

Mitsubishi Electric Building Systems Business Strategies

May 14, 2015

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Executive Officer

General Manager, Building Systems Group



Key Factors for Growth Strategies



Building Systems Business Growth Strategies

	Measures of Major Emphasis Towards FY2020	
Market Strategies	Further expand new installation business in China and India	
Ŭ	2. Accelerate renewal business in Japan	
Product/ Development Strategy	 3. Aim to win "middle zone" market share, introducing strategic models designed for each region overseas 4. With Inazawa Works as the mother factory, continuous production of 10,000 units including renewal orders 	
Manufacturing Strategies		
	5. Build an optimal distributed manufacturing system with mother factory in Japan, and China and Thailand at the core	

Incorporate New Installation Demand for Overseas Markets and Accelerate Renewal Business in Japan

FY2020 Target of Building Systems Business Sales: ¥720 billion, Overseas ratio: 50%



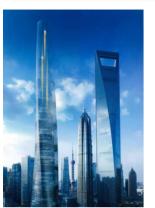


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I-1 Development





Scheduled to deliver world's fastest elevators for Shanghai Tower (1,080m/min)

*At time of completion

(April 2015, researched by Mitsubishi Electric)

Delivered 12 spiral escalators for Shanghai New World Daimaru Department Store

Launched "NEXIEZ" global strategic model for overseas markets

Shanghai Tower

Launched "ELEPAQ" machine-room-less elevator 1998

1993

1978

Delivered world's (then) fastest elevators for Yokohama Landmark Tower (750m/min)

1960

Launched spiral escalators 1985

Delivered world's (then) fastest elevators for Sunshine 60 Building (600m/min)

Launched "ELEPET,"
Japan's first standardspecification elevator

1983 Total production: 100,000 units

2010

1991

company (SMEC)

1965 Total production: 10,000 units

1987

Established Inazawa Works dedicated elevator/escalator factory

1950 Shipped first elevator for export

1935 Delivered first Mitsubishi Electric elevator

1931 Started elevator & escalator business (began parts production)

Completed construction of "Solaé" elevator testing tower

Established manufacturing base in China (MESE)

FY2015 planned total production: 1.3mn units

2015

2004

Established Chinese joint venture

2007

Established manufacturing

Note: Total unit production

denotes global total

base in Thailand (AMEC)





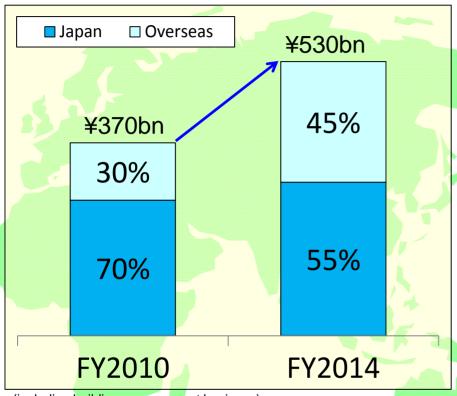
First Mitsubishi Electric elevator



I-2 Business Overview

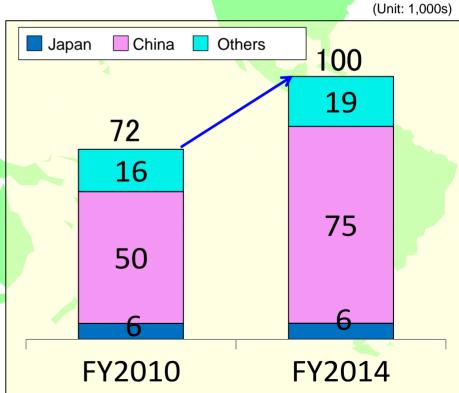


Building Systems Group Sales Trend



(including building management business)

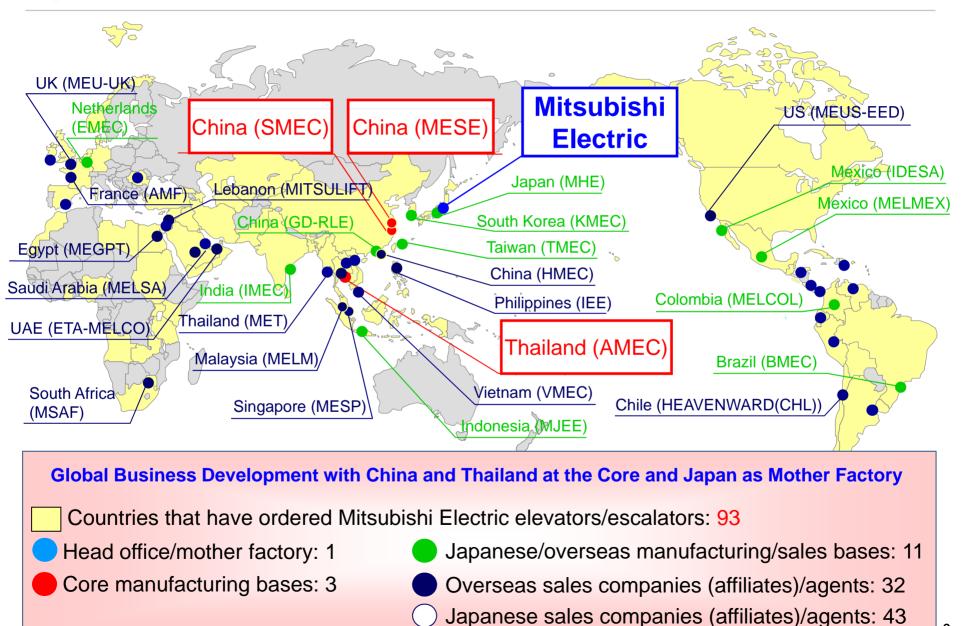






I-3 Global Operations









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II-1-(1) Direction of Elevator & Escalator Business Strategies



<Mitsubishi Electric Management Policy>

- Continue balanced management and further pursuit of sustainable growth -

Aiming to Advance Growth One Level Higher

- Further strengthen strong businesses
- Continuous creation of new strong businesses
- ◆ Enhance solutions business with strong businesses at the core

<Building Systems Group>

Direction of Elevator & Escalators Business toward FY2020

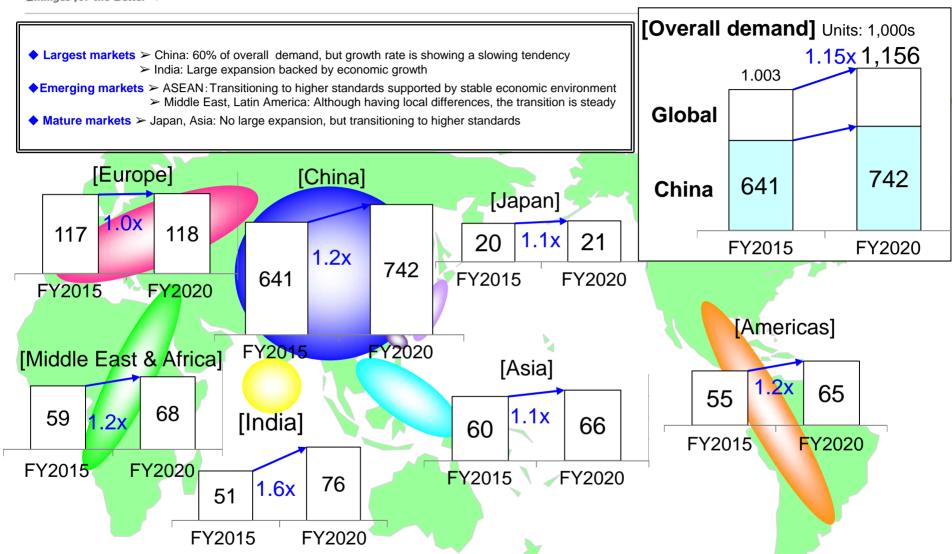
- Strengthen "new installations" and "maintenance" businesses
- Accelerate "renewal" business
- Develop domestic building solutions business with elevators and escalators at the core





II-1-(2) Trend in Demand (New Installations)





Units: 1,000s

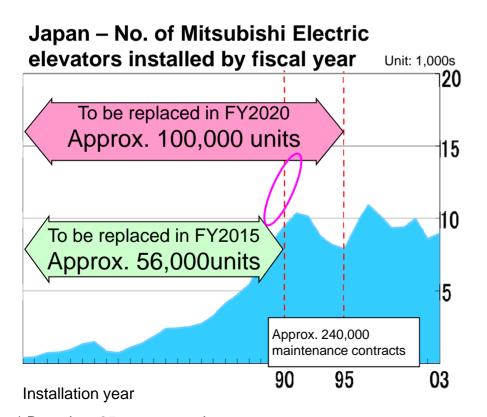
^{*} Estimates by Mitsubishi Electric Corporation

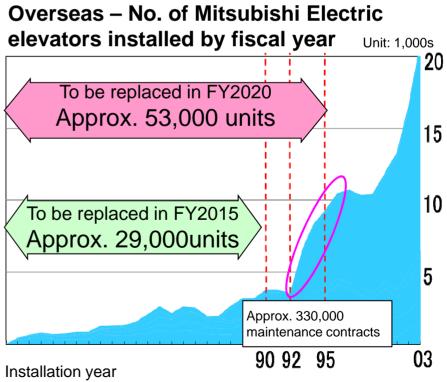


II-1-(3) Trend in Demand (Maintenance/Renewal Business)



- ◆ Worldwide rise in social demand for safety and security, acceleration of legislation
- ◆ Rapid increase in number of installations and increase in elevators used for many years
- ◆ Japan renewal demand to grow further (for elevators 25 year old or older)
- ◆ After 2017, sharp rise in renewal demand expected mainly in China and ASEAN countries





^{*} Based on 25-year operation







Mitsubishi Electric elevators and escalators contribute to the realization of vibrant, stress-free societies as part of a vital social infrastructure (vertical transportation); doing so by ensuring continuous safety and security throughout the lifecycles of buildings and products, and by continuing to provide comfortable transportation and living space throughout the world.

Safe, reliable comfortable products / Offer services, Conduct maintenance

New installation business

Offer products

Promotion of cyclical development business model based on "New installations ⇒ Maintenance ⇒ Renewal"

Renewal business

Create new value

Maintenance business

Offer services



II-1-(5) Elevator & Escalator Business Strategies



Promote cyclical development business model prioritizing safety and quality

Permeation of Global Top Brand

1. Japan/Overseas Business Segment Strategies

New Installations

Maintenance

Renewal

2. Development/Product Strategy

Introduce new products/ new technologies ahead of market change 3. Manufacturing Strategies

Create new manufacturing bases, increase capacity at regional bases

Expand global supply chain

4. Human Resources Strategies

Develop global talent and regional staff

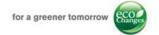




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II-2 -(1)Regional Strategies (by Segment)



Regional Strategies: Business Strategies for Major Regions/Countries by Segment

* Regional Chategies. Dusiness Chategies for Major Regions/Countries by Ceginent				
		New Installations	Maintenance/Renewal	
Major markets	China	Maintain top brand status in world's largest market, China		
		 ◆ Further develop dual branding strategy ◆ Strengthen sales force to manage order of 100,000 units 	◆ Streamline maintenance/renewal business structure	
	India	Build integrated business structure from orders to manufacturing, installations, and maintenance		
ajo				
Š		 ◆ IMEC established to enhance response to market needs ◆ Expand sales network ◆ Competitive edge owing to establishment of new factory 	◆ Streamline education system at field training center	
Emerging markets	ASEAN, Middle East, Africa, Central/South Americas	Introduce new products and drive regional strategies		
		 ◆ Introduce regional strategic models ◆ Develop/Capture share in new markets (Brazil, Turkey, Myanmar, Laos, Cambodia, Africa, etc.) 	 ◆ Improve installation/maintenance technologies further ◆ Strengthen maintenance/renewal business system 	
Mature markets	Japan	Continuous business expansion as top manufacturer		
		 ◆ Strengthen sales force and installation work system ◆ Optimize construction/installation system 	 Provide latest and premium maintenance services Accelerate renewal business to support large-scale demand and increase building value 	
	North America, Europe	Expand orders in the premium market by appealing safety and quality		
		◆ Develop new customers, expand regional sales	◆ Streamline maintenance/renewal business system	





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II-2-(2) Major Markets: China



Maintaining Top Brand Status in World's Largest Market, China

Further Develop Dual Branding Strategy

- Mitsubishi Electric brand: premium products
 - Increase speed of MAXIEZ Series elevator produced by MESE for the Chinese market
- SMEC brand: product dissemination
 - Introduce Mitsubishi Electric's latest technologies, develop high-speed models

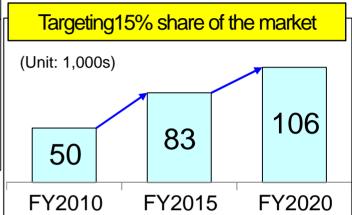
Strengthen Sales Force to Manage Order of 100,000 Units

- Develop New Customer Base
 - Expand sales network: Accelerate penetration into inland areas
 - ♦ Strengthen compliance for major developers' specifications
 - ♦ Strengthen marketability for government-affiliated residences
- Improve Preparedness for Construction Support
 - Increase number of engineers, introduce Japan's latest installation methods

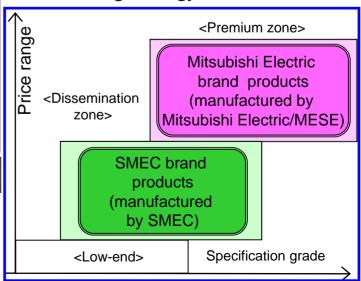
Streamline Maintenance/Renewal Business System

- Train maintenance engineers and expand introduction of remote monitoring system
- Streamline maintenance system to support expanding demand for renewal

No. of new installation orders in China



Dual branding strategy





II-2-(2) Major Markets: India



Establish Integrated Business System in World's Second Largest Market, India

IMEC Established (Aug. 2012) to Enhance Market Support

 Expand business in India by strengthening sales force and field (installation/maintenance) services

Expand Sales Network

- Resident Mitsubishi Electric sales reps stationed in three major cities: Delhi, Mumbai and Chennai
- Further expand sales office network

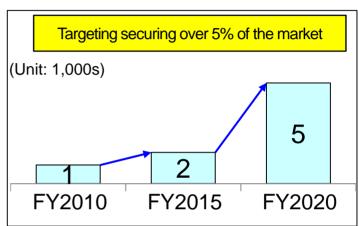
Competitive Edge Owing to Establishment of New Factory (July 2016)

- Enhance business capabilities by integrating ordering, production, installation, and maintenance operations
- ◆ Win middle-zone demand by starting local production of regional strategic model NEXIEZ-LITE designed for the Indian market

Strengthen Field (Installation/Maintenance) Foundation

◆Streamline field training center training system and train installation/maintenance engineers

No. of new installation orders in India



Sales network





II-2-(2) Major Markets: India (Overview of New Factory)



Location	Bangalore, Karnataka, India
Site area	89,000m ²
Total building area	25,400m ²
Use	Manufacturing of elevator equipment
Start of operations	July 2016
Production capacity	Up to 5,000 units per year
Investment amount	INR1,833 million (approx. ¥3.45 billion)
Employees	Approx. 200 (at time of plant going operational)
Adjunct facilities	Elevator testing tower (approx. 41m high), field training center

Exterior view of new factory in India



NEXIEZ-LITE regional strategic model designed for Indian market







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II-2-(3) Mature Market: Japan (Maintenance Business Strategy)



Provide Safety and Security via the Latest and Premium Maintenance Services – Key to Cyclical Development Business Model

Provide High-quality and Sustainable Services

- Bolster maintenance engineers' expertise and technical competence
 (Drive to offer maintenance services for a wider range of models)
 - Improvement in regional training facilities and training/education programs
- Provide new maintenance services with application of latest technologies and more emphasis on preventive maintenance
 - ♦ Development of new products with higher convenience and comfort (Image analysis, operations in line with usage situation, etc.)
 - Sophistication and optimization of maintenance services, using self-diagnosis and remote monitoring

[Service network guaranteeing user safety and security 24/7]



Information centers:
9 locations nationwide
Service centers:
Over 280 locations
nationwide



II-2-(3) Mature Market: Japan (Renewal Business Strategy) **



Enhance Renewal Business Foundation to Ensure Better Safety, Security and Comfort

Accelerate Renewal Business to Support Largescale Demand and Increase Building Value

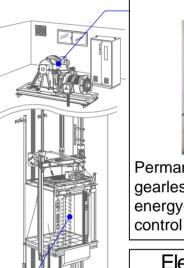
- ◆Accelerate pitch for the renewal of old elevators
 - ♦ Improve energy savings and convenience through latest models
- ◆Develop new product range responding to customer needs
 - ♦ Expand inverter-based models to support energy-saving configurations
 - Exert more effort to achieve shorter installation periods, shorter business disruption time
- Increase number of sales representatives and design/ installation engineers

Elevator Car



Energy savings owing to use of LEDs for ceiling lighting, and latest car designs, operating panels and indicators

Renewal Example



Hoist



Permanent magnet (PM) gearless hoist motor, energy-saving inverter control

Elevator Landing



Multi-beam door sensors for enhanced safety and convenience



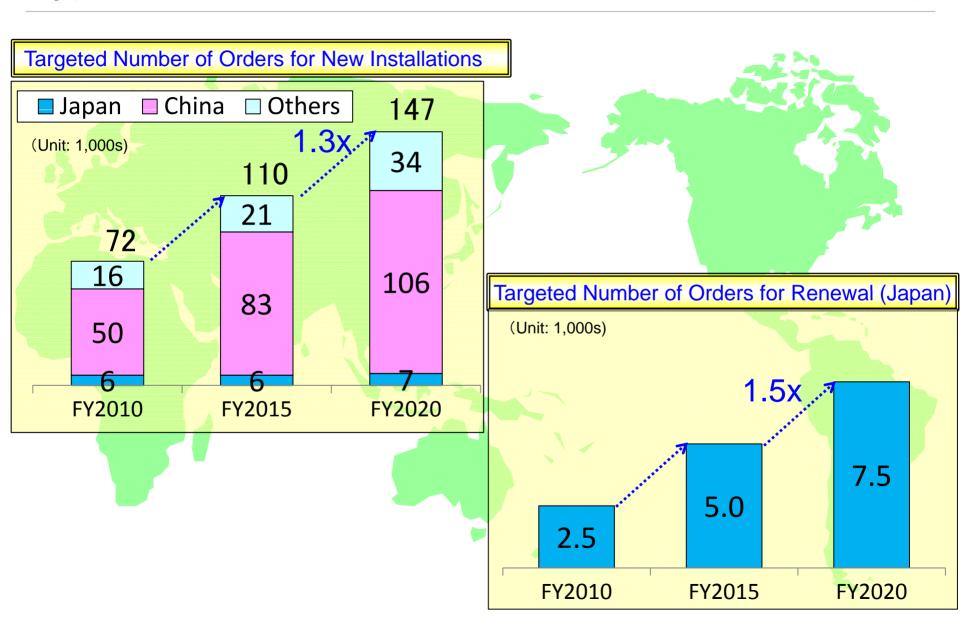


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II-2-(3) Targets for Number of Orders









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II-3-(1) Development Strategies (Products)

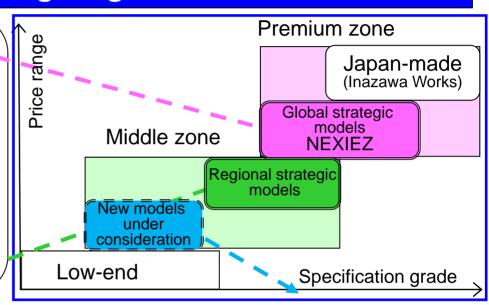


Expand NEXIEZ Series Global Strategic Models and Introduce Models Targeting the Middle Zone

Expand Lineup



- Equipped with Japan's latest technologies
- Supplied worldwide from Thailand production base



NEXIEZ-GPX for Central/South Americas



NEXIEZ-LITE for India



Introduce new regional strategic models

- Functions and design that meet the region's needs
- Higher competitive edge achieved through local production/procurement

Develop models for residential use

- ♦ Modular
- ♦Lightweight
- Short production and installation time requirements

II-3-(2) Development Strategies (Development)

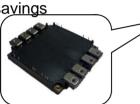


Competitive Edge in Elevator Product Appeal Enhanced by State-of-the-art Technologies

Introduce latest technologies

SiC control panel

SiC module enables more compact products and space savings

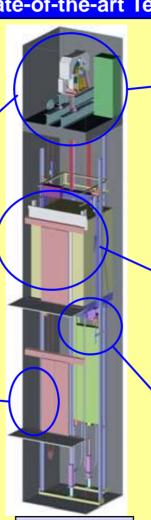




ELE-NAVI destination prediction system



Passenger destination floors assigned to shorten waiting time, elevator landing operating panel operability and design improved



Ultrafast elevator technologies

Large, high-speed hoist



Permanent magnet (PM) motor realies superior energy-saving efficiency

Aerodynamic car design

Wind noise generated around car minimized, further enhancing low-noise performance



Active roller guide



Effectively controls rail twisting and sway caused by air pressure to ensure a stable and comfortable ride



II-3-(3) Manufacturing Strategies (Inazawa Works)



Build an Optimal Distributed Manufacturing System with Mother Factory in Japan, and China and Thailand at the Core



Build a global supply chain through collaboration by improving individual manufacturing base capacities and productivity

Mother Factory: Japan (Inazawa Works)

- Develop and supply elevators and escalators using the latest technologies
- Central functions such as production line design, quality control, and materials procurement

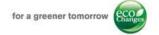
Innovative production technologies resulting in the creation of cutting-edge technologies and nonstop production

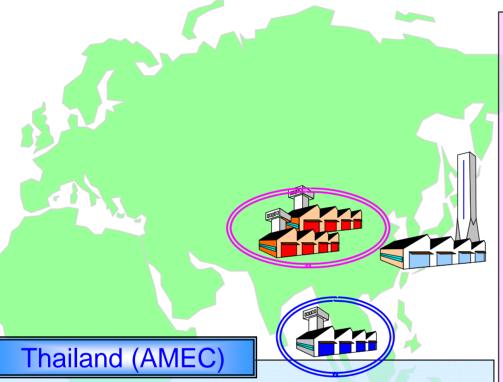
- ◆Promotion of massproduced/custom products and systems
- Automation, system networking, etc.





II-3-(4) Manufacturing Strategies (China, Thailand)





- Supply NEXIEZ strategic models worldwide
- Supply escalators worldwide
- Introduce development capabilities (division of labor with Japan)

Build production system capable of producing 20,000 units

Establish R&D center



New factory: Scheduled to begin operation

in May 2016

New testing tower: Scheduled to begin

operation in Dec. 2016

China (MESE/SMEC)

Develop/supply models for Chinese market

Development and domestic production of high-speed elevators

> Build system capable of producing 100,000 units

<MESE>

New factory construction



Third factory: Began operation in Jul. 2014

Fourth factory: Scheduled to begin operation in Jul. 2015

<SMEC>

Increase production capacity and improve productivity

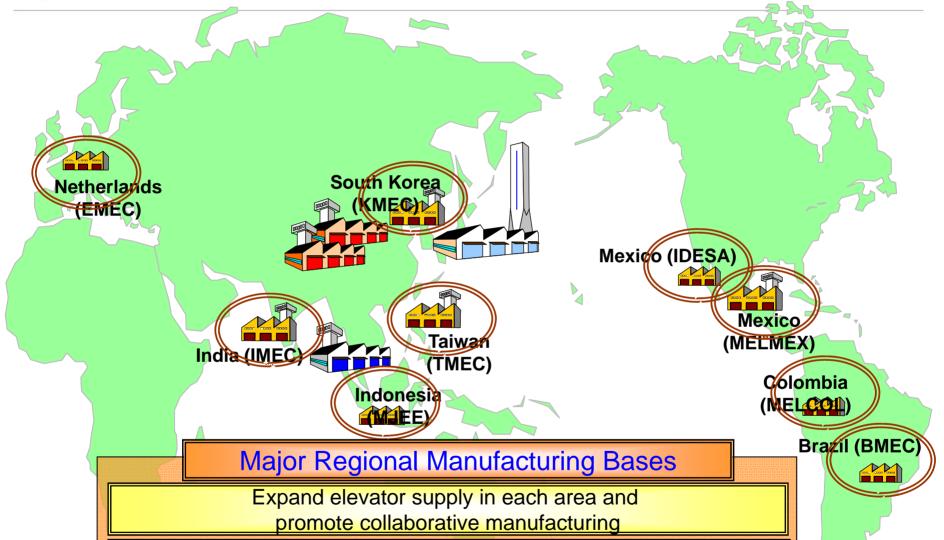


Gain competiveness through automation, cutting costs, etc.



II-3-(5) Manufacturing Strategies (Main Regional Manufacturing Bases)





Establish supply system in Central/South Americas with Mexico and Colombia at the core

Promote domestic production in India and Brazil



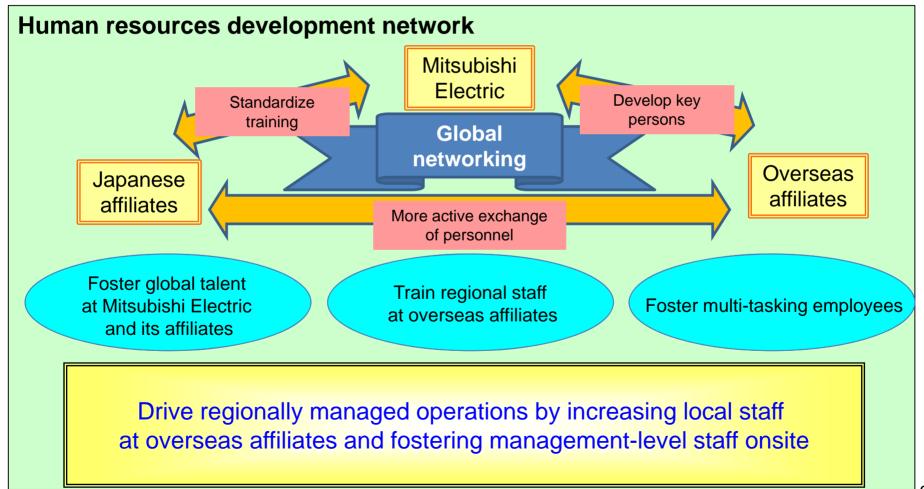


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II-4 Human Resources Strategies



Develop Global Talent and Regional Staff, and Nurture Multi-tasking Employees to Support Business Expansion







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III. Building Management System Business Strategy



Starting with Elevators & Escalators, Create and Provide New Building Solutions Focusing on Security, Crime Prevention, and Energy Savings



Create building solutions

-Offer "value" that meets immediate and future needs for buildings-

Amenity

Convenience

Security

Environment Energy saving

Elevators & Escalators



Core Product



Room entry/exit management systems



Surveillance cameras/recorders



Building management systems





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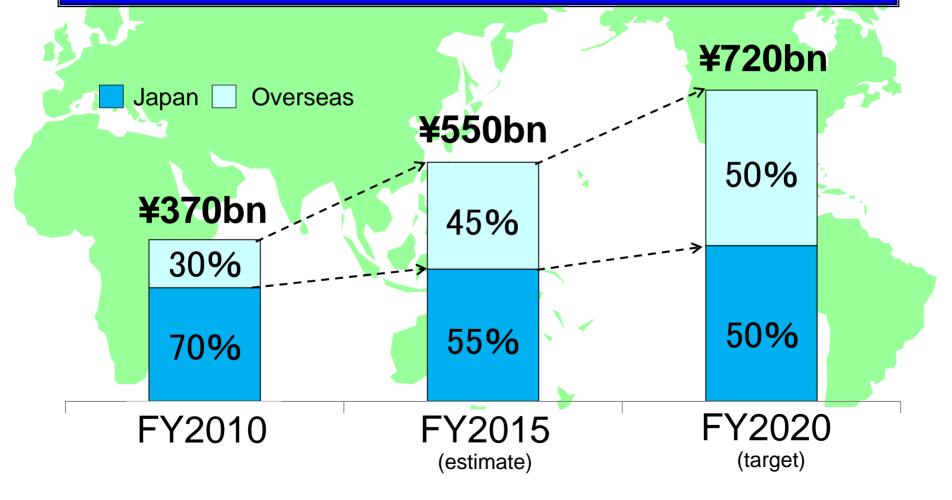


IV. Mid-term Business Targets



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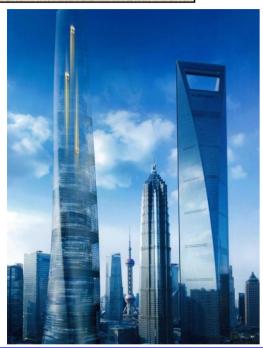




Installation Examples



Shanghai Tower





- **◆Three World's Firsts**
- World's fastest elevator traveling at 1,080m/min
- World's fastest double-decker elevator traveling at 600m/min
- World's longest-distance emergency elevator traveling 578.5m

Scheduled for delivery in 2015

Shanghai New World Daimaru Department Store

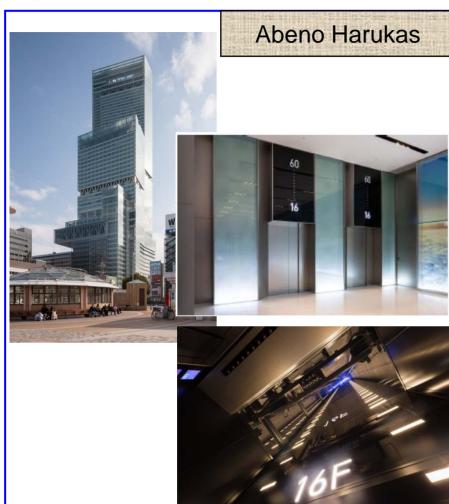


12 spiral escalators installed using Mitsubishi Electric proprietary technologies

Delivered in 2015



Installation Examples



Observation deck elevators for Japan's tallest building (360m/min)

Delivered in 2014

MAHANAKHON



Thailand's fastest elevators for tallest building in Thailand

Scheduled for delivery in 2016



Installation Examples





Yokohama Landmark Tower



Fastest elevators in Japan (750m/min)

Delivered in 1993

Sunshine 60 Building





Built using domestic technologies, world's fastest elevator at the time of delivery (600m/min)

Delivered in 1978 ⇒ Renewed in 2010



Reference (Abbreviated Names for Manufacturing/Sales Bases)



Core Manufacturing Bases

Abbreviations	Company Name	Country
AMEC	Mitusbishi Elevator Asia Co, Ltd.	Thailand
	三菱電機上海機電電梯有限公司	
MESE	(Mitsubishi Electric Shanghai Electric Elevator Co.,	China/Shanghai
	Ltd.)	
CMEC	上海三菱電梯有限公司	China/Shanghai
SMEC	(Shanghai Mitsubishi Elevator Co., Ltd.)	

Manufacturing/Sales Bases

Abbreviation	Company Name	Country
BMEC	MELCO ELEVADORES DO BRASIL S.A.	Brazil
EMEC	Mitsubishi Elevator Europe B.V.	Netherlands
GDRLE	広東菱電電梯有限公司 (Guangdong Ryoden Lift & Escalator Co., Ltd.)	China/Guangdong
IDESA	Internacional de Elevadores, S.A. de C.V.	Mexico
IMEC	Mitsubishi Elevator India Pvt. Ltd.	India
KMEC	Mitsubishi Elevator Korea Co., Ltd.	South Korea
MELCOL	Mitsubshi Electric de Colombia Ltda.	Colombia
MELMEX	Mitsubishi Electric de Mexico, S.A. de C.V.	Mexico
MHE	Mitsubishi Hitachi Home Elevator Corp.	Japan (Gifu Prefecture)
MJEE	P.T. Mitsubishi Jaya Elevator and Escalator	Indonesia
TMEC	台湾三菱電梯股份有限公司 (Taiwan Mitsubishi Elevator Co., Ltd.)	Taiwan



Reference (Abbreviated Names for Manufacturing/Sales Bases)



Sales Bases

Abbreviation	Company Name	Country
AMF	Ascenseurs Mitsubishi France S.A.S	France
ETA-MELCO	ETA Melco Elevator Co. L.L.C.	UAE
HEAVENWARD(CHL)	Heavenward Ascensores S.A.	Chile
HMEC	Mitsubishi Elevator Hong Kong Co., Ltd.	Hong Kong
IEE	International Elevator & Equipment, Inc.	Philippines
MEGPT	MELCO-MEC Egypt for Elevators & Escalators	Egypt
MELM	MITSUBISHI ELEVATOR MALAYSIA SDN. BHD.	Malaysia
MELSA	Mitsubishi Electric Saudi Ltd.	Saudi Arabia
MESP	Mitsubishi Elevator (Singapore) Pte.Ltd.	Singapore
MET	Mitsubishi Elevator (Thailand) Co,. Ltd.	Thailand
MEU-UK	Mitsubishi Electric Europe B.V.	United Kingdom
MEUS-EED	Mitsubishi Electric US, Inc.	United States
MITSULIFT	MITSULIFT (Holding) S.A.L.	Lebanon
MSAF	Melco Elevator (South Africa) Pty. Ltd.	South Africa
VMEC	MITSUBISHI ELEVATOR VIETNAM CO., LTD	Vietnam