

Life Business Area

May 2023

Mitsubishi Electric Corporation

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1

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.

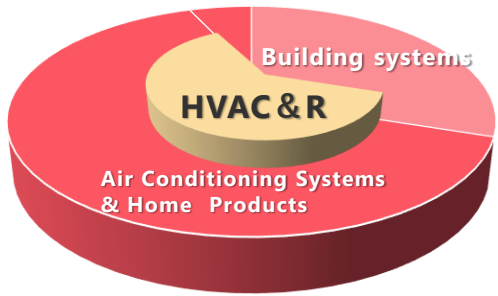
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Life BA

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



HVAC&R Business

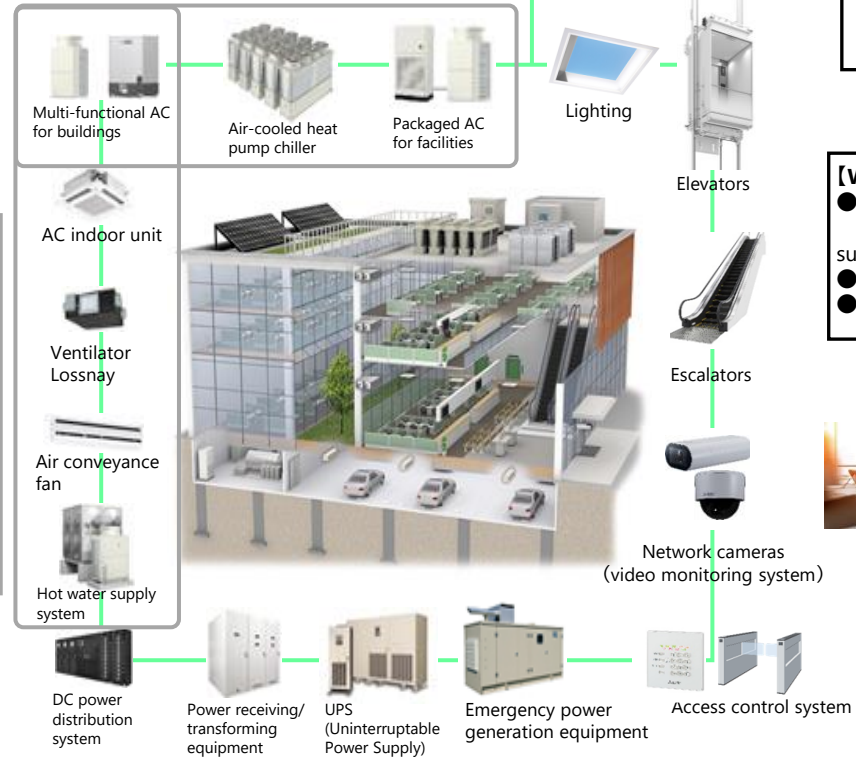


Housing equipment & home appliances business



Business/industrial use and building systems area

HVAC&R Business



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

[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

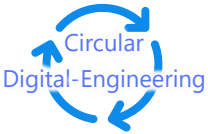


The Ideal Form

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

Green energy solution

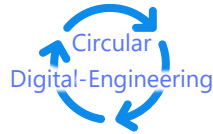
Carbon neutral



Energy conservation/electrification at facilities + Energy demand forecast and supply data
Demand response, Energy conversion

Safe, secure and comfortable solution

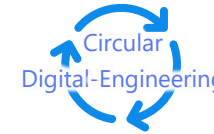
Safety / Security



Operation data + Device sensing for abnormal signals prediction + Human sensory data + Data on flow of people
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

Global sales network

Global maintenance network

Integrated operation system/knowhow

Circular business model

Field knowledge

+

Data utilization × New/advanced technologies

Data utilization

Operation data

Digital technologies

Digital Twin

AI data analysis

Algorithms

Controlling flow of people

Failure prediction

and more

Enhanced components and systems utilized in a wide range of situations

HVAC & R



Elevators & Escalators/buildings management systems



Infrastructure



Cloud infrastructure



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

Building market

- 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

Elevators/escalators

Japan, Europe and the U.S.

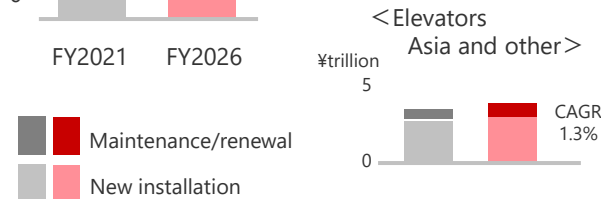
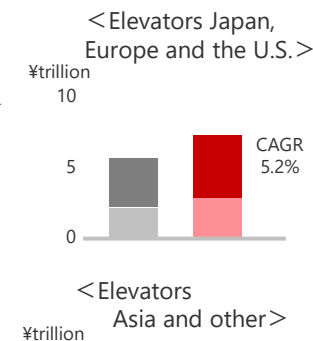
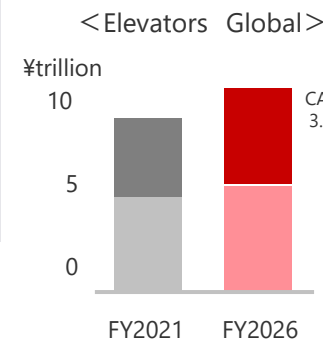
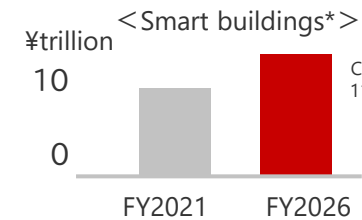
- Demand for new installation slows down, while that for maintenance/renewal is expanding
- Non-manufacturing elevator service providers' business is expanding
- Business model is shifting to accommodating maintenance/renewal of multiple brands

Asia and other

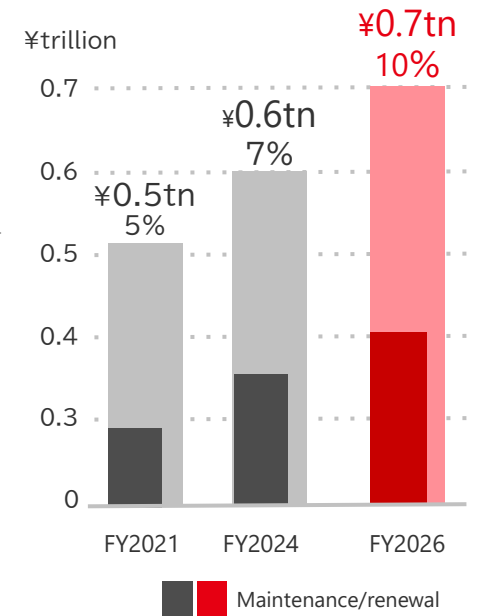
- Demand is recovering to the pre-pandemic level
- Growth in demand for high-end models slows down, while that for mid-range ones, which account for a large portion of the market segment, is expanding

Mid-term plan

Upper figure: Revenue
Lower figure: Operating profit margin



■ Maintenance/renewal
■ New installation

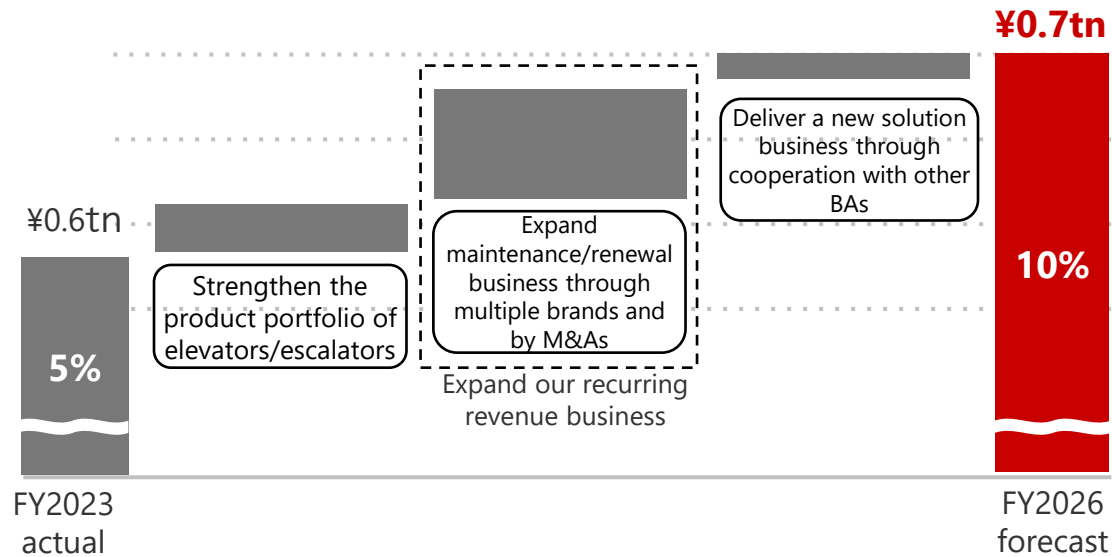


*Assumed values by Mitsubishi Electric. For Smart Buildings, it includes facility monitoring and control function and data linkage function in building management on a global scale.

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

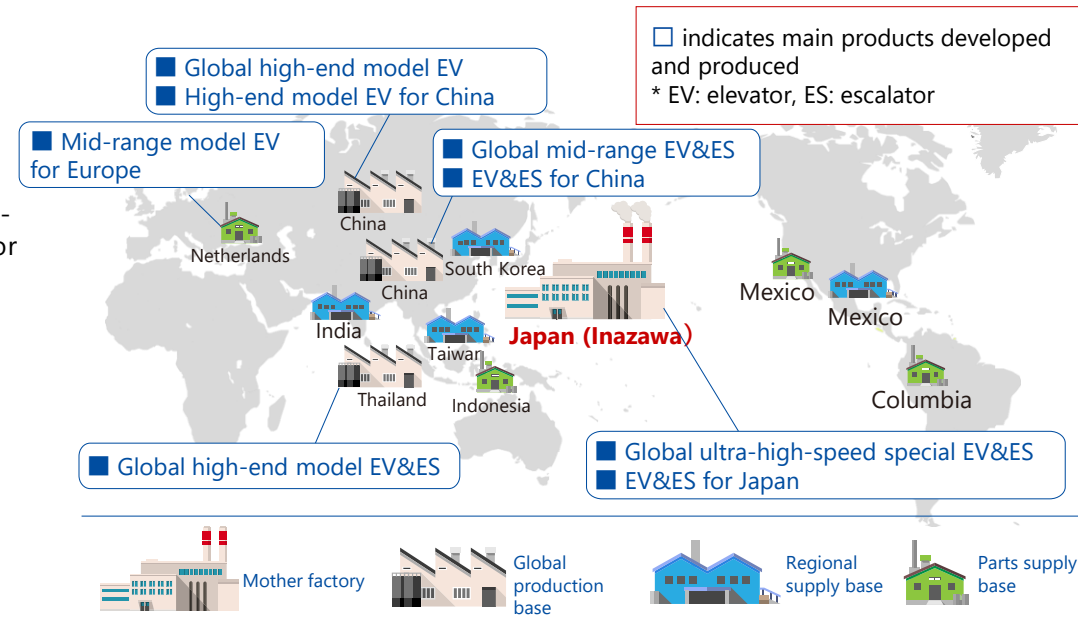


Machine-room-less elevator for Europe



Machine-room-less elevator for India

Global bases for development/production



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



Continued investment
in strategic regions
(Japan, Europe and the U.S.)

Key strategy 3

Synergy with Air-Conditioning & Refrigeration Systems Business

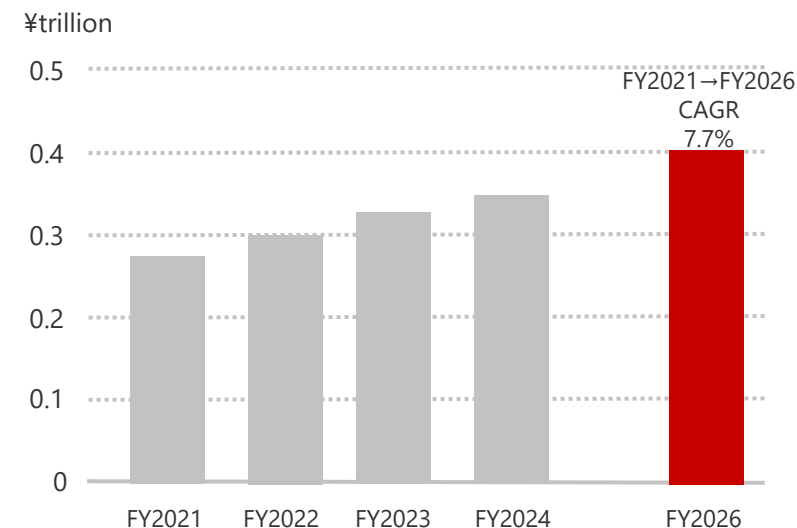
- Mutual utilization and efficient management of the infrastructure, know-how and customer assets between the sales base of the Air-Conditioning & Refrigeration Systems business and the maintenance and service base of the Building Systems business, respectively.
- Expansion of added value for an entire building, from individual facility sales to maintenance and renewal
- Provision of Circular Digital-Engineering solutions using digital technology.

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



4

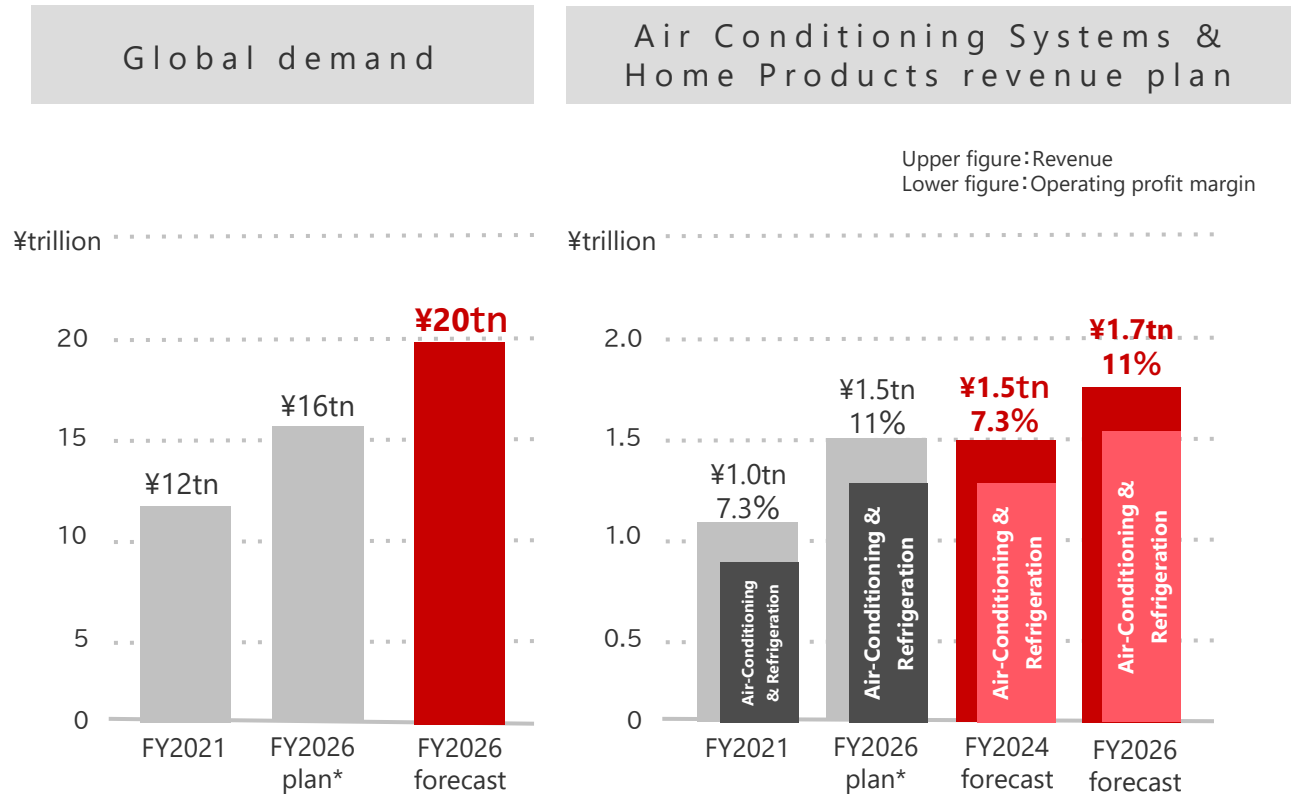
Air-Conditioning & Refrigeration Systems Business

Air-Conditioning & Refrigeration Systems Business

— Market environment and growth directions —

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

	Market trend (by region)	Growth trend
Europe	<ul style="list-style-type: none"> 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. F-gas regulations are expected to prompt a shift to low-GWP (natural) refrigerants. 	
U.S.	<ul style="list-style-type: none"> 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. 	
India	<ul style="list-style-type: none"> 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. 	
Japan	<ul style="list-style-type: none"> 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. 	
China	<ul style="list-style-type: none"> 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. 	
South-east Asia	<ul style="list-style-type: none"> While air conditioning market is expected to grow in tandem with economic growth, energy saving regulations and standards are being introduced in each country. 	



*As of the announcement of Key Growth Businesses in November 2021

Air-Conditioning & Refrigeration Systems Business –Key strategies–

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

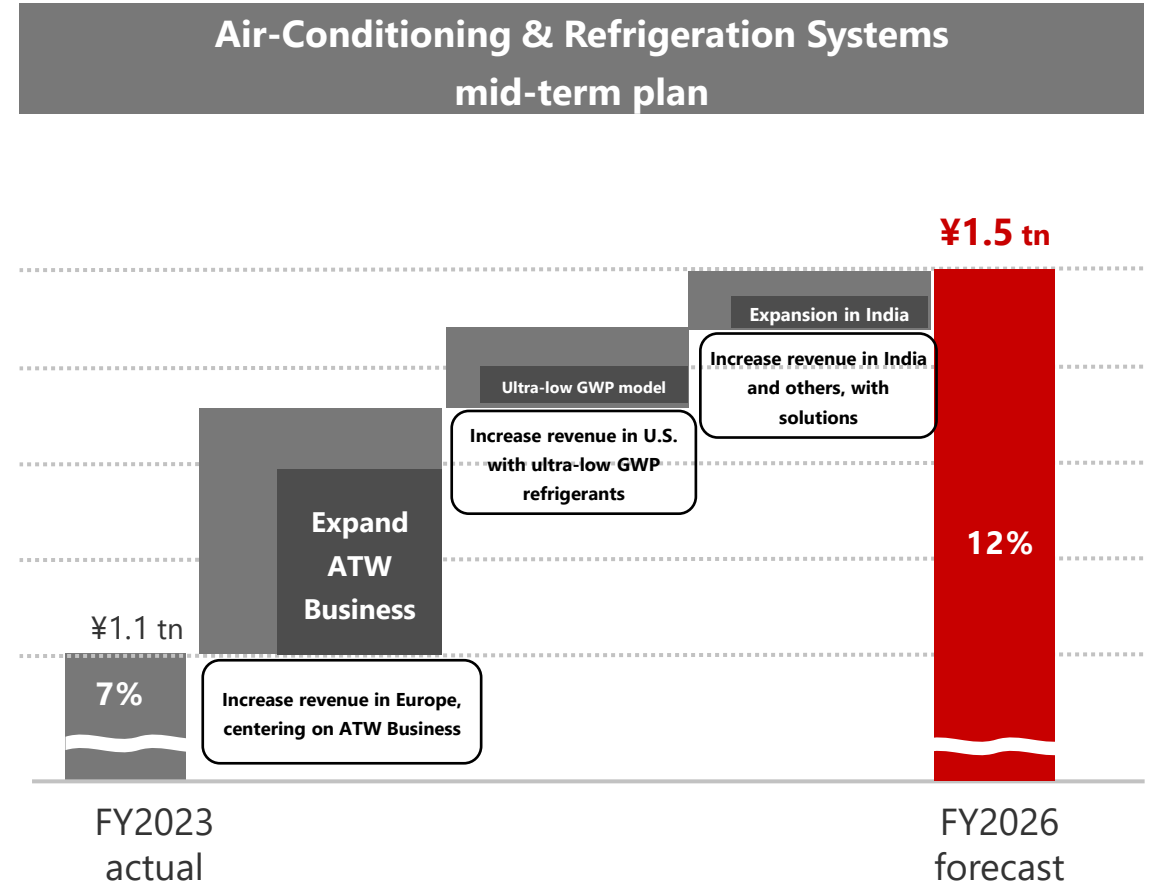
- Concentrate on HVAC&R Business with Air-Conditioning & Refrigeration Business at the core

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



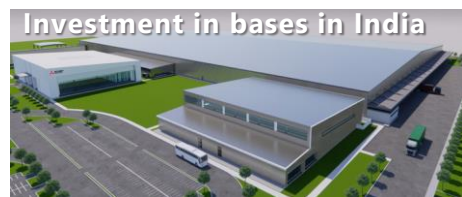
Air-Conditioning & Refrigeration Systems Business

— 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

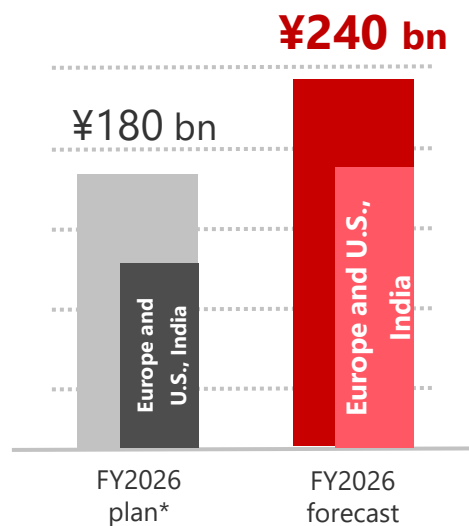


- ATW Business investment: ¥80 billion
Accumulated total (from FY2022 to FY2026)
- Local production rate in FY2026 : 60%
(Increase by 10%)



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

Global manufacturing investment
Accumulated total (from FY2022 to FY2026)



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

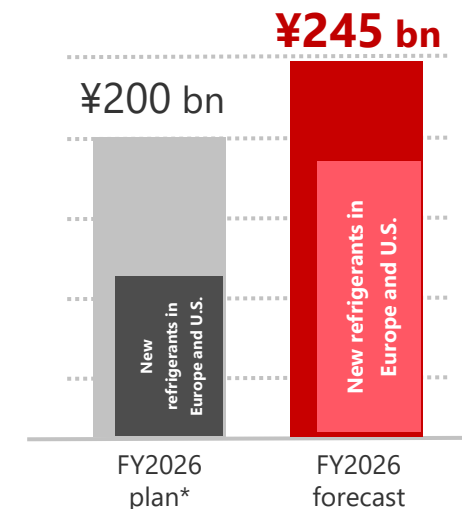


Strengthen global development capability

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



Global development investment
Accumulated total (from FY2022 to FY2026)



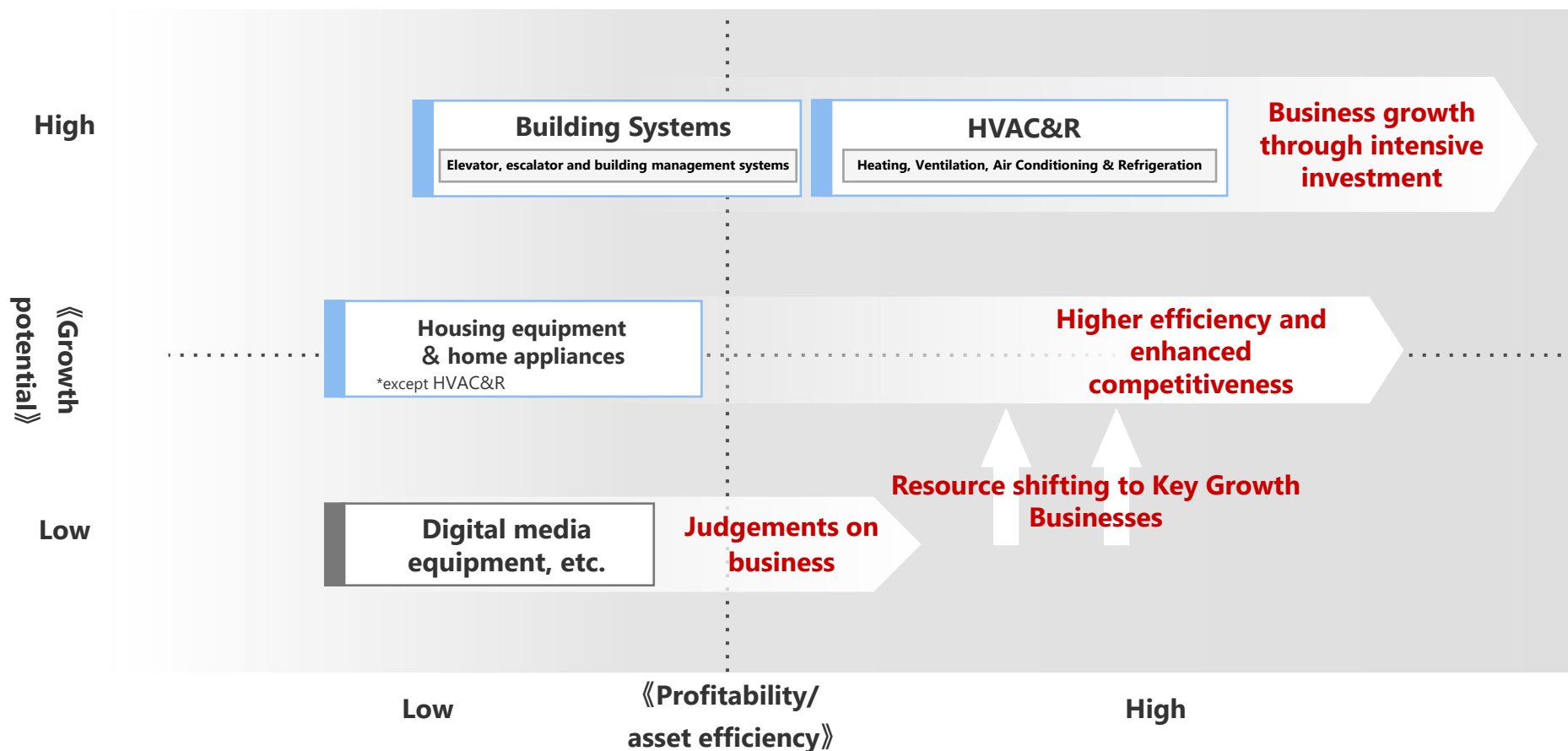
*As of the announcement of Key Growth Businesses in November 2021

5

Portfolio Strategy in BA

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.



6

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



Energy management service

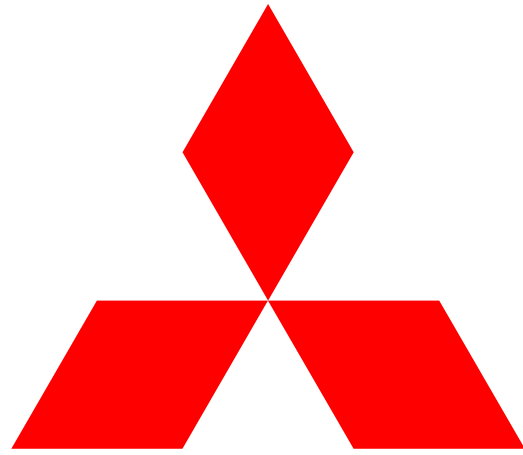


Mobility support service using robots

~ Furthermore, Create, maintain and advance ~

Integrated Solutions





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Changes for the Better