Corporate Strategy

June 2020
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Note
FY2016 : April 1, 2016 - March 31, 2017
FY2017 : April 1, 2017 - March 31, 2018
FY2018 : April 1, 2018 - March 31, 2019
FY2019 : April 1, 2019 - March 31, 2020
FY2020 : April 1, 2020 - March 31, 2021
Introduction

I would like to express my deepest sympathy and condolences for all the people who have lost their lives to COVID-19, as well as for everyone who has suffered through the pandemic and their families and acquaintances. In addition, I would like to express my sincere gratitude and respect to everyone working on the front lines of the medical field and other fields to prevent the spread of disease and treat patients.

Mitsubishi Electric gives the highest priority to the safety and health of customers, business partners, and other related parties, as well as employees and their families. Having taken adequate measures to prevent the spread of the infection, such as thorough enforcement of remote work, and securing social distance in production, construction and service related departments, we will continue business that are necessary for fulfilling our responsibilities to society as a corporation in order to maintain people’s lives, provide a stable supply of products, provide services, and support our customers.

The world economy is expected to suffer a significantly adverse impact from the pandemic. The economic growth rate is expected to slow significantly compared to the previous fiscal year, and we expect that this will have a significant impact on our business performance. While ensuring that employment is maintained, we will work to minimize the impact on business results even if it takes a long time for the pandemic to end.

Nonetheless, we expect that measures to prevent the spread of the disease will bring dramatic changes to the values of humanity, including lifestyles, work styles, business styles, and communication methods. FY2020 is a milestone year, as it marks the 100th anniversary of our founding. We will incorporate new values into our own working styles, while uniting all the capabilities inside and outside of the Group, in order to respond to changing demand and to address social challenges.
1. Corporate Principle

**Corporate Mission**
The Mitsubishi Electric Group will continually improve its technologies and services by applying creativity to all aspects of its business. By doing so, we enhance the quality of life in our society.

**Seven Guiding Principles**
1. **Trust:** Establish relationships with society, customers, shareholders, employees, and business partners based on strong mutual trust and respect.
2. **Quality:** Provide the best products and services with unsurpassed quality.
3. **Technology:** Pioneer new markets by promoting research and development, and fostering technological innovation.
4. **Citizenship:** As a global player, contribute to the development of communities and society as a whole.
5. **Ethics and Compliance:** In all endeavors, conduct ourselves in compliance with applicable laws and high ethical standards.
6. **Environment:** Respect nature, and strive to protect and improve the global environment.
7. **Growth:** Assure fair earnings to build a foundation for future growth.

**CSR materiality**
- Realize a sustainable Society
- Provide safety, security, and comfort
- Respect human rights and promote the active participation of diverse human resources
- Strengthen corporate governance and compliance on a continuous basis

The Mitsubishi Electric Group positions CSR as the basis of corporate management based on the “Corporate Mission” and “Seven Guiding Principles”
2. Management Policy

— Maintain and evolve Balanced Corporate Management —

**Growth**
- Sustainable growth through providing solutions to social challenges
- Technology Synergies/Business Synergies
- Agile response to changes in business environment

**Profitability Efficiency**
- Enhance capital efficiency
- Increase utilization efficiency of natural resources and energy
- Create a stronger business foundation

**Soundness**
- Constantly review and refresh business portfolio
- Maintain sound financial standing
- Strengthen corporate governance and compliance on a continuous basis

- **Pursue the Satisfaction of the Four Stakeholder Categories**
  - Social Contributions
    - Society
  - Excellent Products and Services
    - Customers
  - Increase Corporate Value
    - Shareholders
  - Rewarding Workplace
    - Employees
Mitsubishi Electric will provide integrated solutions to address diversifying social challenges, in the four fields of Life, Industry, Infrastructure and Mobility, uniting all the capabilities inside and outside of the Group. For this purpose, we will enhance our business foundation fostered over the past 100 years and further transform business models.

*Business foundation fostered over the past 100 years: connection with customers, technologies, personnel, products, corporate culture, etc.

Initiatives to Create Value
- Enhance the 100-year business foundation × Strengthen all forms of collaboration = Evolution of Technology Synergies and Business Synergies

Social Challenges
- Zero traffic accidents
- Comfortable transport
- Eliminate traffic congestion
- Reduce air pollution
- Measures for deteriorating infrastructure
- Prepare for natural disasters
- Eliminate poverty/inequalities
- Prepare for man-made threats
- Eliminate regional disparities
- Improve QOL of mobility impaired people
- Build communities
- Prevent global warming
- Clean water
- Industry and technological innovation
- Response to uneven distribution and depletion of resources
- Address labor shortage

Mobility
- Comfortable life
- Health
- Prepare for infectious diseases
- Preserve the ecosystem
- Avoid water shortage/food shortage
- etc.

Life
Based on its strategy, Mitsubishi Electric Group will pursue value creation for addressing social challenges, and contribute to achieving the 17 goals of the SDGs, through all corporate activities.

Further promote initiatives to create value, such as simultaneous achievement of "sustainable society," and "safety, security, and comfort."

SDGs: "Sustainable Development Goals" adopted by the United Nations as goals to achieve towards 2030
4. Outlook for FY2020 (Consolidated performance)

<table>
<thead>
<tr>
<th></th>
<th>FY2016 (Billions of JPY)</th>
<th>FY2017 (Billions of JPY)</th>
<th>FY2018 (Billions of JPY)</th>
<th>FY2019 (Billions of JPY)</th>
<th>FY2020 (Billions of JPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S.GAAP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td>4,238.6</td>
<td>4,431.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Profit</td>
<td>270.1</td>
<td>318.6</td>
<td>327.4</td>
<td>290.4</td>
<td>255.0</td>
</tr>
<tr>
<td>(%)</td>
<td>6.4%</td>
<td>7.2%</td>
<td>7.4%</td>
<td>6.4%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Profit before income taxes</td>
<td>296.2</td>
<td>364.5</td>
<td>353.2</td>
<td>315.9</td>
<td>281.9</td>
</tr>
<tr>
<td>Net Profit *2</td>
<td>210.4</td>
<td>271.8</td>
<td>255.7</td>
<td>226.6</td>
<td>221.8</td>
</tr>
<tr>
<td><strong>ROE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Return On Equity)</td>
<td>10.9%</td>
<td>12.6%</td>
<td>11.7%</td>
<td>9.7%</td>
<td>9.2%</td>
</tr>
<tr>
<td><strong>Stockholders’ Equity</strong></td>
<td>2,039.6</td>
<td>2,259.3</td>
<td>2,294.1</td>
<td>2,399.9</td>
<td>2,429.7</td>
</tr>
<tr>
<td>(%)</td>
<td>48.9%</td>
<td>53.0%</td>
<td>53.3%</td>
<td>55.1%</td>
<td>55.1%</td>
</tr>
<tr>
<td><strong>Debt</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(%)</td>
<td>352.1</td>
<td>311.4</td>
<td>311.9</td>
<td>298.4</td>
<td>377.0</td>
</tr>
<tr>
<td>Debt excluding lease liabilities *3 (%)</td>
<td>8.4%</td>
<td>7.3%</td>
<td>7.2%</td>
<td>6.9%</td>
<td>-</td>
</tr>
<tr>
<td>Debt excluding lease liabilities (%)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>FCF</strong></td>
<td>217.3</td>
<td>62.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dividend (JPY per share)</strong></td>
<td>27</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Dividend ratio (%)</td>
<td>27.5%</td>
<td>31.6%</td>
<td>33.6%</td>
<td>37.9%</td>
<td>38.7%</td>
</tr>
</tbody>
</table>

*1: Mitsubishi Electric adopts International Financial Reporting Standards (IFRS) from FY 2018. *2: Net Profit represents Net profit attributable to Mitsubishi Electric Corp. stockholders. *3: Debt ratio is calculated based on "Debt excluding lease liabilities" that represents bonds and borrowings from FY2019 because IFRS 16 Lease has been applied. *4: The figures for FY2020 without the impact of COVID-19 are for reference only.

The current forecast reflects the sluggish markets in various countries and regions and following recovery process, and is based on the assumption that COVID-19 continues to have a serious impact on revenue and operating profit until the second quarter.
## 4. Outlook for FY2020 (Segment Forecast)

### Revenue and Operating Profit (Billions of JPY)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy &amp; Electric Systems</strong></td>
<td>1,227.9 109JPY/USD 119JPY/EUR</td>
<td>1,241.9 111JPY/USD 130JPY/EUR</td>
<td>1,253.0 111JPY/USD 128JPY/EUR</td>
<td>1,296.7 109JPY/USD 121JPY/EUR</td>
<td>1,307.3 105JPY/USD 115JPY/EUR</td>
<td>1,340.0 105JPY/USD 115JPY/EUR</td>
</tr>
<tr>
<td>Revenue</td>
<td>44.3</td>
<td>51.7</td>
<td>65.4</td>
<td>82.5</td>
<td>82.3</td>
<td>84.0</td>
</tr>
<tr>
<td>Operating Profit (%)</td>
<td>3.6%</td>
<td>4.2%</td>
<td>5.2%</td>
<td>6.4%</td>
<td>6.3%</td>
<td>6.3%</td>
</tr>
<tr>
<td><strong>Industrial Automation Systems</strong></td>
<td>1,310.1 119JPY/USD 130JPY/EUR</td>
<td>1,444.9 111JPY/USD 128JPY/EUR</td>
<td>1,444.9 111JPY/USD 128JPY/EUR</td>
<td>1,467.6 111JPY/USD 128JPY/EUR</td>
<td>1,410.0 115JPY/USD 128JPY/EUR</td>
<td>1,160.0 115JPY/USD 128JPY/EUR</td>
</tr>
<tr>
<td>Revenue</td>
<td>140.0</td>
<td>190.8</td>
<td>187.3</td>
<td>142.5</td>
<td>68.9</td>
<td>80.0</td>
</tr>
<tr>
<td>Operating Profit (%)</td>
<td>10.7%</td>
<td>13.2%</td>
<td>13.0%</td>
<td>9.7%</td>
<td>5.1%</td>
<td>5.7%</td>
</tr>
<tr>
<td><strong>Information &amp; Communication Systems</strong></td>
<td>447.7 119JPY/USD 130JPY/EUR</td>
<td>436.0 119JPY/USD 130JPY/EUR</td>
<td>438.1 119JPY/USD 130JPY/EUR</td>
<td>426.2 119JPY/USD 130JPY/EUR</td>
<td>455.5 119JPY/USD 130JPY/EUR</td>
<td>410.0 119JPY/USD 130JPY/EUR</td>
</tr>
<tr>
<td>Revenue</td>
<td>12.7</td>
<td>11.9</td>
<td>11.3</td>
<td>12.2</td>
<td>26.4</td>
<td>20.0</td>
</tr>
<tr>
<td>Operating Profit (%)</td>
<td>2.8%</td>
<td>2.7%</td>
<td>2.6%</td>
<td>2.9%</td>
<td>5.8%</td>
<td>4.9%</td>
</tr>
<tr>
<td><strong>Electronic Devices</strong></td>
<td>186.5</td>
<td>202.2</td>
<td>202.2</td>
<td>199.9</td>
<td>208.7</td>
<td>250.0</td>
</tr>
<tr>
<td>Revenue</td>
<td>8.3</td>
<td>14.5</td>
<td>14.1</td>
<td>1.4</td>
<td>8.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Operating Profit (%)</td>
<td>4.5%</td>
<td>7.2%</td>
<td>7.0%</td>
<td>0.7%</td>
<td>4.2%</td>
<td>2.0%</td>
</tr>
<tr>
<td><strong>Home Appliances</strong></td>
<td>1,004.4</td>
<td>1,049.3</td>
<td>1,049.3</td>
<td>1,074.0</td>
<td>1,090.2</td>
<td>1,100.0</td>
</tr>
<tr>
<td>Revenue</td>
<td>69.6</td>
<td>56.0</td>
<td>55.4</td>
<td>59.4</td>
<td>78.2</td>
<td>75.0</td>
</tr>
<tr>
<td>Operating Profit (%)</td>
<td>6.9%</td>
<td>5.3%</td>
<td>5.3%</td>
<td>5.5%</td>
<td>7.2%</td>
<td>6.8%</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>713.6</td>
<td>764.3</td>
<td>659.0</td>
<td>676.7</td>
<td>659.6</td>
<td>660.0</td>
</tr>
<tr>
<td>Revenue</td>
<td>23.2</td>
<td>23.9</td>
<td>24.0</td>
<td>24.1</td>
<td>26.0</td>
<td>24.0</td>
</tr>
<tr>
<td>Operating Profit (%)</td>
<td>3.3%</td>
<td>3.1%</td>
<td>3.6%</td>
<td>3.6%</td>
<td>3.9%</td>
<td>3.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,238.6</td>
<td>4,431.1</td>
<td>4,444.4</td>
<td>4,519.9</td>
<td>4,462.5</td>
<td>4,540.0</td>
</tr>
<tr>
<td>Revenue</td>
<td>270.1</td>
<td>318.6</td>
<td>327.4</td>
<td>290.4</td>
<td>259.6</td>
<td>255.0</td>
</tr>
<tr>
<td>Operating Profit (%)</td>
<td>6.4%</td>
<td>7.2%</td>
<td>7.4%</td>
<td>6.4%</td>
<td>5.8%</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

5. Growth Targets for FY2020: Review (1)

The outlook for FY2020 projects revenue of ¥4.1 trillion and operating profit margin (OPM) of 2.9%, which is expected to fall short of the FY2020 growth targets set in FY2014, partly due to the impact of COVID-19.

*Debt ratio is calculated based on "Debt excluding lease liabilities" that represents bonds and borrowings from FY2019 because IFRS 16 Leases has been applied.

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5. Growth Targets for FY2020: Review (2)

The analysis of our performance from FY2014 to FY2020 is as follows. The chart starts with FY2013 that is the year before the target-setting. While certain results have been achieved, targets have not been reached. Some external factors contributed, such as stagnating demand growth and fluctuating exchange rates, but there were also internal factors to reflect on, such as inadequate response to changes in the market environment.
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**Information & Communication Systems**
- **Space systems**
  - Decreased demand for large satellites due to an increase in plans for small commercial satellites
  - Revised business portfolio (Sale of Diamond telecom. Inc.), etc.

**Electronic Devices**
- **Power Devices**
  - Expanded 7th generation IGBT modules (secured demand in China, accelerated conversion to EVs, etc.)
  - Demand growth stagnated due to trade friction between the U.S. and China, intensified competition, falling prices, etc.
  - Expanded prior investment by early execution of automakers’ EV plans

**Home Appliances**
- **Air-Conditioning & Refrigeration Systems**
  - Secured demand in high value-added markets such as North America and Europe due to the establishment of MEHITS / MACT / METUS, etc.
  - Inadequate response to intensified competition due to accelerating domestic production in China and expanding comprehensive proposal needs accompanying changes in demand structure, etc.

**MEHITS**: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A.
**MACT**: Mitsubishi Electric Air Conditioning Systems Manufacturing Turkey Joint Stock Company
**METUS**: Mitsubishi Electric Trane HVAC US LLC

The analysis of our performance from FY2014 to FY2020 is as follows. The chart starts with FY2013 that is the year before the target-setting. While certain results have been achieved, targets have not been reached. Some external factors contributed, such as stagnating demand growth and fluctuating exchange rates, but there were also internal factors to reflect on, such as inadequate response to changes in the market environment.
5. Growth Targets for FY2020: Review (3)
Trends in Capital Allocation

In order to achieve sustainable growth, we have made active investments focused on the enhancement of sales, development, and production systems for strengthening global expansion, as well as the promotion of technology development to create value. At the same time, we have also increased shareholder returns.

**Collaboration and M&A**
- 2015: Took stake in MEDCOM Sp. Z.o.o. (EES)
  - Acquired 100% stake in DeLclima S.p.A. (HA)
- 2016: Established Dynamic Map Platform Co., Ltd. (ICS)
- 2017: Established Sapcorda Services GmbH (ICS)
- 2018: Established a distribution J/V with Ingersoll Rand (HA)
- 2019: Acquired ICONICS, Inc. (IAS) and others

**Supplementation of missing parts essential to strengthen the business, securement of distribution and service networks in new markets, and acquisition of talent**

**R&D**
- Well-balanced short, medium, and long-term R&D investment
- 2015-19 R&D (¥Bn.):
  - EES: 174.4
  - HA: 211.4
  - IAS: 344.9
  - ED: 60.6
  - Others: 157.7

**Capital allocation (¥Tn.)**
- FY2005-FY2019:
  - 2005-09: 1.6
  - 2010-14: 1.9
  - 2015-19 (FY): 2.4

**Capital investment (¥Bn.)**
- FY2005-FY2019:
  - EES: 167.5
  - HA: 190.3
  - ED: 141.6
  - IAS: 426.2
  - ICS: 119.1
  - Others: 96.3

**Shareholder returns**
- Dividend ratio:
  - 2005-09: 23.0%
  - 2010-14: 34.0%
  - 2015-19 (FY): 38.7%
- Dividend (yen):
  - 2005-09: 12
  - 2010-14: 11
  - 2015-19 (FY): 40

**Basic policy in place to stably pay dividends in line with profit growth with buyback as a measure to supplement dividends for further shareholder returns. Efforts made to comprehensively increase shareholder interest**

6. Formulating the Medium-term Management Plan towards 2025

【Principles】
In order to address diversifying social challenges, we will focus on strengthening our solutions business. We will also revise our business portfolio to improve profitability and effectively utilize management resources, and enhance our business foundation.

《Important measures》

(1) Improving profitability of major businesses by thoroughly implementing basic operations such as capturing market needs and strengthening technological development.

(2) Building and cultivating new business models and new businesses that will become the pillars of the next generation.

(3) Identify unprofitable and less profitable businesses, then reallocate resources to high-profit and development businesses.

(4) Pursue the optimal Group management system, including function review of affiliated companies
7. Enhancement of Business Foundation
– Business Group –

Energy & Electric Systems
- **Power Systems**
  - Power generation systems, Substation systems, Transmission & distribution ICT systems, Power distribution systems, etc.
- **Transportation Systems**
  - Inverters, main motors, Train radio system, air conditioning systems for railcars, Train Vision, Train control and management systems, Railcar operation management systems, Signaling systems, etc.
- **Building Systems**
  - Elevators, Escalators, Building management systems, etc.
- **Public Systems**
  - Water treatment systems, Disaster prevention systems, Optical, wireless communications systems, etc.
- **Video Monitoring Systems**
  - Network camera, Video analysis systems

Industrial Automation Systems
- **Factory Automation (FA) Systems**
  - PLCs, AC servomotors, CNCs, Industrial robots, Laser processing machines, etc.
- **Automotive Equipment**
  - Engine electrical components, Engine controller, EPS motor and controller, Car multimedia, Electric powertrain systems, Preventive safety / Autonomous driving related products, etc.

Information & Communication Systems
- **Space Systems**
  - Satellites, Ground systems for satellite control, Satellite communication system etc.
- **Defense Systems**
  - Radar equipment, Antennas, etc.
- **IT Solution**
  - Network security for financial industry, etc.

Electronic Devices
- **Power Devices**
  - SiC modules, IGBT modules, etc.
- **High Frequency and Optical Devices**
  - High frequency devices (GaN and GaAs), Optical devices, etc.
- **TFT LCD Modules**

Home Appliances
- **Air-Conditioning & Refrigeration Systems**
  - Room and package air conditioners, Multiple AC units for buildings, Lossnay ventilation systems, Chillers, etc.
- **Housing Equipment**
  - Ventilation, ATW, Lighting, Smart appliances, etc.
- **Kitchen and Other Household Appliances**

EPS: Electric Power Steering, SiC: Silicon Carbide, IGBT: Insulated Gate Bipolar Transistor, GaN: Gallium Nitride, GaAs: Gallium Arsenide, TFT: Thin Film Transistor
7. Enhancement of Business Foundation
– Initiatives of Major Businesses (1) –

Power Systems Business

Provide products, systems and services which contribute to stable utilization of electricity and efficient business management for clients

- Respond to needs to use energy effectively and stabilize power systems, which have increased with the expansion of renewable energy and distributed energy resources
- Provide systems which support the electricity system reforms
- Maintain aging products, and respond to needs for replacement into high efficiency products with a shorter construction period

Building Systems Business

Provide total support from new installation to maintenance, and renewal, through highly safe and reliable products as well as high field engineering capabilities

- Provide safety and reliability based on a rich track record, and achieve energy-savings by reducing size and weight of product lineup
- Contribute to overall building energy-savings and improving building value by providing “building solutions” that combine various building equipment and premium maintenance services
- Minimize the downtime of elevators during renewal periods

Transportation Systems Business

Contribute to safe, secure, and comfortable rail transport by providing highly reliable equipment and proposing IoT/AI solutions

- Promote energy efficiency improvements and effective utilization of regenerative power during braking
- Safe and efficient train operation using train control which applies wireless technology
- Collect and analyze railcar equipment information with IoT platforms. Contribute to customers’ operational efficiency

Air-Conditioning & Refrigeration Systems Business

Accelerate renewal and maintenance solution proposals to meet the needs of each region and business expansion, focused on the HVAC&R business, which includes ventilation and hot water supply in addition to air-conditioning and refrigeration

- Strengthen and expand renewal and maintenance solution proposals
- Make fine-tuned response to needs with a wide range of products and a global production system
- Respond to environmental and energy-saving regulations, and lower environmental burden

HVAC&R: Heating Ventilating Air Conditioning & Refrigerating
Factory Automation (FA) Systems Business

Contribute to the smartification of factories by further evolving the『e-F@ctory』

- Strengthen 『e-F@ctory』 supporting products / solutions
  - Launch FA products compatible with “CC-Link IE TSN*”
    * Technology that enables integration of information communications and machine control on one network
  - Establish systems to strengthen production and stabilize supply
  - Strengthen production capacity (servo, inverter)
  - Expansion of production bases (Japan/China/India)

Space Systems Business

Contribute to building a global social infrastructure through satellite systems products across various areas

- Contribute to the prevention of global warming, enhanced monitoring of climatic phenomena and global environment, understanding of disaster situations, and the prevention of disasters (observational satellites)
  - Promote solution-based business utilizing observational satellite data
- Offer high-precision positioning Information (positioning satellites)
- Advance communications/ broadcasting infrastructure in various regions (communication satellites)

Automotive Equipment Business

Realize environment-friendliness, safety and security, and comfort by coordinating and integrating a wide range of high efficiency equipment, including electric powertrain systems, and advanced control technology

- Contribute to reducing environmental burden and improving fuel mileage by using engine equipment and equipment for electric vehicles
- Improve comfort during driving through next-generation information equipment, which integrates the car navigation system into driver assistance functions
- Realize safe and comfortable autonomous driving by linking infrastructure using positioning satellites and road-vehicle/vehicle-vehicle communication technology

Power Devices Business

Provide key devices for energy-savings based on the most advanced power semiconductor technology

- Contribute to realizing a low-carbon society by supplying devices that play a major role in reducing power loss
- Improve the value and competitiveness of customers’ products by providing compact and lightweight devices
- Supply devices in response to the global trend toward energy conservation and the adoption of electric vehicles (xEV)

Create new value that contribute to business model transformation, and develop future technologies in a well-balanced way from a short, medium, and long-term perspective, while working to thoroughly strengthen present businesses.

**Life**

Control technology for in-building mobilities and facilities
- Realizes smart buildings where people and robots coexist safely

**Industry**

Visualization technology for cause of the problem in production equipment
- Reduces equipment downtime by supporting troubleshooting

**Infrastructure**

Active electronically steered array antenna technology for inflight connectivity
- Enables internet access with more than 100Mbps in various aircraft and airway

**Mobility**

Path planning and vehicle control technologies for autonomous driving system
- Generate smooth and safe paths to control vehicles with high degree of accuracy

**Common Technologies**

- Encrypt sensitive information (concealment)
- Analyzed information (encrypted)
- Keep encryption and analyze by AI

**AI analysis technology with concealment**
- Reduces risk of sensitive information leakage and provides services safely

**Application example for weather radar**
- Local observation with high resolution
- Wide range and long distance observation

**Ultra-wideband and high power wireless technology**
- Contributes disaster prevention by high resolution and wide range observation
7. Enhancement of Business Foundation  
– Intellectual Property Activities –

Protect technology based business advantages through patents over the medium and long term, and actively pursue intellectual property activities worldwide

<table>
<thead>
<tr>
<th>Patent PCT application ranking</th>
<th>No. 2 globally</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Intellectual Property Organization (WIPO)</td>
<td>Top among Japanese companies</td>
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<tr>
<th>Patent registration numbers ranking</th>
<th>No. 2 in Japan</th>
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<tr>
<th>Design registration numbers ranking</th>
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<th>Patent asset size ranking (all industries)</th>
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**FY2019 National Invention Award**

**Invention Award**

**Invention of drive circuit for power switching element using two pulses**

The award for the invention of a unique drive circuit technology using a switching element that turns electric power on and off according to a control signal, and uses a pulse train of two pulses instead of the conventional control signal of only one pulse. The invention stabilizes the operation of power semiconductors (DIPIPMTM) and greatly contributes to the spread of energy-saving equipment such as air conditioner.

**DIPIPMTM: Dual Inline Package Intelligent Power Module**
8. Business Model Transformation

Accelerate the creation and cultivation of new business models and new businesses, including the renewal and maintenance business, the data utilization business, and the platform business, that unite all the capabilities inside and outside of the Group and actively utilize open innovation, etc.

✔ Establish **Business Innovation Group** under the direct control of the President
   Lead and support the creation of new business models and new businesses that go beyond existing frameworks

✔ **Invest $100 million** in startup companies in the future
   Promote corporate venturing activities company-wide as a means of open innovation, with the aim of promoting businesses that combine knowledge from inside and outside the company

✔ **Mitsubishi Electric IoT Suite: ClariSense**
   Rally the strengths (functions) of our company, such as knowledge of devices and AI/security, in the form of an IoT system unified design guide, solutions library, etc., to centrally develop and expand “ClariSense.”
   Combine these functions to quickly create customer value from various data

ClariSense: A term coined by Mitsubishi Electric meaning, “to solve problems,” from the idea that we will “clarify” the “essence” of information “sensed” by machines
8. Business Model Transformation

Next-generation Transportation System Solution

Contribute to safe and comfortable transportation

- **Railcar Maintenance Solution**
  “Railway LMS on INFOPRISM”
  Contribute to labor savings and the safe and stable operation of railway companies with real-time status monitoring of railcars and data aggregation/AI utilization

  - Quick and appropriate failure response
  - Save labor on inspection and examination
  - Improve safe and stable operation
  - Improve passenger satisfaction

- **Lane Hazard Warning System**
  Contribute to safe driving by sharing location information of road obstacles detected by leading vehicle to following vehicles in real time via the cloud

  - The leading vehicle recognizes an obstacle on the road.
  - The following vehicles are notified of the danger in advance, giving them time (several seconds to several minutes) to avoid the obstacle.

LMS: Lifecycle Management Solution, INFOPRISM: Our original IoT platform, TCMS: Train Control and Management System
Energy Solutions
Contribute to the realization of sophisticated, sustainable lifestyle by turning natural energy into stable, high-quality electrical energy

- Received two awards jointly with local governments and participating companies at the FY2019 New Energy Awards
  <Agency for Natural Resources and Energy Commissioner’s Award>
  Oki Hybrid Project: Japan's first project to utilize state-of-the-art technology to expand the use of renewable energy in the entire community
  <New Energy Foundation Chairman’s Award>
  Installation of large storage battery systems with measures to mitigate periodic output fluctuations

- ZEB test facility
  (Kamakura, scheduled to start operation in September 2020)
  - Acquired CASBEE Wellness Office S rank certification


Power plant
Variable natural energy forecasting system
Renewable energy power plants
Community EMS
Mesh communication for AMI
Factory
Customer
Electricity market
Substation
Large-scale storage battery control
Substation frequency stabilization
Transmission network
Power stabilization equipment
STATCOM
Distribution network
DC power supply system
Smart meter system
Electric vehicles (EV, PHEV)
V2B
V2H
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Smart meter system
Electric vehicles (EV, PHEV)
V2B
V2H
8. Business Model Transformation

Manufacturing Solutions
Solve issues at manufacturing sites through automation that combines advanced technologies

Cooperation/Automation with Robots
Humans concentrate on high value-added tasks

- **Promote collaborative work with robots using “quick-dodging technology”**
  - Detects obstacles instantly and stops temporarily. Immediately calculates a route with no obstacles, and continues operation.
  - Continues high-speed, high-precision operation without coming into contact with people.

Human-AI Cooperation
Enable anyone to utilize the knowledge of a true craftsman

- **Utilize AI technology to automate work done by skilled technicians**
  - Adjustment work for precise positioning while suppressing vibration, which used to take skilled technicians more than a week, can be done in a single day using AI technology.
Safe and Secure Urban Development Solutions

Visualize objects and concepts that were not noticed thus far, and realize an eco-friendly smart city that is easy to live and stay in.

Open Innovations

Video and sensor information
- People flow and traffic flow grasp
- Accident / disaster grasp
- Congestion forecast
- Security

Area traffic management Solutions
- Eliminate/relieve congestion
- Protect and support vulnerable people
- Smooth movement and guidance
- Automated security, cleaning, etc. (Humans and robots coexisting)

Area security management Solutions
- Detect suspicious people and objects
- Watch over the area
- Energy saving

Area energy management Solutions
- Use of renewable energy

Video analysis solutions
- Open Innovations
- High-precision video surveillance
- Data linkage
- Power control
- Equipment control

kizkia : Intelligent Assistant
8. Business Model Transformation

Key Technologies That Support Transformation

Promote the use of our proprietary “compact artificial intelligence (AI) technology” and “5G technology” in a wide range of businesses, as well as their development and demonstration in order to create new businesses.

5G technology
Communication system technology, antenna technology, high frequency / optical device technology

■ Major demonstration experiments
- High-reliability, low-latency cellular V2X system demonstration experiment for 5G communication (From Apr. 2019)
- Technical verification of surveillance camera services utilizing aerial-view video synthesis technology and 5G (From Jan. 2020)
- Local 5G technology demonstration (From May 2020)
9. For New Lifestyles and Work Styles

1. Work Style Transformation
   • Promote group-wide work style transformation by enforcing remote work and fully leveraging online meeting tools.
   • Quickly establish the systems of marketing, commercial transactions, servicing, and user trainings in the digital environment to deal with rapidly changing values of humanity.

2. Providing Integrated Solutions to Current Social Issues
   • Respond to changing demand and address social challenges by uniting all the capabilities inside and outside of the Group.

Example

A Shift In The Way We Communicate

- High expectations for distant and unmanned systems
- Increasing demand for face-to-face online interactions
- Rising awareness of sanitation issues

Integrated Solutions

- Distant control
- Cooperation with Robots
- Security
- Infrared sensors
- Non-contact interface (Speech recognition, etc)
- Ventilation control

AI/5G/IoT
10. ESG Initiatives

**Continue our Commitment to the UN Global Compact**
Continue CSR activities in accordance with UN Global Compact principles in the areas of Human Rights, Labour, the Environment and Anti-Corruption

**Awarded “Gold,” the highest rating, in the evaluation of companies’ CSR performance conducted by EcoVadis (*1), a global rating agency specializing in CSR evaluation (Oct. 2019)**

**Environment**
Formulated Environmental Sustainability Vision 2050 (Jun. 2019)

- **Environmental Declaration**
  Protect the air, land, and water with our hearts and technologies to sustain a better future for all

- **Received the highest rating from CDP (*2) for “Water Security” for four consecutive years (Dec. 2019)**

Mitsubishi Electric Group’s greenhouse gas emissions reduction targets acquired SBT initiative (*3) certification (Jan. 2020)

Expressed approval of the recommendations by the Task Force on Climate-related Financial Disclosures (TCFD) (*4) (May 2019)


- **Contribute to disaster countermeasures related to global warming and climate change, and refine climate change predictions through development**

*1 EcoVadis: A rating agency that covers over 55,000 companies in 155 countries. Every year, EcoVadis comprehensively evaluates companies’ CSR initiatives, and those that rank in the top 5% of the surveyed companies are awarded the “Gold” rating.

*2 CDP: An international NPO working to enhance environmental disclosures.

*3 SBT(Science Based Targets) initiative: An international initiative by the UN Global Compact (UNGC), the World Wide Fund For Nature (WWF), the CDP, and the World Resources Institute (WRI)

*4 TCFD (Task Force on Climate-related Financial Disclosures): A task force for disclosure of climate-related financial information led by the private sector, established at the request of the G20 finance ministers and governors of central banks

*5 GOSAT-GW: Global Observing SATellite for Greenhouse gases and Water cycle
10. ESG Initiatives

**Employee engagement**

Realizing a work environment where all employees can work with vitality

- Transform the workplace culture by monitoring conditions using engagement surveys and implementing various measures based on the results
- Promote flexible and efficient working styles such as remote work utilizing IT
- Support career development through leave programs that accommodate individual life plans for those wishing to study abroad or accompany their spouse on overseas postings, etc.
- Strengthen and thoroughly implement intrusion prevention, diffusion prevention, leak prevention, global response, and document management
- In April 2020, establish the Information Security Supervisory Office under the direct control of the President
- Secure human resources by expanding the evaluation system for employees with advanced skills in AI and other fields
- Systematically select and educate non-Japanese candidates for core management positions at overseas bases

**Information security**

Develop a comprehensive multi-layer defense system

- Strengthen and thoroughly implement intrusion prevention, diffusion prevention, leak prevention, global response, and document management
- In April 2020, establish the Information Security Supervisory Office under the direct control of the President

**Product and service quality**

Provide the best products and services with unsurpassed quality

- Build a thorough quality control system that complies with related laws and required specifications
- Further foster quality awareness within the Group, centered on education
10. ESG Initiatives

Corporate Governance

In June 2003, Mitsubishi Electric became a company with a committee system (currently: nomination committee system company) and separated the supervisory and executive functions of management, to further continue with the promoting flexibility of operations and transparency of management.

Actual practices at Mitsubishi Electric

- Thorough separation of supervision and execution
- Majority of board of directors NOT assuming responsibility as executive officer
  
  | Directors | 12 |
  | of whom: independent directors | 5 |
  | executive officers (concurrent post) | 4 |

- Minimal number of executive officers (21 members) responsible for day-to-day operation of each business division and corporate administrative sections
- Multi-phase risk management through executive officers meeting
- Global internal control system to ensure compliance with various laws and regulations
- Maintaining systems to respond to company-wide risks
- Appropriate responses to Japan’s Corporate Governance Code

Appropriate response to revisions of legislation and other external factors

Appropriate disclosure to stakeholders
Cautionary Statement

While the statements herein including the forecast of the Mitsubishi Electric Group are based on assumptions the Group considers to be reasonable under the circumstances on the date of announcement, actual results may differ significantly from forecasts. Such factors materially affecting the expectations expressed herein shall include but are not limited to the following:

1. Any change in worldwide economic and social conditions, as well as laws, regulations, taxation and other legislation
2. Changes in foreign currency exchange rates, especially JPY/dollar rates
3. Changes in stock markets, especially in Japan
4. Changes in balance of supply and demand of products that may affect prices and volume, as well as material procurement conditions
5. Changes in the ability to fund raising, especially in Japan
6. Uncertainties relating to patents, licenses and other intellectual property, including disputes involving patent infringement
7. New environmental regulations or the arising of environmental issues
8. Defects in products or services
9. Litigation and legal proceedings brought and contemplated against the Company or its subsidiaries and affiliates that may adversely affect operations or finances
10. Technological change, the development of products using new technology, manufacturing and time-to-market
11. Business restructuring
12. Incidents related to information security
13. Large-scale disasters including earthquakes, typhoons, tsunami, fires and others
14. Social or political upheaval caused by terrorism, war, pandemics, or other factors
15. Important matters related to the directors and executive officers, major shareholders and affiliated companies of Mitsubishi Electric Corporation