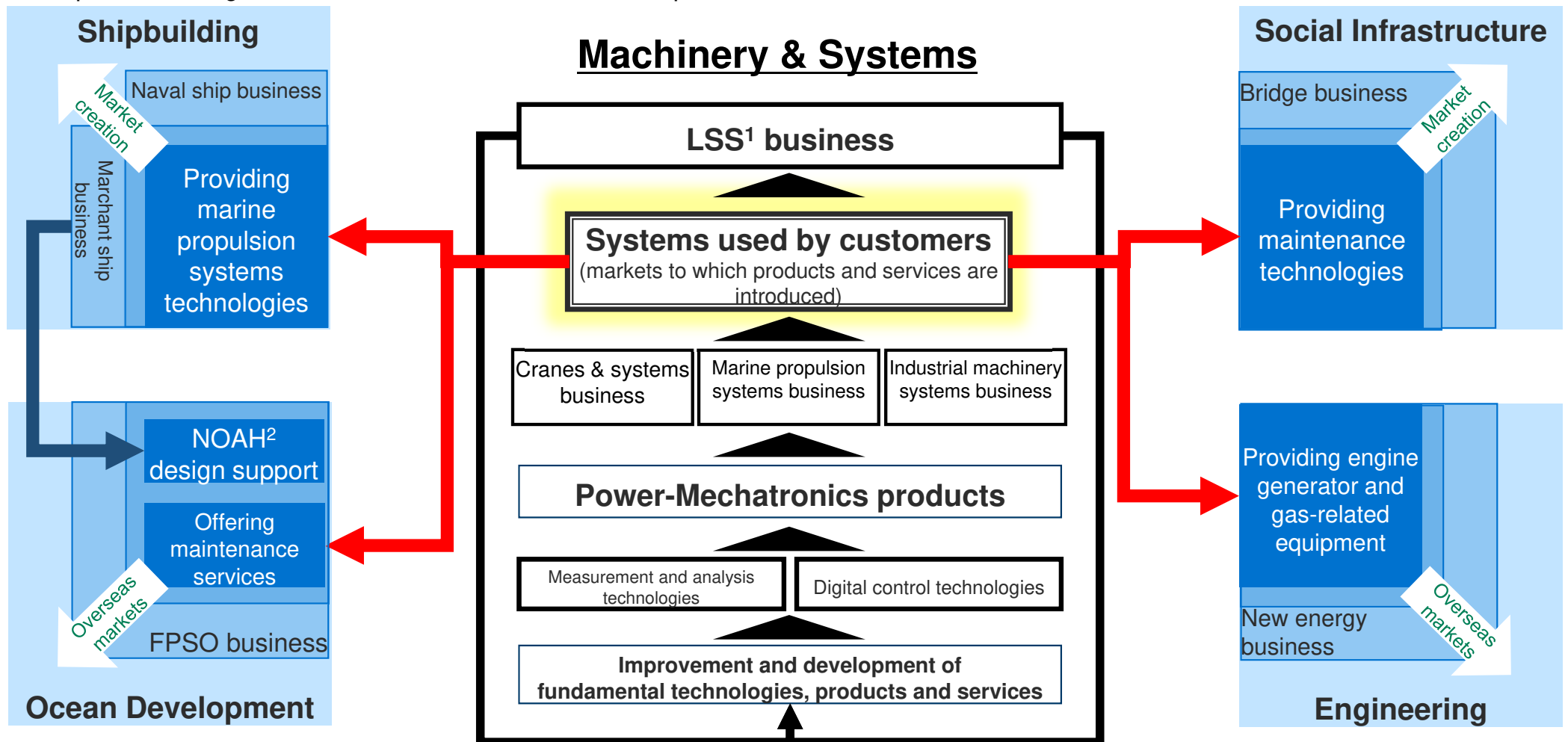
Inspections are shifting from human and visual observation to mechatronic and monitoring operations.

* Global market share figures are based on statistics on the basis of production volume.

9. Strategy in the Mid-Term Business Plan: Concentration of Business and Collaboration

In accordance with the alliance strategy, we will work to create markets in which Machinery and Systems business products will be introduced to expand the LSS¹ business.

On the basis of the fundamental technologies cultivated in the field of marine logistics and transportation, we will focus our energy on the incorporation of digital modules into Power-Mechatronics products.



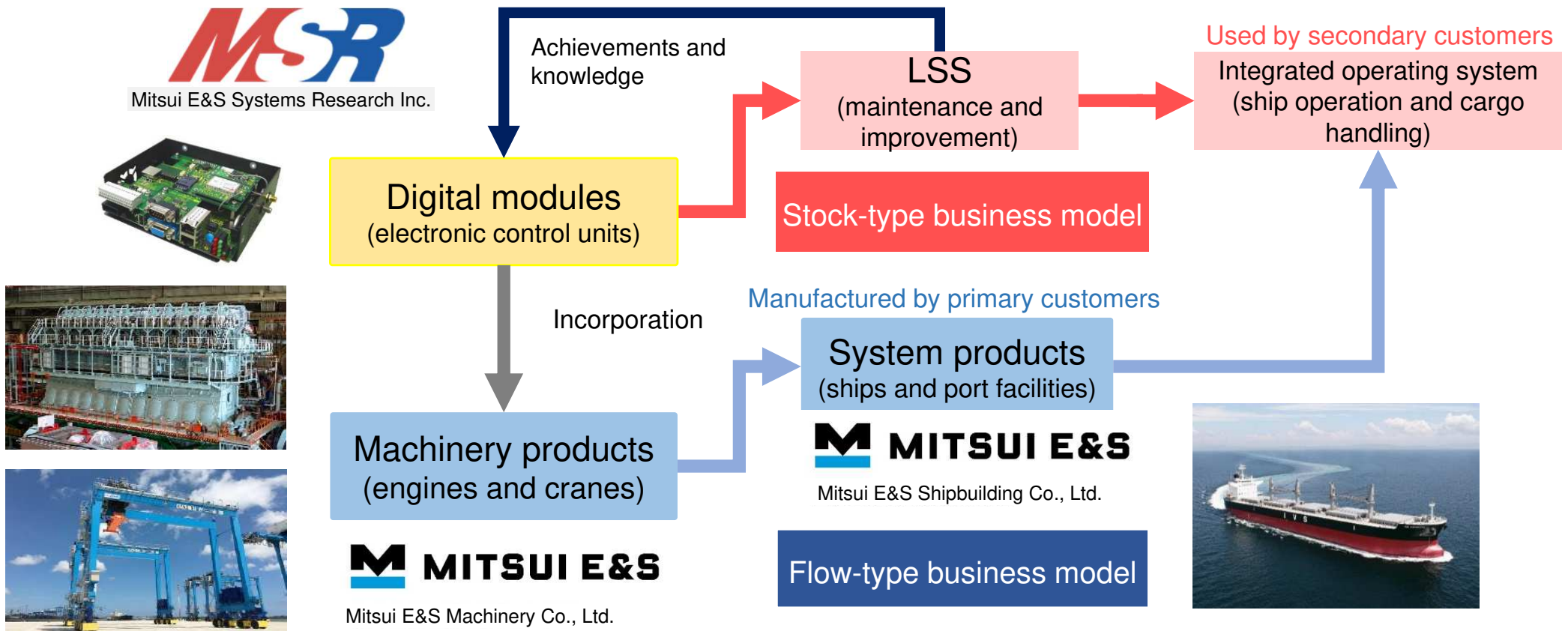
*1 LSS is Lifecycle Solution Service, a service offered continuously from the release of a product onto the market until its withdrawal.

*2 NOAH is New Offshore Adapted Hull, a next-generation hull for floating production, storage and offloading (FPSO) systems.

10. Shift to Stock-Type Business Model

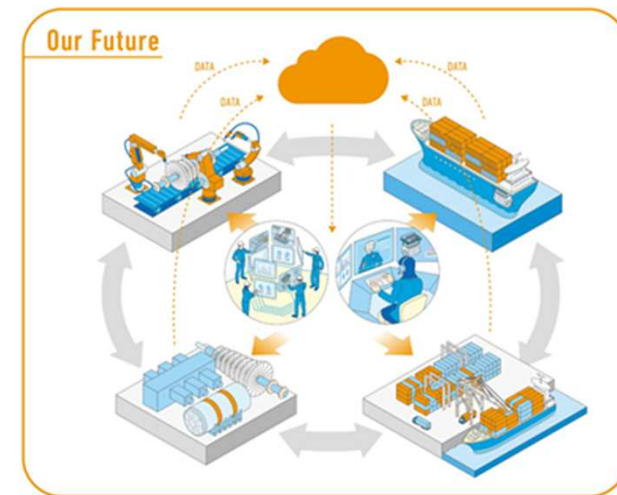
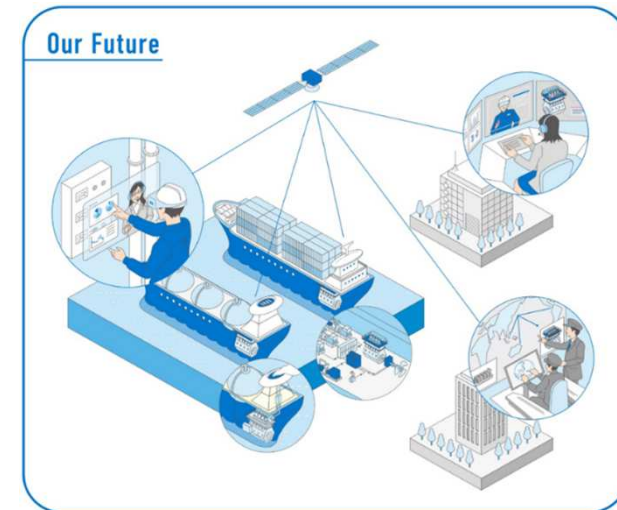
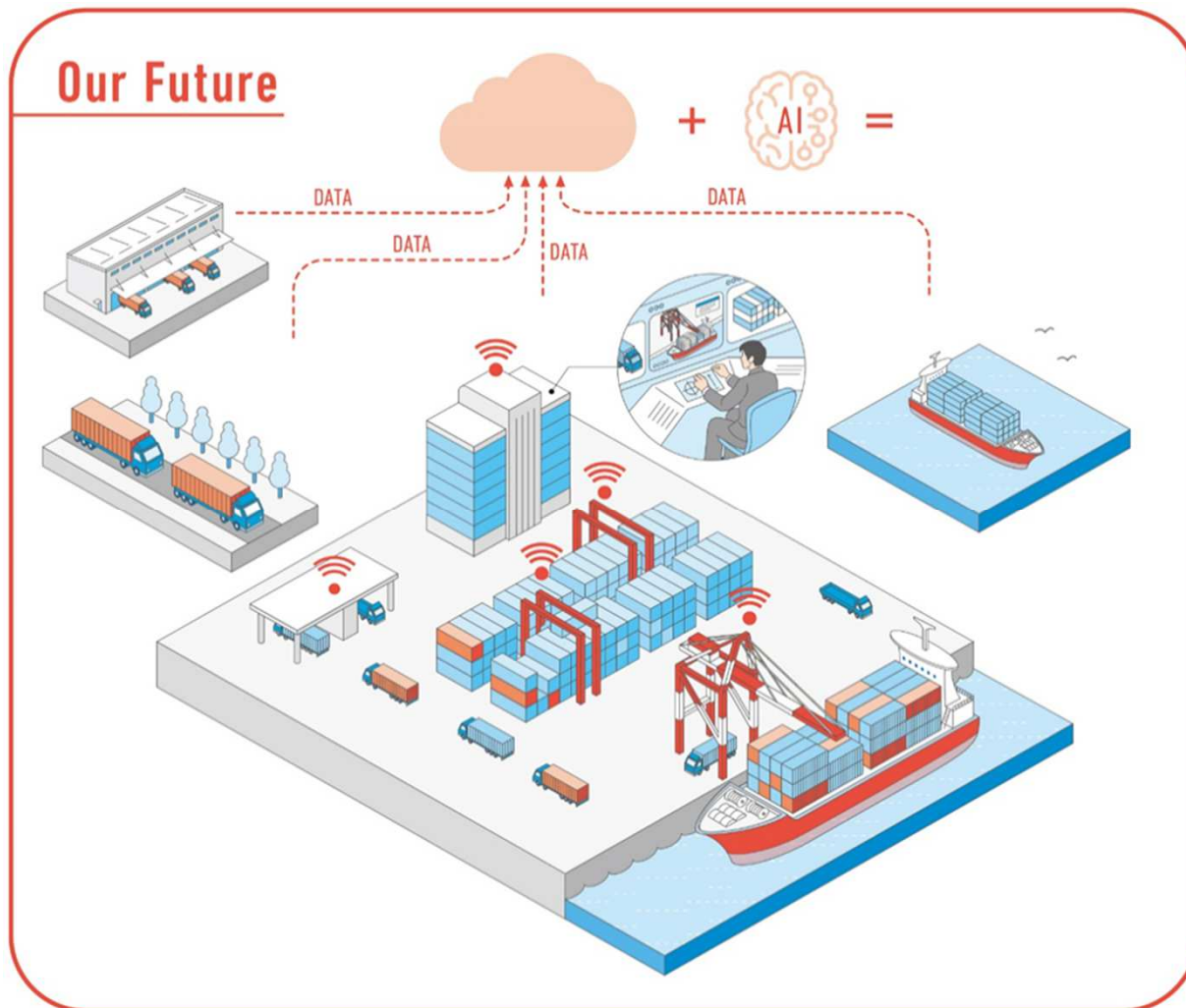
We will operate not only a flow-type business model but also provide services centering on products with digital modules (the LSS business). We will thus shift to a stock-type business model in which we continuously provide services to customers to generate revenue over the long term.

Mitsui E&S Systems Research Inc. (MSR), a Group company, will provide services using digital modules to respond to diverse customer needs in the domain of electronic device and control systems, ranging from the proposal of related products to after-sales services.

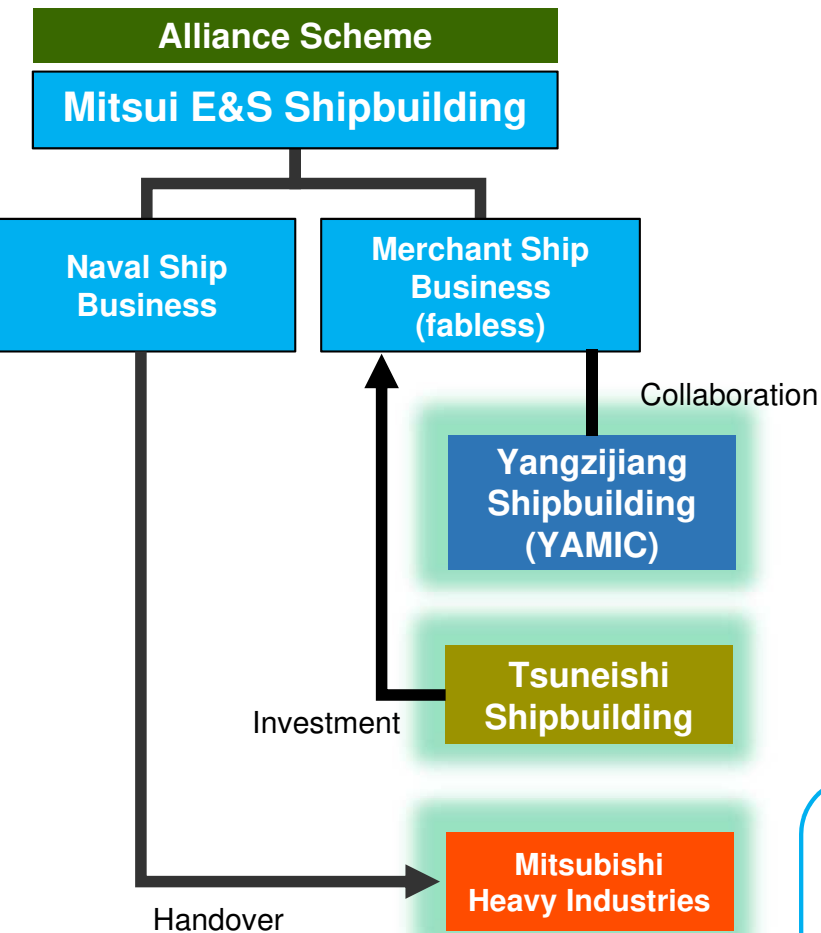


11. System Envisioned for the Machinery and Systems Business

For example, the incorporation of digital modules into Power-Mechatronics products will pave the way for centralized remote control of all operations including loading, sailing, mooring and unloading from a control room. Solving customers' problems through combinations like this will accelerate the shift to a stock-type business model.



12. Market Creation through Alliances (Shipbuilding businesses)



Repercussion Effect

Introduction of Power-Mechatronics products and market creation

Introducing electronically controlled engines and others to a growing market

Increasing market share on medium- and small-sized bulkers
8% → 20%

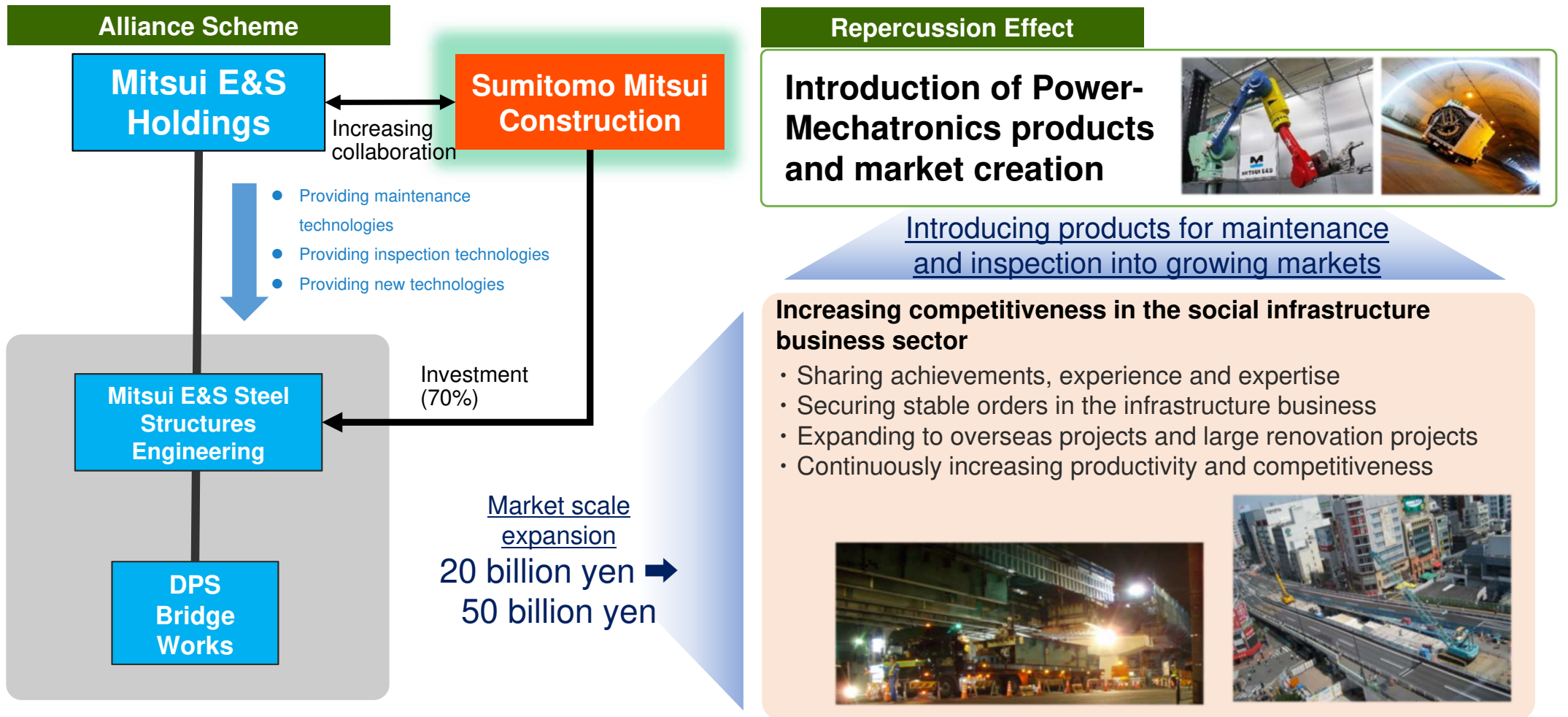
- Lead the market of medium- and small-sized bulkers through an alliance between the three companies
- Build a global overseas shipbuilding system
- Focus on energy engineering
- Increase efficiency by sharing capabilities in design and in procurement
- Support for ocean development (design of FPSO hulls)

Mitsui E&S Holdings' objectives

- In the naval ship business, orders are so volatile that it is difficult to stabilize revenue.
- It is becoming difficult to maintain technical strengths and meet security requirements.
- Meanwhile, it is necessary to solidify foundations for the defense industry.
⇒ Strengthen the labor force at the Tamano Works from the perspective of the whole industry.

In the Merchant ship business, focus on fables business that capitalizes on strength in design and development capabilities.

12. Market Creation through Alliances (Social infrastructure business)



With the capital participation of Sumitomo Mitsui Construction, we will increase the corporate value of subsidiaries involved in the social infrastructure business.

Boost the competitiveness of the social infrastructure business and introduce products for maintenance and inspections to create markets

13. Overseas Market Expansion (Ocean Development Business and Engineering Business)

In the ocean development business and the engineering business, we will push ahead with overseas market expansion in domains where their strengths may be displayed.

Expansion of the ocean development business

Expansion of the engineering business through the provision of gas-related equipment and engine generator

Manufacturing

Manufacturing at overseas bases



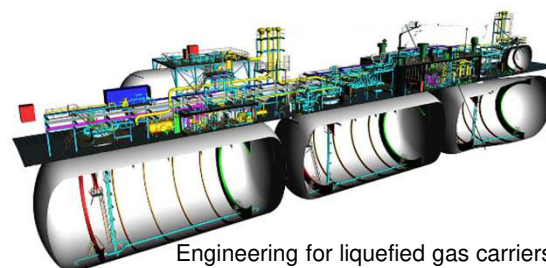
Development

Global implementation of the FPSO project



Mitsui E&S Shipbuilding Co., Ltd.
Offering of branding and design expertise related to the NOAH next-generation hull for FPSO systems

Branding and design expertise



Engineering for liquefied gas carriers
Gas-related equipment engineering



Biomass power plant in the United Kingdom
Engineering in power generation using renewable energy

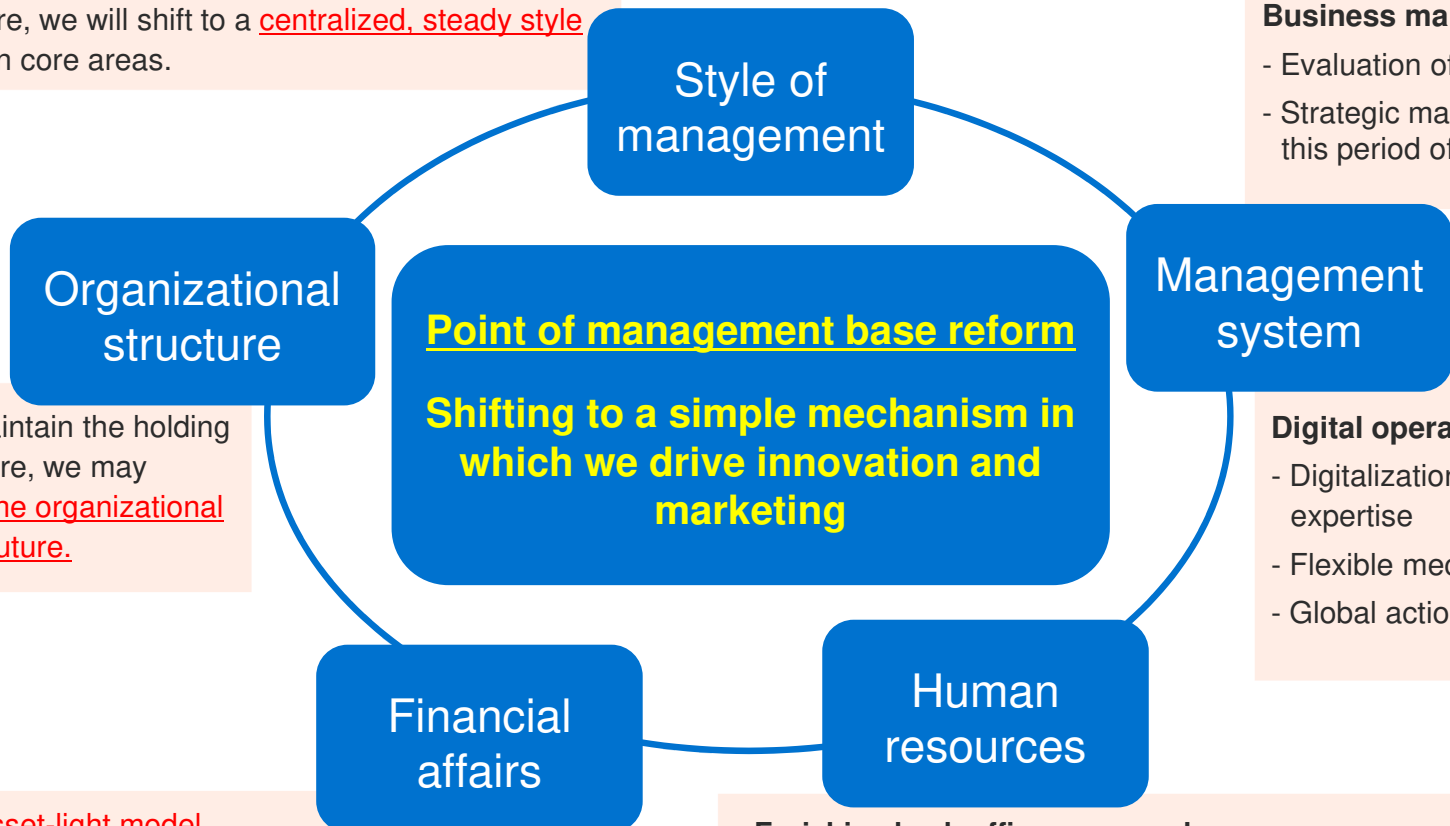
14. Overview of Management Base Reform

We will strengthen unification to achieve a shift to a simple management style without owning assets. We will reduce business size and domains and place an emphasis on balance sheets.

While we will operate in extensive business domains for the foreseeable future, we will shift to a centralized, steady style to concentrate on core areas.

While we will maintain the holding company structure, we may possibly revise the organizational structure in the future.

Shift to an asset-light model
 Focus on capital efficiency (ROIC) and give consideration to balance sheets
 Consider introducing throughput accounting or process costing



Business management

- Evaluation of substantial performance (ROIC)
- Strategic management indicators suited to this period of strategic change

Digital operation environment

- Digitalization of all knowledge and expertise
- Flexible mechanisms (teleworking)
- Global actions

Enriching back-office personnel

- Properly appoint staff knowledgeable in business domains from operating departments to introduce their knowledge to back-office operations
- Proactively hire highly skilled personnel in business administration, financial affairs, contracts, legal affairs and others from outside.
- Evaluate and develop them to become personnel for global operations and value diversity



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