

Panasonic

Heating & Ventilation A/C Company

European Growth Strategy

November 22, 2022

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Contribute to Society via Business Globally

A sustainable society and Earth

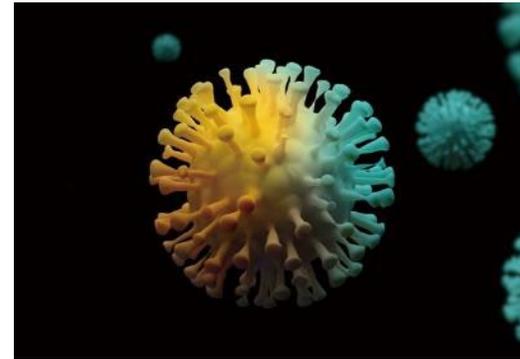


Low GWP refrigerant chillers, A2W



Electric AC, gas AC

Bacteria, viruses, air pollution



Active air purification and humidity regulation

Productivity improvement



DX for installation and maintenance

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 utilising 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.

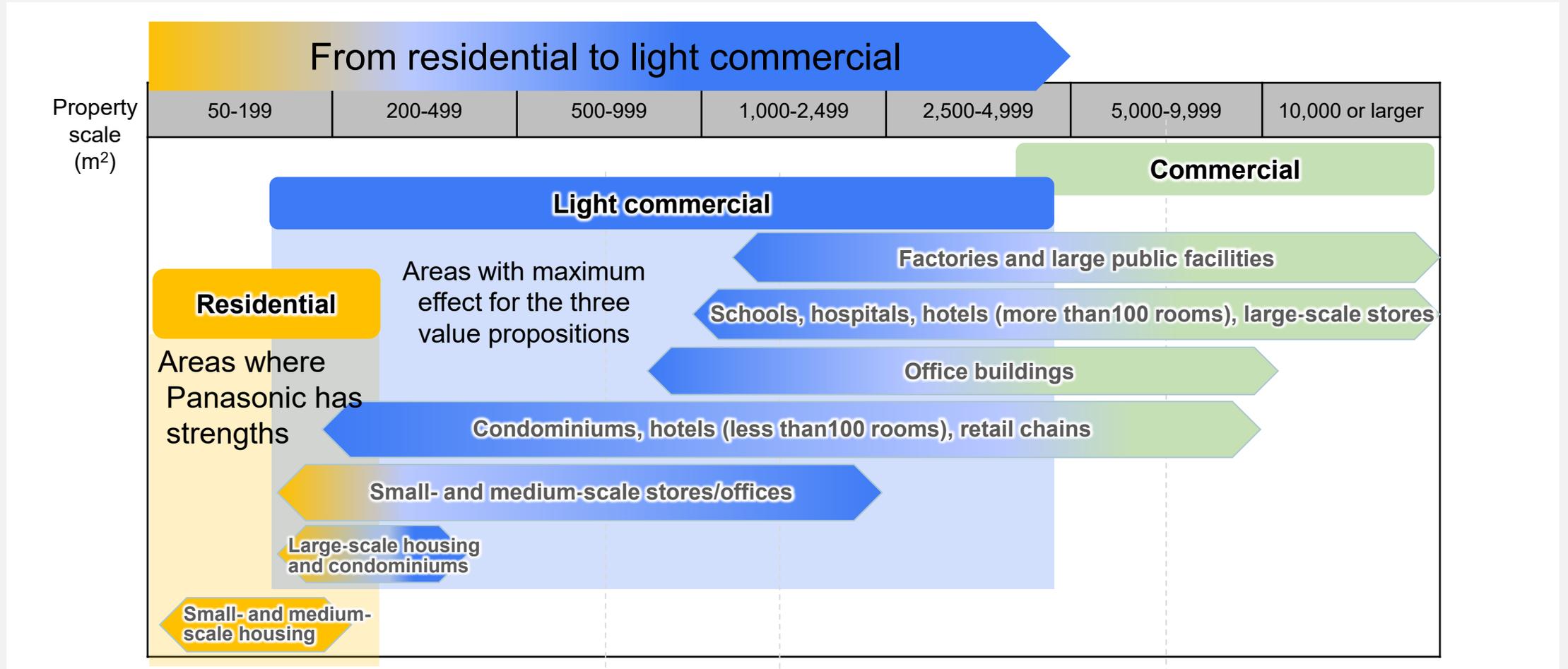


Create Three Values Provided Together with Customers and Partners

Three values	 Sustaining the planet with air	 Promoting wellbeing with air	 Energising lifestyles with air
Property owners Construction agencies	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

Expand Business Areas

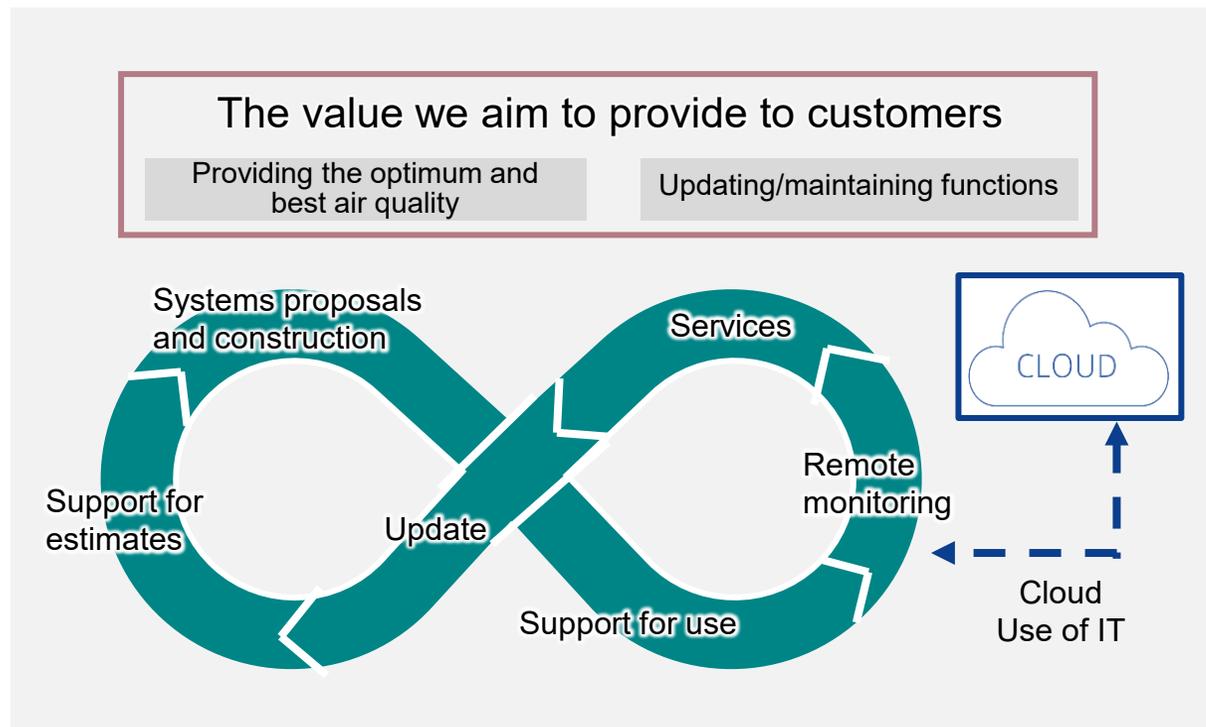
(Image of Europe)



Target Vision for the Heating & Ventilation A/C Company

Constantly continue to provide the highest value

Aim to build a circular business



Points to reinforce

Expand solution business by key strategy

1. Strengthen environmental technology

- Expand contributions to the environment
- Strengthen the light commercial business area
 - Fill in the missing pieces

2. Strengthen customer touchpoints

- Build a circular business base
 - Boost specialists
 - IT/cloud utilization

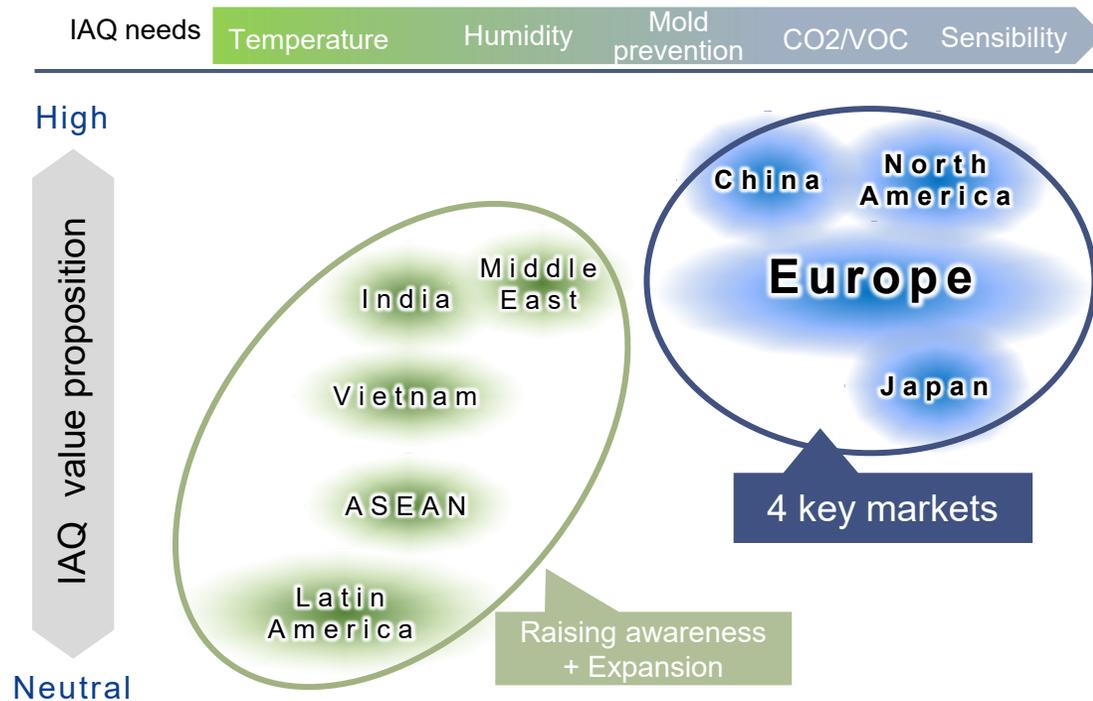
3. Operational reform

- Locally optimized (local production, local consumption) management

Positioning of the European Market

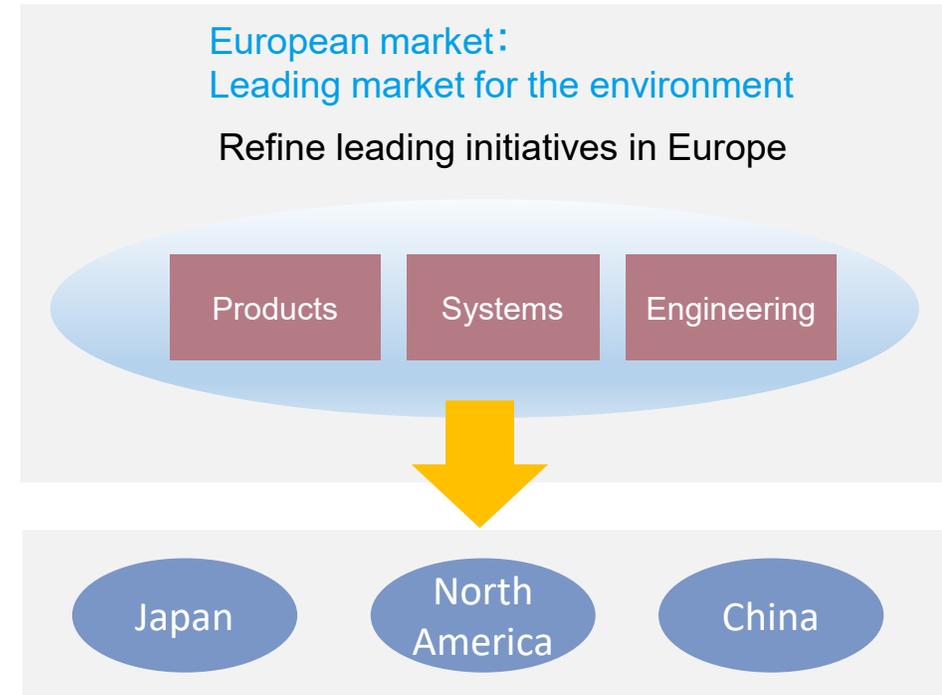
Strategic area for IAQ needs

Europe: High IAQ needs, value-oriented market



Precedent toward Global market

Europe : Advanced area with tough competition



VOC (Volatile organic compounds): General term for highly volatile substances that can harm health and pollute indoor air.

※IAQ: Indoor Air Quality

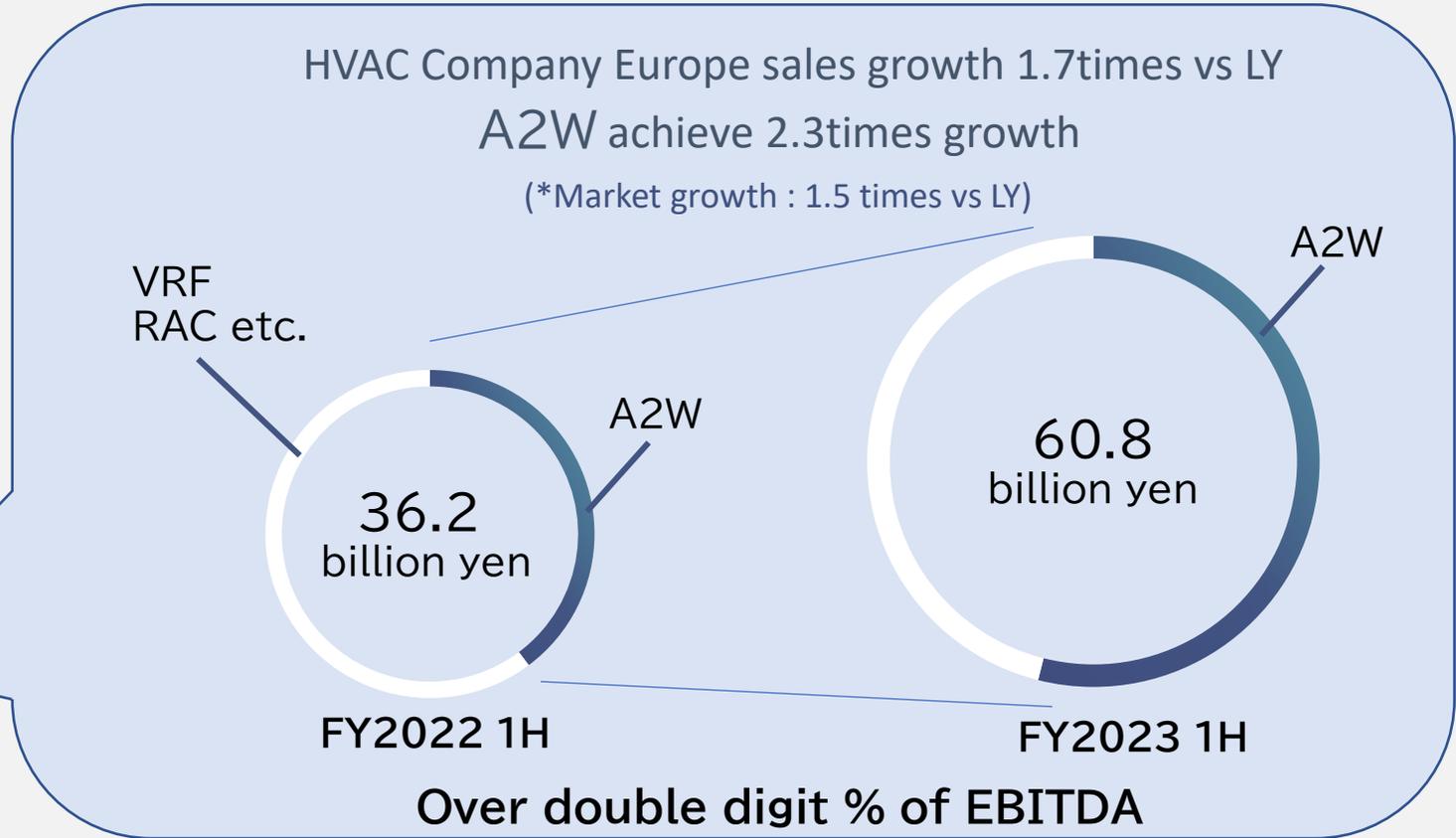
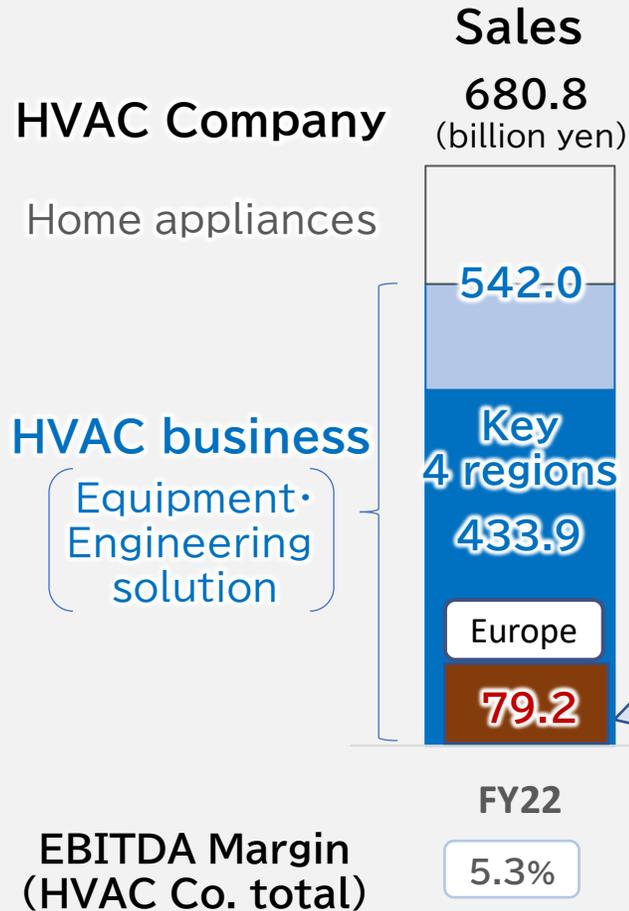
Develop the Current Panasonic Air-conditioning Business in Europe



Residential				Commercial			
							
Air to water heat pump	Single split	Multi split	Packaged	Variable Refrigerant Flow	Gas Heat Pump	Chiller	CO ₂ Refrigeration

Sales result (FY23 1H, Europe total)

Made huge growth 1.7times in FY23 1H (vs LY)



*Estimated by Panasonic

Panasonic Corporation

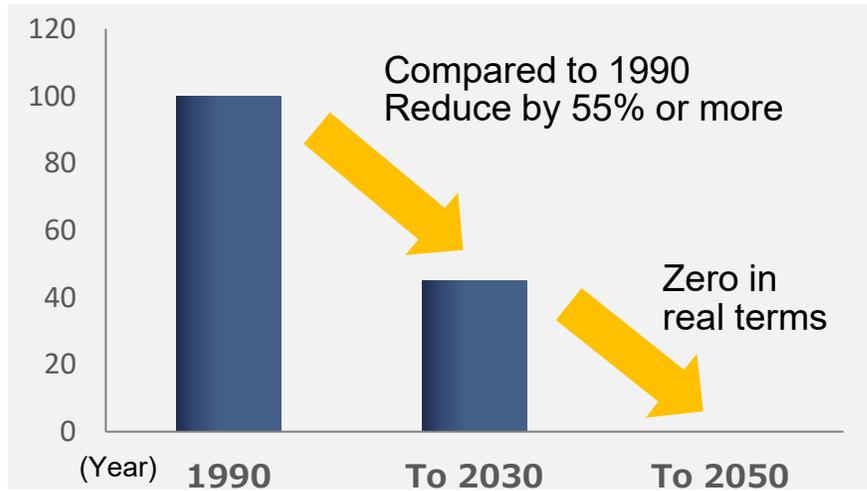
Increasingly Tough Environmental Regulations

Kigali revision of the Montreal Protocol

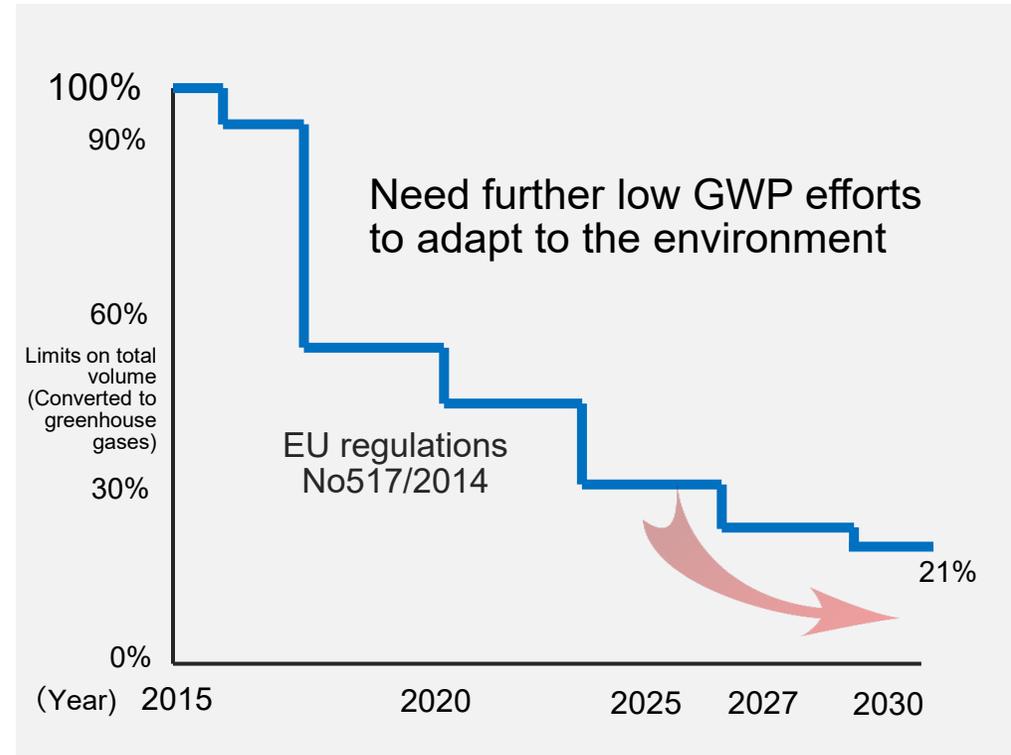
Issued January 1, 2019
Made CFC alternatives subject to the protocol

Regulations on the volume of greenhouse gas emissions (in the EU)

(%) European Climate Law issued July 1, 2021

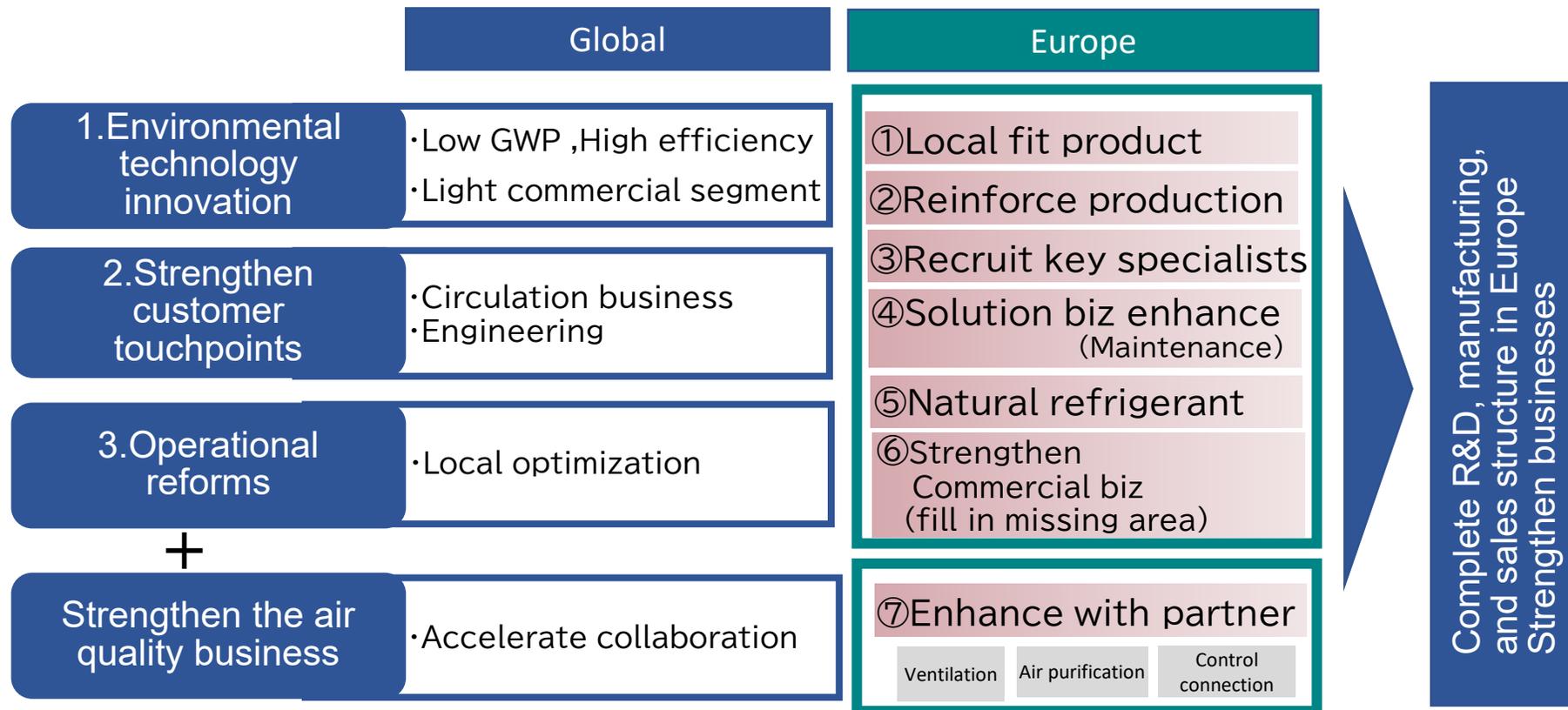


F Gas Regulation and GWP regulation



Initiatives to Strengthen Our European Business

Expand areas (light commercial) + Strengthen the equipment/solutions business



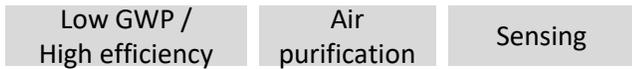
Realize Locally Optimized (Local Production for Local Consumption) Management

Locally optimized (local production for local consumption) management

①Local fit product

Launch new R&D base in FY24

Realize on-demand development



②Reinforce production

Reinforce Czech resource

Production capacity

14times
FY2022

Mid term target
Global
1 Million units

Build a circular business

③Recruit key specialists

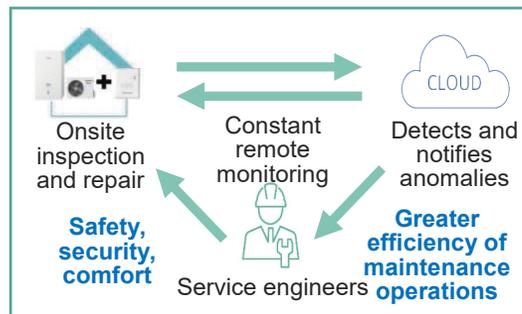
Strengthen engineering and services sales

Double or more by FY2026

Training center /Show-room
50 base in Europe in FY2026
(vs FY2022 1.5times)

④Solution biz enhance

FY2022: Formulate structure in Denmark ; Expand Europe-wide

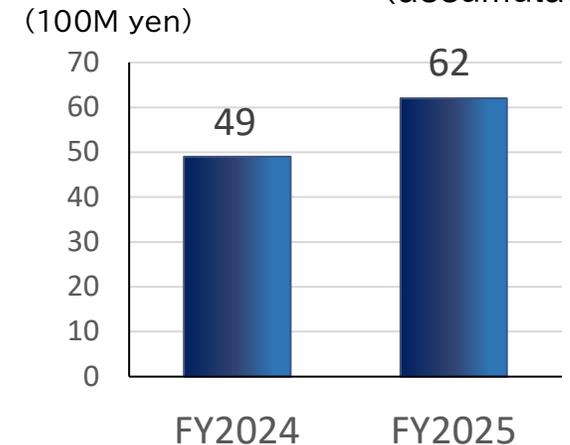


Affect of Localization

Cash flow betterment

- Reduce inventory for transit / storage
- Reduce production supply L/T by60%

Europe:Impact of Czech reinforce (accumulated)



A2W Environmental Contributions and European Market Expansion

A2W CO2 reduction contribution

Contribute to switching from combustion-type



CO₂ emissions
65% reduction

* Provisional calculations by Panasonic
Per unit per year
Including hot water heaters

A2W estimate
Boiler estimate

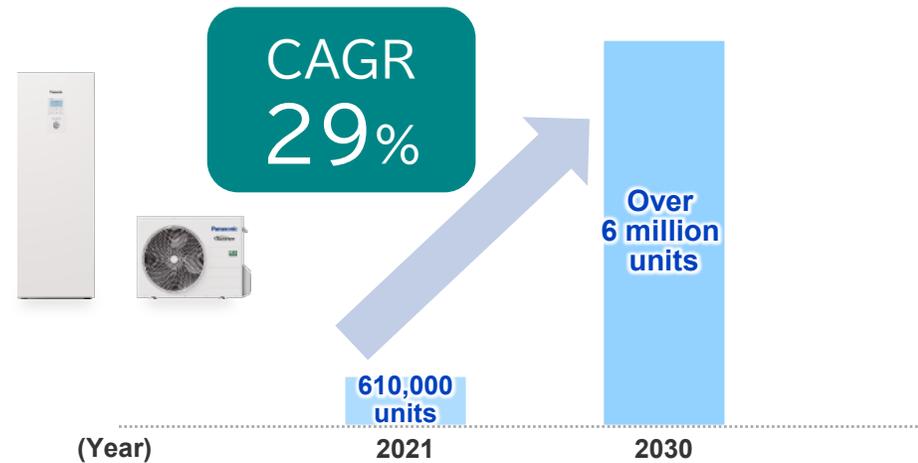
Electricity emissions factor (kg-CO₂/kWh): 0.277
Heat conversion (MJ/kWh): 3.6 Gas conversion (m³/MJ): 0.0217
Gas emissions factor (kg-CO₂/m³): 2.24

Expanding market

Expedite shift from fossil fuels in the heating equipment market

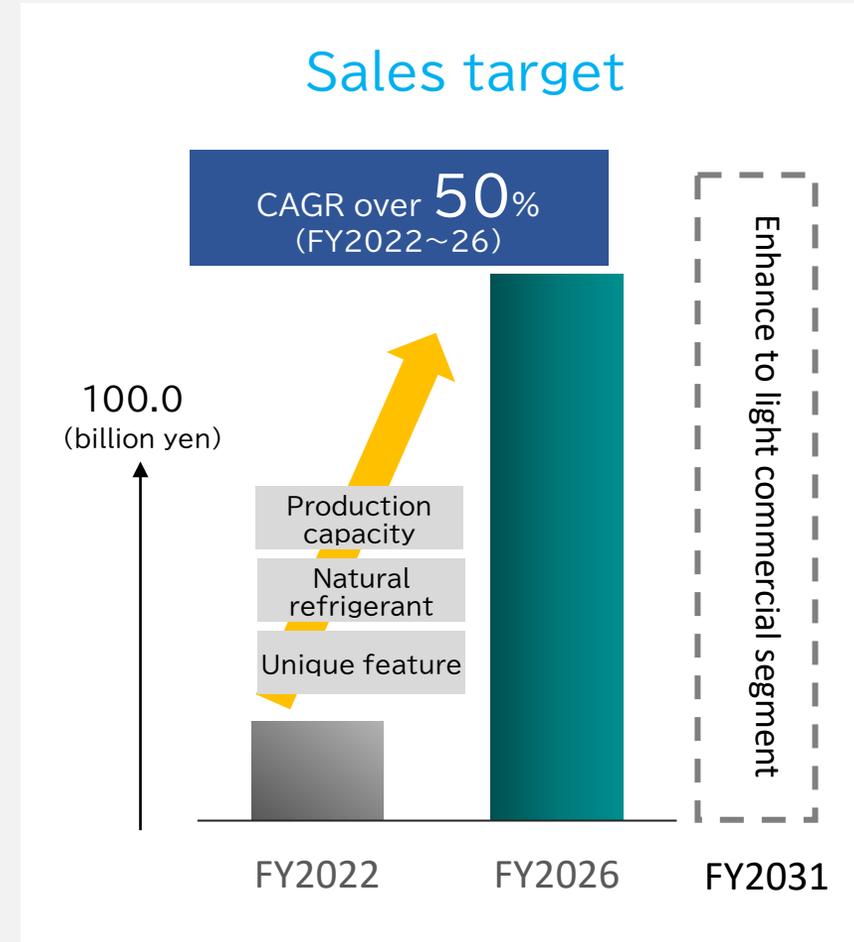
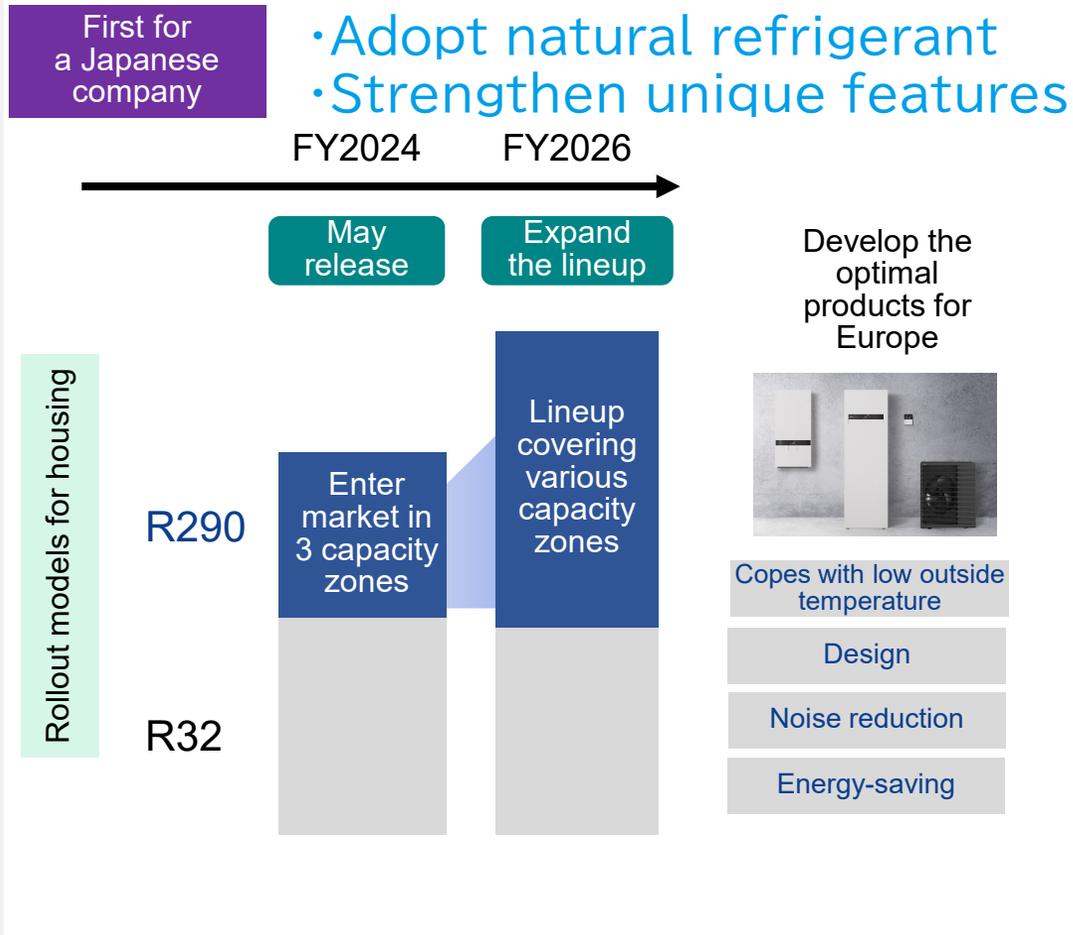
A2W market volume in Europe

A2W market scale
(By units) Europe EHPA base



Evolution of A2W and business target

⑤ Natural refrigerant



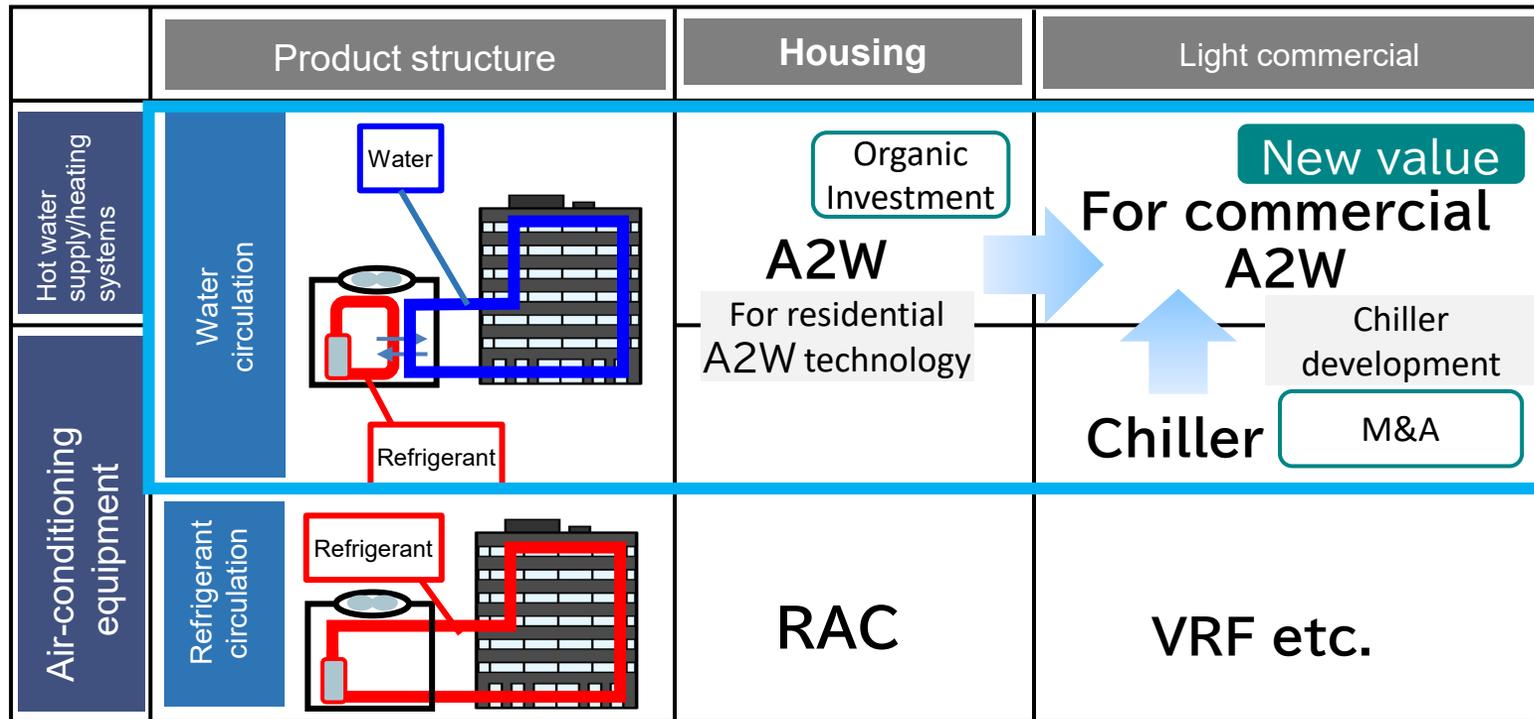
For home A2W with heating and cooling functions using the R290 natural refrigerant in all of Europe. Research by Panasonic, as of October 03, 2022.

The photo is the model for release in May 2023

Strengthen Chiller segment

⑥Strengthen Commercial biz

Fill in the missing pieces for “Light commercial × Chiller business”



- ◆ Create new value by utilizing synergy of A2W / commercial
- ◆ Enlarge target segment to light commercial range

Conversion from combustion-type Low GWP

◆ Fill in the missing pieces

- ◆ Strengthen solutions linked to air quality
- ◆ Low GWP and energy saving

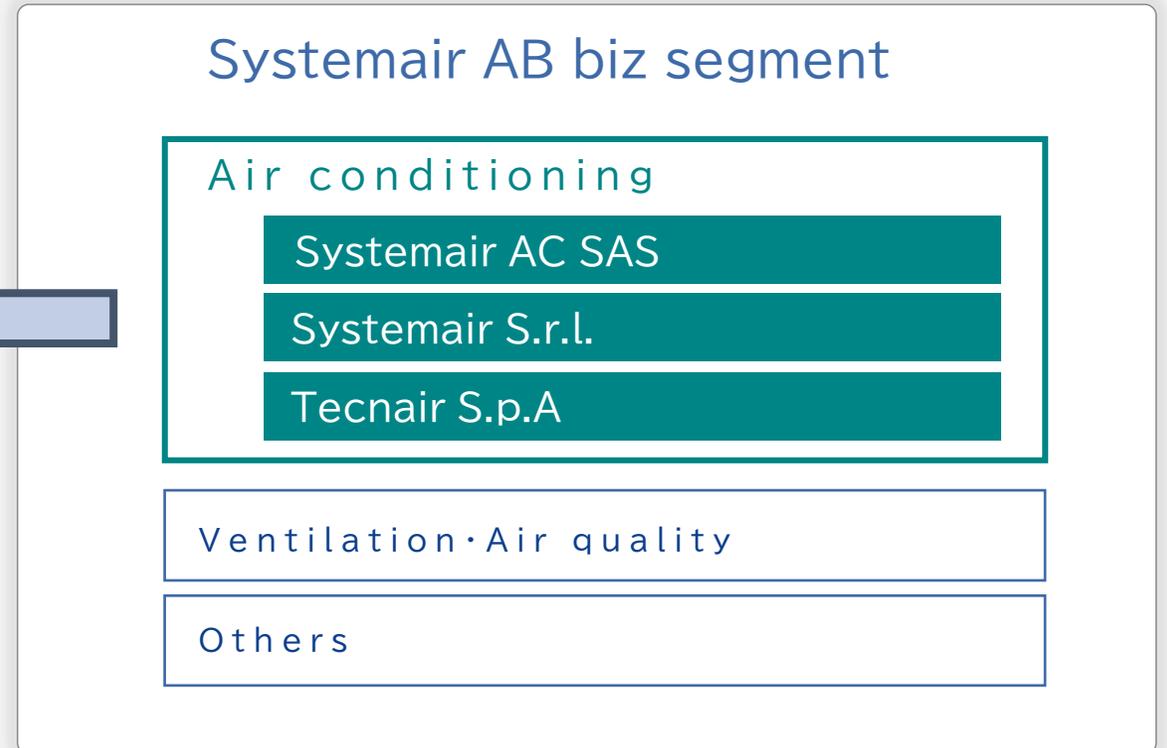
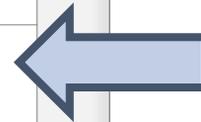
The M&A of the Systemair AB Air-conditioning Business

⑥ Strengthen Commercial biz

Acquiring Systemair AB's air-conditioning business enables the following:

- ① Construct one-stop organization in Commercial business. (R&D/Production/Sales/Maintenance)
- ② Create high valued-added solution for heating etc. in addition to air conditioning biz.

Item	Overview
Relevant companies	<ul style="list-style-type: none"> Systemair AB air conditioning business (three companies)
Acquisition price	<ul style="list-style-type: none"> 100 million euro
Funding	<ul style="list-style-type: none"> With cash reserves only
Schedule	<ul style="list-style-type: none"> The M&A will be completed by March 2023 after going through the necessary procedures



Value Owned by the Systemair AB Air-conditioning Business

(Acquisition target)

(Acquisition target)

Commercial air-conditioning technology

Water circulation technology



Indoor terminals, etc.



Possesses R&D, manufacturing, and sales departments in Europe



Systemair AC SAS

Systemair S.r.l.
Tecnair S.p.A

R&D and manufacturing



Tillières-sur-Avre
(Paris, France)



Barlassina
(Milan, Italy)

R&D department and testing facilities,
production equipment and warehouses

Sales

Has sales functions in the business

Air conditioning biz sales 63 Million euro (FY2022)

Potential Synergy

Synergy by M&A

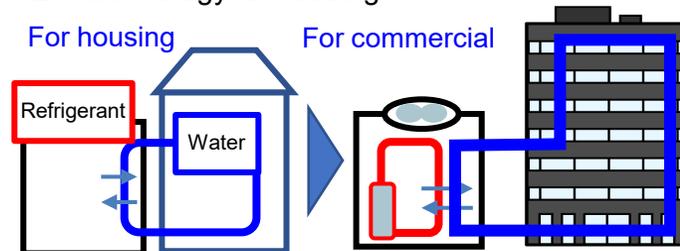
Strengthen environmental technology

Enhance product capacity

- Commercial air-conditioning technology + Inverter technology
- Strengthen R290 efforts

Promote development of hot water supply/heating systems

Water circulation technology + A2W technology for housing



Strengthen customer touchpoints

Develop the circular business

- IT/cloud utilization
- Installers
- Securing accounts
- Strengthen sales using the Panasonic sales network



Operational reform

Strengthen procurement capabilities

Procurement in Europe + Panasonic Global Procurement systems



Collaboration with Systemair AB

Collaboration with air quality business

Systemair: Commercial air quality (ventilation) technology

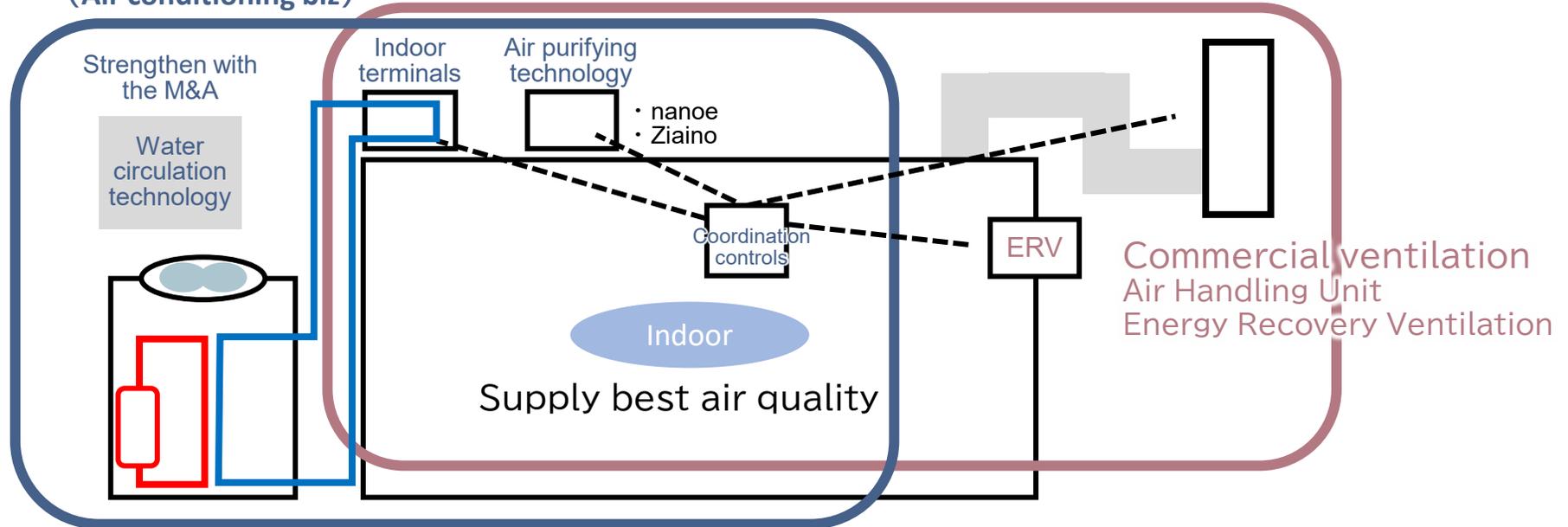
Panasonic: Original purification technology/ highly efficient technology

Initiatives to Boost Value Going Forward

⑥Strengthen Commercial biz

Strengthen development by owned R&D base (Air conditioning biz)

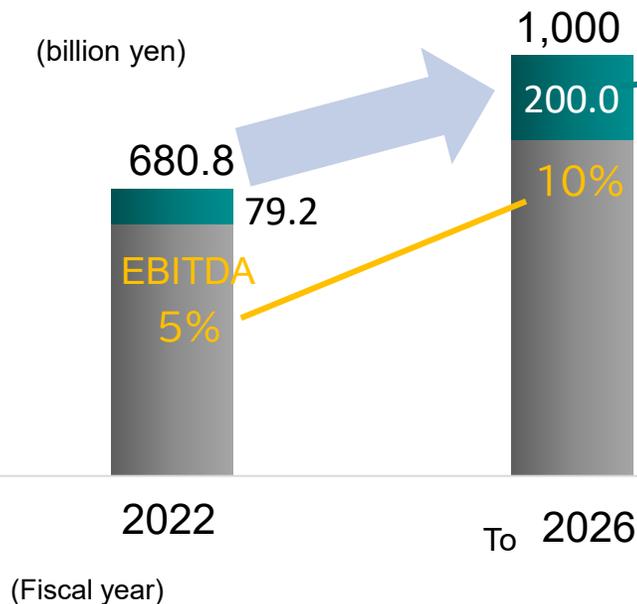
Initiatives in collaboration with partners



HVAC Company mid term target

Sales : 1 Trillion yen / EBITDA : over 10%

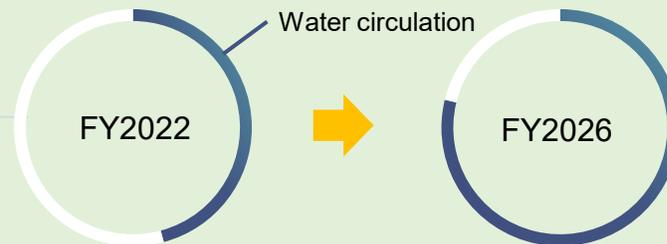
HVAC Company Business Target



European business

FY2026
Aim for 200 billion yen
CAGR 25% or more
(2022-2026)

Changes in the composition ratio by categories



Execution of strategic investment

Strategic investment to expand the European business up to FY2026

100 million euro

Systemair AB
Air-conditioning business

+

Strengthen the A2W business, etc.
Approx. 50 billion yen

Strengthen A2W production structure

Adopt natural refrigerant R290

Strengthen customer touchpoints

Enhance R&D capabilities

With expansion of European business as a trigger, achieve our FY2026 target ahead of schedule.

Panasonic

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