



Mitsubishi Electric Business Strategy of Air-Conditioning & Refrigeration Systems

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MITSUBISHI ELECTRIC CORPORATION





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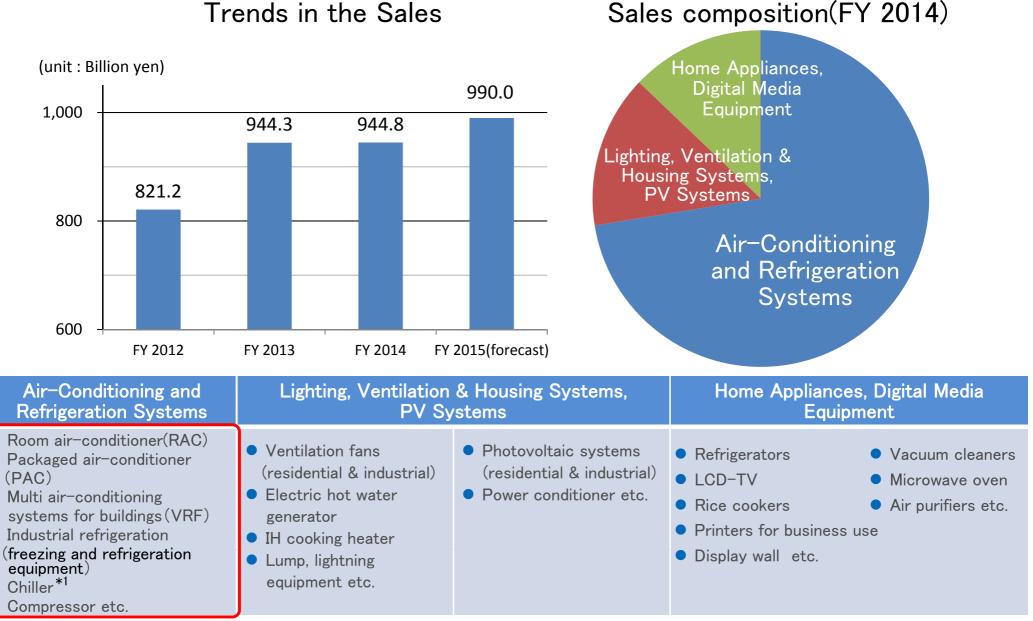
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Note

FY2012: April 1, 2012-March 31, 2013 FY2013: April 1, 2013-March 31, 2014 FY2014: April 1, 2014-March 31, 2015 FY2015: April 1, 2015-March 31, 2016 FY2020: April 1, 2020-March 31, 2021 FY2025: April 1, 2025-March 31, 2026



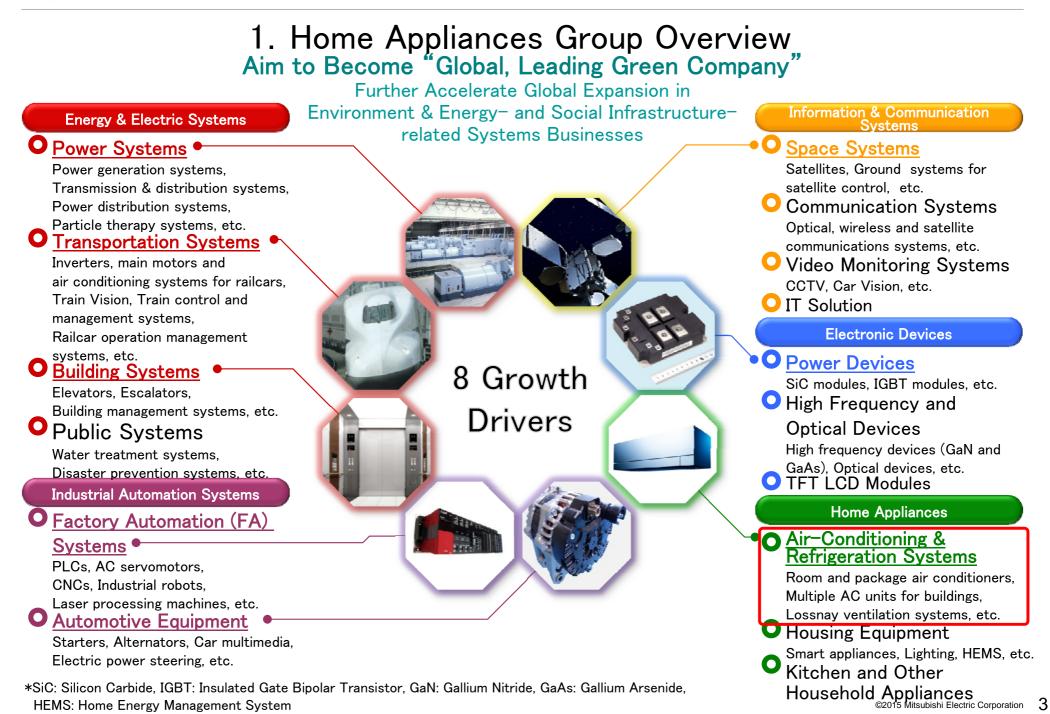
1. Home Appliances Group Overview



*1 Chiller: Cool and hot water supply equipment used in a large size air-conditioning systems for buildings and factories etc.











2. Business Strategy of Air-Conditioning & Refrigeration Systems



-Toward a Higher Level of Growth-

Growth Targets to be Achieved by FY2020 Net Sales 5 trillion yen or more OPM 8% or more

-Strive for Continuous Innovation-

Through continuous innovation, we develop new frontiers

Business policy of Air-Conditioning & Refrigeration Systems division

- Drive global growth strategy based on the mid-term plan -

- Establish and expand appropriate organization in the five key regions (Japan, Europe, USA, China, Asia)
- Full-scale approach to emerging markets (Middle East, Africa, Latin America)
- Further strengthen energy saving and direct expansion type^{*1} air-conditioner business as our advantage
- Work globally to strengthen of water cooled type^{*2}airconditioning systems and industrial refrigeration
- Accelerate the circular business (maintenance, service and Energy Management System(EMS))

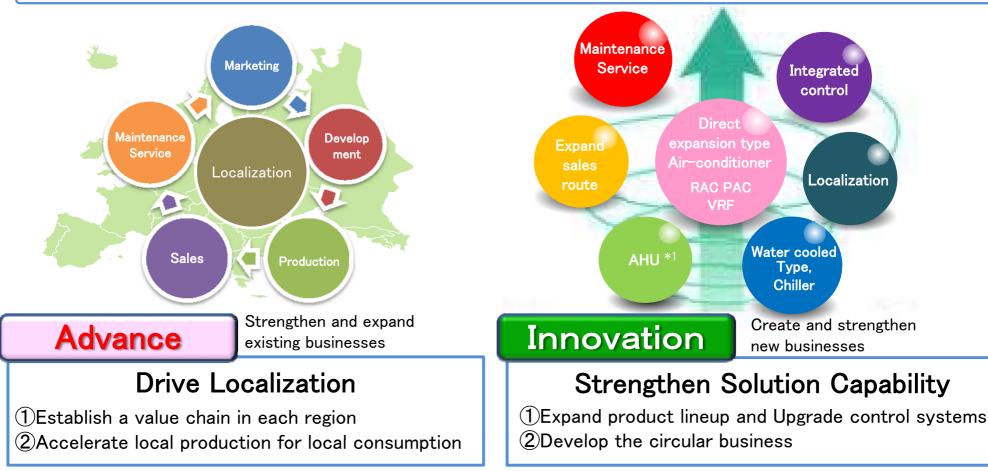
Growth Greater Corporate Value Profitability Efficiency Soundness





2. Business Strategy of Air-Conditioning & Refrigeration Systems - Growth Strategy Slogan toward FY 2020 -

Advance & Innovation 2020(AI20) **Consolidated Net Sales Target : 1 Trillion Yen**



Strengthen response and proposal capabilities to individual customer needs

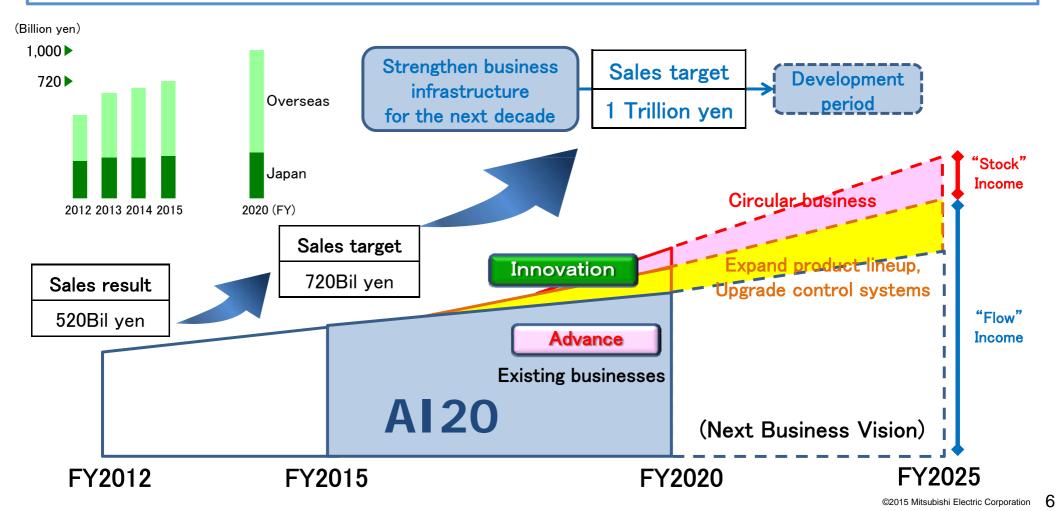
*1 AHU: Air Handling Unit, control temperature and humidity by using hot and cold water supplied from external heat source equipment @2015 Mitsubishi Electric Corporation 5





2. Business Strategy of Air-Conditioning & Refrigeration Systems - Business Vision of AI20 -

Develop new frontiers of air-conditioning and refrigeration systems business by strengthening and expanding existing business Advance, creating and strengthening new businesses Innovation







2. Business Strategy of Air-Conditioning & Refrigeration Systems - Strategic point of AI20 -

Market Environment

- Increased needs for safety and energy-saving products with tightening of environmental regulations in each country
- Expand air-conditioning & refrigeration demand in emerging countries mainly
 Increasingly competitive environment due to a business domain expansion by our competitors utilizing M&As and business alliances

Mitsubishi Electric's Advantage

- High performance and high efficiency devices, advanced control technologies
- Product development and manufacturing technologies utilizing the advanced core technology
- Wide range of products and systems lineup from residential to commercial use
- Integration capabilities of sales, technologies and systems with the advantages of a comprehensive electric appliance manufacturer

Strategic Point to Establish Business Infrastructure

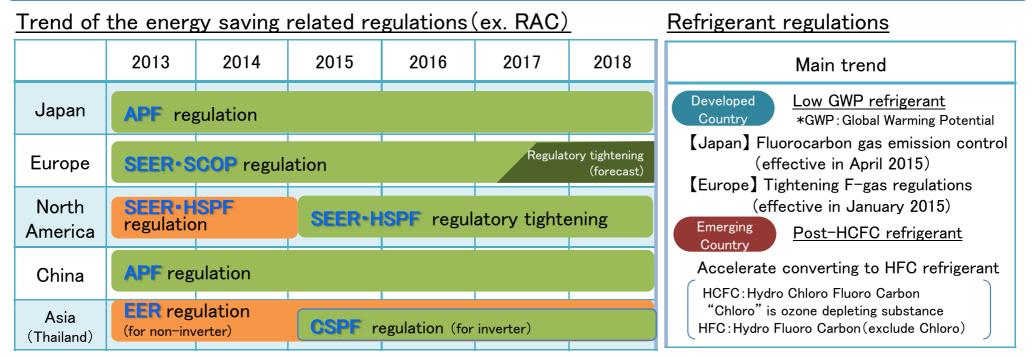
- Strengthen organization to accelerate the regionally-oriented marketing strategy
- Expand product development and manufacturing capability to meet extensive needs
- Aggressively increase human resource and capital investment globally
- Accelerate expansion of business domain and market utilizing M&As and alliances



3. Market Environment

- Environmental Regulations & Technology Trend -

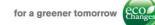
- Energy related and refrigerant regulations are tightening globally, however specific criteria differ by country
- Necessary terms of specifications, functions and costs for air-conditioning and refrigeration products are different in each country, therefore strengthening of development capabilities to adapt to individual needs is essential for business global expansion
- Increased needs for EMS, operation and maintenance facilities utilizing information technology from a energy saving perspective

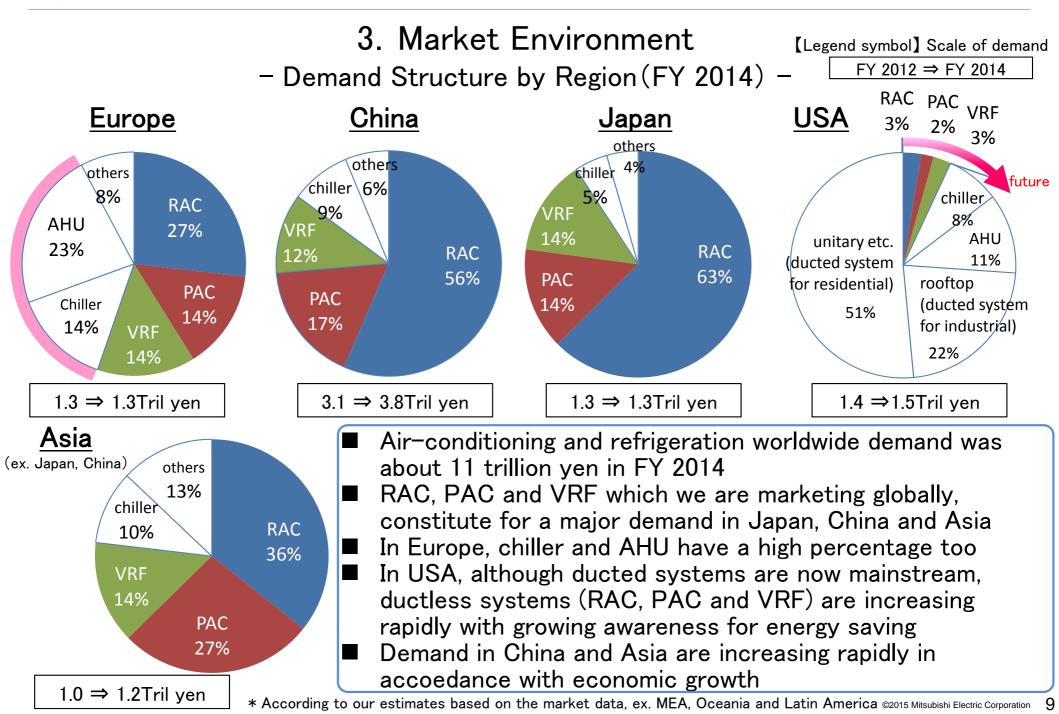


* APF: Annual Performance Factor, SEER: Seasonal Energy Efficiency Ratio, SCOP: Seasonal Coefficient Of Performance, HSPF: Heating Seasonal Performance Factor, CSPF: Cooling Seasonal Performance Factor

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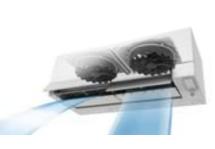


4. Mitsubishi Electric's Advantage -Leading Technology -

High performance , high efficiency devices and leading technologies to realize high performance and energy saving products



Energy and noise-efficient fans and motors





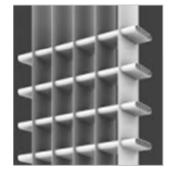


Personal twin flow

Joint lap motor

Flat pipe heat exchanger





Copper pipe (previous)

Aluminum flat pipe



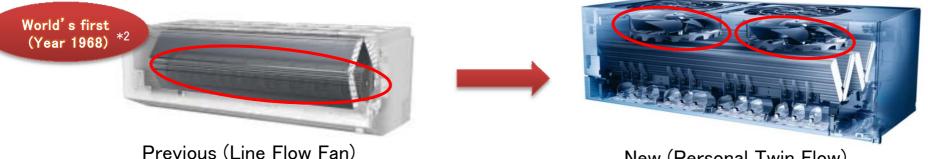


World's 4. Mitsubishi Electric's Advantage-Leading Technology (RAC) first

< A drastic change in the indoor unit mechanism for the first time in 50 years > Two independent fans realize comfort for each family member



The world's first two independent-driven fans, the Personal Twin Flow, air conditioner will save energy and bring comfort to each individual with the capability to respond to felt temperature



New (Personal Twin Flow)

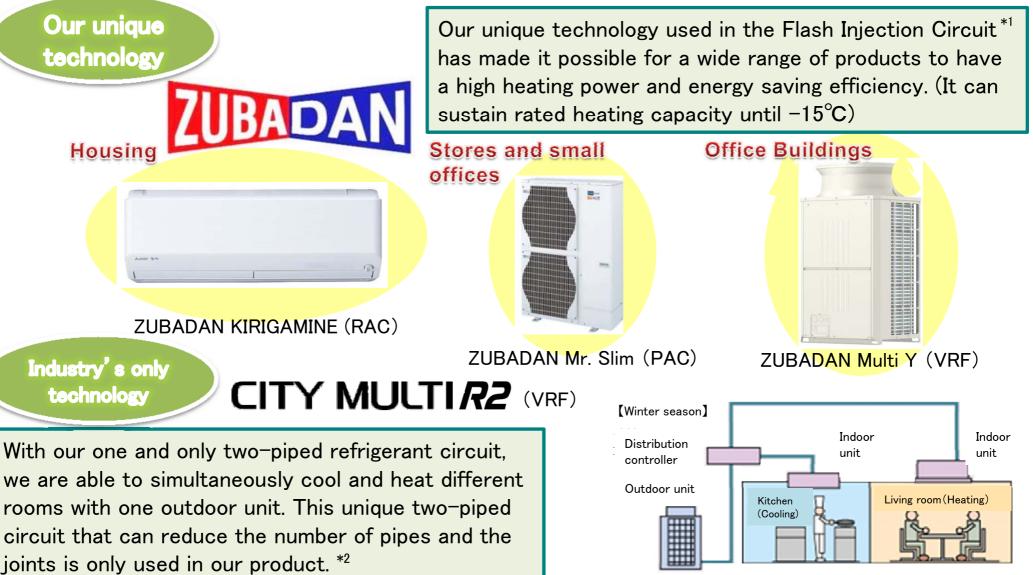
*1 At the point of Oct. 30th, 2015 in the home air conditioner unit according to our research

*2 At the point of Aug. 2015 according to our research





4. Mitsubishi Electric's Advantage – Leading Technology (RAC·PAC·VRF) –



*1 At the point of Aug. 2015, according to our research. Flash Injection Circuit: A circuit that can maintain a constant amount of refrigerant by injecting a high pressure and density refrigerant into the compressor. (Only used in the models larger than Zubadan Mr. Slim)
 *2 At the point of Dec. 2014, according to our research.





5. Business Strategy (by Business Unit)

Business unit		Direction of strategy			
Enhance our brand value, accelerate global expansion of value added and differentiated products					
Advance Strengthen and expand current business	(1) RAC	 Accelerate global expansion of product lineup with a focus on value added products Enhance our brand value (launch most-advanced model and strengthen advertisement) Expand business in emerging countries centered on the Asia 			
	(2) PAC•VRF	 Differentiate our brand by developing and expanding our unique products, ZUBADAN and R2 etc., to meet market needs Expand commercial air-conditioning business in emerging countries increasing the new construction demand 			
	(3) Industrial refrigeration (freezing and refrigeration equipment)	Utilize the business infrastructure in the Japan market (adapt to a broad range of fields from producing area, distribution and warehouse to retailer)			
	(4) Compressor	 Strengthen the performance improvement with advanced core technologies Expand sales to other air-conditioning maker in Europe, United States and China 			
Full-scale entry to a large size commercial business, establish circular business infrastructure					
Innovation	(5) Chiller	 Overseas development of the high efficiency chiller Full-scale entry and expansion to a large size commercial business by integration with DeLclima 			
Create and strengthen new business	(6) Circular business	 Establish business infrastructure of maintenance and management air-conditioning and refrigeration facilities Strengthen and expand circular business cooperating with Building and FA systems business Strengthen circular business by creating synergies with DeLclima's control technology 			



Advance

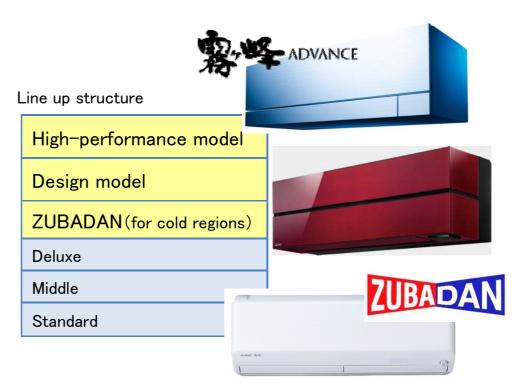
5. Business Strategy – (1)RAC –

Expand product lineup with a focus on the value added products

- Create and develop the "New Value"
- Accelerate market penetration of the high performance and design model
- •Expand coverage of the design strategy
- Accelerate the cold regions strategy and expand product lineup
- Further develop the comprehensive strategy (Deluxe: DX, Middle: MID, Standard: STD)
 - •DX: Continuously improve the sensing technology 'Move-eye KIWAMI" realizing top class energysaving performance
 - MID/STD: achieve both the large-capacity and compact design

Expand sales volume in global markets

- Overseas development of the high performance and design model
- Expand ZUBADAN sales to cold regions overseas
- Develop and expand the cooling-only inverter model to support the saving-energy and refrigerant related regulations in emerging countries
- Propose "Whole home solutions" by multi type air-conditioning systems in USA



Enhance our brand value

Strengthen advertisement in Japan market Increase our brand recognition in emerging countries

Multi type air-conditioning system ©2015 Mitsubishi Electric Corporation 14





Advance

5. Business Strategy – (2)PAC•VRF –

Accelerate the differentiation

Japan: Maintain the high market share by expanding sales of only one value added product

Europe: Expand sales by differentiated unique products, ZUBADAN, R2 and HVRF, and control technology

Capture the demand in emerging countries

 Asia: Expand sales by cooling-only model to meet the increasing demand of construction sector
 Russia: Expand sales by strengthen the heating capacity improved model, ZUBADAN etc.

Innovation

Entry to the new business

USA: By collaborating with Greenheck's AHU and Mitsubishi Electric's VRF, strengthen the total proposing capability of energy-saving building use air-conditioning systems including ventilations



VRF: CITY MULTI

Centralized controller (AE-200J)













5. Business Strategy - (3) Industrial refrigeration -

Advance

Utilize the strong business infrastructure in Japan

- To support the Fluorocarbon-gas emission low and elimination of HCFC refrigerant in 2020, capture the demand for equipment replacement using HFC refrigerant (Expand lineup of wide replace condensing unit that can reuse existing refrigerant piping etc.)
 - Overseas development (Asia etc.)



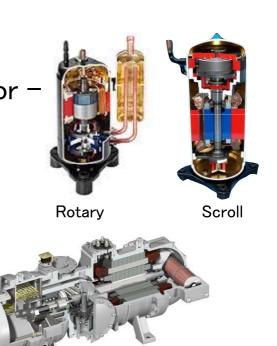
Condensing unit series

Advance

5. Business Strategy - (4) Compressor -

Strengthen the performance improvement with advanced core technologies and expand business

- Accelerate development the Rotary, Scroll and Screw type compressors that can adapt to HFC refrigerant and inverter
- Expand sales volume to other air-conditioning makers in Europe, United states and China



Screw Sorporation 16





5. Business Strategy - (5) Chiller -

Advance

In Japan

Expand sales volume

Launch the top-class efficiency and space-savings module chiller 「Compact cube DT-R」 for renewal and replacement demand leading up to the Tokyo Olympics and Paralympics in 2020

Innovation

In global market

Full-scale entry and expand to a large size commercial business

- Launch the high efficiency chiller into global market
 Sell DeLclima's chillers via Mitsubishi Electric's sales channels in Europe market mainly
- Co-develop higher value-added products and fast market launch by combining DeLclima's competitive chillers and Mitsubishi Electric's core technologies (compressors and fans, etc.)

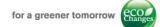
Module Chiller : Compact cube DT-R





DeLclima's (Climaveneta) Chillers





Innovation

5. Business Strategy - (6) Circular business -

Japan

Strengthen and expand the circular business by collaborating with in-house Building systems and FA systems businesses

[Examples]

- Control energy saving operation of air-conditioning systems in Building facilities operation & planning systems "facima"
- Remote management service of Air-conditioning, freezing, refrigeration facilities "Cool remote maintenance"

Overseas

- Strengthen and Expand the circular business in Europe and United states
- Europe: Remote monitoring and maintenance business (Italy: RMI*1/UK: MELCLOUD)
- US: Propose the energy saving air-conditioning systems for buildings
- I Strengthen the circular business by utilizing synergies with DeLclima's control systems







Reference: Progress situation of the DeLclima acquisition and Project effect

Progress situation

Currently under review of the antitrust law in some countries. After completion of this procedures, we will purchase DeLclima's share capital from De' Longhi Industrial (74.97% of share capital), and the tender offer will be launched to purchase the remaining shares from the other shareholders.

Project effect

- Realize more synergies by discussion with DeLclima based on the following items
- (1) Full-scale entry into the chiller business and a large size commercial air-conditioning & refrigeration systems business
 - •Sales in FY2014: 48.8Bil yen(vs FY2013: +6%), Operating profit margin: Approx.12%
- (2) Cross-selling opportunities for both companies by complementing products
- (3) Co-develop higher value-added products and promptly launch into market by combining DeLclima's competitive chillers and our core technologies (compressors and fans, etc.)
- (4) Accelerate comprehensive circular business by collaborating with both control systems
- (5) Establish global organization of production and supply utilizing both company's production bases
 - →After the completion of the acquisition, we aim to finish investment recovery within 8–9years





6. Area Strategy – Japan –

Mid-term Plan	Basic Policy	Initiative			
<sales (fy2014)="" composition=""></sales>	(1) Increase presence and enhance brand value by expanding sales of value added and differentiated products	 Promote strengthening of product development for renewal demand Develop products to meet global needs and launch to Japan market in advance Improve brand appeal by strengthening promotion and enhance non-price competitiveness 			
<sales (fy2014–2020)="" growth=""></sales>	(2)Strengthen chiller and industrial refrigeration business in addition to air-conditioning products as comprehensive HVAC manufacture	 Launch the top-class efficiency and space-saving module chiller Reinforce sales organization to capture demand for the Tokyo Olympics and Paralympics in 2020 Improve system response capabilities to food distribution related business 			
2014 2015 2020(FY) FY2020 Sales Target: 1.2 times vs FY2014	(3) Strengthen and expand the circular business	 Strengthen collaboration with the Building systems and FA systems businesses 			





6. Area Strategy - Europe, Middle East and Africa -

Mid-term Plan	Basic Policy	Initiative
<pre> </pre> </td <td>(1) Aim to take over "the Number 1" market share in Europe by expanding exiting businesses and business domain utilizing acquisition of DeLclima</td> <td> Mitsubishi Electric's position is number 2 as of now Expand product lineup utilizing integration with DeLclima, reinforce sales channels and strengthen RAC-PAC-VRF-Chiller the circular business (according to our estimation) </td>	(1) Aim to take over "the Number 1" market share in Europe by expanding exiting businesses and business domain utilizing acquisition of DeLclima	 Mitsubishi Electric's position is number 2 as of now Expand product lineup utilizing integration with DeLclima, reinforce sales channels and strengthen RAC-PAC-VRF-Chiller the circular business (according to our estimation)
	(2)Expand sales channels in new market	 In Turkey, acquired and integrated with a local agency, Klima Plus In Russia, established own sales company and started operation In Norway, acquired a local agency and started operation as a new branch In South Africa, a new sales branch started operation Re-entry into Saudi Arabian market (Started sales of VRF in 2014)
2014 2015 2020(FY) FY2020 Sales Target: 1.5 times vs FY2014	(3)Accelerate developing "Air to Water (ATW)" business to meet regional needs in Europe	 Promote developing ATW products utilizing the Housing Test facility in Scotland Housing Test facility in Scotland, UK





6. Area Strategy - North and South America -

Mid-term Plan	Basic Policy	Initiative
Sales Composition (FY2014) Xex. compressor business Asia Oceania Japan North/South America Europe Middle East Africa Sales Growth (FY2014–2020)>	 (1)Maintain the top share by strengthening existing ductless business, expanding sales volume by launching original products for the US market and by strengthening regional marketing capability (2)Maintain and strengthen a existing sales network and accelerate developing emerging markets 	 Accelerate development of original products for the US market at the engineering center in the US Started production of VRF indoor units for the US market in Mexican factory (since 2013), expand production capacity and increase production models in series Maintain and strengthen relationships with distributors and builders reaching 1,300 in US Expand business in South America by strengthening sales channels
2014 2015 2020(FY) FY2020 Sales Target: 2 times vs FY2014	(3)Enter into the ductless market by harmonizing with US's original air-conditioning culture and ductless products	 Commercial: Strengthen total solution proposing capability of energy-saving building air-conditioning systems and include ventilations by collaborating with Greenheck's AHU and our VRF Residential: Develop the Multi-position indoor unit to meet unitary market Multi-position indoor unit





6. Area Strategy - China, Asia and Oceania -

Mid-term Plan	Basic Policy	Initiative
<sales (fy2014)="" composition=""></sales>	(1) Further strengthen high −end, top brand image in China	 Continuously launch value added and differentiated products developed China market-exclusive models etc.
North/South Africa Europe• Middle East• Africa <sales (fy2014–2020)="" growth=""></sales>	(2) Firmly maintain high share in Thailand, Singapore and Oceania, expand sales volume in Asian emerging markets (India, Indonesia and Vietnam etc.)	 Expand sales volume by launching Asia market-exclusive energy saving models Expand sales channels by establishing comprehensive sales company in Asian emerging countries and enhance band value, increase brand awareness by strengthening advertisement Reinforce supply and production organization in Thailand factory to meet rapidly increasing demand in Asia
2014 2015 2020 ^(FY) FY2020 Sales Target : 1.7 times vs FY2014	(3) Reinforce a sales organization to expand commercial Air- conditioning business	 Reinforce organization of technical, service and support in whole Asia utilizing "ASC (Asia support center)" Established "Advance & Innovation Center" in Thailand sales company to strengthen improving total proposal capabilities and training



Advance



7. Development & Manufacturing Strategy

- Drive Localization -

Establish a value chain in each region

Accelerate developing optimized products for each region by regionally-oriented marketing

- Overseas bases : Product planning and develop independently to meet individual needs and regulations in each region
 - Strengthen independent development capabilities in all overseas bases utilizing research centers in US and Europe, R&D centers in US, Thailand and China
 - •For example, promoting product developing to reflect Asian local needs by forming a project team with sales and design department members in Thailand base

Japanese bases : Develop new technologies for global market

- Expand design and development capabilities by contracting new development sites (buildings) in Air-conditioning and refrigeration systems works (AC&R works, Wakayama city) and Shizuoka works (Shizuoka city), and accelerate developing value added and differentiated products
- Increase the number of development personnel globally (Target in FY2020: 1.5 times vs FY2013)
 - •Reinforce organization of training and education
 - Strengthen design and development infrastructure utilizing IT systems



AC&R works Contract a new building



Shizuoka works Contract a new building ©2015 Mitsubishi Electric Corporation 24





Advance

7. Development & Manufacturing Strategy

- Drive Localization -

Accelerate local production for local consumption

- Establish supply and production organization to respond quickly to changing demand due to weather conditions by shortening supply lead times
- (1)Accelerate transferring production to production bases neighboring each market [Examples of transferring production]
 - ①Japan→Overseas: Transferred production of VRF indoor unit for global market from AC&R works to Thailand in October 2014

②Overseas→Overseas: Transferred production of RAC for US market from Thailand to Mexico in October 2014

(2) Consistently continue production for Japanese market in Japanese bases

Strengthen establishing supply and production bases globally

- Established a production base in Mexico for expanding sales in North American market in October 2013
- Improve logistics and increase production capacity in Thailand base for expanding sales in Asian market (Target in FY2018: 7 million units production)*1
- •Utilize DeLclima's production bases (12 bases in 3countries) in addition to our production bases (10 bases in 5 countries)

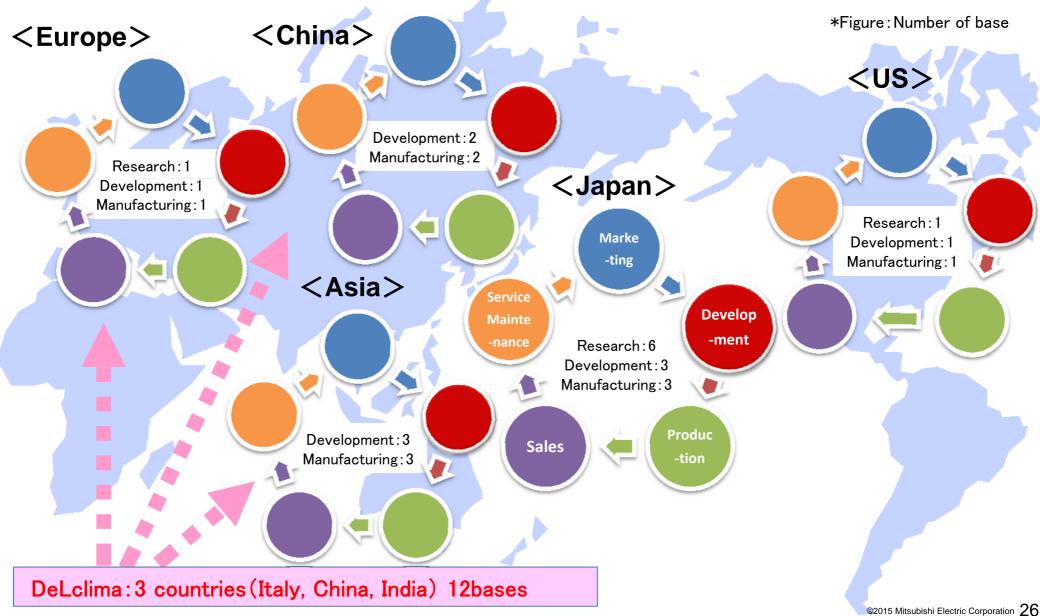
*1 Indoor unit + Outdoor unit





7. Development & Manufacturing Strategy

Localization in the 5 regions







Reference: Examples of investments into development, production and sales bases since FY2013



DeLclima (Italy) Into a consolidated subsidiary (Plan)

Investment amount approx. 90.2 Billion yen



Mitsubishi Electric Europe B.V. Established a new branch in Norway in Oct, 2015



Mitsubishi Electric acquired and integrated with a Turkish local agency, Klima Plus in Jul, 2014



Mitsubishi Electric Consumer Products (Thailand) Established new facilities in Jul, 2015

Investment amount approx.10 Billion yen



Mitsubishi Electric Kang Yong Watana Co., Ltd. (Thailand) Established "Advance & Innovation Center" in Aug, 2015



Mitsubishi Electric started production Air-conditioning products in Mexico in Oct, 2013



Shizuoka works (Japan) Contract a new building Start operation in Jun,2019 (Plan)

Investment amount approx. 5 Billion yen



Mitsubishi Electric Europe B.V. South Africa branch started sales operation in Jun, 2015



Mitsubishi Electric opened Housing Test Facility in Scotland in Jul, 2013



AC&R works (Japan) Contract a new building Start operation in 2016 spring (Plan)

Investment amount approx. 4 Billion yen



Mitsubishi Electric established Mitsubishi Electric (Russia) LLC Started sales operation in Oct, 2014



Mitsubishi Electric US, Inc. HVAC Division started operation in USA in Apr, 2013





Changes for the Better

Cautionary Statements

The expectation of operating results herein and any associated statement to be made orally with respect to the Company's current plans, estimates, strategies and beliefs, and any other statements that are not historical facts are forward-looking statements. Words such as "expects," "anticipates," "plans," "believes," "scheduled," "estimated," "targeted," along with any variations of these words and similar expressions are intended to identify forward-looking statements that include but are not limited to projections of revenues, earnings, performance and production. While the statements herein are based on certain assumptions and premises that the Company trusts and considers to be reasonable under the circumstances to the date of announcement, you are requested to kindly take note that actual operating results are subject to change due to any of the factors as contemplated hereunder and/or any additional factor unforeseeable as of the date of this announcement.

Such factors materially affecting the expectations expressed herein shall include but are not limited to the following. As such, additional factors may arise at any given time.

- 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 yen/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. Occurrence of large-scale disasters including earthquakes, typhoons, tsunami, fires and others
- 14. Social or political upheaval caused by terrorism, war, pandemic by new strains of influenza and other diseases, or other factors