Life Business Area

May 2023

Mitsubishi Electric Corporation
Index

1. Executive Summary ................................................................. P3
2. Life BA
   2-1. Business Structure .......................................................... P6
   2-2. The Ideal Form ................................................................. P7
   2-3. Strengths ........................................................................ P8
3. Building Systems Business
   3-1. Market environment and growth directions ......................... P10
   3-2. Key strategies .................................................................. P11
   4-1. Market environment and growth directions ......................... P14
   4-2. Key strategies .................................................................. P15
   4-3. Manufacturing and development strategies ......................... P16
5. Portfolio Strategy in BA ......................................................... P17
6. BA Synergy Strategies ............................................................. P19
Executive Summary
Executive Summary

Aim for sales of approx. 2.4 trillion yen and an operating margin of 11% or more in FY2026 by promoting growth and synergy strategies in the HVAC&R business and the building systems business.

- In Life BA, aim to become a solution provider that creates comfortable, safe and secure environments in all sorts of spaces for living, in addition to strengthening business strategies for individual facility businesses.

- Building Systems Business steadily improves profitability by enhancing recurring revenue business model, strengthens the portfolio of elevator/escalator products, and reaps the effect of business integration by Mitsubishi Electric Building Solutions Corporation, to further enhance Building Solutions Business.

- Air Conditioning Systems & Home Products Business concentrates resources into HVAC&R* Business centering on Air-Conditioning & Refrigeration Business, which is one of the mainstay Key Growth Businesses. Investment to expand ATW Business in Europe and ductless air conditioners in U.S., and to grow business in India, thereby accelerating the improvement of a system for local production/local consumption.

- Combine the strengths of both businesses with digital technologies to evolve into Life BA’s integrated solutions, namely (1) green energy solution, (2) safe, secure & comfortable solution, and (3) buildings management solution.

* HVAC&R is an acronym for Heating, Ventilation, Air Conditioning & Refrigeration, standing for equipment and facilities relating to the foregoing.
Life BA
Life BA Business Structure

Life BA consists of Air Conditioning Systems & Home Products segment centering on HVAC&R area and Building Systems segment.

Life BA Revenue

- Building Systems
- HVAC&R
- Air Conditioning Systems & Home Products

Home products area

Business/industrial use and building systems area

HVAC&R Business

- Multi-functional AC for buildings
- Air-cooled heat pump chiller
- Packaged AC for facilities

Building management systems
System control by connecting energy saving equipment and sensors

HVAC&R Business

- AC indoor unit
- Ventilation fan
- Air conveyance fan

HVAC&R Business

- ATW (Air To Water)
- Heat pump water heater
- Refrigerator

HVAC&R Business

- Room air conditioners
- Ventilation fan
- Refrigerator

Housing equipment & home appliances business

- DC power distribution system
- Power receiving/transforming equipment
- UPS (Uninterruptable Power Supply)

Building management systems
- Lighting
- Escalators
- Elevators
- Network cameras (video monitoring system)

Service by product
- Sale, production and installation of equipment
- Maintenance and remote control
- Renewal

Whole-building service
- One-stop proposals (From consultation on introduction to support)
- Energy management
- Smart solution proposals

【Service by product】
- Sale, production and installation of equipment
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【Whole-building service】
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- Smart solution proposals

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The Ideal Form

A solution provider that makes all sorts of spaces/environments comfortable - Create, maintain and advance -

Green energy solution
- Energy conservation/electrification at facilities + Energy demand forecast and supply data
- Demand response, Energy conversion
- Carbon neutral

Safe, secure and comfortable solution
- Safety / Security: Operation data + Device sensing for abnormal signals prediction + Human sensory data + Data on flow of people
- Well-being: Lifeline maintenance, Personal space optimization

Buildings management solution
- Energy conservation Higher efficiency: Operation data management + Robot utilization + Data on flow of people
- Lower lifecycle costs, Remote monitoring/control

Strong global networks × Abundant field knowledge
- Ties with many customers
- Integrated operation system/knowhow
- Circular business model
- Field knowledge

Data utilization × New/advanced technologies
- Data utilization
- Operation data
- Digital technologies
- Algorithms
- Digital Twin
- Controlling flow of people
- AI data analysis
- Failure prediction

Enhanced components and systems utilized in a wide range of situations

HVAC & R
Elevators & Escalators/buildings management systems
Infrastructure
Cloud infrastructure

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### Strengths of Life BA

#### Our strengths

1. **Broad-ranging facility business enabling creation of environments**
   - HVAC&R (ultra low-GWP refrigerants, energy-efficient HP* technologies)
   - Elevators/buildings management systems (higher efficiency)
   - DC power distribution systems, power receiving/transforming facilities (control technology)

2. **Safe and secure technologies and accumulated data**
   - Knowledge cultivated in field services
   - Data obtained and accumulated from various equipment and knowledge in maintenance/operation/management
   - Various system technologies

3. **Strong customer base and abundant assets**
   - Strong relationships with global business partners and sales/maintenance networks

*HP*: Heat Pump

#### Business strategies

**Growth strategies**
- Evolve and expand Components business and Maintenance & Service business
- Develop into Integrated Solutions, away from the one centered on facilities

**Key initiatives**
- Concentrate investment in HVAC&R and Building Systems businesses
- Establish a foundation for global business by enhancing systems for local production and consumption
- Expand and enhance our recurring revenue business

**Pursue synergies**
- Coordinate the service foundation for Building Systems business and the sales foundation for Air-Conditioning & Refrigeration Business
- Collaborate with Infrastructure BA to "generate, transmit and utilize energy efficiently"
3 Building Systems Business
Building Systems Business—Market environment and growth directions—

Demand for maintenance/renewal is rising in the elevator/escalator market and needs for solutions are expanding in the entire building market. Leveraging our strengths of globally operating business base for maintenance/operation/management, technologies, field knowledge and customer assets, focus on efforts to enhance recurring revenue business model and expand building systems solutions, aiming to achieve the medium-term management plan.

**Trend in demand**

- Needs of building owners and users diversify, requiring improved value of buildings
- e.g. life cycle cost reduction, energy conservation, labor saving, etc.
- Acceleration in initiatives for carbon neutrality

- Demand for new installation slows down, while that for maintenance/renewal is expanding
- Non-manufacturing elevator service providers’ business is expanding
- Business model is shifting to accommodating maintenance/renewal of multiple brands

- Demand is recovering to the pre-pandemic level
- Growth in demand for high-end models slows down, while that for mid-range ones, which account for a large portion of the market segment, is expanding

*Assumed values by Mitsubishi Electric. For Smart Buildings, it includes facility monitoring and control function and data linkage function in building management on a global scale.
Building Systems Business —Key strategies—

- Expand globally our recurring revenue business focusing on elevator and escalator business
- Number of units we service: 1,000,000 units to 1,300,000 units

Building systems mid-term plan

**Key strategy 1**
Strengthen the product portfolio of elevators/escalators to dominate the mid-range model market
- Enhance both global models and regional strategic models
- Optimize global supply chain management to develop strategic models
- Strengthen development by establishing a global R&D system

Global bases for development/production

- Indonesia
- Thailand
- South Korea
- Mexico
- Columbia
- Taiwan
- Japan (Inazawa)
- China
- India
- Netherlands

- Stylized representation of global production bases and supplier bases for elevators/escalators and electric vehicles (EVs) and escalators (ESs).
- Diagram indicates main products developed and produced, with notations such as "Global high-end model EV & ES for China" and "Global ultra-high-speed special EV & ES for Japan."
Building Systems Business —Key strategies—

Key strategy 2
Increase the number of units we service for maintenance/renewal
- Expand the maintenance service contract rate by offering remote monitoring system; Strengthen business platform for maintenance/service business; Enhance both global models and regional strategic models
- Expand maintenance/renewal business through alliance with independent maintenance operators and by M&As
- Strengthen efforts to accommodate maintenance/renewal of multiple brands

Key strategy 3
Synergy with Air-Conditioning & Refrigeration Systems Business
- Mutual utilization and efficient management of the infrastructure, know-how and customer assets between the sales base of the Air-Conditioning & Refrigeration Systems business and the maintenance and service base of the Building Systems business, respectively.
- Expansion of added value for an entire building, from individual facility sales to maintenance and renewal

Key strategy 4
Shift resources and improve efficiency to build an optimum one-stop business structure, spanning development to production, sales, maintenance and renewal
- Increase capability to offer one-stop service to customers and improve service quality
- Strengthen capability to develop maintenance/renewal menus, in addition to component development
- Improve operational process, streamline organizations and shifting management resources to solution business
- Develop foundation to utilize maintenance service infrastructures and data

Scale of maintenance/renewal business
- FY2021—FY2026
- CAGR: 7.7%
- ¥ trillion
- FY2021: 0.0, FY2022: 0.1, FY2023: 0.2, FY2024: 0.3, FY2026: 0.5
Air-Conditioning & Refrigeration Systems Business
Air-conditioner market, our main target, continues to expand globally amid the global trend for carbon neutrality and well-being. Revenue plan of ¥1.5 trillion for FY2026 as of the announcement of Key Growth Businesses in Nov, 2021 is expected to be achieved two years ahead of the plan.

<table>
<thead>
<tr>
<th>Market trend (by region)</th>
<th>Growth trend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Europe</strong></td>
<td></td>
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<tr>
<td>• A shift in thermal energy conversion (from combustion system to electric heat pumps) triggered by global warming accelerates further due to energy crisis, causing demand for ATW to surge.</td>
<td></td>
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<tr>
<td>• F-gas regulations are expected to prompt a shift to low-GWP (natural) refrigerants.</td>
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<tr>
<td><strong>U.S.</strong></td>
<td></td>
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<tr>
<td>• Rebate programs to promote decarbonization/ adoption of heat pumps, inflation reduction act and others were set forth as new state policies. Demand is expected to surge for highly-efficient ductless products.</td>
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<tr>
<td><strong>India</strong></td>
<td></td>
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<tr>
<td>• The market is projected to expand into the world’s largest size in the future due to economic growth and an increase in the middle income class with purchasing power. Demand for repair/maintenance emerged and is growing.</td>
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<tr>
<td><strong>Japan</strong></td>
<td></td>
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<tr>
<td>• F-gas regulations are expected to prompt a shift to low-GWP (natural) refrigerants. The pandemic has generated new trends, such as the pursuit of air quality and comfortability.</td>
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<tr>
<td><strong>China</strong></td>
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<tr>
<td>• Despite boasting of the world’s largest demand for air conditioning, the demand trends are slowing down due to low economic growth rate and sluggish real estate and housing.</td>
<td></td>
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<tr>
<td><strong>South-east Asia</strong></td>
<td></td>
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<tr>
<td>• While air conditioning market is expected to grow in tandem with economic growth, energy saving regulations and standards are being introduced in each country.</td>
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</tbody>
</table>
In addition to North America and Europe, we position the Indian market as the key focused market, where significant growth is expected for a medium to long term. Intensively allocate resources to these strategic markets.

Key strategy 1

- Concentrate on HVAC&R Business with Air-Conditioning & Refrigeration Business at the core

Key strategy 2

- Concentrate resources into growth markets
- Strengthen regional strategies based on local production for local consumption in the markets of Europe, U.S. and India

Key strategy 3

- Strengthen solution business through user support throughout the life cycle, including maintenance
Air-Conditioning & Refrigeration Systems Business

—Manufacturing and development strategies—

Manufacturing strategy: To address surging demand in Europe, the U.S. and India, establish a global operational foundation through strengthening a system for local production/local consumption.

Development strategy: Further refine our energy-saving and environmental-conscious technologies (refrigerant conservation and new refrigerants) to contribute to a decarbonized society; Establish and reinforce a global R&D center to support local production/local consumption.

Investment for new establishment/capacity increase of AC production bases

- ATW Business investment: ¥80 billion (Accumulated total (from FY2022 to FY2026))
- Local production rate in FY2026: 60% (Increase by 10%)

- Local production rate in FY2026: 50% (Increase by 30%)

<table>
<thead>
<tr>
<th>Global manufacturing investment</th>
<th>¥240 bn</th>
</tr>
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<tbody>
<tr>
<td>Accumulated total (from FY2022 to FY2026)</td>
<td>¥180 bn</td>
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<tr>
<th>Global development investment</th>
<th>¥200 bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated total (from FY2022 to FY2026)</td>
<td>¥245 bn</td>
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- Strengthen development of natural/ultra-low GWP refrigerants
  - Europe: R290 natural refrigerant adopted
  - ATW: To be introduced in July 2023
  - Room air conditioners: To be introduced in FY2025
  - U.S.: 454B ultra low-GWP refrigerants adopted
  - Room air conditioners: To be introduced in FY2025

- Strengthen global development capability
  - Establish local R&D centers in Europe, Americas, China and Asia. Execute development tailored to local needs.

*As of the announcement of Key Growth Businesses in November 2021
Portfolio Strategy in BA
To achieve an ideal Life BA, assess the feasibility of each business and concentrate resources into the core HVAC&R and Building Systems Business areas. Less profitable businesses falling below a certain threshold shall be terminated upon judging feasibility, to conduct resource shifting.

**Portfolio Strategy in BA**

- **High Growth Potential**
  - **HVAC&R**
    - Heating, Ventilation, Air Conditioning & Refrigeration
  - **Building Systems**
    - Elevator, escalator and building management systems

- **Low Growth Potential**
  - **Digital media equipment, etc.**
  - **Housing equipment & home appliances**
    - *except HVAC&R*

**Profitability/asset efficiency**

- **Low**
  - Judgements on business
  - Resource shifting to Key Growth Businesses

- **High**
  - Higher efficiency and enhanced competitiveness
  - Business growth through intensive investment

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BA Synergy Strategies
BA Synergy Strategies

Create Integrated Solutions to pursue synergies for expanding into Circular Digital-Engineering Business

- Evolve the existing system solutions within the BA into Integrated Solutions and new value proposition, powered by data utilization
- Deliver a new solution business through cooperation with Infrastructure BA and DX Innovation Center

Existing system solutions

Remote supervision
Watch over a family member living far away without disturbing

Remote monitoring/maintenance service
Abnormality alarm, refrigerant leakage diagnosis, operational data browsing

Contribute to decarbonization by supporting ZEB introduction as a one-stop service from design to operation

Enhance services utilizing a smart city/building IoT platform

~Furthermore, Create, maintain and advance~

Integrated Solutions

Green Energy Solution
- Carbon neutral

Safe, Secure and Comfortable Solution
- Safety/ Security

Buildings Management Solution
- Well-being
- Energy conservation
- Higher efficiency

Mobility support service using robots
Energy management service