

Hitachi Zosen Corporation

# Financial Results 2<sup>nd</sup> Quarter FY2015



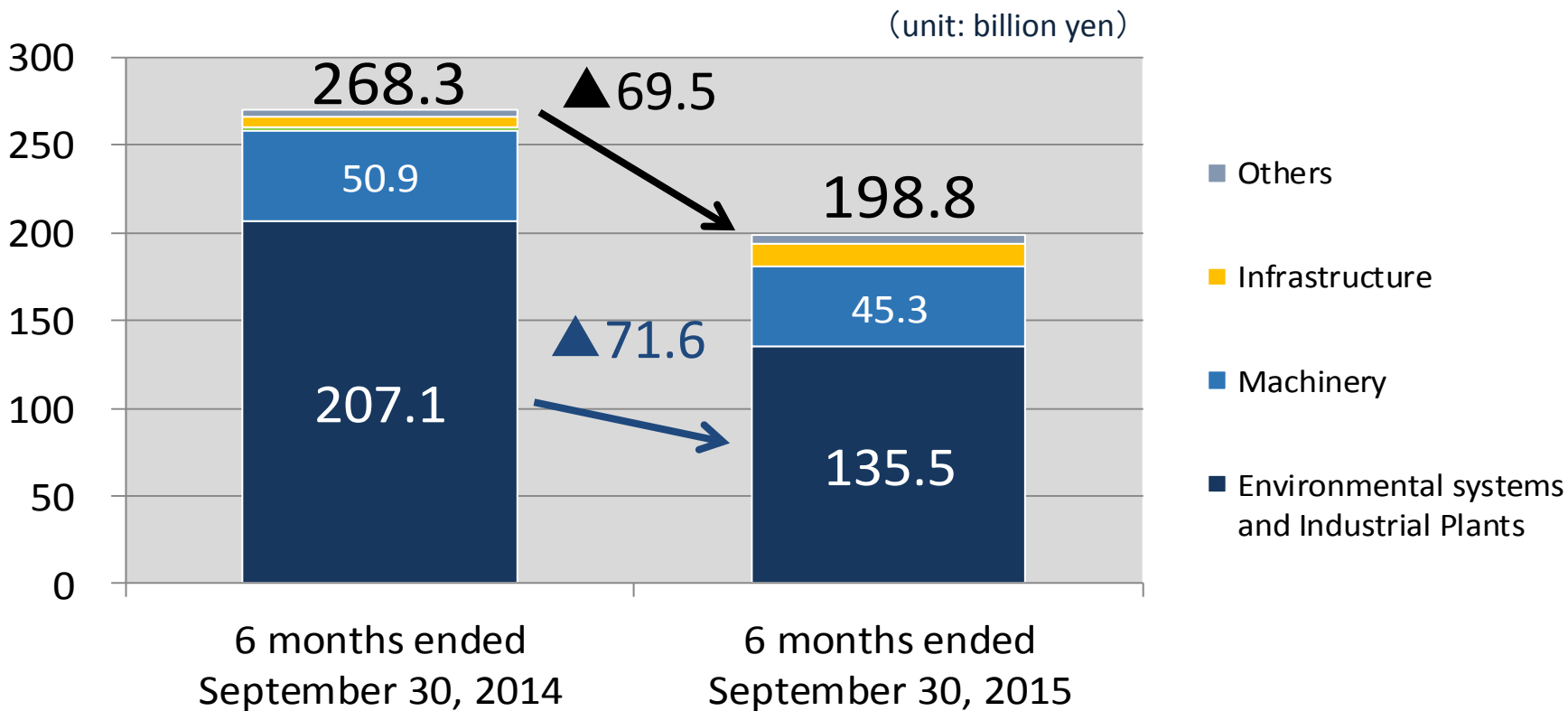
November 2015

# Overview of P&L

(Unit: billion yen)

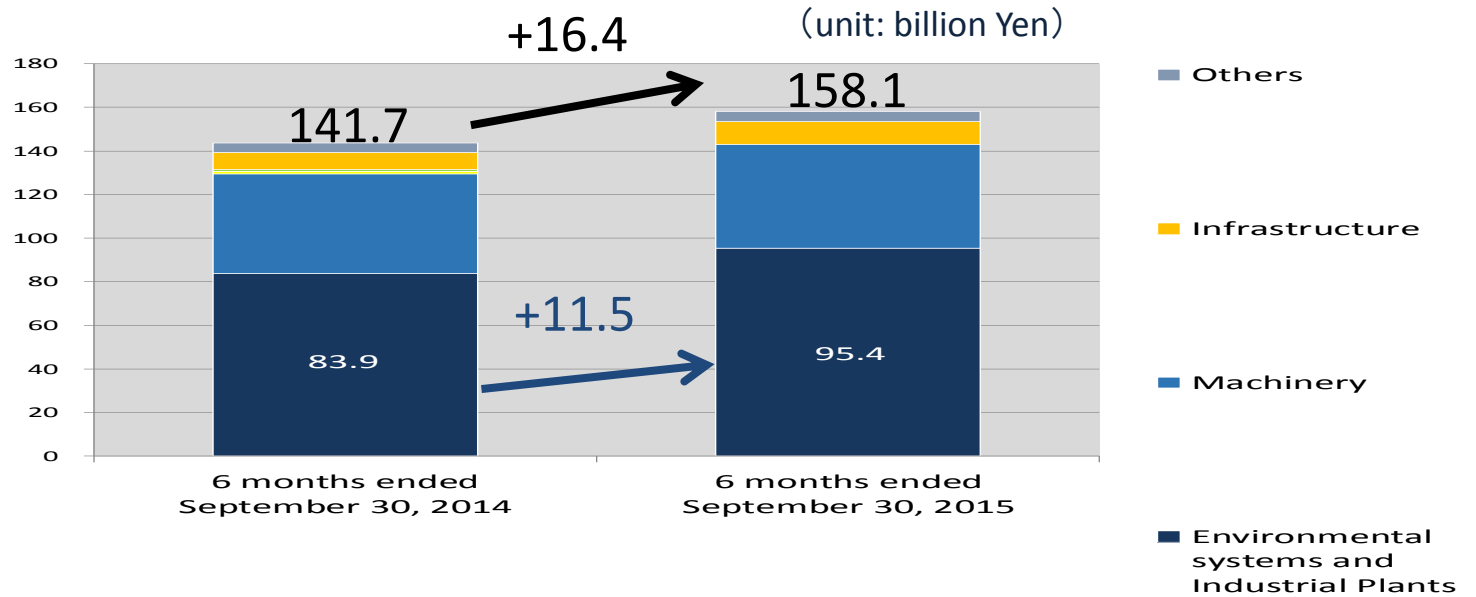
	6months ended September 30,2014	6months ended September 30,2015	Difference
Order intake	268.3	198.8	-69.5
Net Sales	141.7	158.1	16.4
Operating income	-3.5	-0.4	3.1
(Ratio)	-2.5%	-0.3%	2.2%
Ordinary income	-4.9	-1.2	3.7
(Ratio)	-3.5%	-0.8%	2.7%
Net income	-2.9	-3.9	-1.0
(Ratio)	-2.1%	-2.5%	-0.4%

# Order intake by segments

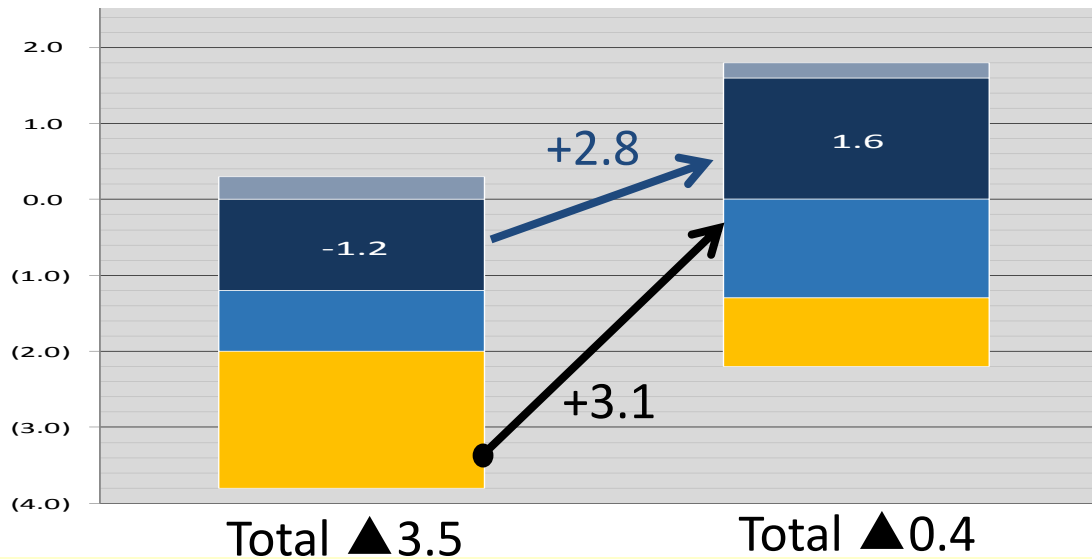


# Net sales & Operating income

## Net sales



## Operating income



# P&L by Segments

(unit: billion Yen)

		Environmental Systems and Industrial Plans	Machinery	Infrastructure	Others	Total
<b>2Q FY2015 (6 months)</b>	Order intake	135.5	45.3	13.3	4.7	198.8
	Net Sales	95.4	47.6	10.4	4.7	158.1
	Operating income	1.6	-1.3	-0.9	0.2	-0.4
<b>2Q FY2014 (6 months)</b>	Order intake	207.1	50.9	5.9	4.4	268.3
	Net Sales	83.9	45.7	7.6	4.5	141.7
	Operating income	-1.2	-0.8	-1.8	0.3	-3.5
<b>Difference</b>	Order intake	-71.6	-5.6	7.4	0.3	-69.5
	Net Sales	11.5	1.9	2.8	0.2	16.4
	Operating income	2.8	-0.5	0.9	-0.1	3.1

A large version of the Hitachi Zosen logo, with "Hitachi" in a bold, blue, sans-serif font and "Zosen" in a smaller, blue, sans-serif font below it. The letter "i" in "Hitachi" has a yellow square above it.

### **Cautionary Statement**

Forward-looking statements are based on information currently available to Hitachi Zosen Corporation. Therefore those forward-looking statements include unknown risks and uncertainties. Accordingly, you should note that the actual results could differ materially from those forward-looking statements. Risks and uncertainties that could influence the ultimate outcome include, but are not limited to, the economic conditions surrounding Hitachi Zosen Corporation and/or exchange rate fluctuation.

# Hitachi Zosen Corporation



## FY2014 Financial Results and Progress of Hitz Vision II

Fujisan Eco Park Incineration Center (71.5t/day × 2units)  
Gotemba-Oyama Regional Administrative Association(Shizuoka, Japan)



November 2015

Hitachi Zosen Corporation

1. Overview of FY2014 Consolidated Financial Results and Forecast of FY2015
2. Progress of Mid Term Business Plan “Hitz Vision II”
3. Key Business Strategies
4. New Business and Products



# 1. Overview of FY2014 Consolidated Financial Results and Forecast of FY2015

- FY2014 exceeds the last year result
- Big growth of Environmental system division's order intake

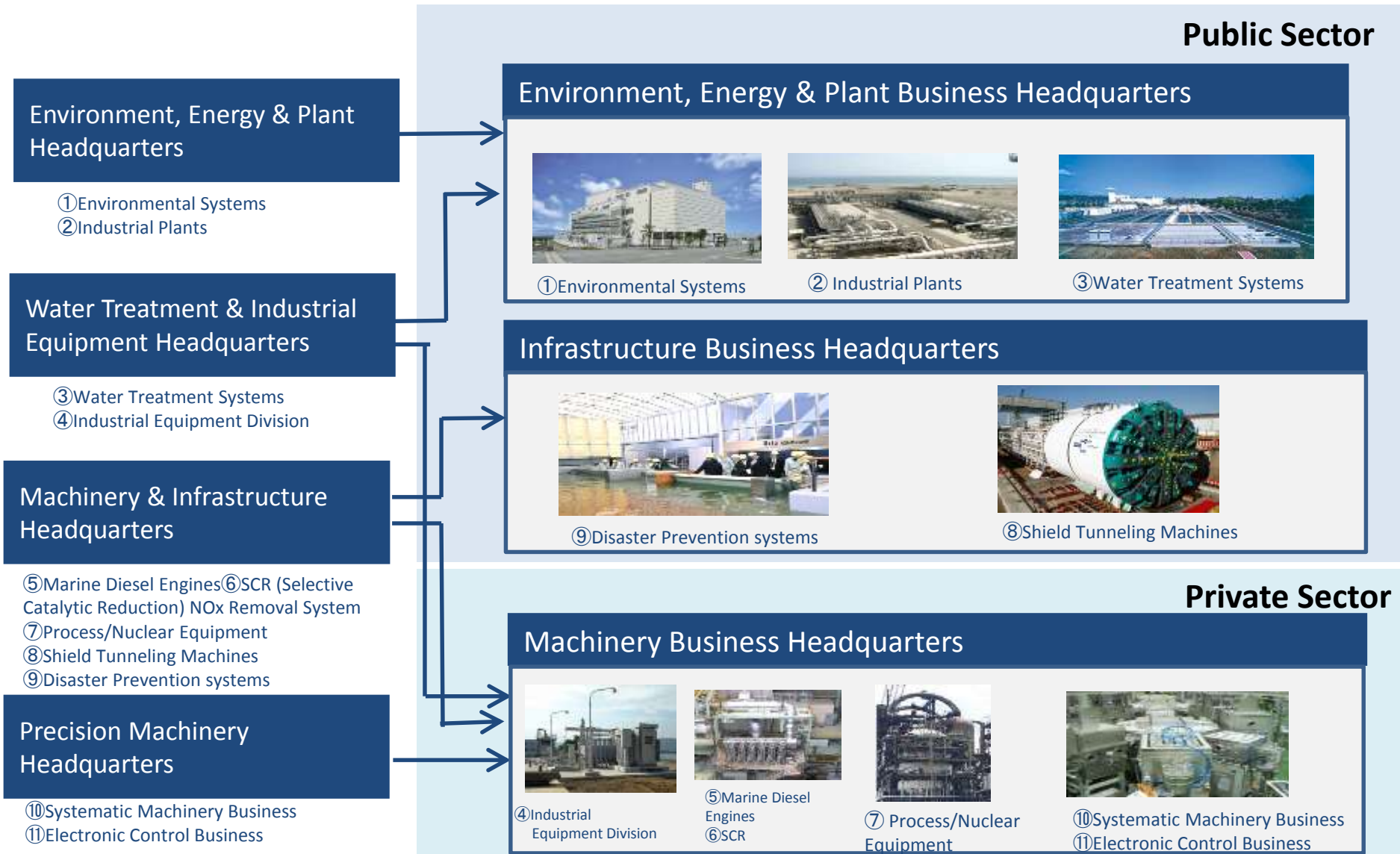
# FY2014 Results and FY2015 Forecast Overview

(Unit: Billion Yen)

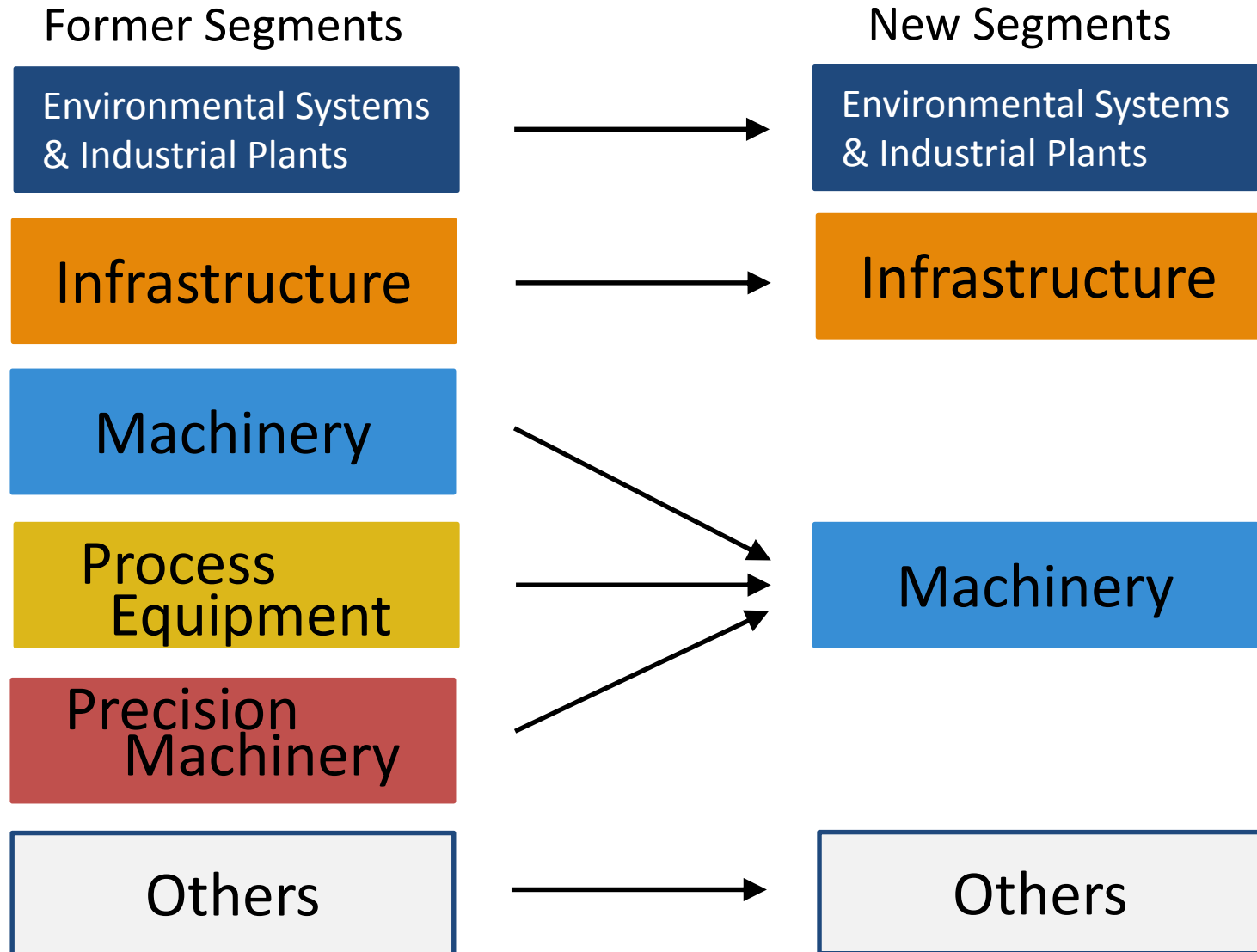
	FY2013	FY2014	FY2015	FY2016
	Actual	Actual	Forecast	Hitz-V II Plan
Order intake	328.4	452.7	450.0	500.0
Net sales	333.4	359.3	390.0	400.0
Operating income	7.8	12.8	14.5	23.0
(ratio)	2.4%	3.6%	3.7%	5.8%
Non-operating P&L	-1.6	-5.3	-3.5	-3.0
Ordinary income	6.2	7.5	11.0	20.0
(ratio)	1.9%	2.1%	2.8%	5.0%
Extraordinary P&L	0.0	1.8	-1.4	0.0
Income tax & minority interests	-2.5	-4.2	-4.1	-7.0
Net income	3.7	5.1	5.5	13.0
(ratio)	1.1%	1.4%	1.4%	3.3%

# Promote flat-matrix management structure : Reorganization

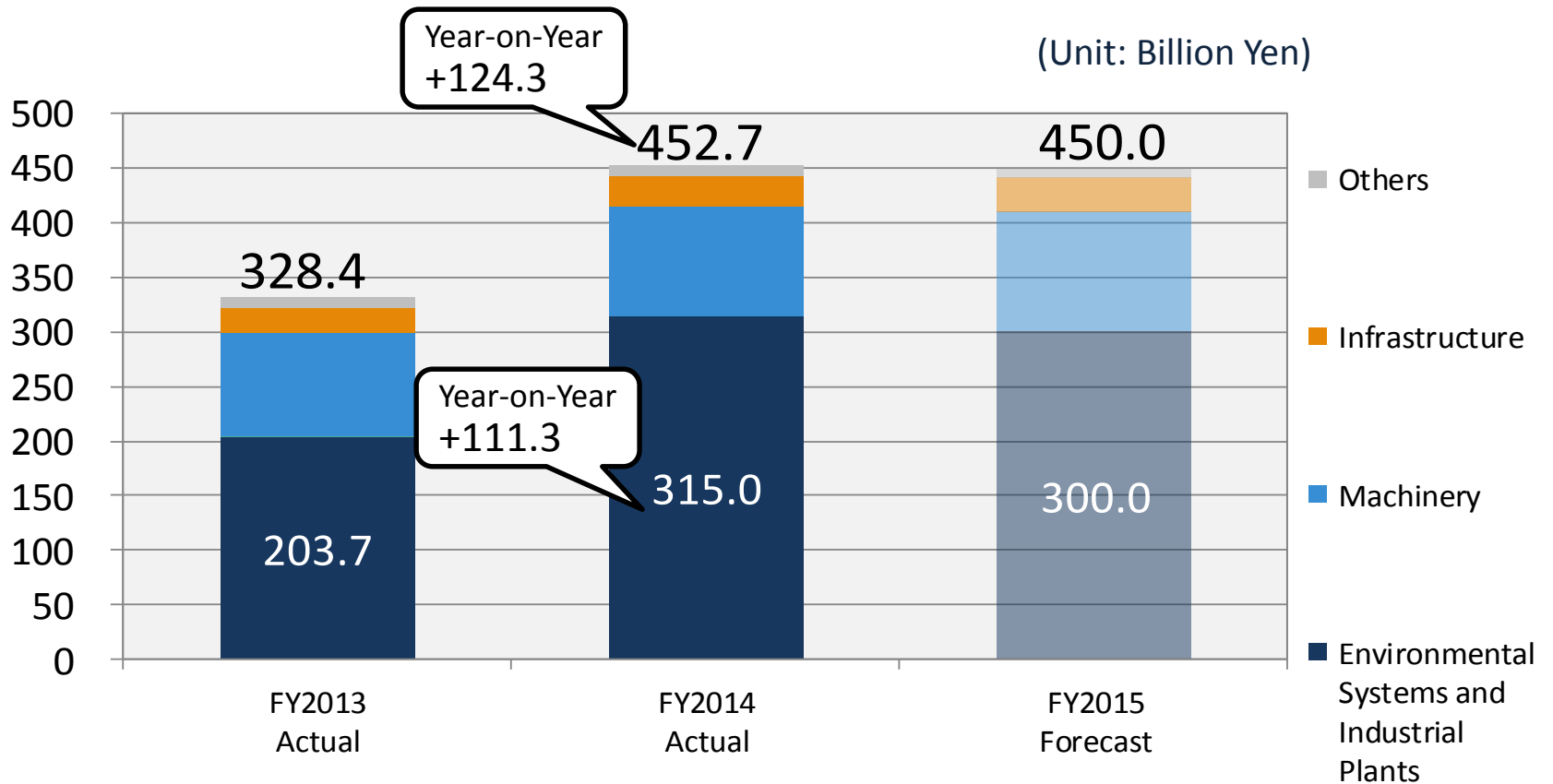
## ◆ Reorganization to divided by industry from our customers' perspective



# Change of Business Segments



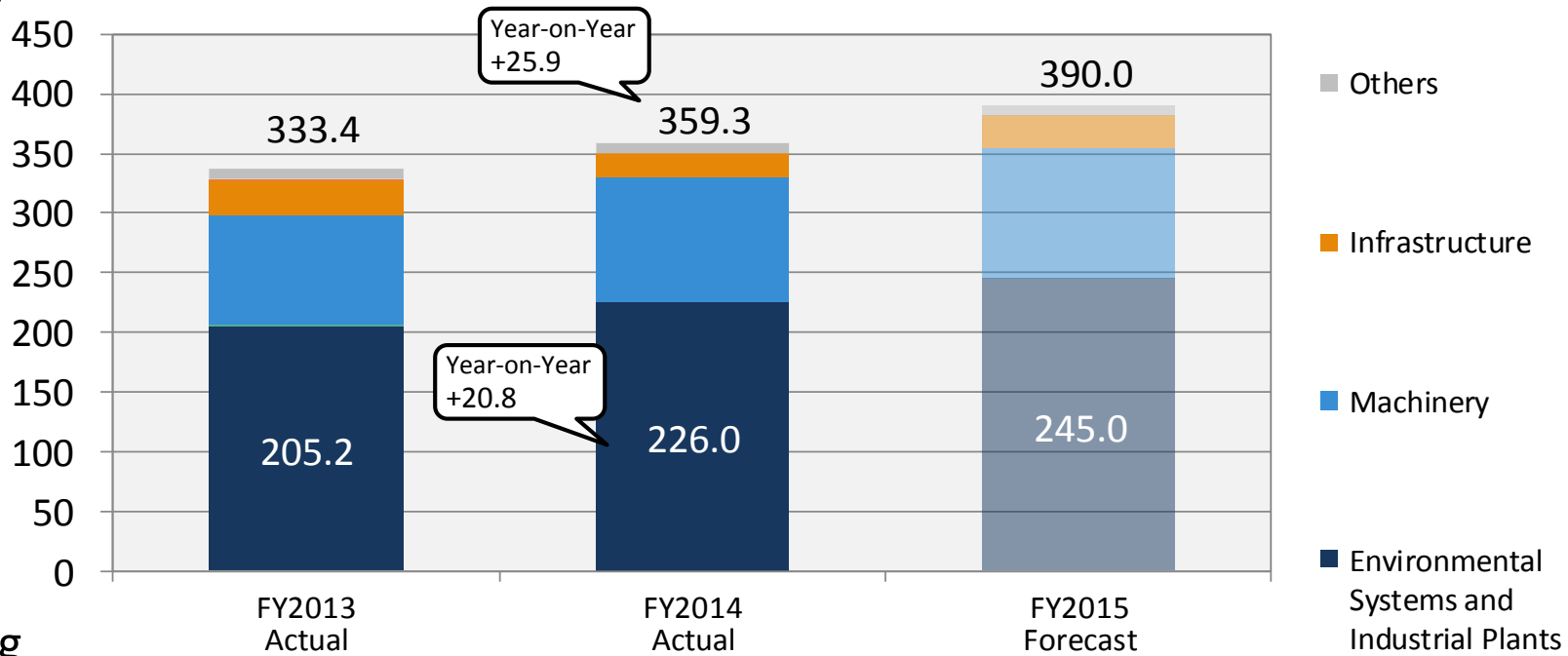
# Order intake



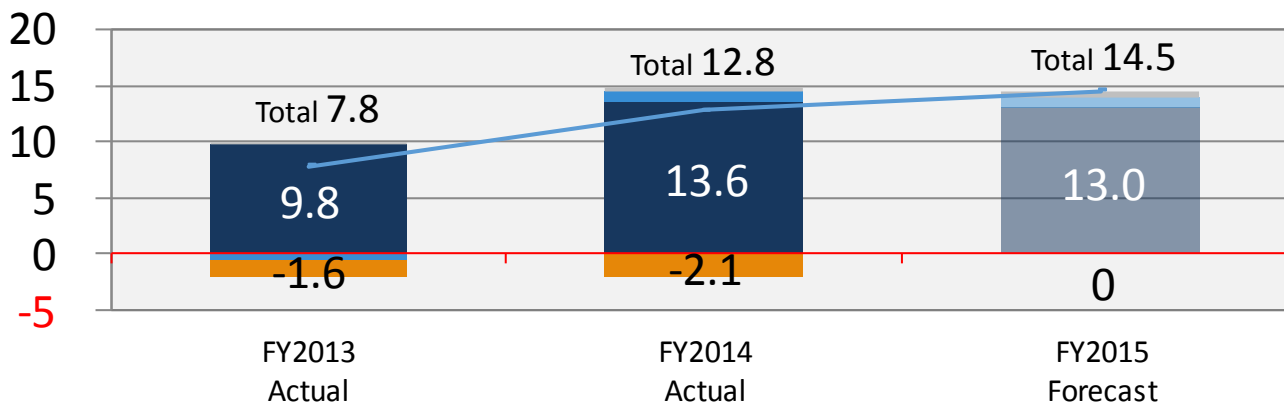
# Net sales & Operating income

## Net sales

(Unit: Billion Yen)



## Operating income



# Order intake, Net sales & Operating income by Segments

(unit: billion Yen)

		Environmental Systems & Industrial Plants	Machinery	Infrastructure	Others	Total
<b>FY2013</b> Actual	Order intake	203.7	93.8	22.5	8.4	328.4
	Net sales	205.2	91.6	28.1	8.5	333.4
	Operating income	9.8	-0.5	-1.6	0.1	7.8
<b>FY2014</b> Actual	Order intake	315.0	100.6	27.7	9.4	452.7
	Net sales	226.0	104.4	19.4	9.5	359.3
	Operating income	13.6	0.8	-2.1	0.5	12.8
<b>FY2015</b> Forecast	Order intake	300.0	110.0	31.0	9.0	450.0
	Net sales	245.0	110.0	26.0	9.0	390.0
	Operating income	13.0	1.0	0.0	0.5	14.5

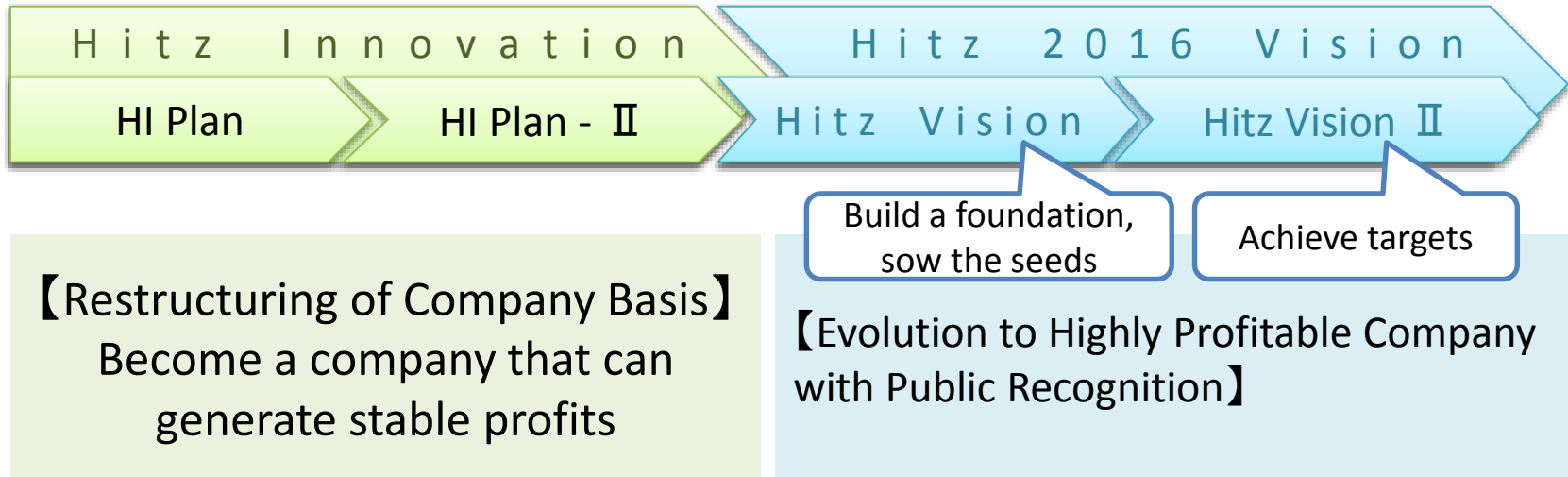


## 2. Progress of Mid Term Business Plan “Hitz Vision II”

## ◆ Long-term vision and medium-term management plans

<FY2005-FY2010>

<FY2011-FY2016>



## ◆ Business Domains

### A. Environment/Green Energy

- Environmental restoration
- Effective use of natural resources
- Expansion of utilization of renewable energy sources

### B. Social Infrastructure & Disaster Prevention

### Hitz Vision II : Three years to achieve targets

(Unit: Billion yen)

	FY2013 Actual	FY2014 Actual	FY2016 Targets
Order intake	328.4	452.7	500.0
Net sales	333.4	359.3	400.0
Operating margin	7.8 (2.4%)	12.8 (3.6%)	23.0 (5.8%)
R&D expenses	6.2 (1.9%)	6.1 (1.7%)	12.0 (3.0%)

#### A. Strengthen profitability

Each business and product to achieve No. 1 profitability in its area

#### B. Expand scale of operations

Expand to Yen 500 billion company with public recognition

#### C. Fortify financial structure

Achieve and maintain at least 30% shareholders' equity ratio, and secure a stable financial position

### ◆ Status of Well-balanced Business Portfolio

(Unit: Billion yen)

	FY2010		FY2013		FY2014	
Domestic sales	237.5	83%	217.4	65%	237.1	66%
Overseas sales	49.6	17%	116.0	35%	122.2	34%
<b>Total</b>	<b>287.1</b>	<b>100%</b>	<b>333.4</b>	<b>100%</b>	<b>359.3</b>	<b>100%</b>
Incl. New Businesses/Products	—	—	0.9	0%	3.2	1%
Incl. Stable businesses (after-sales service, etc.)	115.5	40%	139.5	42%	136.1	38%

**[Overseas]**

17% → 30% (FY2016)

**[Stable businesses]**

40% → 50% (FY2016)

**[New Businesses/Products]**

50bil (FY2016)

### ◆ Investment

(Unit: Billion Yen)

	Hitz Vision (Actual) 3 years total	Hitz Vision II (Plan) 3 years total
R&D expenses	20.0	30.0
Capital investment	19.0	30.0
M&A & others	13.8	40.0
Total	52.8	100.0

# 3. Key Business Strategies

## ◆ Strategic M&A of overseas companies

### Hitachi Zosen Inova (Switzerland): since Dec. 2010

Consolidation of licensor → **Aiming global Market**

Steady order intake in Europe

- Cleveland STV4+5: 456t/dx2 24MW (FY2011) (UK)
- Vantaa: 480t/dx2 (FY2011) (Finland)
- Ferrybridge: 1,013t/dx2 68MW (FY2012) (UK)
- Luzern: 300t/dx2 (FY2012) (Switzerland)
- Buckinghamshire: 900t/dx1 22MW (FY2013) (UK)
- Severnside: 581t/dx2 34MW (FY2013) (UK)
- Poznan: 360t/dx2 15MW (FY2014) (Poland)
- Hereford & Worcestershire: 624t/dx1 21MW (FY2014) (UK)
- Dublin: 840t/dx2 69MW (FY2014) (Ireland)

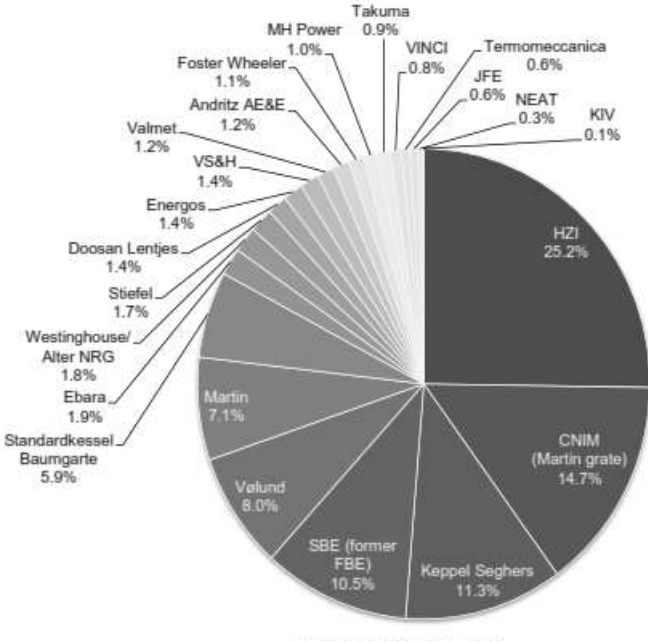


**Accelerate synergy with Hitachi Zosen**

# 1. Expansion in growth areas (Overseas) : Energy from Waste (2)

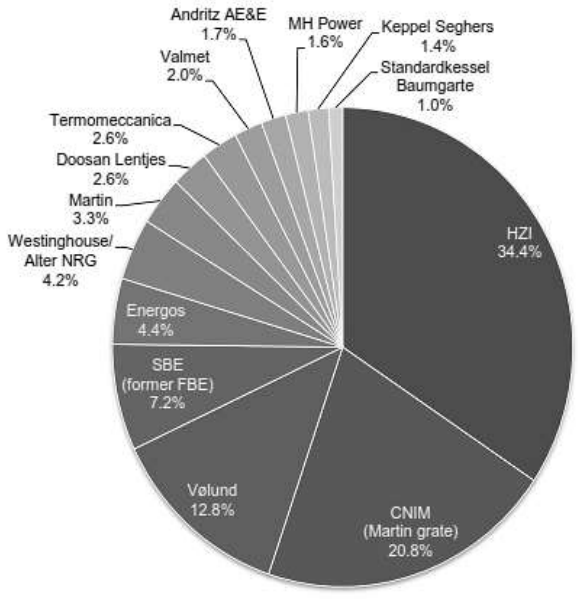
## HZI Market Shares – European EfW Market

**Market Shares**  
2005 – 2014 by supplier



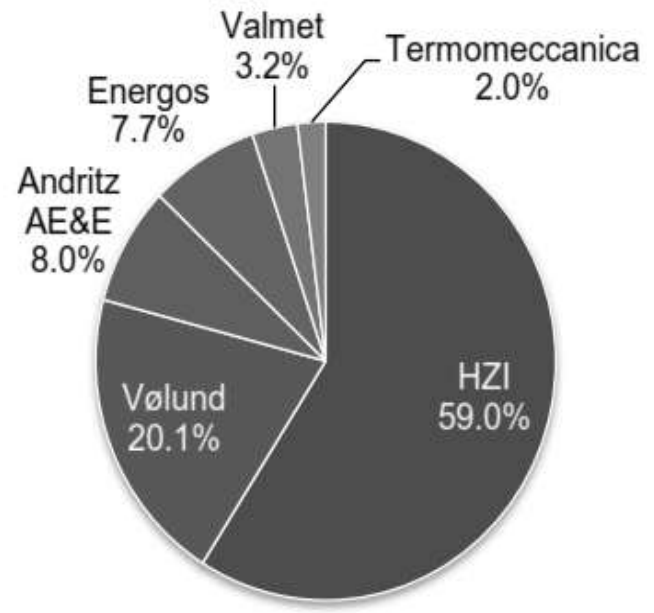
Total: 106,793 tpd

**Market Shares**  
2012 – 2014 by supplier



Total: 25,923 tpd

**Market Shares**  
in 2014 by supplier



Total: 5,623 tpd

HZI : Hitachi Zosen Inova AG, EfW : Energy from Waste

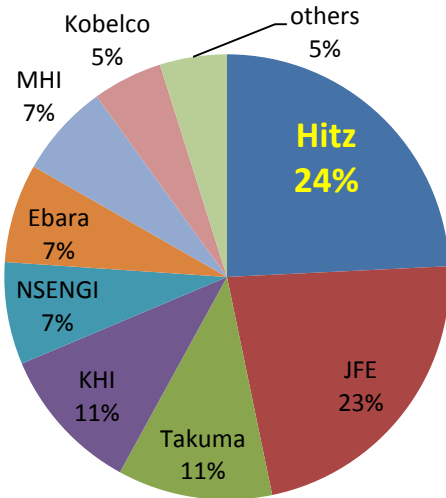
Source: Vaccani European Market Share Analysis of Thermal Waste Treatment Plants, 2015 Edition



# 1. Expansion in growth areas (Overseas) : Energy from Waste (3)

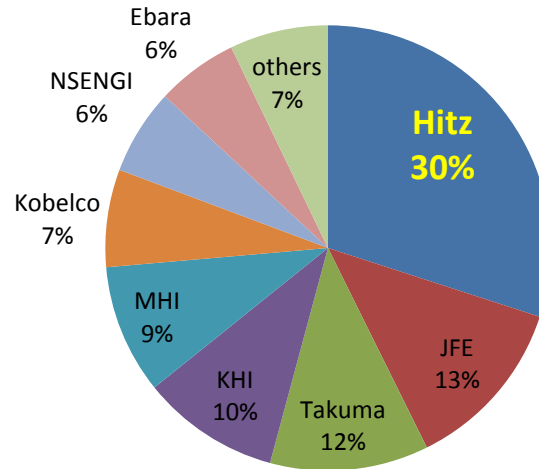
## Hitz Market Shares – Japanese EfW Market

**Market Shares**  
2005 – 2014 by supplier



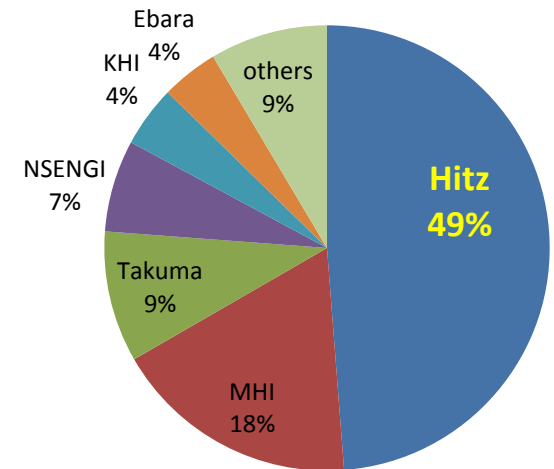
Total: 16,515 tpd

**Market Shares**  
2012 – 2014 by supplier



Total: 9,143 tpd

**Market Shares**  
in 2014 by supplier

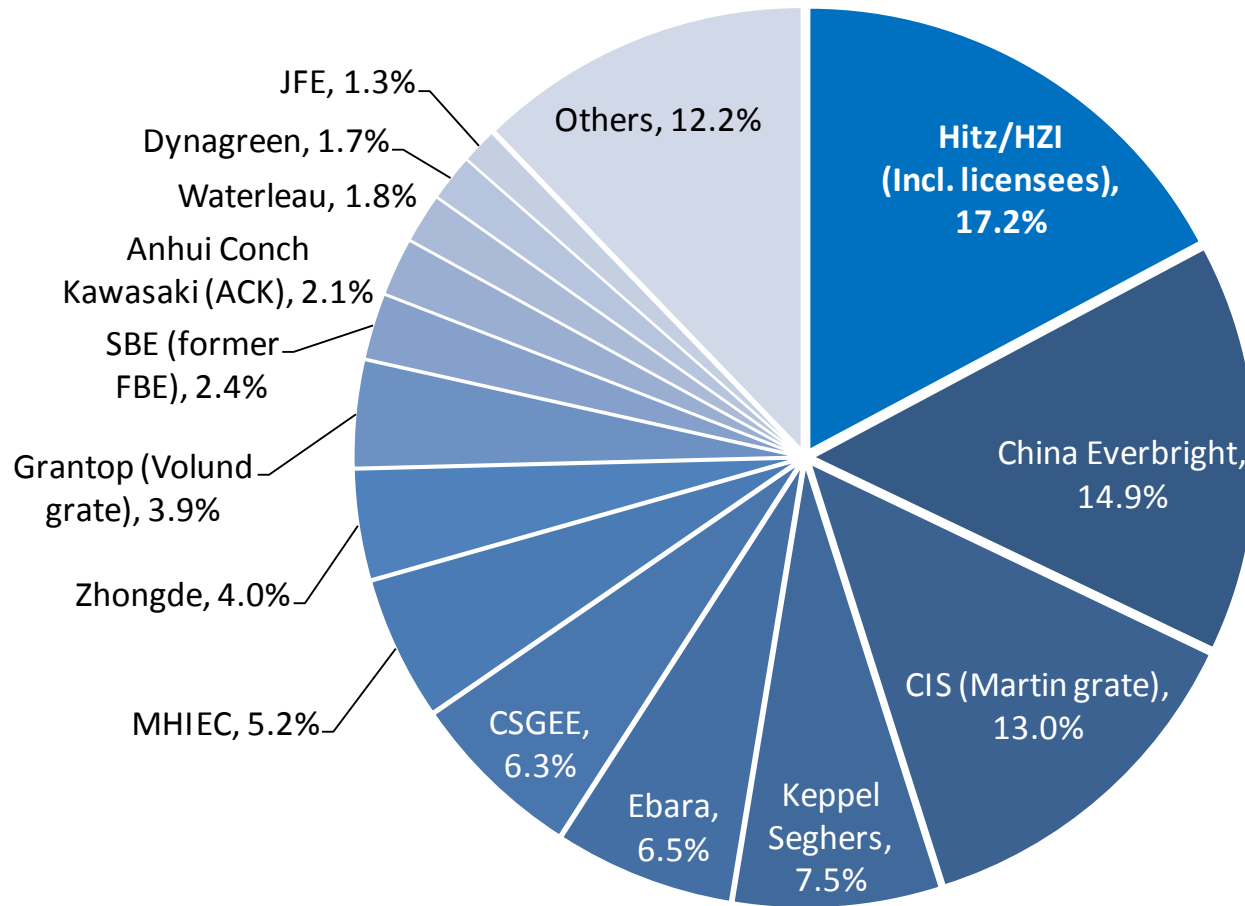


Total: 2,247 tpd

Source: Internal survey by Hitachi Zosen Corporation

# 1. Expansion in growth areas (Overseas) : Energy from Waste (4)

## Market Shares by Supplier 2008-2014 – China

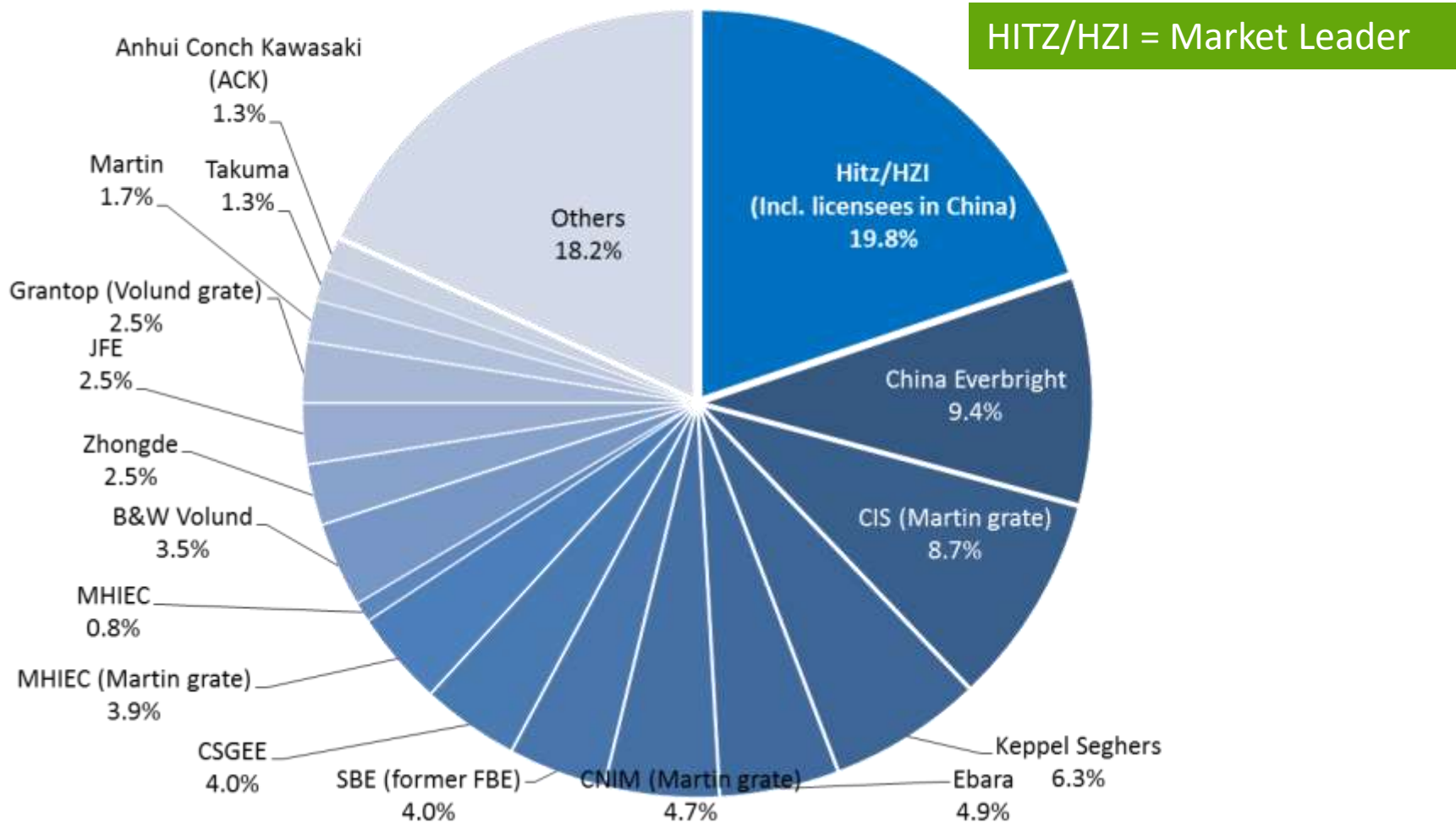


Total: 171,962 tpd

Source: Vaccani Worldwide Market Share Analysis of Thermal Waste Treatment Plants, 2015 Edition

# 1. Expansion in growth areas (Overseas) : Energy from Waste (5)

## Market Shares by Supplier 2008-2014 – Worldwide



Total: 271,258 tpd

Source: Vaccani Worldwide Market Share Analysis of Thermal Waste Treatment Plants, 2015 Edition

## ◆ World-class operation bases, ample reference projects



As of April 1, 2015



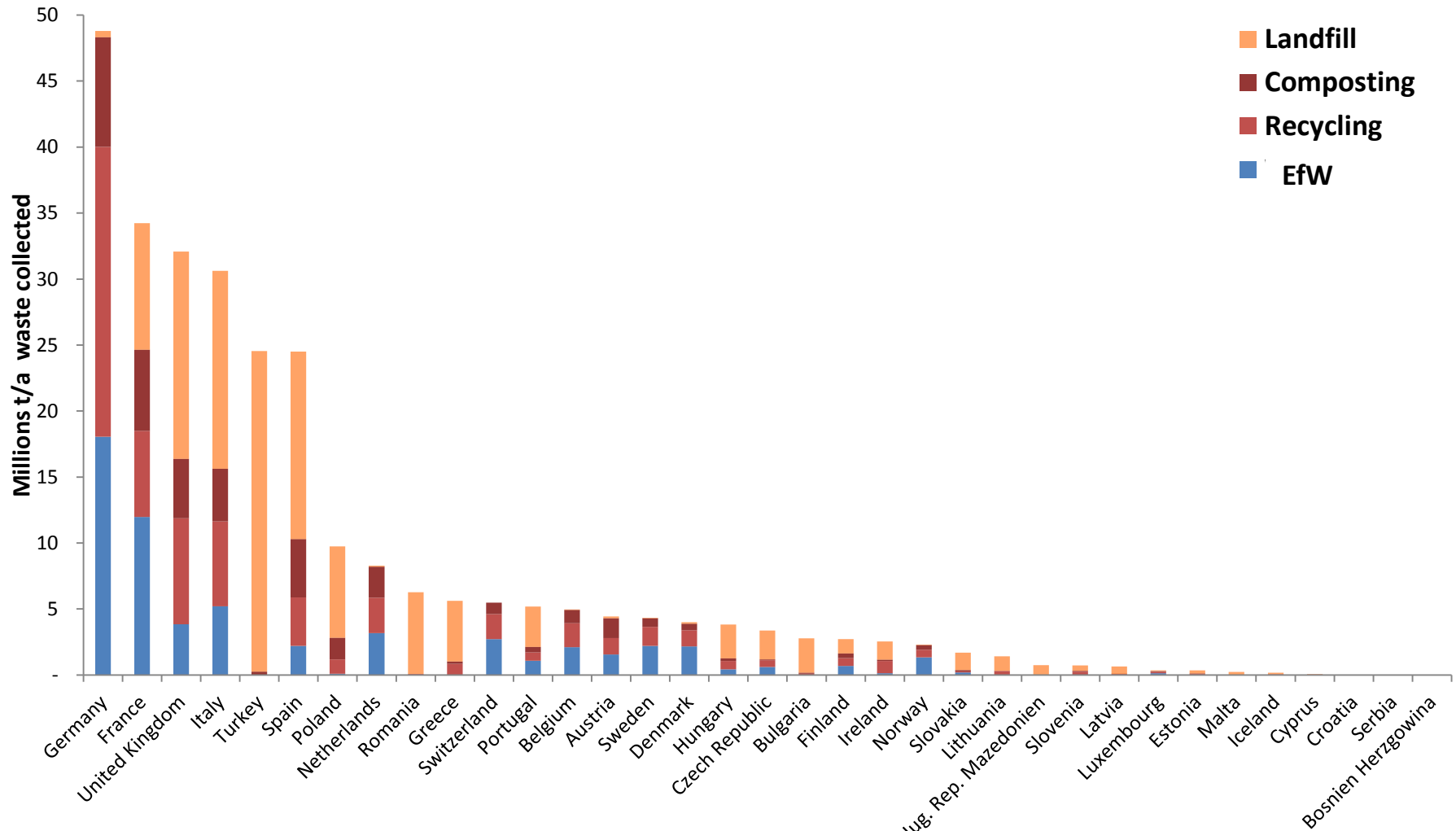
Riverside, UK (778t/dx3)



Shanghai, China (500t/dx4)

# 1. Expansion in growth areas (Overseas) : Energy from Waste (7)

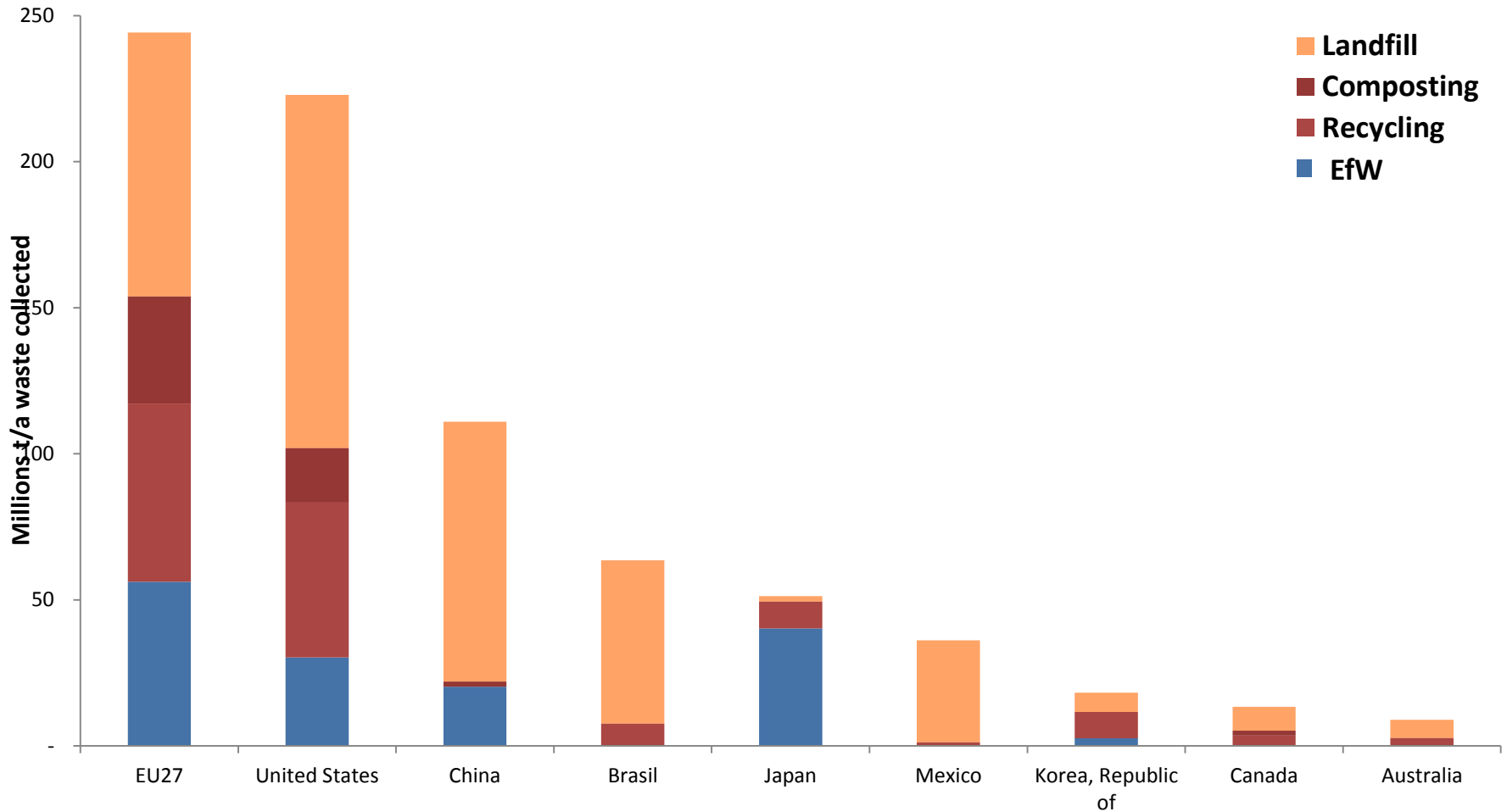
## European Waste Management: Outlook Europe Remains Important Market for EfW and AD



Data: Eurostat 2011 AD : Anaerobic Digestion MRF : Material Recovery Facilities

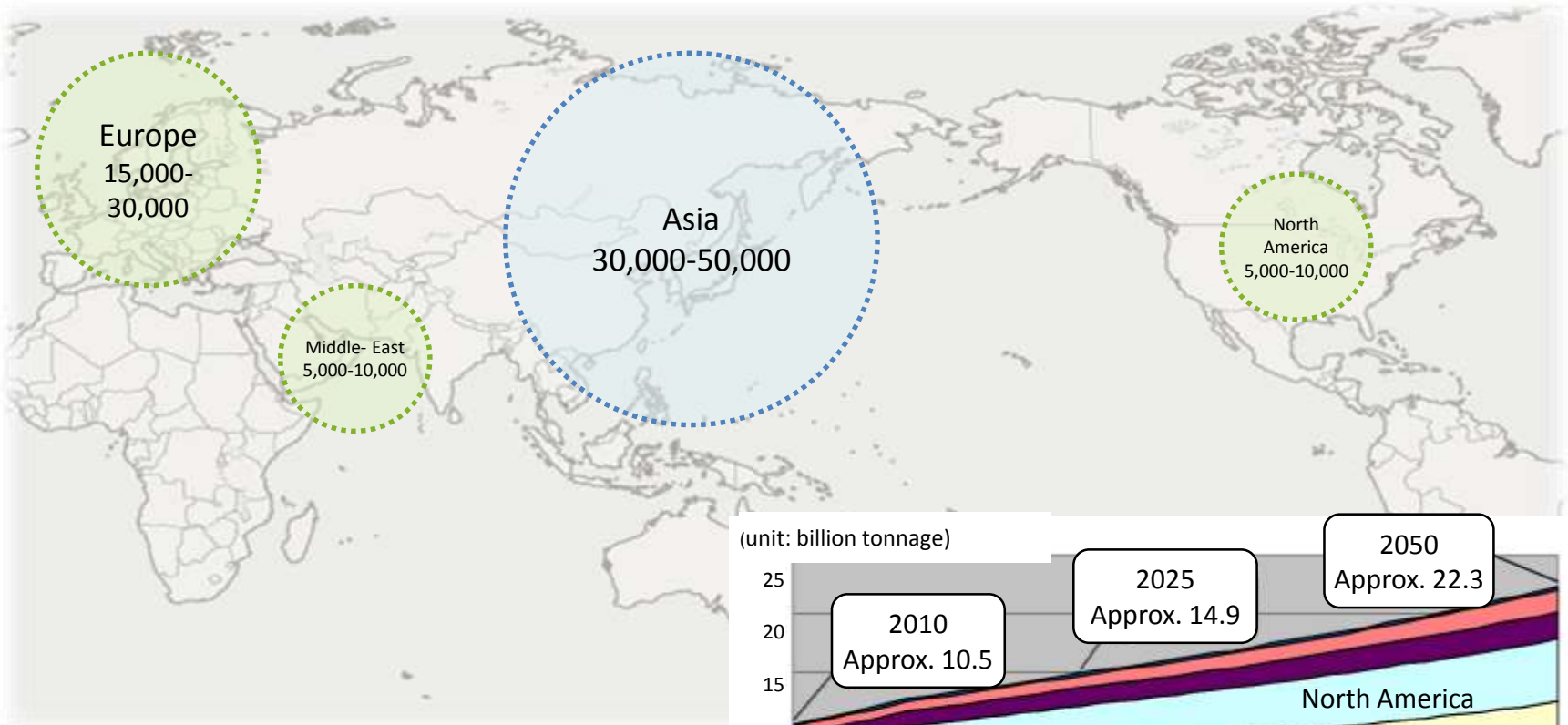
# 1. Expansion in growth areas (Overseas) : Energy from Waste (8)

## Global Waste Management: Outlook Potential in Many Markets, Slow Development Outside of China

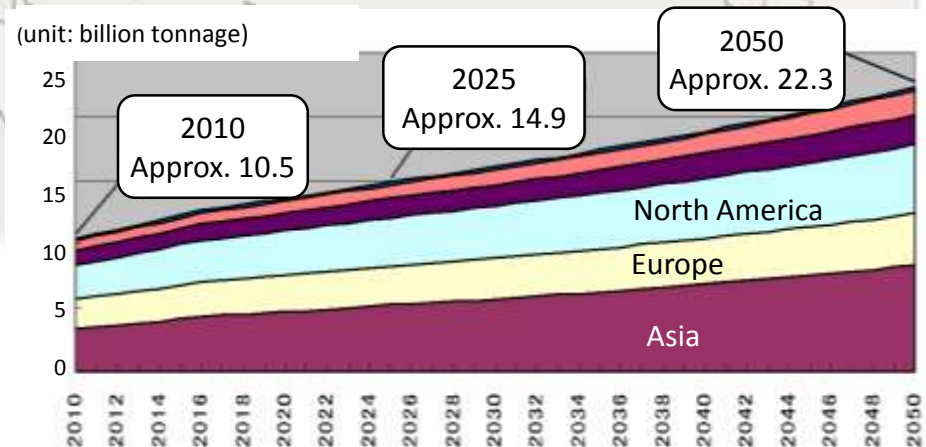


Data from Eurostat and OECD, 2012

## ◆ Global forecast market volume in EfW 2013-2017

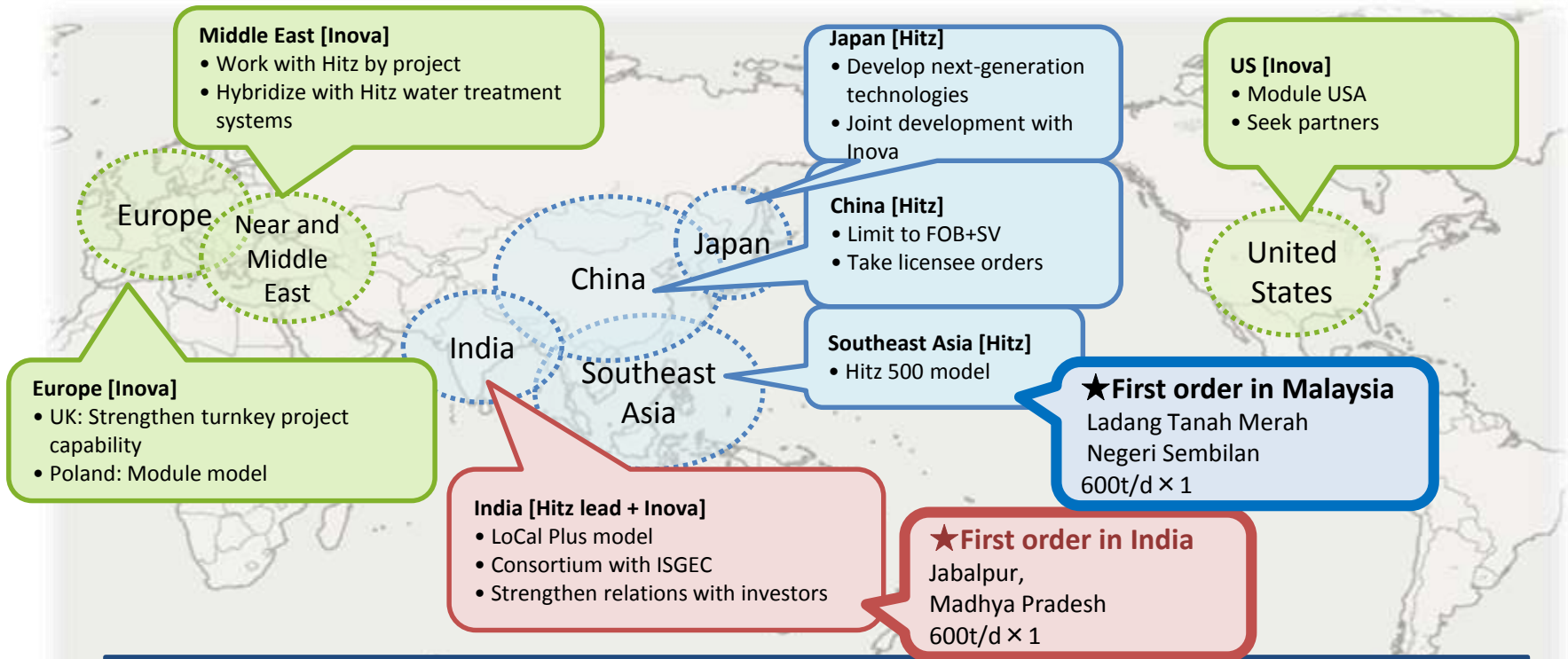


New Constructions in 1,000t/a  
Source : Ecoprog 2013/2014



Source: "Estimates and Projections of Global Waste Emission Volumes,"  
Research Institute of Solid Waste Management Engineering

## ◆ Aim to be No. 1 in global EfW market



### Hitz to lead collaboration with Inova aiming for No. 1 in global EfW market

- Expand into Southeast Asia, India, Near and Middle East
- Introduce EPC concept models by market (standardization)
- Collaboration and operation with key partners (localization)
- Propose financing with Japanese government related fund (JCM)
- Combine with desalination plants

JCM: The Joint Crediting Mechanism



## AOM + long-term operation of waste incineration facilities

Japan

### Expand business based on **strong track record**

#### (1) Expand AOM business

- Propose added value for each facility (life extension, CO<sub>2</sub> emissions reduction)
- Disaster management
  - Retrofit facilities, solution for disaster management bases
  - Expand solutions menu (disaster prevention, emergency response, recovery and reconstruction, etc.)
- Develop further technologies, increase plants with technology (advanced maintenance, energy recovery and etc.)

#### (2) Expand long-term operation business

- Differentiate through feedback of experiences (optimal LCC, etc.)
- Propose long-term operation along with life extension work
- Streamline with operation support systems

Overseas

### Expand worldwide the **know-how acquired in Japan**

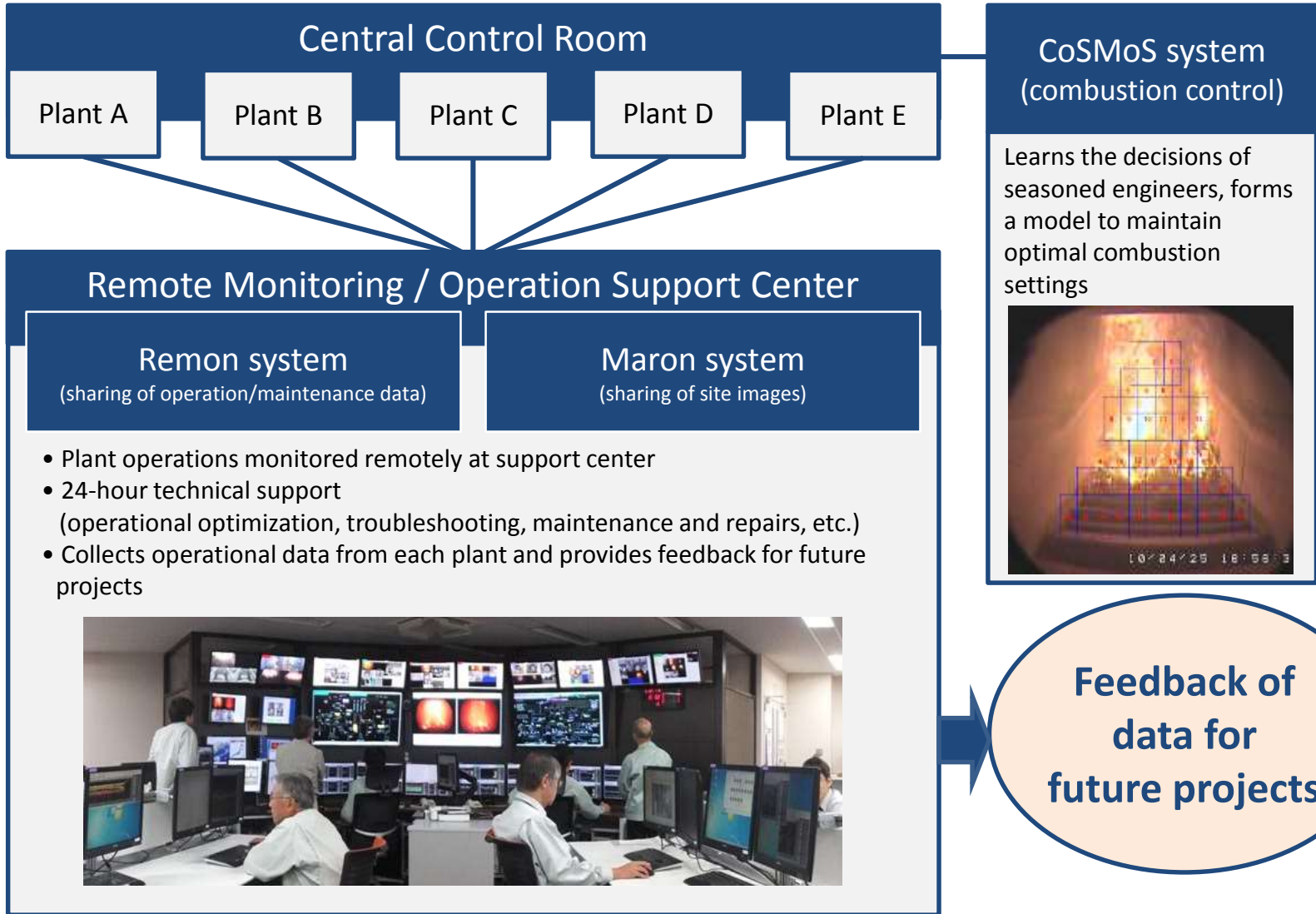
(1) China: After-sales and maintenance services

(2) Southeast Asia: Market research for long-term operation

(3) Europe: Expansion of AOM business by Inova (including by M&A)

AOM: After-service, Operation and Maintenance

# ◆ Rationalization by overall operation of support systems



# 4. New Businesses and Products

## 1. Movable Flap-Gate Type Breakwater

### (1) Land-mounted flap-gate seawall (neo RiSe)

- Steady order intake (order intake in FY2014: 2.4 bil)
- Demonstration at Sakai Works **Disaster Prevention Lab** (opened April 2014)



### (2) Seabed-installed flap-gate breakwater

**Improving reliability and preparing environment toward use of new technology**

- Two-year test in actual marine environment at Shin Yaizu Fishing Port → Final report October 2013

Strategy:

- Build a track record with neo RiSe and small seabed type projects
- Prepare operations manual
- Provide information to tsunami preparedness technology advisory committees



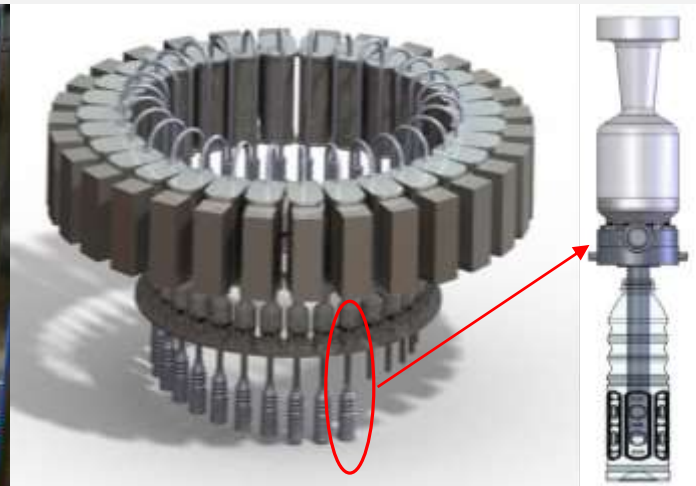
## 2. Electron beam sterilization system

### Electron beam sterilization (environment friendly and cost-effective)

- Sterilizes PET bottles without heat or chemical treatment
- Can also be used for paper cartons and other food containers

#### Strategy:

- Develop an aseptic filling system
- Expand maintenance services
- Pharmaceuticals application
- Develop overseas markets



## 3. SCR (Selective Catalytic Reduction) system for marine engines

### Compliant with IMO Tier III NOx emission standards to be enforced in 2016

Hitz is the leader in SCR system for marine engines

- World's first new vessel commissioned with certified SCR system launched in November 2011
- Development completed in FY2013
- **SCR system received World's first approval from Man Diesel & Turbo (MDT) in October 2014**



Note :

Tier III requires an 80% reduction of NOx emissions from Tier I (17.0g/kWh) within emission control areas (ECA)

IMO: International Maritime Organization



Current and Future Emission Control Areas

Source: "Understanding exhaust gas treatment systems", LRS

## 4. Demonstration Plant for Solar Thermal Power Generation

One-year test got successful results

### Saudi Arabia

#### **Thermal Power Generation** ⇒ **Contributing to Desalination plants**

Using mirror reflectors to focus sunlight on a tube absorber,  
which acts as a heat source to generate steam and produce electricity

Thermal storage enable continuous power generation during nighttime

#### **Hitz Super Low Profile Fresnel concentrated solar power (HSLPF)**

(1) Controllable reflector in both angle and curvature

→improvement of the solar concentration ratio

(2) Lower setup of the tube absorber →wind resistance and easy maintenance

⇒**Received first order for HSLPF from Mitsubishi Hitachi Power Systems, Ltd.**



## 5. High-speed Seabed Infiltration System (HiSIS®)

One-year operation test was started in June 2014

### Abu Dhabi

#### HiSIS® pilot plant construction

is agreed between the Abu Dhabi Water and Electricity Authority (ADWEA) and Hitachi Zosen contributing to **Seawater Reverse Osmosis (SWRO) Desalination Plants**

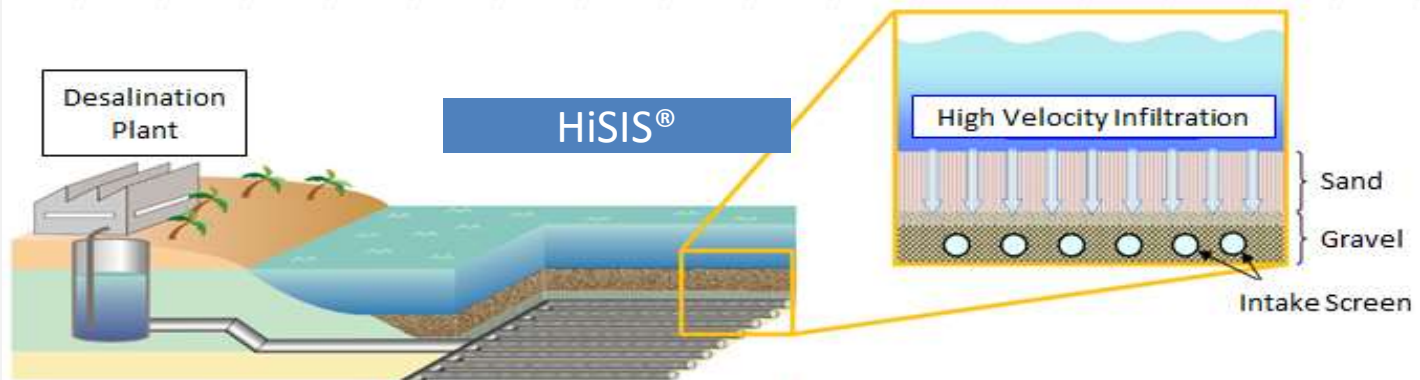
#### Features of SWRO

Needs fewer electricity consumption, but has problems;

- clogging of membrane
- environmental burden caused by injecting chemicals

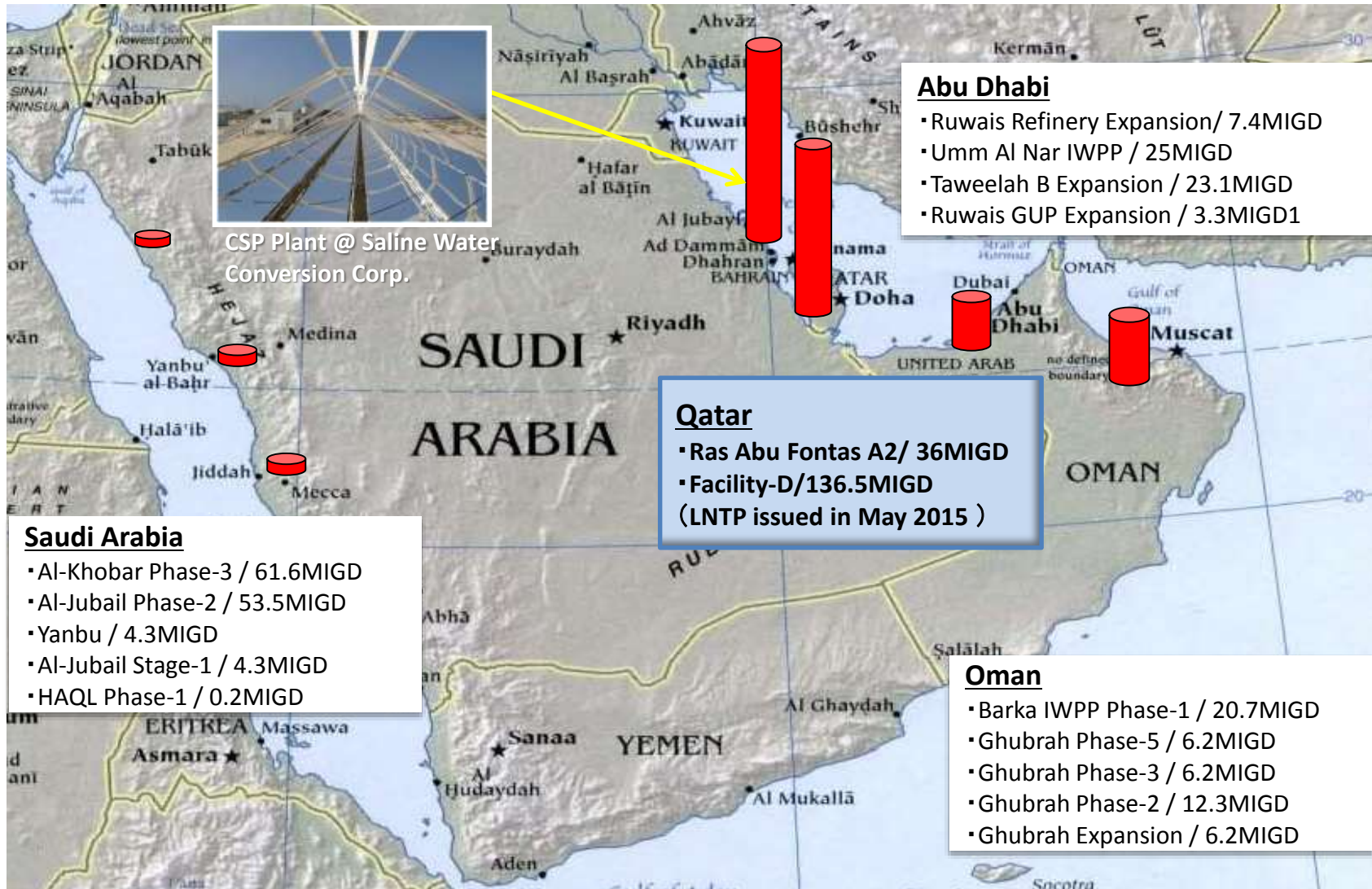
#### Merits of installing HiSIS® to SWRO

- (1) Saving facilities  
→ Reduction of initial costs
- (2) Restraint the growth of marine life, amount of injecting chemicals, and deterioration of membrane  
→ Reduction of running costs and environmental burden





## Desalination Plant Experience in Middle East

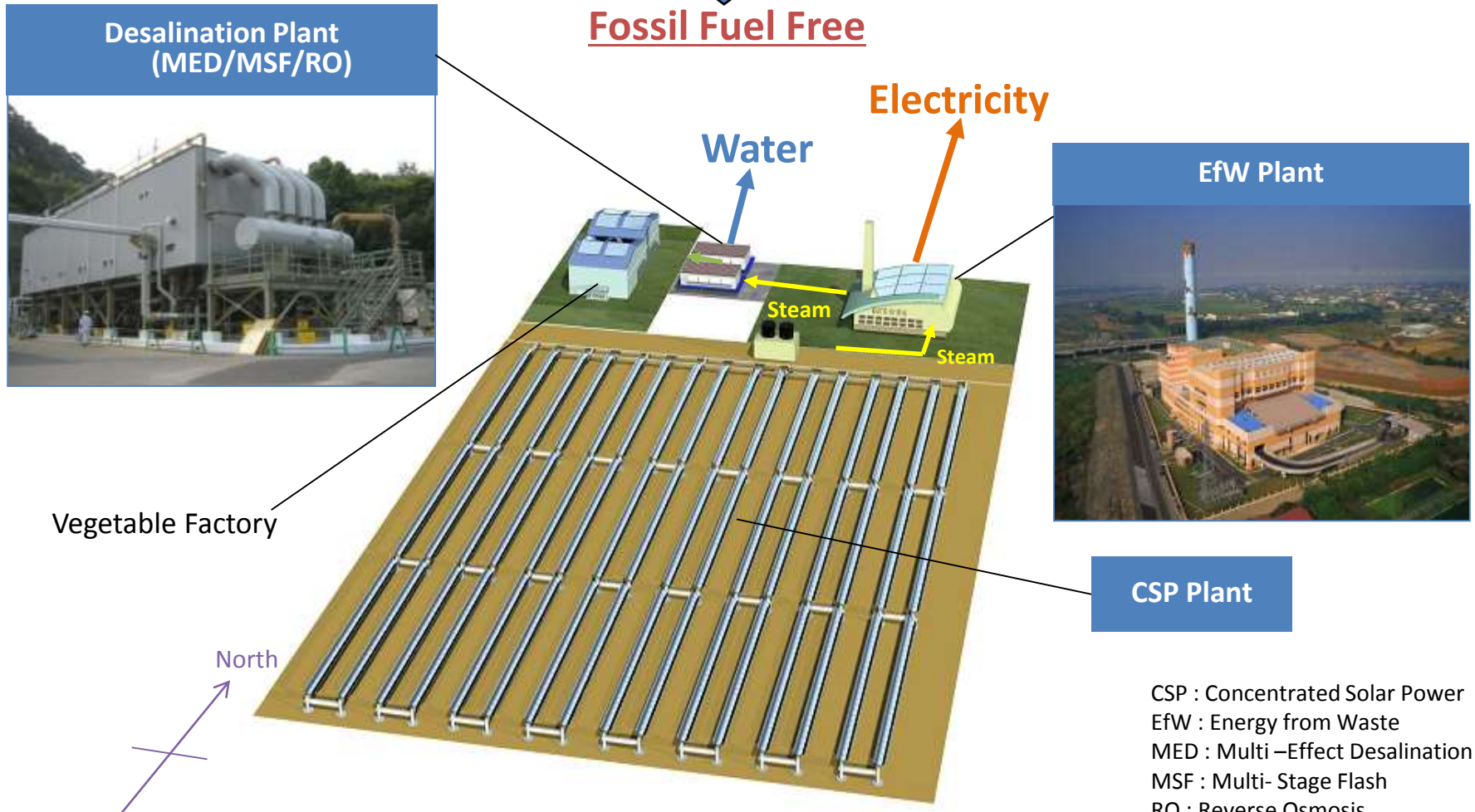


## Low Carbon & Fossil Fuel Free Solution

**CSP Plant + Desalination Plant + EfW Plant**



**Fossil Fuel Free**



CSP : Concentrated Solar Power  
EfW : Energy from Waste  
MED : Multi-Effect Desalination  
MSF : Multi-Stage Flash  
RO : Reverse Osmosis

## M&A in FY2014

- ✓ Cumberland joined Hitz group
  - Strengthening A/S network for Seawater electrolysis equipment
  - Utilization sales network not only water treatment but also other area
- ✓ HZI acquired HNP Kraftwerkstechnik(Germany) engaged in services for EfW and power generation plants(Germany), Axpo Kompogas Engineering with anaerobic biogas technology(Switzerland), and MT-BioMethan GmbH with biogas purification technology(Germany)
  - Expanding HZI's business area



Cumberland Technology



Axpo Kompogas Technology



MT-BioMethan GmbH Technology

# Numerical Targets “Hitz Vision II”

(Unit: Billion Yen)

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Operating income (ratio)	7.8 (2.4%)	12.8 (3.6%)	14.5 (3.7%)	23.0 (5.8%)
Ordinary income (ratio)	6.2 (1.9%)	7.5 (2.1%)	11.0 (2.8%)	20.0 (5.0%)
Net income	3.7	5.1	5.5	13.0
Interest bearing debt	104.3	119.0	126.0	120.0
Shareholders' equity ratio	26.4%	26.6%	27.5%	30.6%
ROE	3.7%	4.9%	5.0%	11.1%



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