

# Panasonic

## Heating & Ventilation A/C Company

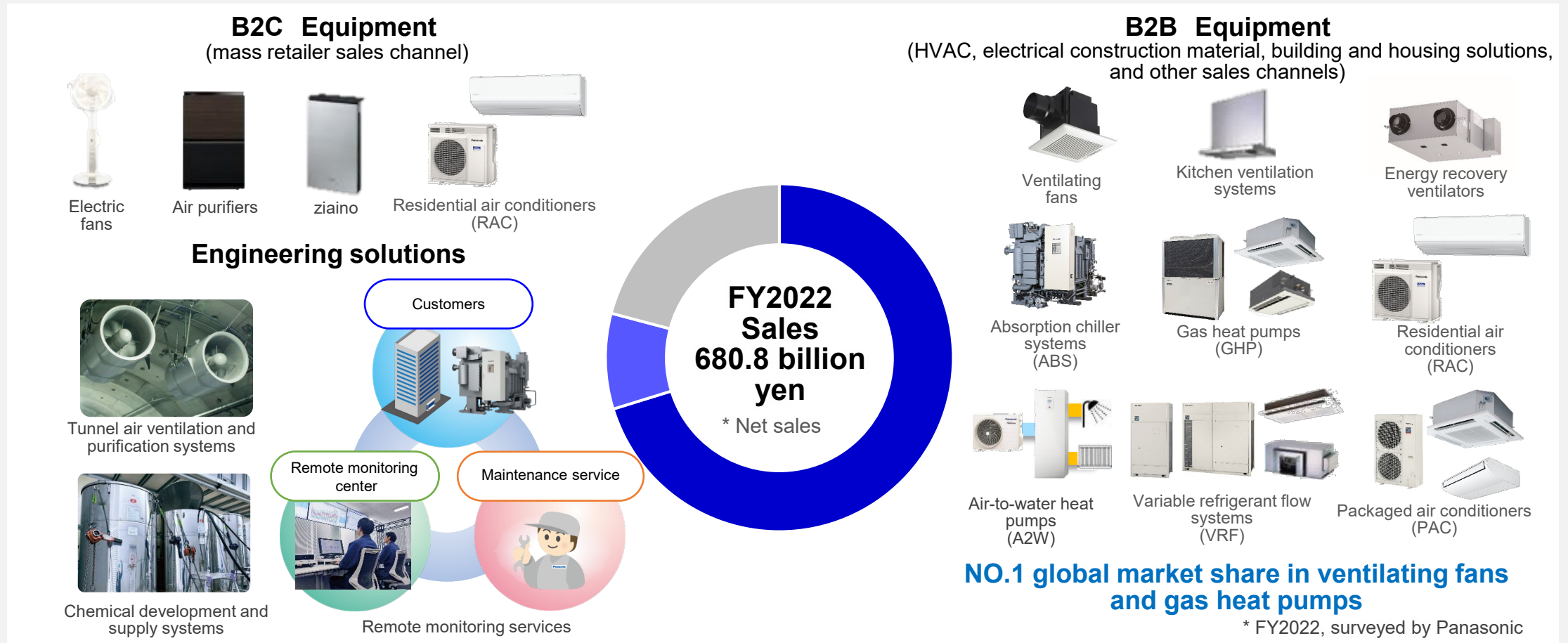
### Mid-term Strategy

June 2, 2022

Notes: 1. This is an English translation from the original presentation in Japanese.

Notes: 2. In this presentation, "Fiscal 2023" or "FY23" refers to the year ending March 31, 2023

# Development, Manufacturing and Sales of Air- and Water-related HVAC Equipment as well as Engineering Solutions



# Global Expansion of Business Opportunities

Regulations on CO2 emissions and refrigerant emissions



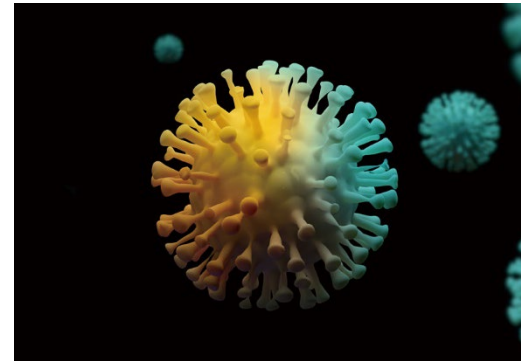
Low GWP refrigerant/absorption chiller systems (ABS)

Resilience



Standalone power air conditioners (gas heat pumps)  
GHP/EHP hybrid system

Infectious diseases and air pollution



Active air purification and humidity control

Productivity improvement



Digital transformation of construction and maintenance work

# Goals

## MISSION

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Life tech & ideas  
For the wellbeing of people, society and the planet

## VISION

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Leading the industry with air and water technologies that  
secure a comfortable and sustainable new world

# Commitment

## Vitalize the Future with Air

These are times of exceptional challenge.

If the world is to move forward confidently, it must overcome the serious threats of the new global pandemics and the degrading of the environment. It must find ways large and small to reduce the stresses that affect people's health and the stability of their communities.




At Panasonic, we're utilizing the power of air to create positive change.

Air that benefits body and mind. Air that energizes the places where people gather to work and play. Air that reduces our burden on the Earth.

With more than a century of research and expertise to guide us, we're using air to open a more hopeful and vital future for all.



# Three Values Provided Together with Customers and Partners

| Three values                  | <br>Sustaining the planet with air | <br>Promoting wellbeing with air | <br>Energizing lifestyles with air |
|-------------------------------|--|---|---|
| Property owners / Contractors | Contribution to implementing environmental management and fulfilling social responsibilities                         | Provision of a better air environment to residents and contribution to increasing property value                    | Contribution to labor-saving and improvement of safety and productivity in construction and maintenance work          |
| End-users                     | Contribution to reducing environmental impact  | Contribution to creating clean spaces, sterilization, and antivirus measures  | Contribution to improving physical and mental health, intellectual productivity, and vitality                         |

# Actions to Meet the Panasonic Corporation's Target for Reducing CO<sub>2</sub> Emissions by FY2031

(FY2023-2025 GREEN IMPACT promotion 90billion yen or more)

## Reducing CO<sub>2</sub> emissions from our company

[Scope1&2]

- Virtually zero CO<sub>2</sub> emissions at overseas bases by FY2028
- Virtually zero-CO<sub>2</sub> emissions at all bases including domestic by FY2031

[Scope3]

### Individual products

- Acceleration of the shift to inverter for RAC and PAC
- Penetration of ceiling and ventilating fans equipped with DC motor

### Refrigerants

- Acceleration of the shift to the environmentally friendly refrigerants in anticipation of environmental regulations in each country

## Contribution to society by reducing CO<sub>2</sub> emissions

- Optimal control based on unit coordination, integrated systems, and sensing
- A2W and heat pump water heaters for heat source shift
- Distributed energy business (e.g., use of waste heat for ABS with water refrigerant and low power consumption)

### Panasonic Oizumi Plant

Waste heat from gas cogeneration systems + ABS



### Ueno Village Mushroom Center

Waste heat from biomass cogeneration systems + ABS

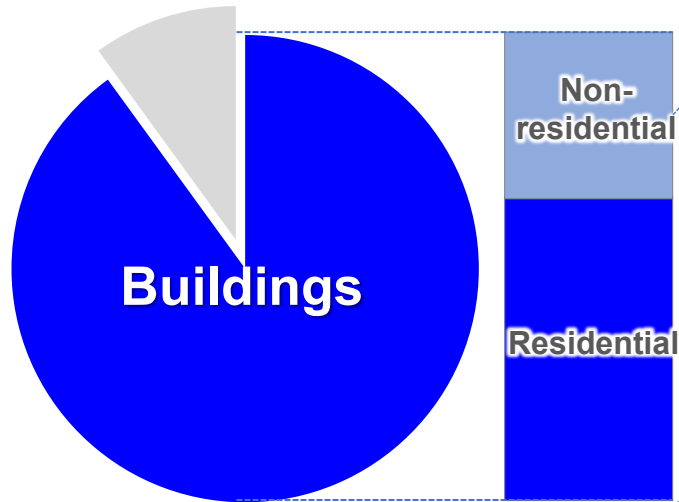


Apply

# Placing Emphasis on Residential and Light Commercial Fields

Places to spend our lives

Market where indoor air quality is highly valued  
**Residential and Light Commercial Fields (up to 2,500 m<sup>2</sup>)**



Clinics



Hotels



Health care facilities for elderly and childcare facilities



Residential Homes



Offices

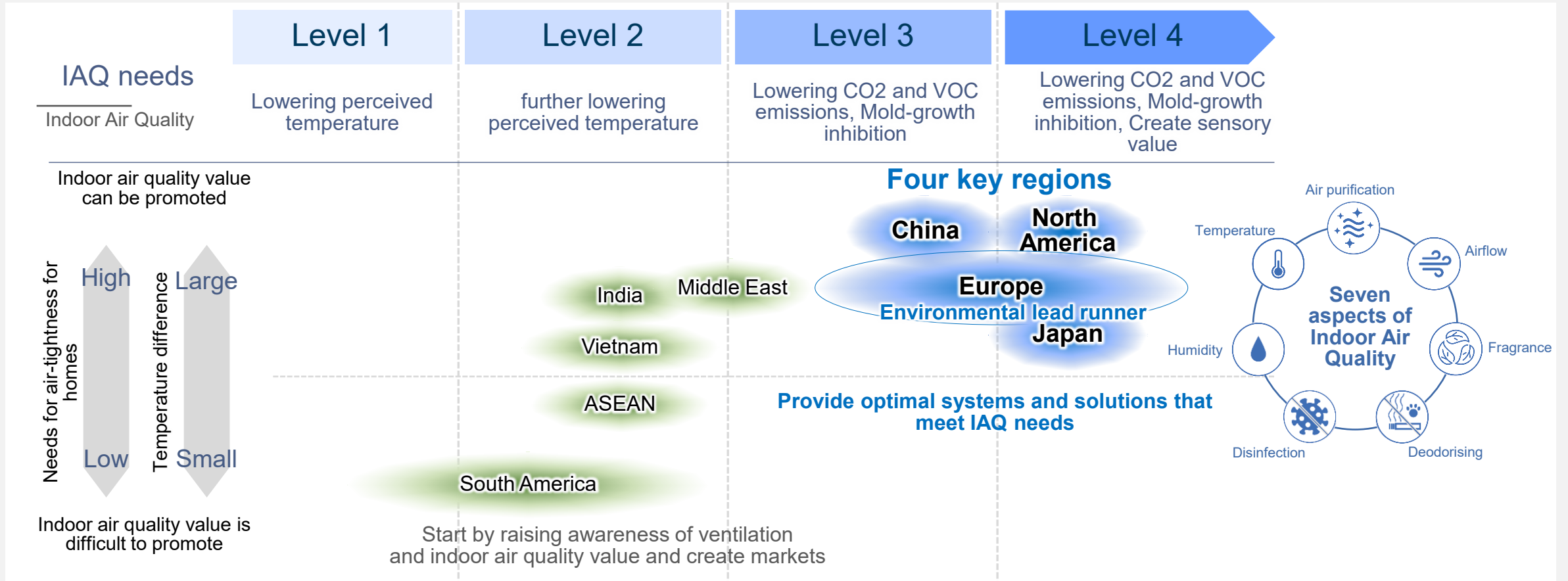


Commercial facilities





# Driving Business Growth in Four Key Regions Where Indoor Air Quality Is Highly Valued



# Creating Three Values by Realizing Virtuous Cycles for Customers, Partners, Panasonic and Become the Best in Class Company by FY2030

**FY2022**  
Sales: 680.8 billion yen  
EBITDA: 5%

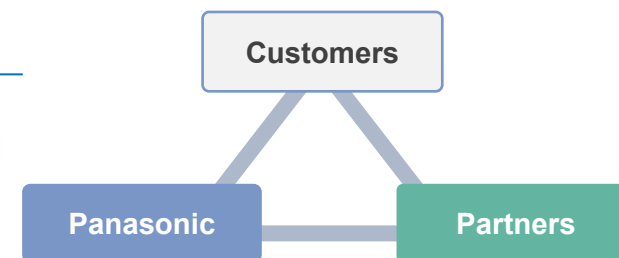
Establishing a competitive advantage in air quality and carbon-free areas, Restructuring business foundations

- Upfront investment: 100 billion yen or more  
\*FY2023-2025 total
  1. Environmental technology innovation: 30 billion yen
  2. Strengthening of ongoing customer contacts: 28 billion yen
  3. Operational reforms: 46 billion yen
- Acquisition of deficient infrastructure (alliances and M&A)

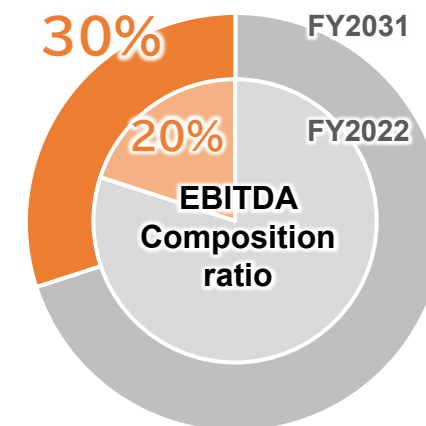
**FY2026**  
Sales: 1,000 billion yen  
EBITDA: 10% or more

**FY2031**  
EBITDA: 15% or more

Expansion of engineering solution capabilities



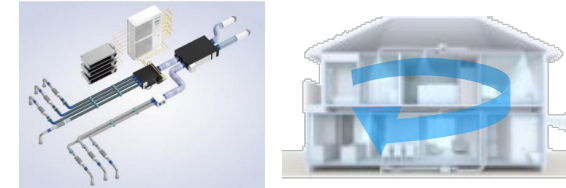
Engineering solutions



# 1. Environmental Technology Innovation

## Game-changing HVAC System Different from Conventional Heating, Ventilation, and Air Conditioning

Creating a HVAC system that realizes outstanding improvement in air quality and reducing CO2 emissions



### Humidity control and water purification

Centrifugal crushing humidification



Advantages in reducing maintenance needs

Salt-free water softener



### Active purification



In addition to passive air purification functions,

**the entire space can be purified**

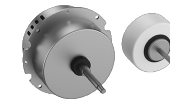
by inhibiting the growth of airborne and adhered bacteria and virus

### Shift to low-GWP refrigerants and high energy efficiency

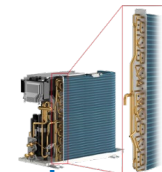
Rotary and injection technology



High-efficiency brushless motors



High-efficiency heat exchangers



Outstanding advantages in reducing CO2 emissions

### Visualization and standardization of air quality value

Verification of reliable evidence  
(Effects in actual usage)



IAQ Validation Centre

Obtaining certification and standardization  
(Collaboration with local partners)

Next-generation space sensing  
(Virus and vital data)

Algorithm for coordinated control

## 2. Strengthening Contacts with Continued Customers

Creation of new solutions with customers and partners

### Enriching engineering resources

FY2022 → FY2026  
Number of engineering resources  
(Japan and Europe)

**790 → 1,100**

(x 1.4)



**Closer ties with the EW  
and CCS Companies**

**Collaboration with other  
companies and M&A**

### Co-creating spaces for solution ideas



YADA×Panasonic  
showroom  
(Opened in July 2021)



Shiodome P-BOX  
(Opened in April 2022)

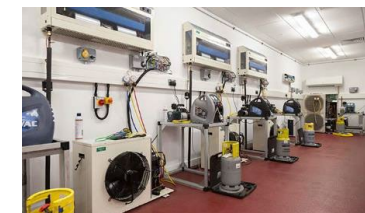


Nihonbashi AIR HUB TOKYO  
(Opened in June 2022)

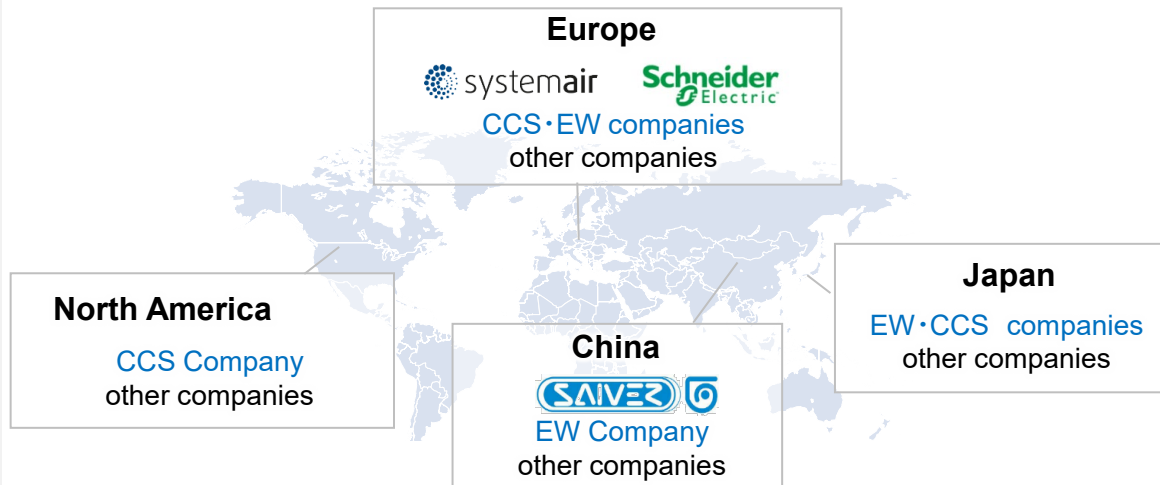
### Expansion of engineering training centers



Europe HQ in Germany  
(Opened in October 2021)

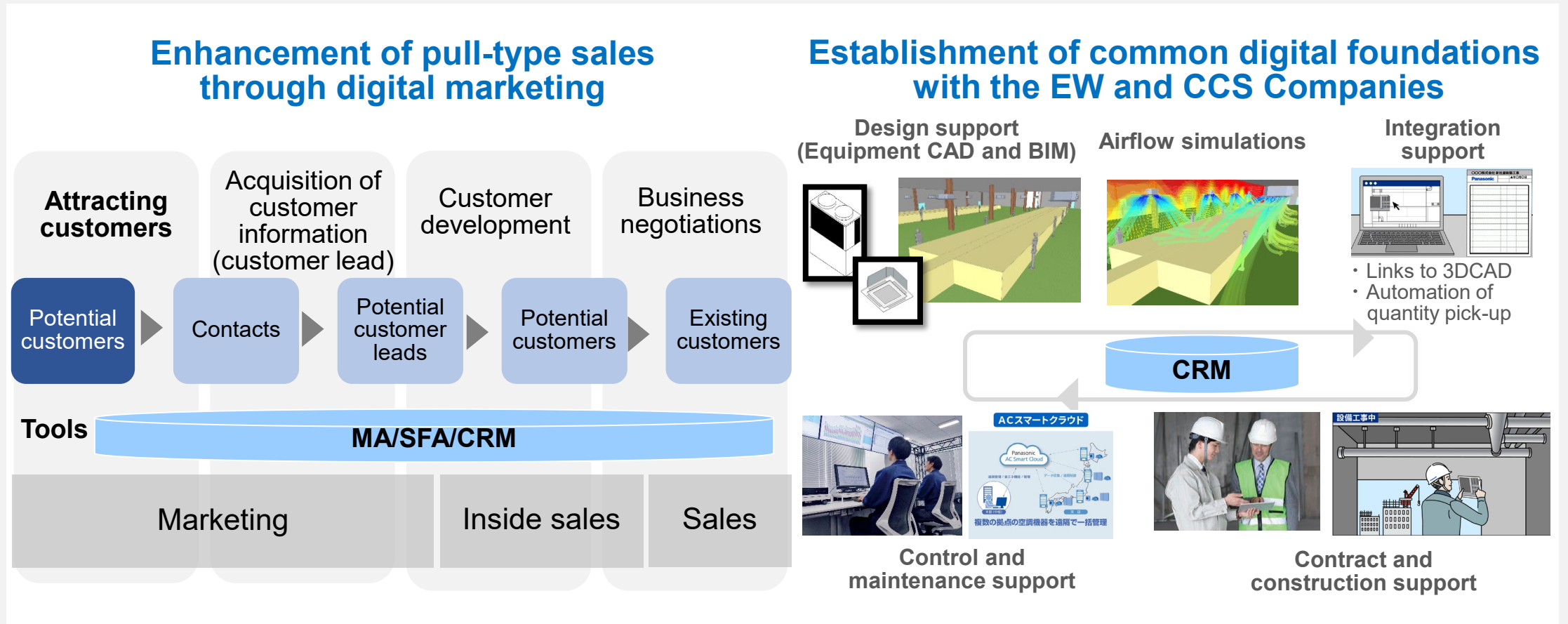


Lab. In Malaysia  
(Opened in July 2022)



## 2. Strengthening Contacts with Continued Customers

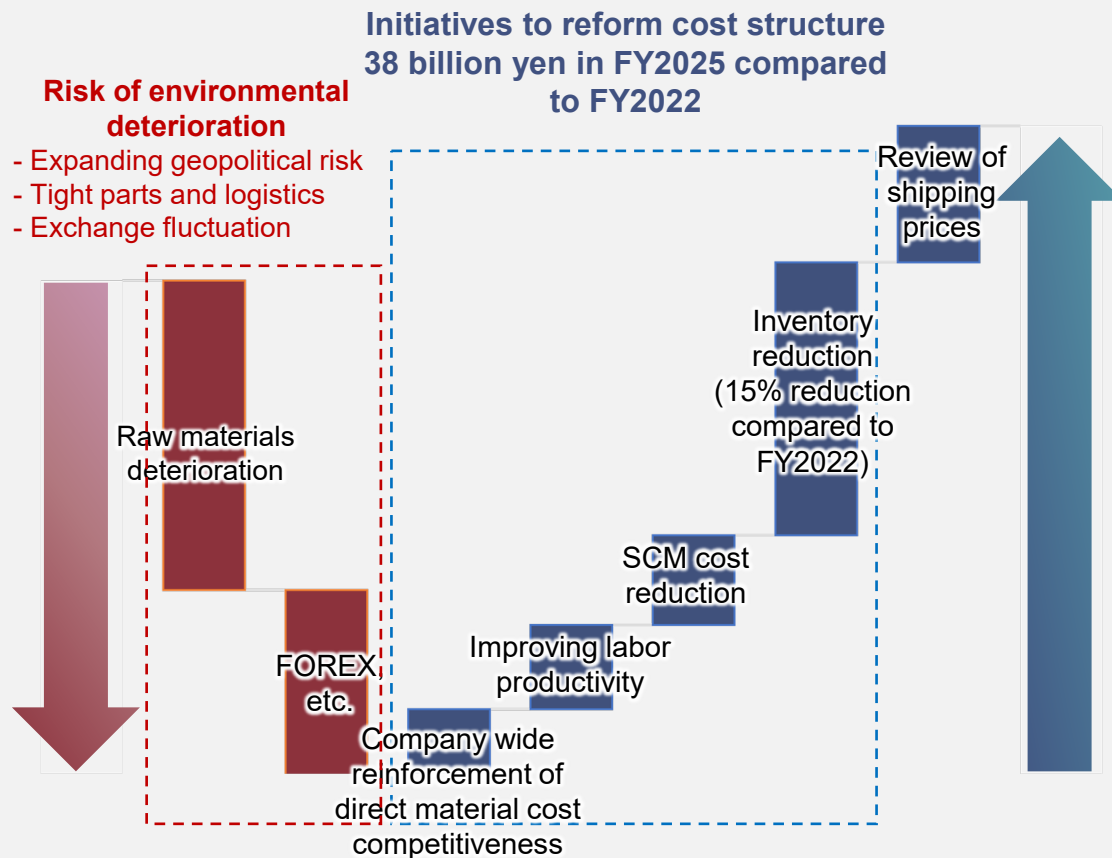
Streamlining operations and providing Panasonic's unique solutions



### 3. Operational reforms

Build a management base that overcomes changes in the environment and promotes DEI by strengthening the local operation system

#### Operating cash flow from FY2022 to FY2025



■ **Revitalize global human resources** (Acceleration of DEI promotion) and speed up management by strengthening regional management system

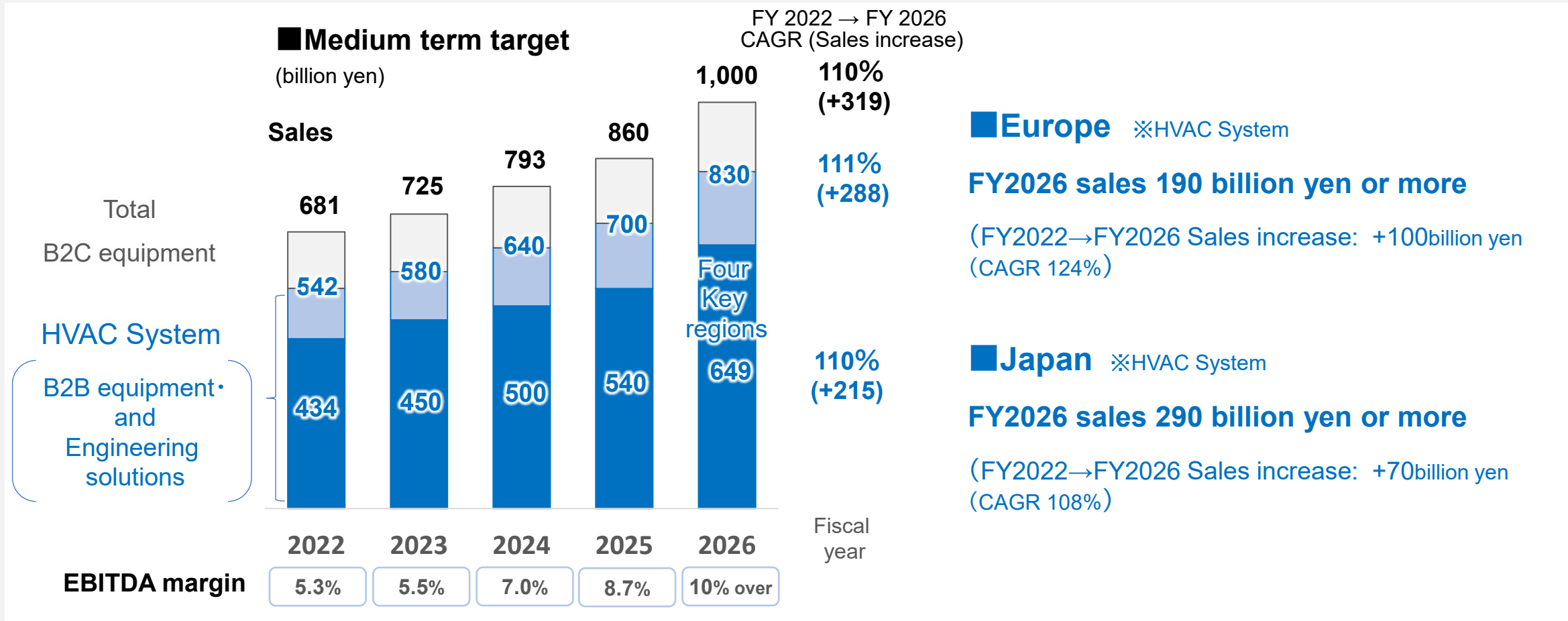
- Global human resource development and expansion of local-led operations by strengthening the regional promotion system
  - Strengthening production of indoor and outdoor unit Air To Water (Product supply lead time -60% reduction)
  - Strengthening production of ventilation fan (Product supply lead time -70% reduction)
- In addition to strengthening career recruitment, building a system and fostering a corporate culture that makes the most of diverse human resources

■ **Improvement the efficiency of manufacturing operations**

- Production automation in China and Malaysia
- Expanding shared design and digitizing development for Local fit and development efficiency

■ **Company-wide reinforcement of direct material cost**

# FY2026 Sales Target of 1,000 Billion Yen by Expanding HVAC System & Engineering Solution Sales



## Expanding European business with A2W as breakthrough, Where Environmental Awareness is the Highest

### ■ Market share (A2W (Air To Water Heat Pump))

\* FY2022, surveyed by Panasonic

A2W has a high market share mainly in Northern and Eastern Europe.



### ■ Advantages

#### Unique environmental technologies

Active purification, humidity control, salt-free soft water, and low-GWP refrigerants

#### Sales and engineering infrastructure

HVAC EU: Approx. 400 personnel  
Started subscription CRM

#### Partners

  Cold Chain Solutions Company

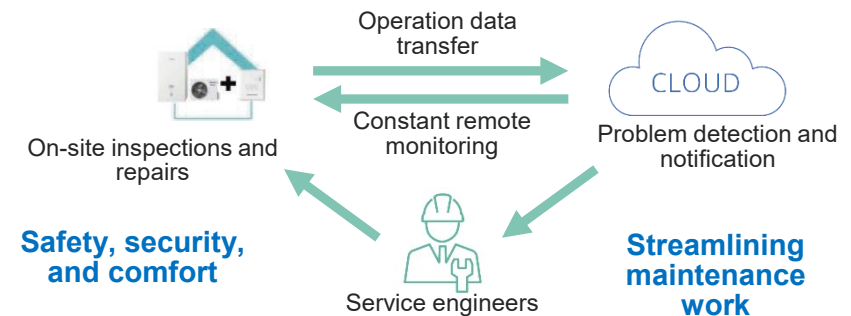
### Expansion of A2W to drive business in Europe (FY 2022 → FY 2026 CAGR: +125%+)

**Broadening the lineup of environmentally friendly products to contribute to decarbonization and air quality improvement**

- Swiftly introduce a range of products that meet the stricter refrigerant regulations scheduled in 2025.
- Link A2W and air quality products to provide value

### Expansion of the A2W maintenance solution business

- Establish a maintenance solution business in Denmark
- Reach more dominant positions in regions where we have high market share through the promotion of the solution business



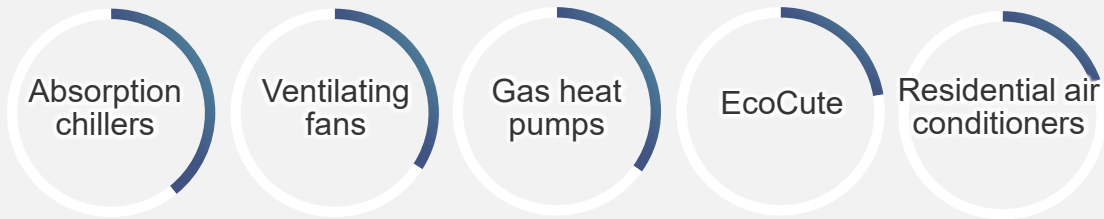


## Develop Systems and Engineering Solutions that will Support the Optimization of Seven Aspects of Indoor Air Quality and Decarbonization

### ■ Market share

\* FY2022, surveyed by Panasonic

High market shares in wide range of HVAC categories



### ■ Advantages

#### Unique environmental technologies

Active purification, humidity control, low-GWP refrigerants, and sensing

#### Sales/Engineering infrastructure

Engineering business revenue:

Approx. 170 billion yen

\* Including equipment sales and cold chains

#### Partners

Electric Works Company

Cold Chain Solutions Company

Expand the engineering solutions business by increasing CAGR by 110% or more from FY2022 to FY2024.

### Sales expansion of systems that link heating, ventilation, and air conditioning functions

- Systems for the light commercial field that ensure high air quality and a maximum energy saving of 52%



Ceiling-mounted zaiino  
Centrifugal crushing  
humidification

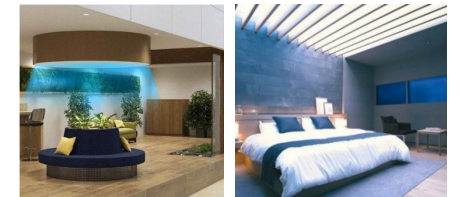
Commercial heat  
exchangers

Commercial air  
conditioners (PAC)

- Whole-house air conditioning and ventilation systems contributing to free space designs and zero emission house

### Engineering solution optimizing seven aspects of indoor air quality

- Flexible control of the seven indoor air quality aspects in closed, open, and other types of spaces (Reboot Space)



## Fiscal 2025 KGIs

### EBITDA

(Most important KGI)

**75 billion yen**  
**(8.7%)**

35.8 billion yen  
(FY 2022 results)

### ROIC

**10% or more**

5.0%  
(FY 2022 results)

### Three-year cumulative operating cashflow

**120 billion yen**

**Panasonic**

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