



Mid-Term Business Plan 2017

— Shifting to a holding company system —



May 8, 2018
Mitsui E&S Holdings Co.,Ltd.

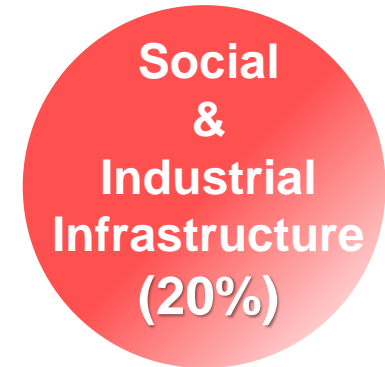
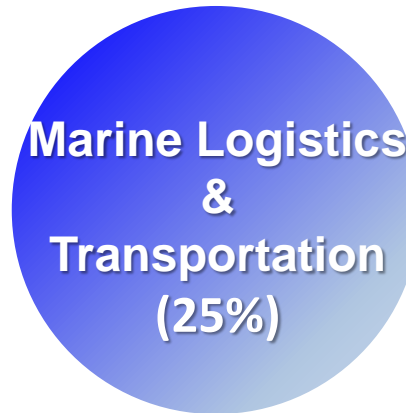
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1. Mitsui E&S Group's 2025 Vision

What we want to be?

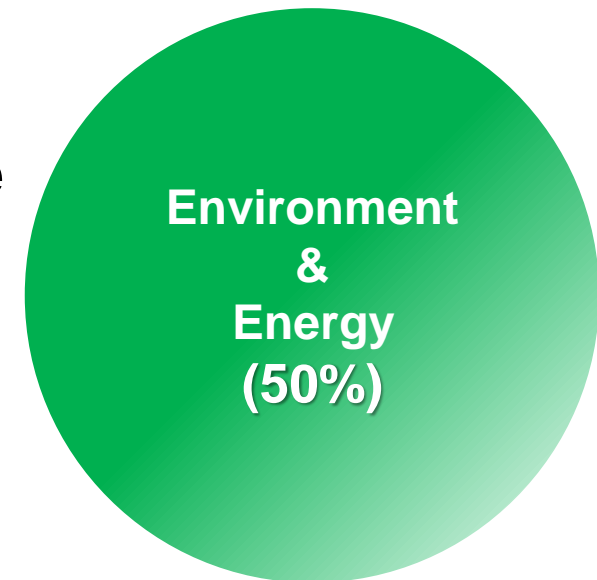
A group of professional engineers to pursue the innovation of values for our better society



Profit target of FY2025

Aim for net sales of **1,100 billion Yen** and ordinary profit ratio of **6.0%** in three core business domains

1. **Environment & Energy (50%)**
2. **Marine Logistics & Transportation (25%)**
3. **Social & Industrial Infrastructure (20%)**



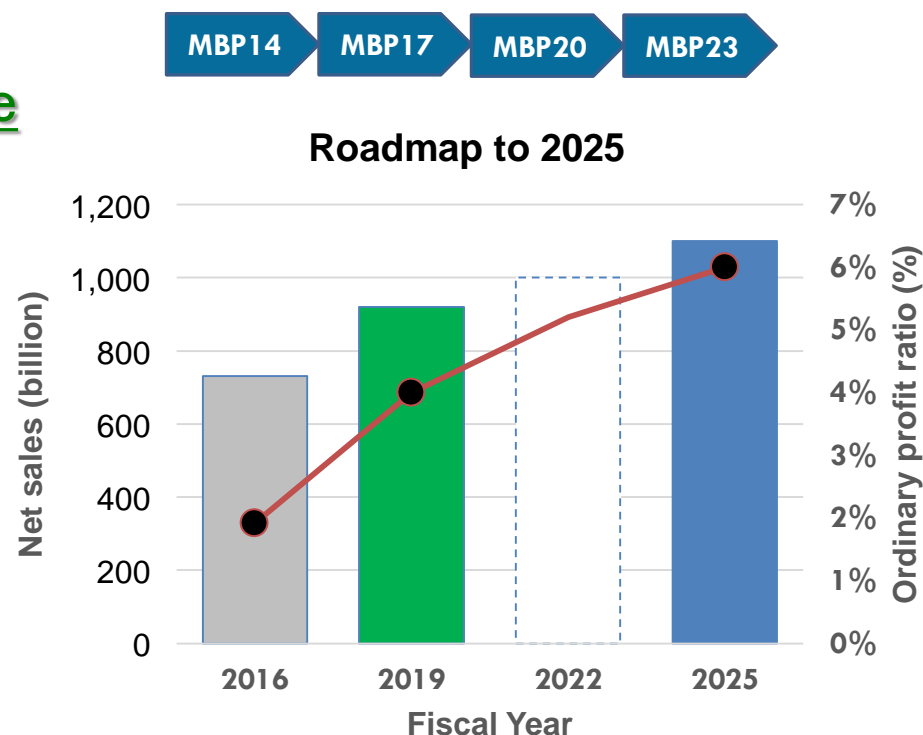
2. Roadmap to 2025

- MBP14: Basis Development
- MBP17: Revolutionary Change
- MBP20: Significant Advance
- MBP23: Accomplishment of the Goal

Targets of MBP17

Net sales: 920 billion Yen

Ordinary profit ratio: 4 %



We are executing MBP17 in the phase of
“Revolutionary Change” to achieve 2025 Vision
Improvement of profitability is a key success factor

2. Business Environment

General

- In the medium to long term, market expansion expected by economic growth in emerging countries and development of advanced information society
- In the short term, uncertain outlook of global economy, including forming economic blocs and slowing down of growth in emerging countries
- Increased volatility in exchange market and in the field of resources and energy industry
- Due to the evolution of IT (IoT, AI technology), sharing economy market is expected to grow rapidly

Environment & Energy

- **Offshore oil and gas development projects:** Predicted increase again in the medium to long term
- **Electricity and other energy:** Demand increased driven by development in emerging countries
- **Renewable and clean energy:** Demand continued due to increasing awareness of environmental issues

Marine Logistics & Transportation

- **Shipbuilding, marine engine and equipment :** Prolonged severe price competition due to decline in new shipbuilding demand
- **Container Cranes:** Increased demand in Southeast Asia, Latin America, etc. including its renewal and upgrade
- **Maintenance, inspections and upgrades :** Continued strong demand for environment, energy saving and life extension related, even under uncertain outlook of global economy
- **Gas products:** Increased demand due to global shift to the clean energy

Social & Industrial Infrastructure

- **Industrial machinery:** Increased demand for upgrades and renovations despite continued weak demand in new construction
- **Public works projects:** Growth in demand including large-scale upgrades and renovations amid full-scale implementation of measures to address deteriorating infrastructure
- **Defense and security:** As security measures in the surrounding seas, the importance of preparation and maintenance of naval vessels and government vessels increases

4. Mid-Term Business Plan 2017

1) Our target and key strategy

— Target of Mitsui E&S Group at MBP17 —

Improvement and stabilization of the profit
by maximizing synergy of the group

Key Strategy 1

Improving added value of
products & services

Product
uniqueness

- ◆ Enhance planning and proposal capabilities
- ◆ Enhance product development capabilities

Key Strategy 2

Reforming structure of
manufacturing & EPC

Cost
competitiveness

- ◆ Build a swift and flexible production system
- ◆ Build up a flexible EPC execution system

Key Strategy 3

Expanding & enhancing
ancillary services

Stable Profit

- ◆ Expansion of service domains and areas
- ◆ Evolution of services using IoT

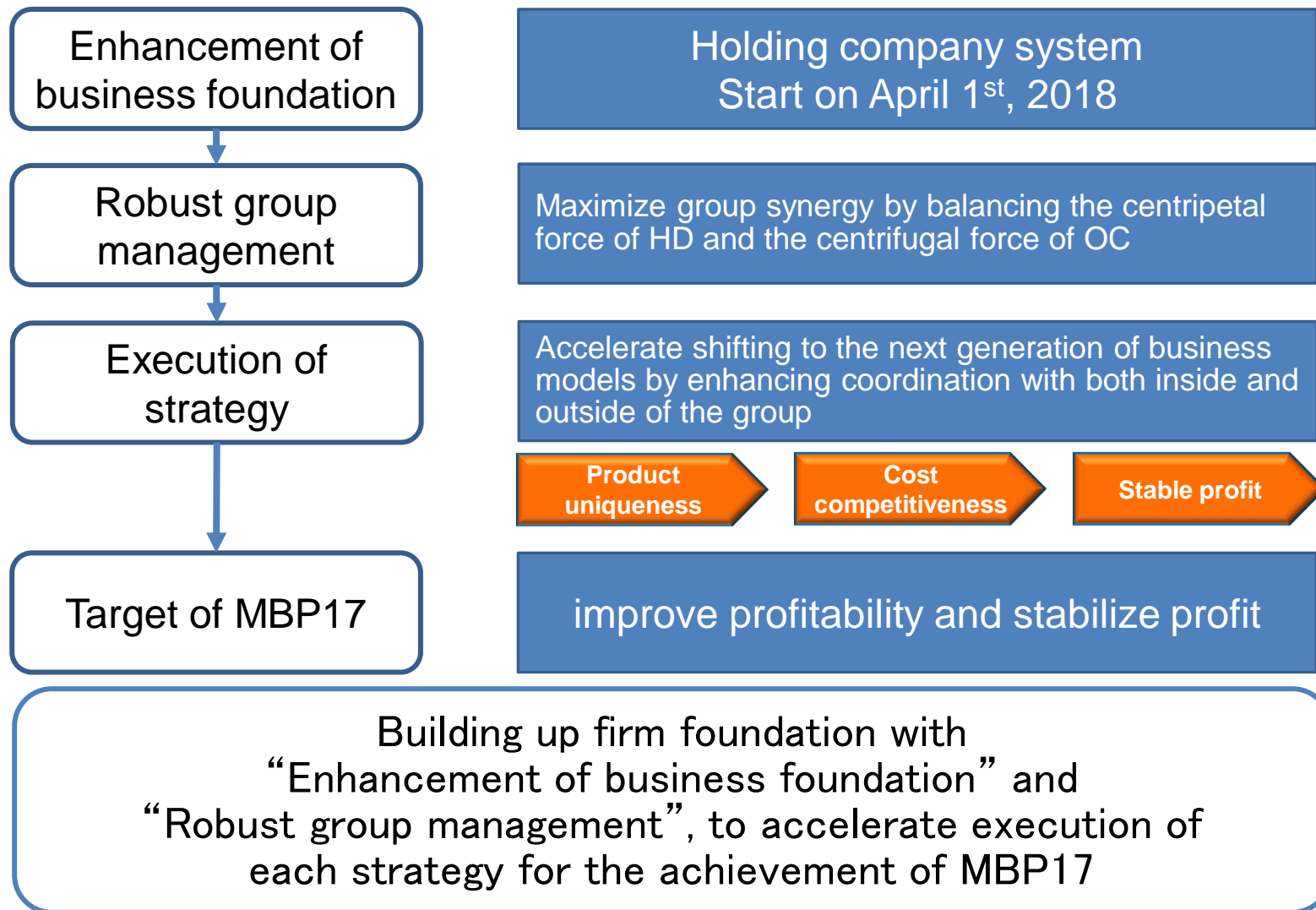
— Group management —

— Business foundation —

Taking advantage of the demand opportunities for energy saving, environmental response (clean energy) and infrastructure renewal with the strength of synergy and value chain of the group

4. Mid-Term Business Plan 2017

1) Our target and key strategy (Action)



4. Mid-Term Business Plan 2017

2) Business foundation (Shifting to a holding company system)

Challenges for Achieving MBP17

- To establish the independent business units in the group to make their own profit by themselves with their own responsibility
- To build a flexible framework that can speed up the execution of strategies such as business selection and concentration, collaboration with other companies, development of M&A etc.

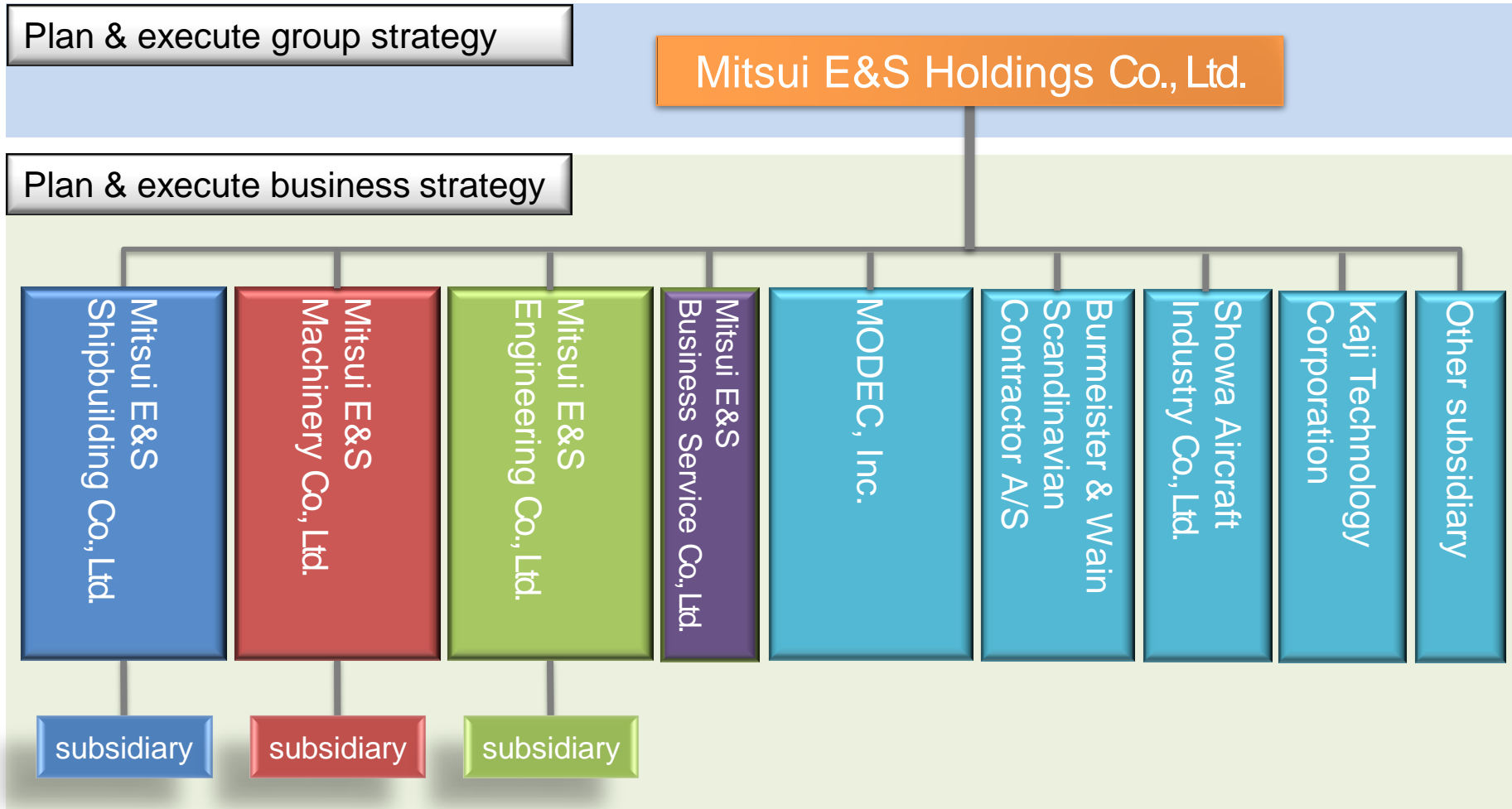
To build up a flexible system
with an impetus for structural change

Shifting to a holding company system
Mitsui E&S Holdings Co., Ltd.



4. Mid-Term Business Plan 2017

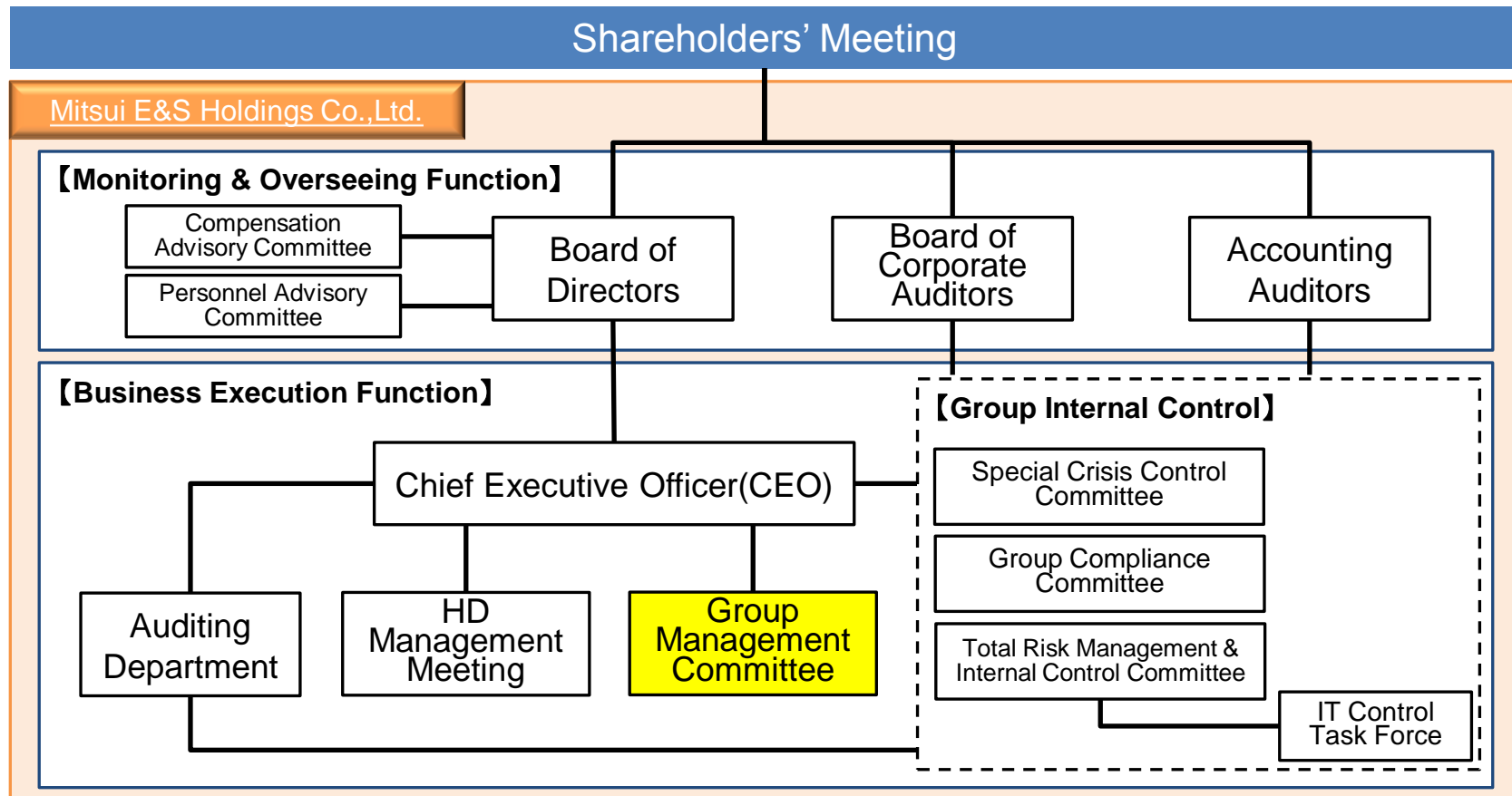
2) Business foundation (New organization)



To separate group management and business management with the clear definition of each organization, function, role and responsibility

4. Mid-Term Business Plan 2017

3) Group management (Strategy of group management)



Subsidiary directly under holding company

To establish "Group Management Committee" to discuss and make decisions on the management strategy of the entire group

4. Mid-Term Business Plan 2017

4) Group synergy

Mitsui E&S Holdings

Mitsui E&S Shipbuilding

Mitsui E&S Machinery

Mitsui E&S Engineering

MODEC

BWSC

Environment & Energy

Offshore production & storage facilities for oil & gas (FPSO etc.)

Gas power generating unit

Offshore power generation

Renewable energy

+ O&M

Marine Logistics & Transportation

Merchant ship

Marine diesel engine

Gas fuel propulsion

Crane

+ After-sale service

Social & Industrial Infrastructure

Naval ship
Patrol ship

Civil works of power plant

Industrial Machinery

Bridge

Environmental infrastructure

Social infrastructure

Petro-chemical plant

+ Update & maintenance service

To develop business by integrating the advantages of each group-company in three business domains

4. Mid-Term Business Plan 2017

4) Group synergy

Evolution of group management

=

Core technology of group companies

×

Alliances with companies inside & outside of the group

Environment & Energy

Participate in O&M project at renewable energy & power sector

- Started biomass power generation business

Stable profit

EPC / O&M know-how in domestic and overseas plants



Expand collaboration with MES-E, BWSC, MDT (alliance partner)

Participate in new power generation domain

- Completed detailed design of 60-150 MW gas power generation barge

Product uniqueness

Know-how on offshore power generation, Gas technology

Build value chain with strengths of BWSC, TGE, MDT (alliance partner)



Create new ocean projects in sub-sea

- Confirmed the feasibility of surface type Methane Hydrate (MH) recovery

Product uniqueness

Hydrate related technology, Comprehensive technical capabilities of marine structures



Participate in national projects with subsea drilling companies, resource energy companies etc.

* MES-E : Mitsui E&S Engineering, TGE : TGE Marine Gas Engineering, MDT : MAN Diesel & Turbo

4. Mid-Term Business Plan 2017

4) Group synergy

Evolution of group management



Core technology of group companies



Alliances with companies inside & outside of the group

Marine Logistics & Transportation

Promote collaboration for construction of merchant ships

- Started negotiations for business alliance

Cost competitiveness

Expand engineering business in shipbuilding field

- Received orders for engineering business

Product uniqueness

Provide total solutions for gas fuel engines

- Started sales of high pressure pump for FGSS

Product uniqueness

Construction of automated terminal

- Received orders for automated cranes

Product uniqueness

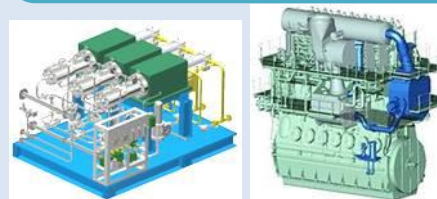
Comprehensive engineering capability,
Ship development capability,
Gas technology



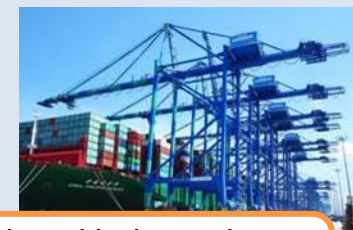
Alliances with other company's shipbuilding domain

Acceleration of collaboration between MES-S and TGE

Environmental technology,
Production technology,
Gas technology



Enhance collaboration between KTC, MES-S & TGE



Remote operation & automatic operation technology,
Terminal control technology



Cooperation with domestic terminals and overseas mega terminals

* MES-S : Mitsui E&S Shipbuilding, FGSS : Fuel Gas Supply System, KTC : Kaji Technology Corporation

4. Mid-Term Business Plan 2017

4) Group synergy

Evolution of group management



Core technology of group companies



Alliances with companies inside & outside of the group

Social & Industrial Infrastructure

Promote LSS business for special ships

- Received orders for new construction & repair works of special ships



Ship model development capacity,
Proposal and development capacity of special ship,
Production technology



Build a supply chain with companies inside & outside of the group

Cost competitiveness

Stable profit



Increase maintenance business

- Received orders for construction works on replacing slabs of highways



Repair and reinforcement technology,
radar exploration technology



Enhance cooperation with PC / steel bridge manufacturers & inspection companies among group

Developed composite search vehicle, combined with laser measurement technology of other companies

Stable profit



* LSS : Lifecycle Solution Service

4. Mid-Term Business Plan 2017

5) Function and role of HD and OC (Centripetal & centrifugal force)

Strategy formulation from group management viewpoint

Holdings (HD)

Centripetal force
【Group management】

Cross-company coordination among the group

“M&A” and “Business selection and concentration”

Cash management in one group

Operation Company (OC)

Centrifugal force
【independence of OC】

Speed-up execution of strategy

Flexible strategy in accordance with the changes in business environment

Implement strategy flexibly in a timely manner by allocating group's resources to the critical business domain

4. Mid-Term Business Plan 2017

5) Function and role of HD and OC (Risk management)

Risk management for improving profitability

Holdings (HD)

Group governance system

Audit of operating companies

Operation Company (OC)

Specific responsibility on business development & its profitability

Up-graded risk management system

(establish internal control and audit organization)

Reinforced project management system

(establish project management department)

OCs up-grade risk management system
HD organizes overall group governance system

4. Mid-Term Business Plan 2017

5) Function and role of HD and OC (Human resources)

Human resource development strategy in the environment where the domestic population shrinks

Holdings (HD)

Strategic human resource management
(Job rotation among the group)

Common training system
(Improvement of skills and encouragement from personnel with different back ground)

Operation Company (OC)

Development and allocation of human resources corresponding to business needs

Multiple job experience for career development
(Job rotation in OC)

Development of multi-talented human resources who can work with leadership in various business fields

4. Mid-Term Business Plan 2017

5) Function and role of HD and OC (R&D)

Clarify the role sharing between Holdings and operating companies

Holdings (HD)

【Cross-company coordination】

- Share & utilization of R&D achievements
- Mid- and long-term R&D strategies
- Maintenance and reinforcement strategy for common basic technologies

Operating Company (OC)

【Enhancement of business】

- Technology development as per business plan
- Maintenance and reinforcement strategy for specific technologies used in their business and products

R&D institution: Responsible for enhancement of common basic technologies and new technologies

Akishima Laboratories (Mitsui Zosen) Inc.

Mitsui E&S Technical Research Co.,Ltd.

Focus on the selected R&Ds critical for social issues and needs
Not only the usage of our own internal resources,
but also the collaboration with outside parties

4. Mid-Term Business Plan 2017

6) Target for FY2019 - Consolidated profit & loss

(Billions of Yen)

	Target FY2019
Net Sales	920
Ordinary Profit	37
Ordinary Profit Ratio	4%
ROIC	6.5%
Interest-bearing Debt	270 or less

Assumed Exchange Rate
105 JPY/USD

4. Mid-Term Business Plan 2017

6) Target for FY2019 - Consolidated investment plan

(Billions of Yen)

	investment plan
R&D investments	13
Facility investments	40
Financial investments	72

R&D
investments

Prioritize on innovation and improvement
of profitability

Facility
investments

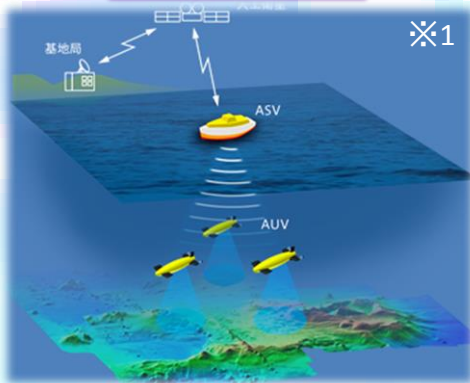
Prioritize on improvement of productivity
and profitability

Financial
investments

Prioritize on structural reforms and
profit stabilization

Transformation and evolution of business model through IT utilization

Marine Development



※1

Join Team KUROSHIO
Challenge undersea mapping which collaborates and operates unmanned offshore repeater and multiple autonomous underwater robots simultaneously

Production System



※2

Promote application of factory IT, such as participation in affiliated business of maritime productivity revolution (i-Shipping)

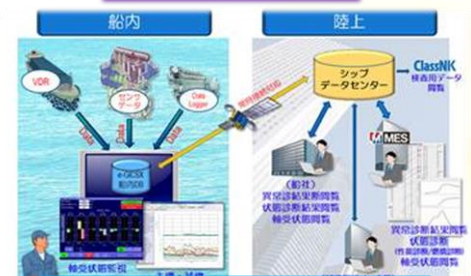
Marine Logistics



Continue automation and remote monitoring of container terminals contributing to improvement of efficiency and reliability on cargo handling

Ancillary Services

※3



Started operation of next-generation engine condition monitoring system (CMAXS e-GICSX)

Preventive maintenance for main engine can be developed by diagnosis technology utilizing Big Data

※Quote source

1. Team KUROSHIO's website
2. Ministry of Land, Infrastructure and Transport website
3. ClassNK Consulting Service website

Planning & Product development

Design & Procurement

Production & Construction

Operation & Maintenance

Power Barge Systems & Gas Supply Systems

Power Barges

Key Strategy 1
Product uniqueness



Collaboration with
group companies

Create
total Group value



FSRU

Mid/Small Scale Gas Carrier



BAL ENERGY PARTNER

Clean Energy Technology

**Key Strategy 3
Stable Profit**

**Key Strategy 1
Product uniqueness**

Biomass Power

Wind Power

LNG Carrier

Increase stable sources of profit

Deliver broader value of products

Biogas Power

FGSS

Solar Power

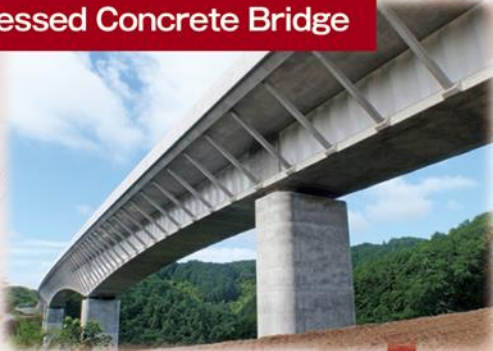
MEGI



Social Infrastructure Construction & Maintenance

**Key Strategy 3
Stable Profit**

Prestressed Concrete Bridge



Steel Bridge

**Collaboration with
group companies**

Expand service domains



Rader Detection Technology



Laser Detection Technology

2018.04. MITSUI E&S STARTING.

A wellspring of new solutions.



MITSUMI E&S