Mitsubishi Electric Key Growth Businesses
Factory Automation (FA) Control Systems
[PLC, Servo, and CNC]

November 8, 2021
Mitsubishi Electric Corporation
FA Systems Division formulates medium-term business plan aiming for sales of 800 billion yen or more and operating profit ratio of 17% or more in FY2025.

The FA Control Systems Business, a key growth business for the entire company, aims for sales of 400 billion yen or more and an operating profit ratio of 23% or more in FY2025, by focusing management resources.

Taking “Technological Innovation (digital decarbonization)” and “Intelligent Manufacturing” as opportunities for future growth and growth strategies.

Contributing to the solution of social issues, such as decarbonization and labor shortage, through use of automation technology and energy-saving equipment and solutions at production sites.
1. Business Overview
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   1-2. Business Details and Areas
   1-3. FY 2021 2Q Result Highlights
   1-4. Our Strengths
   1-5. Business Management Policy

2. Medium-term Management Plan of Key Growth Businesses
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   2-2. Business Environment
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   2-4. Growth Strategy
   2-5. Initiatives to meet Social Challenges

Note
FY 2018: April 1, 2018 - March 31, 2019
FY 2019: April 1, 2019 - March 31, 2020
FY 2020: April 1, 2020 - March 31, 2021
FY 2021: April 1, 2021 - March 31, 2022
FY 2025: April 1, 2025 - March 31, 2026
1 Business Overview
## Business Structure

<table>
<thead>
<tr>
<th>Segment</th>
<th>Sub-segment</th>
<th>Key Growth Businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy &amp; Electric Systems</td>
<td>Social Infrastructure</td>
<td>Building Systems</td>
</tr>
<tr>
<td>Industrial Automation Systems</td>
<td>Building Systems</td>
<td>FA Control Systems (PLC, Servo, and CNC)</td>
</tr>
<tr>
<td>Information &amp; Communication Systems</td>
<td>Factory Automation (FA) Systems</td>
<td>Automotive Equipment</td>
</tr>
<tr>
<td>Electronic Devices</td>
<td>Information Systems &amp; Service</td>
<td>xEV/ADAS</td>
</tr>
<tr>
<td>Home Appliances</td>
<td>Electronic System</td>
<td>Power Semiconductor Devices</td>
</tr>
<tr>
<td></td>
<td>Electronic Devices</td>
<td>Air Conditioning &amp; Refrigeration Systems</td>
</tr>
</tbody>
</table>

**Key Growth Businesses**
- Building Systems
- FA Control Systems (PLC, Servo, and CNC)
- xEV/ADAS
- Power Semiconductor Devices
- Air Conditioning & Refrigeration Systems

*ADAS: Advanced Driver Assistance System*
Providing a wide range of products, services, and solutions to support customers' manufacturing needs.

<table>
<thead>
<tr>
<th>Business Group</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control and Drive Products</strong></td>
<td><strong>FA Control Systems</strong></td>
</tr>
<tr>
<td>Control Systems</td>
<td>PLC</td>
</tr>
<tr>
<td>Other Control and Drive Products</td>
<td>Servo</td>
</tr>
<tr>
<td></td>
<td>CNC (Numerical Controller)</td>
</tr>
<tr>
<td><strong>Processing Machine</strong></td>
<td><strong>Laser Processing Machine</strong></td>
</tr>
<tr>
<td></td>
<td>Electric Discharge Machine</td>
</tr>
<tr>
<td></td>
<td>Laser Processing Machine for CFRP(^1)</td>
</tr>
<tr>
<td></td>
<td>Metal 3D Printer</td>
</tr>
<tr>
<td><strong>Rotary Motor Power Distribution Control equipment</strong></td>
<td><strong>Rotary Motor</strong></td>
</tr>
<tr>
<td></td>
<td>Power Distribution Control Equipment</td>
</tr>
<tr>
<td><strong>Integrated Solution</strong></td>
<td><strong>e-F@ctory</strong></td>
</tr>
<tr>
<td></td>
<td>Consulting</td>
</tr>
<tr>
<td></td>
<td><strong>Software</strong></td>
</tr>
<tr>
<td></td>
<td>Remote Services</td>
</tr>
</tbody>
</table>

*1: Laser processing machine for Carbon, Fiber, Reinforced and Plastics.*
## FY 2021 2Q Result Highlights

Demand increased from FY 2020 3Q and further from FY 2021 1Q

<table>
<thead>
<tr>
<th></th>
<th>FY 2020 2Q</th>
<th>FY 2021 2Q</th>
<th>Year-on-year change</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orders received</td>
<td>281.2</td>
<td>462.8</td>
<td>+181.6</td>
<td>165</td>
</tr>
<tr>
<td>Net sales</td>
<td>272.3</td>
<td>366.7</td>
<td>+94.4</td>
<td>135</td>
</tr>
<tr>
<td>Operating profit</td>
<td>25.5 [9.4%]</td>
<td>63.0 [17.2%]</td>
<td>+37.5 [+7.8pt]</td>
<td>247</td>
</tr>
</tbody>
</table>

### Demand Growth Factors

#### Type of business
- Digital: Electronics, Semiconductors, 5G, etc.
- Decarbonization: EV, Battery, Solar power, etc.

#### Region
- All regions (especially East Asia)

#### Model
- All products (especially PLC/Servo/CNC/Processing machine)

### By Region (FY 2021 Cumulative 2Q)

- **Europe** 23.1 (165%)
- **Americas** 17.2 (153%)
- **Asia** 73.5 (134%)
- **Japan** 140.0 (113%)
- **India** 5.4 (179%)

*In parentheses: YoY percentage change*
Our Strengths (1) Technology Asset

Core of our FA products: Control and drive technologies, synergy, and in-house key parts
Our Strengths (2) Sales and Service Assets

Sales and service network covering the global FA market

- Mitsubishi Electric
  - 69 Countries
  - 177 Sites

- Sales and Service Network
  - 94 Countries
  - 1,480 Sites +

- Customer
  - Manufacturing Equipment and Machine Tool Builders
  - End Users
### Our Strengths (3) Partner Assets

**Ecosystem with partners to meet diverse customer needs**

#### In-plant Layer

- **IT System**
- **Edge**
- **Production Site**
- **Power Receiving and Distribution Facilities**

#### Edge Computing

- **e-Factory Alliance**
  - 1,058 Partners
  - SI 486 Partners
  - Software 290 Partners
  - Partners to realize a smart factory

- **EDGE CROSS CONSORTIUM**
  - 373 Partners
  - SI 166 Partners
  - Software 36 Partners
  - Edge-area Partners

- **CLPA**
  - 4,004 Partners
  - 2,430 Products
  - Industrial Network Partners

- **Ryoban kai**
  - 480 Partners
  - Partners for building power receiving and distribution facilities

### Partners

<table>
<thead>
<tr>
<th>Classification</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>SI</td>
<td>486</td>
</tr>
<tr>
<td>Software</td>
<td>290</td>
</tr>
<tr>
<td>Edge-area Partners</td>
<td>373</td>
</tr>
<tr>
<td>SI</td>
<td>166</td>
</tr>
<tr>
<td>Software</td>
<td>36</td>
</tr>
<tr>
<td>Edge-area Partners</td>
<td>486</td>
</tr>
<tr>
<td>Equipment and machinery</td>
<td>307</td>
</tr>
<tr>
<td>Equipment</td>
<td>96</td>
</tr>
<tr>
<td>Other</td>
<td>75</td>
</tr>
</tbody>
</table>

*As of September 2021*
Our Strengths (4) Customer Assets

Connection with customers gained through abundant delivery records and operating units

- **Number of Installations (Cumulative)**
  - e-F@ctory: 35,000 Cases
  - EDGE CROSS: 3,300 Licenses

- **Number of Units in Operation (Estimated from shipments over past 10 years)**
  - PLC: 11 Million Units
  - Servo: 12 Million Units
  - CNC: 900,000 Units

- **Customer Connection**
  - Number of registered members of FA web site: 680,000 Members
  - Number of Social Media followers: 800,000 Followers

  *Access per day 330,000

  *As of September 2021
## Business Management Policy (1) 
**Growth Target for FY 2025**

### FY 2025 Growth Targets: FA System Business

<table>
<thead>
<tr>
<th></th>
<th>FY 2020 Actual</th>
<th>FY 2021 Forecast</th>
<th>FY 2025 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>¥587.9 billion</td>
<td>¥750 billion</td>
<td>¥800 billion+</td>
</tr>
<tr>
<td><strong>Operating Profit Margin</strong></td>
<td>10.5%</td>
<td>16.8%</td>
<td>17.0%+</td>
</tr>
</tbody>
</table>

### Exchange Rate

<table>
<thead>
<tr>
<th>Currency</th>
<th>FY 2020 Actual</th>
<th>FY 2021 Forecast</th>
<th>FY 2025 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>US $</td>
<td>106 yen</td>
<td>110 yen</td>
<td>105 yen</td>
</tr>
<tr>
<td>Euro</td>
<td>124 yen</td>
<td>128 yen</td>
<td>115 yen</td>
</tr>
<tr>
<td>Renminbi</td>
<td>15.7 yen</td>
<td>17.0 yen</td>
<td>15.0 yen</td>
</tr>
</tbody>
</table>
Our FA system business consists of a wide range of products. Clarify resource input policies for each business segment and accelerate growth.

<table>
<thead>
<tr>
<th>Business Category</th>
<th>Product</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>FY 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Net Sales (¥bn)</td>
<td>Operating Profit Margin</td>
<td>Net Sales (¥bn)</td>
</tr>
<tr>
<td>Key Growth Businesses</td>
<td>PLC, Servo, CNC</td>
<td>265</td>
<td>~20%</td>
<td>355</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable Profit Businesses</td>
<td>Processing Machine, Inverter, HMI</td>
<td>149</td>
<td>10%+</td>
<td>197</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated Solution, Potential and New Businesses</td>
<td>e-Factory, Robot, New Processing Machine Business</td>
<td>56</td>
<td>~3%</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value Recapurting Businesses and Other Businesses</td>
<td>Other Business</td>
<td>167</td>
<td>~5%</td>
<td>184.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolidated Total</td>
<td></td>
<td>588</td>
<td>10.5%</td>
<td>750</td>
</tr>
</tbody>
</table>

April 2022 (planned): Establishment of a new industrial sewing machine company (20% owned by Mitsubishi Electric)
Medium-term Management Plan of Key Growth Businesses
Enriching the lives of people around the world by contributing to co-innovation with industry and infrastructure customers utilizing automation technology.
Our role will become increasingly important for technological innovation and the realization of a sustainable society.
Our FA business has expanded steadily by providing value to growth areas. We formulate strategies for growth based on the business environment.
Focusing on “Technological innovation (digital and decarbonization)” and “Intelligent manufacturing” for future business expansion, we will acquire appropriate technology / human resources and establish a "business driving" structure.
Our FA business continuously generates stable free cash flow. We will strengthen growth investments to realize further expansion of operating cash flow.

### Cash Flow

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating cash flow (¥bn)</th>
<th>Investment cash flow (¥bn)</th>
<th>Free cash flow (¥bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>90.7</td>
<td>60.9</td>
<td>29.8</td>
</tr>
<tr>
<td>2017</td>
<td>85.5</td>
<td>56.1</td>
<td>29.8</td>
</tr>
<tr>
<td>2018</td>
<td>80.5</td>
<td>47.8</td>
<td>34.5</td>
</tr>
<tr>
<td>2019</td>
<td>80.0</td>
<td>30.6</td>
<td>49.9</td>
</tr>
<tr>
<td>2020</td>
<td>86.0</td>
<td>57.9</td>
<td>28.1</td>
</tr>
<tr>
<td>2021</td>
<td>60.0</td>
<td>55.9</td>
<td>4.1</td>
</tr>
<tr>
<td>2025</td>
<td>120.0</td>
<td>60.0</td>
<td>60.0</td>
</tr>
</tbody>
</table>

### Growth Investment

- **FY 2016 to 2020**
  - **R&D**: ¥259 billion (¥259bn)
  - **Facilities**: ¥158 billion (¥158bn)
  - **M&A, etc.**: ¥15 billion (¥15bn)

- **FY 2021 to 2025**
  - **Facilities**: ¥346 billion (¥346bn)
  - **M&A, etc.**: ¥178 billion (¥178bn)
  - **R&D**: ¥178 billion (¥178bn)

- **Strengthen Core Components**
  - Intelligent devices and others
- **Provide Value to Growth Industries**
  - Special purpose motors, etc.
- **Expand Integrated Solutions**
  - Software
  - Security
  - Consulting, etc.

- Servo/CNC production capacity: ¥26 bn
- New production facility in Chubu region: ¥17 bn
- Expansion of production facility in China: ¥13 bn
- New production facility in India: ¥3 bn etc.
(There is some overlap in the amounts)
Growth Strategy

Our Growth Strategy

Provide Value to Growth Industries
Strengthen Core Components
Expansion of Integrated Solutions

Strengthening Business Infrastructure

Technology Assets
Sales Service Assets
Partner Assets
Customer Assets

Key Growth Businesses

<table>
<thead>
<tr>
<th>FY 2020 Actual</th>
<th>FY 2021 Forecast</th>
<th>FY 2025 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>¥265 billion</td>
<td>¥355 billion</td>
</tr>
<tr>
<td>Operating Profit Margin</td>
<td>~20%</td>
<td>20%+</td>
</tr>
</tbody>
</table>

Integrated Solutions, Potential & New Businesses

<table>
<thead>
<tr>
<th>FY 2020 Actual</th>
<th>FY 2021 Forecast</th>
<th>FY 2025 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>¥56 billion</td>
<td>¥65 billion</td>
</tr>
<tr>
<td>Operating Profit Margin</td>
<td>~3%</td>
<td>5%+</td>
</tr>
</tbody>
</table>
Growth Strategy (1)
Strengthening Core Components

Introducing next-generation products that meet cutting-edge customers’ needs

Product Roles
- **PLC**: Optimal control of manufacturing equipment and production lines
- **Servo**: High speed and high accuracy control of manufacturing equipment
- **CNC**: High speed and high accuracy control of machine tools

Growth Strategy
- Contribute to technological innovation through co-creation and development with advanced manufacturing equipment manufacturers.
- Strengthen global business structure (manufacturing, development, sales, service, IT)

Core Components
- Development of next-generation products with maximum performance and scalability
- Strengthen high-speed and high-accuracy technologies

Field Knowledge

Advanced Digital Technology
- Integration with digital technologies such as 5G, AI, and Cloud technologies
- 5G: Verification test using PLC production line, Started in November 2021
- AI: Applied to 21 products
- Cloud: Started in April 2016
- Digital Twin: Released in August 2021
- Cybersecurity: IEC62443-4-1, Acquired in May 2021
Establishing business structure to support customers’ innovation globally

Growth Industries

- EV
- Semiconductor
- Display
- EMS
- Battery
- Logistics
- Data Center
- Food, Beverage, Medical Care

Strengthening sales organization for growth industries

Global 260 +
(As of September 2021)

April 2021: Dedicated organization established

Optimal proposal by industry
Customer support for overseas expansion

Expansion of innovation labs for the global market

More than 200 engineers
(Planned for FY2025)

Regions:
China, Europe, North America, India

Co-creating to meet the customer's ideal status

Creation of innovation unique to Mitsubishi Electric

Corporate Research and Development Group

Advanced Technology R&D Center
Information Technology R&D Center
Integrated Design Center

Environmental Change
Acceleration of Technological Innovation
Global Diversification
Normalization of Uncertainty
Growth Strategy (3)  
Expansion of Integrated Solutions

Providing integrated solutions that leverage our strengths to meet the needs of intelligent manufacturing

<table>
<thead>
<tr>
<th>FA Systems Business</th>
<th>Characteristics of Mitsubishi Electric</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>Offering a diversified product lineup, technology, knowledge and comprehensive value as a general electronics manufacturer</td>
</tr>
<tr>
<td>Edge (OT (FA))</td>
<td>Edge products and IoT platform to connect IT and OT</td>
</tr>
<tr>
<td>PLC, Motion, CNC, Key Growth, Key Growth</td>
<td>Capable of dealing with variety of customer needs through ecosystem with our partners</td>
</tr>
<tr>
<td>PLC: 11 Million Units, Servo: 12 Million Units, CNC: 0,9 Million Units</td>
<td>Integration of digital technology to production sites; e-F@ctory (since 2003)</td>
</tr>
</tbody>
</table>

**Technological Assets**
- Real-time Control Technology
- Power Electronics Technology
- Motor Technology
- Manufacturing Technology
- Maisart (AI)
- ClariSense
- Communication Technology (5G utilization)

**Customer Assets**
- No. of Deliveries: e-F@ctry 35,000
- No. of Units in Operation: e-F@ctry
- PLC: 11 Million Units
- Servo: 12 Million Units
- CNC: 0,9 Million Units
- Customer Contact
- Registered Members on FA Web Site: 680,000 Members

**Partner Assets**
- e-F@ctory Partners: 1,058 companies
- Edgecross Partners: 373 companies
- CC-Link Partners: 4,004 companies

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Accelerate the use of digital technology within the company, establish foundation for DX, and build a new business model.
Creating value throughout the customers’ life cycle using digital technology and field knowledge

<table>
<thead>
<tr>
<th>Consulting</th>
<th>Software</th>
<th>Remote Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>e-F@ctory (China: since 2014)</strong></td>
<td><strong>MELSOFT</strong></td>
<td><strong>iQ Care Remote 4U (Since 2016)</strong></td>
</tr>
<tr>
<td>Support for automation, productivity, quality improvement</td>
<td>SCADA (Monitoring &amp; Control)</td>
<td>Processing Machine</td>
</tr>
<tr>
<td>Total 125 Cases</td>
<td>GENESIS64 (March 2021)</td>
<td>End User</td>
</tr>
<tr>
<td><strong>Data Analysis (Since 2018)</strong></td>
<td><strong>Digital Twin</strong></td>
<td><strong>Remote Services</strong></td>
</tr>
<tr>
<td>Task definition, data collection and learning model creation support by experts</td>
<td>Energy Saving Analysis &amp; Diagnosis</td>
<td><strong>iQ Care Platform (Under Development)</strong></td>
</tr>
<tr>
<td>Total ~ 10 Cases</td>
<td>Data Analysis Software (May 2018)</td>
<td>Mitsubishi Electric</td>
</tr>
<tr>
<td><strong>Energy Saving (since 1997)</strong></td>
<td>Eco Adviser (October 2020)</td>
<td>FA Products</td>
</tr>
<tr>
<td>Unit consumption management, utility renewal, operation optimization support by experts</td>
<td>MELSOFT iQ AppPortal for Cloud (Under Development)</td>
<td>Product sales</td>
</tr>
<tr>
<td>Total 500 Cases</td>
<td>Management of project files, drawings, documents, etc. by purpose</td>
<td>Remote Services Foundation</td>
</tr>
</tbody>
</table>

- **Company wide IoT platform**
- **Technological Assets (AI, security, etc.)**
- **Solution Library**
- **Database**
- **Creation of new value at manufacturing sites**
Build a solid, stable supply system by increasing production capacity and establishing a global trilateral manufacturing structure.

- **Establish new production facility**
  - Location: Chubu region
  - Completion: FY2024
  - Total floor area: 33,000㎡+

- **Use of internal facility**
  - Start of production: FY2022

- **Consideration for expanding existing sites**
  - Dalian No. 4 Factory
  - Changshu No. 3 Factory

- **Establish new production facility**
  - Location: Talegaon, Pune
  - Completion: FY2023
  - Total floor area: 15,000㎡+

- **Use of internal facility**
  - Start of production: FY2022
Provide solutions to social challenges through our business efforts

1. Contribute to a decarbonized society by providing Energy-saving equipment and solutions for production sites

   **Example (1)** Fiber laser processing machine
   Reduction of electricity consumption to 1/3 (compared to conventional CO2 laser processing machines)

   **Example (2)** Energy-saving support application “EcoAdviser”
   Support for energy conservation measures through automated diagnosis of energy loss factors with Maisart (AI technology)

2. Contribute to solving social issues through automation technology

   **Examples** Overcoming issues caused by labor shortages
   Robot utilized for automatic tire replacement system (RoboTire, Inc.)
   Tire replacement on one vehicle in 15 minutes
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