Transition to Global Group Management

October 31, 2018

Mitsubishi Heavy Industries, Ltd.

Shunichi Miyanaga, President and CEO
1. Medium- and Long-Term Challenges to Achieving Growth ・・・ P.3~7

2. A New Step toward a Growth Trajectory ・・・ P.8~12

3. Transition to Global Group Management ・・・ P.13~17

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1. Medium- and Long-Term Challenges to Achieving Growth

(1) Structural Changes in External Environment
   * Long-Term Slow Sales Growth from Maturation of Japanese Market / Economy and Other Factors
   * Decelerating Growth Rates of Core Infrastructure Businesses

(2) Decreasing Orders in Thermal Power Business and Delayed Development of Growth Businesses

(3) Medium- and Long-Term Challenges (Summary)
   * Globalization and Entry into Growth Areas
Global GDP figures and MHI sales growth

Starting from the 1990s, Japan's GDP growth stagnated over the long term due mainly to economic maturation and overseas transfers of production. Gaps widened globally and with USA and Germany; as a result, MHI sales, which depend highly on the domestic market, entered a period of slow growth.

Growth measures (exports expansion, development of new fields) were carried out, but with multi-product conglomerate type management under the system of business headquarters and factories, improvement of global competitiveness was limited* and gaps widened further.

* Mainly, insufficient focus of investment into areas of core competencies

Global financial crisis
Business structure reforms / Financial foundation improvements
Start of sales expansion from M&A's

Note: Index figures are based on local currency. (1980 = 100)

Gaps shrank as a result of business structure reforms and M&A activities.

Starting from the 1990s, Japan’s GDP growth stagnated over the long term due mainly to economic maturation and overseas transfers of production. Gaps widened globally and with USA and Germany; as a result, MHI sales, which depend highly on the domestic market, entered a period of slow growth.
1-(1) Structural Changes in External Environment - Decelerating Growth Rates of Core Infrastructure Businesses

Annual sales growth by sector*
→ Major changes in recent 10+ years

2000 → 2009 average

2010 → 2017 average

* Industry classifications: GICS (Global Industry Classification Standard) / 21 industries (financials excluded)
* Target companies: Japanese, North American, European, Chinese and ASEAN stock-listed firms (19,564 companies)

0.0% 5.0% 10.0% 15.0%

Energy
Utilities
Household & Personal Products
Telecommunication Services
Food, Beverage & Tobacco
Materials
Capital Goods
Pharmaceuticals, Biotechnology & Life Sciences
Technology Hardware & Equipment
Food & Staples Retailing
Consumer Services
Media
Transportation
Commercial Services & Supplies
Healthcare Equipment & Services
Software & Services
Automobiles & Components
Consumer Durables & Apparel
Retailing
Commercial Services & Supplies
Transportation
Media
Consumer Services
Food & Staples Retailing
Technology Hardware & Equipment
Pharmaceuticals, Biotechnology & Life Sciences
Capital Goods
Materials
Consumer Durables & Apparel
Media
Household & Personal Products
Automobiles & Components
Semiconductors & Semiconductor Equipment

Average: 6.0%
Average: 6.2%

: Business areas of MHI / MHI core customers

Significant decrease after FY2015
(FY2017: recovery under impact of oil prices)

(Recent trends)
Recovery trend in US, etc.
Continuing sluggishness in demand for large-scale power generation equipment
Oil & gas in recovery trend mainly downstream

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1-(2) Decreasing Orders in Thermal Power Business and Delayed Development of Growth Businesses

**<Thermal power systems: orders received>**

<table>
<thead>
<tr>
<th>Year</th>
<th>Steam Power</th>
<th>GTCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>3,000</td>
<td>900</td>
</tr>
<tr>
<td>2011</td>
<td>4,000</td>
<td>900</td>
</tr>
<tr>
<td>2012</td>
<td>6,000</td>
<td>900</td>
</tr>
<tr>
<td>2013</td>
<td>8,000</td>
<td>900</td>
</tr>
<tr>
<td>2014</td>
<td>10,000</td>
<td>900</td>
</tr>
<tr>
<td>2015</td>
<td>12,000</td>
<td>900</td>
</tr>
<tr>
<td>2016</td>
<td>14,000</td>
<td>900</td>
</tr>
<tr>
<td>2017</td>
<td>15,000</td>
<td>900</td>
</tr>
<tr>
<td>2018</td>
<td>15,000</td>
<td>900</td>
</tr>
</tbody>
</table>

- Sharp decrease in steam power and GTCC demand

**<I&I core businesses: orders received>**

<table>
<thead>
<tr>
<th>Year</th>
<th>Air-conditioning &amp; Refrigeration</th>
<th>Metals machinery</th>
<th>Material handling equipment</th>
<th>Turbocharger</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1,500</td>
<td>1,200</td>
<td>900</td>
<td>600</td>
</tr>
<tr>
<td>2011</td>
<td>1,500</td>
<td>1,200</td>
<td>900</td>
<td>600</td>
</tr>
<tr>
<td>2012</td>
<td>1,500</td>
<td>1,200</td>
<td>900</td>
<td>600</td>
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<tr>
<td>2013</td>
<td>1,500</td>
<td>1,200</td>
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<td>2014</td>
<td>1,500</td>
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<td>2015</td>
<td>1,500</td>
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<td>2016</td>
<td>1,500</td>
<td>1,200</td>
<td>900</td>
<td>600</td>
</tr>
<tr>
<td>2017</td>
<td>1,500</td>
<td>1,200</td>
<td>900</td>
<td>600</td>
</tr>
<tr>
<td>2018</td>
<td>1,500</td>
<td>1,200</td>
<td>900</td>
<td>600</td>
</tr>
</tbody>
</table>

- Acquisition of UniCarriers
- JV with Siemens
- JV with Nichiyu
- JV with Hitachi
- JV with Nichiyu

**<Commercial aircraft (Tier1+MRJ) sales>**

<table>
<thead>
<tr>
<th>Year</th>
<th>Original MRJ Target</th>
<th>Tier1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>2012</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>2013</td>
<td>0</td>
<td>150</td>
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<td>2014</td>
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<td>2015</td>
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<td>150</td>
</tr>
<tr>
<td>2016</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>2017</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>2018</td>
<td>0</td>
<td>150</td>
</tr>
</tbody>
</table>

- Sales decrease due to delayed MRJ development

- Original MRJ Target
- Tier1

**I&I orders generally on target, due to M&A’s and some growth businesses**

- Thermal power systems benefited from M&A impact, but demand dropped sharply starting in 2017. (scale gap: over ¥500 billion)
- Delayed development of MRJ (medium-term scale gap: ¥100 billion)
1-(3) Medium- and Long-Term challenges (Summary)

Main causes of slow sales growth

- Maturation of Japanese market / economy
- Maturation of business portfolio (Decrease in differentiated technologies / equipment)

Delayed response to globalization
Delayed entry into growth areas

Limitations of conglomerate management under MHI’s system of business headquarters and factories
Each business pursues distinct strategy, self-sufficient

2010-2015 Medium-Term Business Plans

- Business structure reforms focused on overall optimization and increased efficiency (p.19)
- Foundational financial improvements due to strategic business evaluation system and cash flow management (p.20)
- Business scale expansion to ¥4 trillion (Mainly from M&A*)
  * Thermal power systems: JV with Hitachi, Metals machinery: JV with Siemens, Forklift trucks: JV with Nichiyu / acquisition of UniCarriers

Response to emerging issues under conglomerate management

2018 Medium-Term Business Plans (A New Step toward a Growth Trajectory)

- Globalization and accelerated entry into growth areas
- Growth balanced with financial soundness

Preparation of management organization
Reform and evolution of conglomerate management
2. A New Step toward a Growth Trajectory

(1) Growth Strategy under 2018 Medium-Term Business Plan ・・・ P.9

(2) Reform and Evolution of Conglomerate Management ・・・ P.10

(3) Categorization Based on Business Characteristics ・・・ P.11

(4) Bar chart of major measures ・・・ P.12
2-(1) Growth Strategy under 2018 Medium-Term Business Plan

Business structure reforms embedded

Reform and evolution of conglomerate management (Core of growth measures under global group management structure)

Maintain of sound financial foundation

Early resolution of ongoing issues
  - Structural conversion of thermal power systems business
  - MRJ development ~ Preparation of business structure

Growth Measures under 2018 Medium-Term Business Plan

◎ Globalization
◎ Entry into growth areas
◎ Stronger competitiveness and enhanced profitability
  → Higher productivity in all business activities

Efficient use of M&A’s

Long-term growth (Achievement of TOP)

◎ Adaptation to social/market changes
  = MHI FUTURE STREAM
◎ Maintenance and reinforcement of growth potential
  → Human resource development and reinforcement of technological infrastructure

TOP : Triple One Proportion (p.22)

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2-(2) Reform and Evolution of Conglomerate Management

**Proactive use of management resources**
- Greater fluidity through major consolidation (domain system)
- Business categorization* + Division between globally based businesses and businesses based in Japan

**Growth balanced with financial soundness**
- Shorter investment return cycle (correction of business structure heavily dependent on made-to-order products with long return periods)
  → Growth of mass and medium lot manufacturing businesses
  → Strengthening of service-oriented businesses
- Cash flow management and efficient balance sheets

* Major markets / regions, competitive format trends, business bases, investment return cycle, etc.

**Reform and evolution of conglomerate management**
- Simultaneous attainment of stability and growth
- Balance between independent SBU management and group synergies
- Flexible, swiftly responsive management

**Advanced portfolio management**
- Sustained growth capability through continuous recalibration of business portfolio
- Improvement of strategic business evaluation system
  → Synergies between businesses, incorporation of medium/long-term cash flow trend evaluation, etc.
# 2-(3) Categorization Based on Business Characteristics
(Applied to years of 2018-2021 Business Plans)

<table>
<thead>
<tr>
<th>Business type</th>
<th>Domestically based businesses (approx. ¥1.7 trillion)</th>
<th>Globally based businesses (approx. ¥2.4 trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I - 1 Regulated/cutting-edge</td>
<td>II - 1 Developing/expanding</td>
</tr>
<tr>
<td></td>
<td>I - 2 Mature &amp; niche/Reform</td>
<td>II - 2 Mature/mid-tier</td>
</tr>
<tr>
<td></td>
<td>I - 3 Export/Reform</td>
<td>III - Large-scale/Reform</td>
</tr>
<tr>
<td>Component businesses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defense, space</td>
<td>Machinery systems</td>
<td>Material Handling Equipment</td>
</tr>
<tr>
<td>Nuclear power</td>
<td>Machine tools*</td>
<td>Engineering (EPC)</td>
</tr>
<tr>
<td>Thermal power systems</td>
<td></td>
<td>Air-conditioning &amp; refrigeration</td>
</tr>
<tr>
<td>Total business scale</td>
<td>¥680bn (stable or slight increase)</td>
<td>¥390bn (nearly flat)</td>
</tr>
<tr>
<td>(Medium-term trend, 3-6 years)</td>
<td></td>
<td>¥650bn (gradual expansion)</td>
</tr>
<tr>
<td>Overseas sales ratio</td>
<td>3〜4%</td>
<td>¥600bn (recovery or gradual increase)</td>
</tr>
<tr>
<td>Overseas personnel ratio</td>
<td>0%</td>
<td>¥670bn (recovery or gradual increase)</td>
</tr>
<tr>
<td>Business characteristics</td>
<td></td>
<td>¥1,150bn (stagnation or Settled at a given level)</td>
</tr>
<tr>
<td>- Oriented to Specific customers: government agencies and power companies</td>
<td>Mainly domestic market</td>
<td>Oriented to global markets</td>
</tr>
<tr>
<td>- Long-term recovery type businesses</td>
<td>Mature &amp; niche business</td>
<td>High-volume or made-to-order production (standardized products)</td>
</tr>
<tr>
<td>- Wide fluctuations in demand</td>
<td>Oriented to specific customers</td>
<td>Established business model</td>
</tr>
<tr>
<td>- Export businesses</td>
<td>Established business model</td>
<td>Portfolio contains differentiated products</td>
</tr>
<tr>
<td>- Business model reform</td>
<td>Mainly overseas production, established business model</td>
<td>Oriented to global markets</td>
</tr>
<tr>
<td>- Long-term recovery type businesses</td>
<td>High-volume or made-to-order production (standardized products)</td>
<td>Oriented to global markets</td>
</tr>
<tr>
<td>- French-Japanese collaboration in nuclear power</td>
<td>Increased overseas production and business expansion through alliances</td>
<td>Structural market change resulting from CO₂ issues and renewable energies</td>
</tr>
<tr>
<td>Challenges and solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Expansion of security / space-related businesses</td>
<td>Significant productivity improvement</td>
<td></td>
</tr>
<tr>
<td>- Steady exports expansion</td>
<td>Business model reform</td>
<td></td>
</tr>
<tr>
<td>- French-Japanese collaboration in nuclear power</td>
<td>Preparation of business structure after MRJ development</td>
<td></td>
</tr>
<tr>
<td>- Business model reform</td>
<td>Stronger human resources for global management</td>
<td></td>
</tr>
<tr>
<td>- Structural market change resulting from CO₂ issues and renewable energies</td>
<td>Increased overseas production and business expansion through alliances</td>
<td></td>
</tr>
<tr>
<td>Steady growth measures</td>
<td>Acceleration of profitability improvement activities</td>
<td>Steady pursuit of growth and profit</td>
</tr>
<tr>
<td>Radical measures (business structure conversion)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2-(4) Bar chart of major measures

<table>
<thead>
<tr>
<th>Group overall</th>
<th>2018 Medium-Term Business Plan</th>
<th>2021 Medium-Term Business Plan</th>
<th>FY2024~</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management / organization structure</strong></td>
<td>Transition to global group management structure (→ P.15~17)</td>
<td>Reform and evolution of conglomerate management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(enhancement of portfolio management / management balanced between growth and financial soundness → TOP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Market / technology areas</strong></td>
<td>Mega Scan (search / evaluation of growth and new areas)</td>
<td>Mega Scan (Review)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shift the Path</td>
<td>New Shift the Path</td>
<td></td>
</tr>
<tr>
<td><strong>Growth foundation</strong></td>
<td>Maintenance and reinforcement of strategic technological infrastructure</td>
<td></td>
<td>Sustain</td>
</tr>
<tr>
<td></td>
<td>Talent management (development of global human resources, diversification of management personnel)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enhancement and optimization of overall value chain using digital technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Issue resolution</strong></td>
<td>Development / delivery(MRJ 90)</td>
<td>Launch of MRJ70</td>
<td>Improvements and further development</td>
</tr>
<tr>
<td></td>
<td>Capital policy</td>
<td>Reorganization</td>
<td>Reinforcement of high-volume production system and customer services</td>
</tr>
<tr>
<td><strong>MRJ</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thermal power</strong></td>
<td>Use of abundant backlog and smooth promotion of structure conversion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expansion of growth areas such as services / solutions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Transition to Global Group Management

(1) Current Organization and Personnel Distribution ・・・ P.14
   - Increase in group companies and overseas employees

(2) Distribution of Major Company Functions ・・・ P.15

(3) Organization Structure and Targeted Management System ・・・ P.16

(4) Outline of Transition Process ・・・ P.17
3-(1) Current Organization and Personnel Distribution

Increase in group companies and overseas employees

(March 2008: □□□□ March 2018: □□□□)

Consolidated

Domestic group companies

Approx. 38,000 employees (164 companies)

Optimization through establishment of group companies/consolidation and reorganization

Overseas group companies

Approx. 28,000 employees (246 companies)

• Transition to domain structure
• Transition to group company/M&A
• Reduced number of product businesses*

MHI parent

Approx. 14,700 employees

Domestic

Approx. 34,000 employees

Non-consolidated

Overseas

Approx. 80,700 employees (Overseas 34.7%)

Approx. 64,000 employees (Overseas 12.5%)

• Business headquarters and factories
• Conglomerate management focused on domestic market

Approx. 22,000 employees (198 companies)

Approx. 8,000 employees (105 companies)

Reinforcement of global management

Continuation of expansion measures

Reinforcement of group management

• Development and diversification of management human resources, including corporate divisions
• Efficiency / productivity improvement and pursuit of synergies

• Transition to global group management
• Reform and evolution of conglomerate management

*2012-2017: 18 businesses Partner-led JVs, selloffs, withdrawals

Approx. 8,000 employees (105 companies)

Domestic group companies

Approx. 34,000 employees (164 companies)

Overseas group companies

Approx. 64,000 employees (Overseas 12.5%)

Approx. 22,000 employees (198 companies)

Approx. 8,000 employees (105 companies)
3-(2) Distribution of Major Company Functions

**Best-fit corporate management**

**Group headquarters**

1. Overall management (Portfolio management, resource allocation, etc.)
2. Corporate philosophy/Branding/Corporate governance/Risk management
3. Common base of financial/accounting/tax matters, human resources, technology, etc.
4. Overall growth strategy/Promotion of special project
   - Reform and evolution of conglomerate management
   - Pursuit of “Triple One Proportion” (TOP)
   - MHI FUTURE STREAM

**Regions oversight functions (details on next page)**

**Creation of overseas growth opportunities**

**Regional headquarters**

1. Manifestation of regional synergies
   - Information sharing, brand penetration etc.
2. Unearthing of new business opportunities (cross-SBU projects, etc.)
3. Improved efficiency of regional corporate services

**Domains**

1. Manifestation of synergies among businesses
   - Resource adjustment, Sales information sharing
2. Compilation of all domains’ information

**Expansion of autonomous management/Business value improvement**

**Business divisions, business companies**

1. Autonomous business management
   (based on approved Medium-Term Business Plan)
   - Business strategies, resource management
   - Sales/Service, Production/Procurement
2. Risk management
3. Corporate operations
   - Management according to business characteristics
4. Human resource management
   (Hiring and HR development in cooperation with Group Headquarter)

SBU: Strategic Business Unit
3-(3) Organization Structure and Targeted Management System

- **Group headquarter function**
  - Balance between growth and financial soundness
    - Overall management
    - Overall growth strategies
  - [synergies among overseen businesses]

- **Domestically based businesses**
  - Globally expanding businesses
  - Domestically based businesses

- **Regional headquarters**
  - North America / Latin America
  - Asia-Pacific / India
  - EMA (including Russia)
  - China

- **Business company**
  - Autonomous management of business companies and value enhancement of individual businesses

- **MITAC (Development company)**
  - Japan oversight functions
  - Overall business of listed companies
  - Overall management of Japan-based businesses
    - Profitability improvement
  - Management of domestic facilities / equipment, etc.
    - Modernization, efficient utilization

- **Globally expanding businesses**
  - Power Systems
  - I&I
  - ADS

- **MHI (Non-consolidated)**
  - Regions
    - EMA
    - North America / Latin America
    - Asia-Pacific / India
    - EMA (including Russia)
    - China

- **Regional synergy**
  - [Measures for all regions]
    - Pursuit of diversity / Hiring of local staff
    - Promotion of results-based management

**Legend**
- I&I: Industry & Infrastructure
- ADS: Aircraft, Defense & Space
- MITAC: Mitsubishi Aircraft Corporation
- EMA: Europe, Middle East, Africa
### 3-(4) Outline of Transition Process

#### Structure / System

<table>
<thead>
<tr>
<th>2018 Medium-Term Business Plan</th>
<th>2021 Medium-Term Business Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January-March 2019</strong></td>
<td>FY2019</td>
</tr>
<tr>
<td>Relocation to Marunouchi, Tokyo</td>
<td>&lt;Reinforcement of global management&gt;</td>
</tr>
<tr>
<td>Preparation of initial structure</td>
<td>- Reinforcement of regional oversight company functions</td>
</tr>
<tr>
<td></td>
<td>- Business expansion of businesses in North American and Asia-Pacific regions</td>
</tr>
<tr>
<td></td>
<td>- Profitability improvement of Japan-based businesses</td>
</tr>
<tr>
<td></td>
<td>&lt;Reinforcement of group management&gt;</td>
</tr>
<tr>
<td></td>
<td>- Preparation of Group Head Office functions</td>
</tr>
<tr>
<td></td>
<td>&lt; Reform of Conglomerate Management &gt;</td>
</tr>
<tr>
<td><strong>Personnel system</strong></td>
<td></td>
</tr>
<tr>
<td>(preparation)</td>
<td></td>
</tr>
<tr>
<td><strong>Financial, accounting and tax</strong></td>
<td></td>
</tr>
<tr>
<td>- Further enhancement of global cash management</td>
<td></td>
</tr>
<tr>
<td>- Promotion of application of RPA</td>
<td></td>
</tr>
<tr>
<td><strong>RPA</strong> : Robotic Process Automation</td>
<td></td>
</tr>
</tbody>
</table>

- Embed global group management
- (trial implementation)
- (review and adjustment)
Reference

1. Roadmap to Completion of Business Structure Reforms ..... P.19
2. Improvement of Financial Foundation ..... P.20
3. Improvement of Business Process through Business Structure Reforms ..... P.21
4. TOP (Triple One Proportion) ..... P.22
5. MHI FUTURE STREAM ..... P.23
6. New Business Areas in the Energy Field (examples under consideration) ..... P.24
**Reference #1 Roadmap to Completion of Business Structure Reforms**

- Completed organizational/structural reforms over 8 years, starting from 2010 Business Plan.
- Almost completed corporate governance reforms launched in 2012 Medium-Term Business Plan.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effective use of management resources</strong></td>
<td><strong>Removal of siloes between businesses</strong></td>
<td><strong>Responded to various challenges</strong></td>
</tr>
<tr>
<td><strong>Business works structure</strong></td>
<td><strong>Integration and reorganization of business headquarters</strong></td>
<td><strong>Reinforced risk management structure</strong></td>
</tr>
<tr>
<td><strong>Business headquarters structure</strong> (9 business headquarters)</td>
<td><strong>Domain structure (4 domains)</strong></td>
<td><strong>3 domains</strong></td>
</tr>
<tr>
<td><strong>Review of business portfolio</strong></td>
<td><strong>(concentration into core competencies)</strong></td>
<td><strong>Acceleration of M&amp;A and business spin-offs</strong></td>
</tr>
<tr>
<td><strong>Strategic business evaluation system (SBUs)</strong></td>
<td></td>
<td><strong>Strengthening of cross-domain functions (ST framework)</strong></td>
</tr>
<tr>
<td><strong>• Synergies of Domain structure</strong></td>
<td></td>
<td><strong>Efficiency enhancement and strengthening of corporate functions (BPO, etc.)</strong></td>
</tr>
<tr>
<td><strong>• Response to Globalization</strong></td>
<td></td>
<td><strong>Company with Audit and Supervisory Committee</strong></td>
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<td><strong>Corporate governance reforms</strong></td>
<td></td>
<td><strong>Chief officers system, increased ratio of outside directors</strong></td>
</tr>
</tbody>
</table>

SBU : Strategic Business Unit  
ST : Shared Technology  
BPO : Business Process Outsourcing
Reference #2 Improvement of Financial Foundation

- Financial foundation strengthened beyond target, reaching a healthy level through measures including cash flow management, asset management, etc.

- Interest-bearing debt reduced beyond original target
- Debt/equity ratio reached lowest level in history
- FCF target achieved (see p.4)
# Reference #3 Improvement of Business Process through Business Structure Reforms

## Structural and directional improvements / activities

<table>
<thead>
<tr>
<th>Business Area</th>
<th>Achievements</th>
<th>Globalization, outside collaboration</th>
<th>Increased productivity IoT / AI</th>
<th>Future Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing</td>
<td>Development of cross-SBU projects overseas</td>
<td>☐</td>
<td></td>
<td>• Operationalize and enhance process improvement outcomes</td>
</tr>
<tr>
<td></td>
<td>Achievement of advanced customer services (O&amp;M support system, etc.)</td>
<td>☐</td>
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<td></td>
<td>Long-Term Growth Vision (future stream) activities (p.27)</td>
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<tr>
<td></td>
<td>Improvement of companywide sales and service education systems</td>
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<tr>
<td>Technology</td>
<td>Expanded open innovation with global CoEs</td>
<td>☐</td>
<td></td>
<td>• Nurture global managers</td>
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<td></td>
<td>Engineering talent management system</td>
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<td></td>
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<td></td>
<td>Digitalization of production processes</td>
<td>☐</td>
<td>☐</td>
<td>• Strengthen new business creativity and integrate state-of-the-art technologies</td>
</tr>
<tr>
<td></td>
<td>Configuration of common component code system</td>
<td>☐</td>
<td></td>
<td>• Broad application of digitalization</td>
</tr>
<tr>
<td>Finance</td>
<td>Introduction of global financial and accounting policies</td>
<td>☐</td>
<td></td>
<td></td>
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<td></td>
<td>Expanded operation of global cash management</td>
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<tr>
<td></td>
<td>Introduction of IT/automation of monitoring of business status, enhanced business process efficiency through RPA</td>
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<tr>
<td>HR</td>
<td>Configuration of HR data base and use in planning successors</td>
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<tr>
<td></td>
<td>Unification of business processes and systems</td>
<td>☐</td>
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<tr>
<td>Procurement</td>
<td>Consolidation of suppliers, introduction of management tools</td>
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<tr>
<td></td>
<td>Reconfiguration of commercial aircraft SCM, Reform of procurement processes</td>
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</tbody>
</table>

Reference #4 TOP (Triple One Proportion)

TOP (Triple One Proportion) Concept

Serving the needs of stakeholders and society in a sustainable and harmonious way

Managerial goal (proportion) Net sales : Total assets : Market value = 1 : 1 : 1*

* Future orientation: Total assets ≤ 1, Market value ≥ 1

- Prioritize efficiency and quality
- Balance of maintaining sound financial base and growth investment over the medium term
- Seek long-term and stable improvement in corporate value

Managerial goal (proportion) Net sales : Total assets : Market value = 1 : 1 : 1*

**Net Sales**

- Optimal portfolio (shuffle / maintain)
- Earnings base
- Quality and efficiency
- Investment base

**Shared Social Values**

- (ESG/SDGs)

**Investors**

- Improve ROE and provide stable shareholder returns

**Customers**

- Provide products and services matching customer needs

**Employees / partners**

- Long-term growth investment (including HR)

**Market Value**

- Maintain sound financial structure

**Total assets**

- ROE = \( \frac{\text{Net income}}{\text{Net sales}} \times \frac{\text{Net sales}}{\text{Total assets}} \times \frac{\text{Total assets}}{\text{Shareholder Equity}} \)

ESG: Environment, Social, Governance
SDGs: Sustainable Development Goals
ROE: Return On Equity

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MHI FUTURE STREAM  In step with social evolution

Under “MHI FUTURE STREAM,” MHI aims to:
- Resolve complex and difficult social issues of today and the near future
- Take on challenges of the distant future
- Carry out continuous reforms to make MHI a company always in demand by humanity and society

SDGs
Realization of a sustainable world

SUSTAINABLE DEVELOPMENT GOALS

Under climate change, urbanization, aging population, etc.

Carbon-free (Low-carbon society)
Urban problems
Safety

Hydrogen combustion
GTCC
SOFC

Logistics and transportation systems
Waste treatment

Advanced security products and autonomous operation

Heat/electrical storage, conversion
Nuclear, fusion reactor

Future mobility and logistics

National security systems
Space development

Mega Scan
Exploring all realms of opportunity
Finding business opportunities in the uncertain trends of the future

Shift the Path
Converting existing businesses
Responding to emergent trends
Mulling ways to convert current businesses

Technology Scouting
Exploring for innovative technologies
Reflecting technological trend analysis in Mega Scan and Shift the Path

A new set of initiatives under the 2018 Business Plan focused on MHI’s future

Reference #6 New Business Areas in the Energy Field (examples under consideration)

Promotion of business structure conversions toward the realization of carbon-free society, responding to megatrends, ESG and SDGs.

**Megatrends surrounding energy business**

Curbing of CO2 emissions toward 2°C target
- Possibility of CO2 emissions staying flat by 2030
- 2°C target difficult to achieve with continuation of current technologies

Global slowing of growth in demand for primary energies
- Slowing of GDP growth
- Unbundling of GDP and energy consumption

Increasing power demand from electrification progress
- Demand growing at quadruple the speed of demand for fossil fuels, etc.
- Increasing demand for improved services

Accelerating adoption of renewable energies amid cost reductions
- Cases already exist where costs are on par with those of new thermal plants
- Costs to become even with those of existing plants within 5-10 years

Slowing and peaking of fossil fuel demand
- Coal demand to peak in 10 years
- Oil demand to peak in 20 years
- Gas demand to continue gradual increase

**New business areas in the energy field (examples under consideration)**

- Optimized energy operation services making use of digital technologies
- Asset management services to maximize value of electric power in deregulated markets
- CO2 recovery, storage and utilization plants, toward carbon-free society
- Plants spanning from carbon-free fuel (hydrogen, ammonia, etc.) production to power generation
- Achievement and sales expansion of hydrogen gas turbines
- Gas turbines that respond quickly to renewable energy output fluctuations
- System integration, including energy storage

Response to increased renewable energy usage

Energy management

Carbon-free energy chain
MOVE THE WORLD FORWARD