

MIURA CO.,LTD.

# Financial Summary and Growth Strategy

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MIURA CO.,LTD.

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The Best Partner of  
Energy, Water and Environment



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## Caution

Each value mentioned in this document is based on the information currently available and the actual results may be changed and differ from what is stated herein, due to forthcoming various factors. The utmost care has been taken to provide the information publicized in this document. However, MIURA shall not be held responsible for any damages resulting from the information publicized in this document.

# 1. Company Profile

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# 1 Company Profile

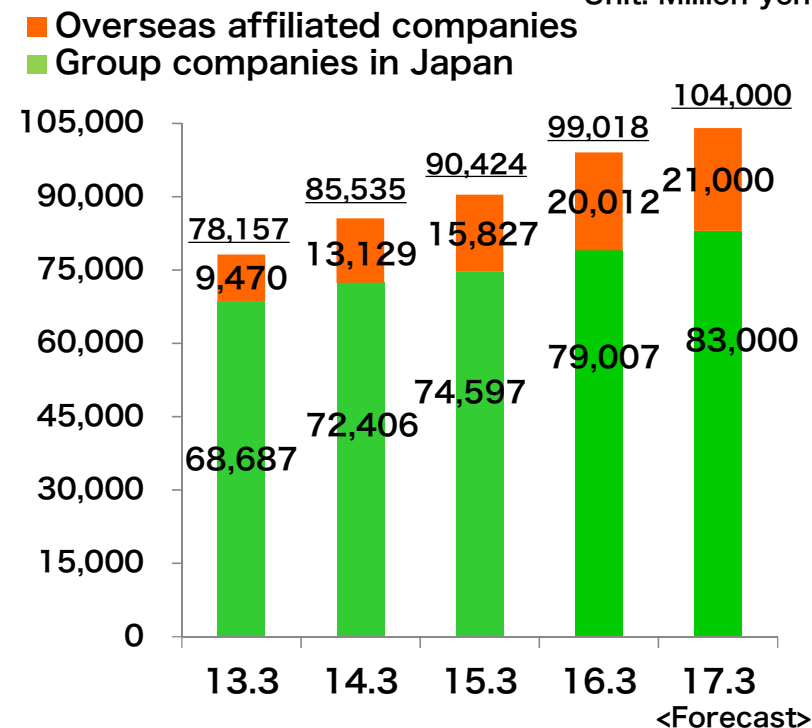


## Company Information

Location	7 Horie, Matsuyama, Ehime, 799-2696 Japan
Established	May, 1959
Group Company	Japan 8 companies (Includes 7 consolidated companies) Abroad 15 companies (Includes 10 consolidated companies)
Employees	Consolidated 4,855 employees Group Total 4,917 employees (Includes 1,323 employees abroad)
Business	Manufacturing, Sales, and Maintenance of Equipment
Rating	"A" (Rating and Investment Information, Inc., September 16 <sup>th</sup> , 2016) A-Rating for 11 years since FY2005

## 【 Consolidated Net Sales 】

Unit: Million yen



	FY2014	FY2015	FY2016 (Forecast)
Net sales (Million yen)	90,424	99,019	104,000
Ordinary income (Million yen)	10,799	10,887	11,400
Profit attributable to owners of parent (Million yen)	7,464	7,476	7,800
Capital Ratio (%)	79.5	78.4	—
Net assets per share (JPY)	915.75	947.00	—

## 2. FY2017 2nd Quarter Summary Overview

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## Consolidated Result

[Unit: Million of Yen]

	FY2015 2 <sup>nd</sup>	FY2016 2 <sup>nd</sup>	FY2016 - Forecast
Net Sales	46,585	46,804	104,000
Cost of Goods Sold	27,549	27,622	61,600
SG & A expenses	14,452	14,680	32,000
Operating Profit	4,584	4,501	10,400
Ordinary Profit	4,925	4,696	11,400
Net Income	3,254	3,028	7,800

## Overview of Financial Summary

《Domestic》 Marine and Special equipment sales are increased.

- Marine equipment (Ballast water management system) and Special equipment sales are increased.
- Boiler, Food, and Medical equipment sales are slightly increased.

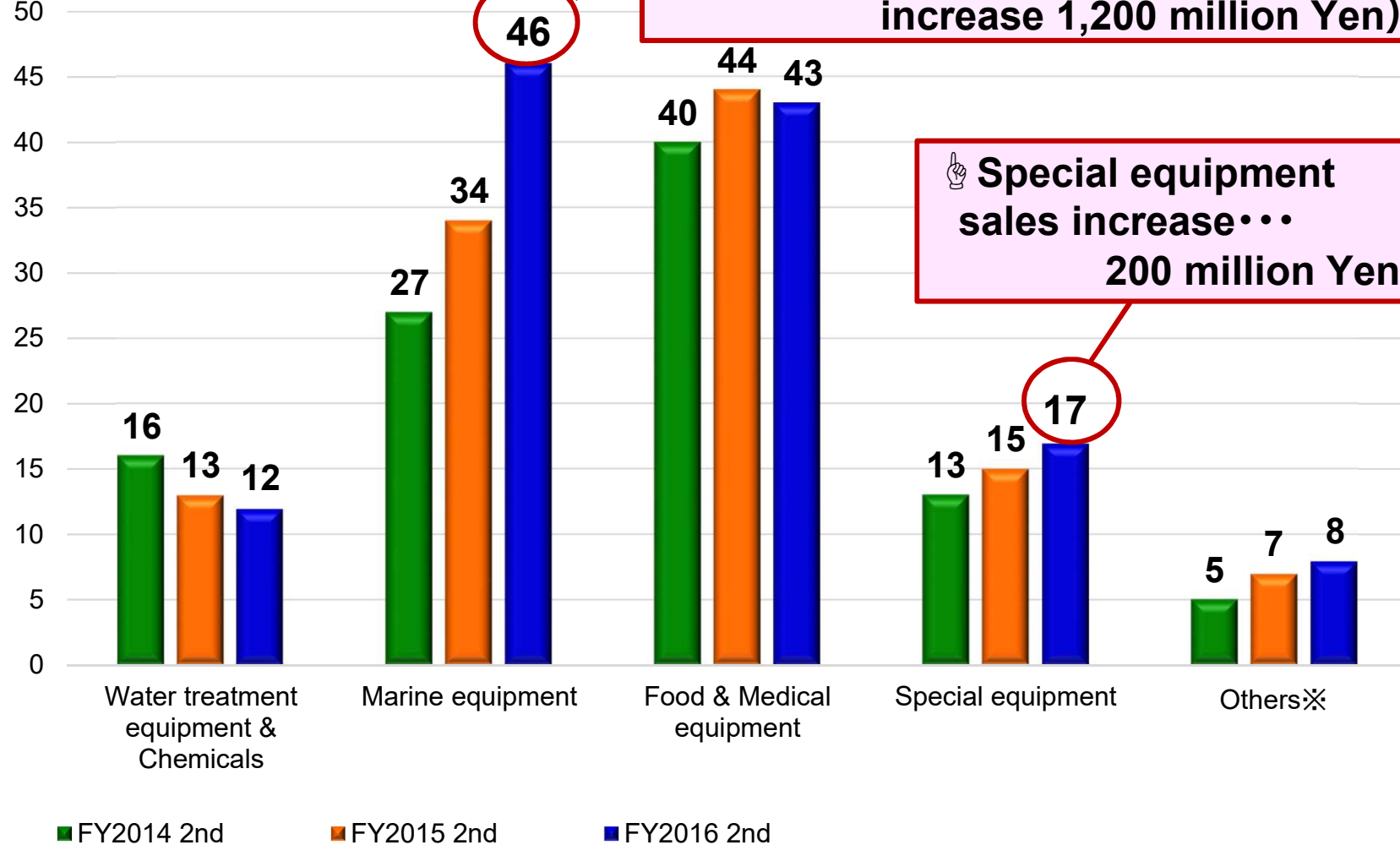
《Overseas》 Sales are affected heavily by the currency exchange rate, but the maintenance business is increased.

- Sales of all countries is affected by currency exchange , but maintenance business is increased based in Yen.

Personnel and depreciation expenses are increased.

## Analysis of Domestic Sales

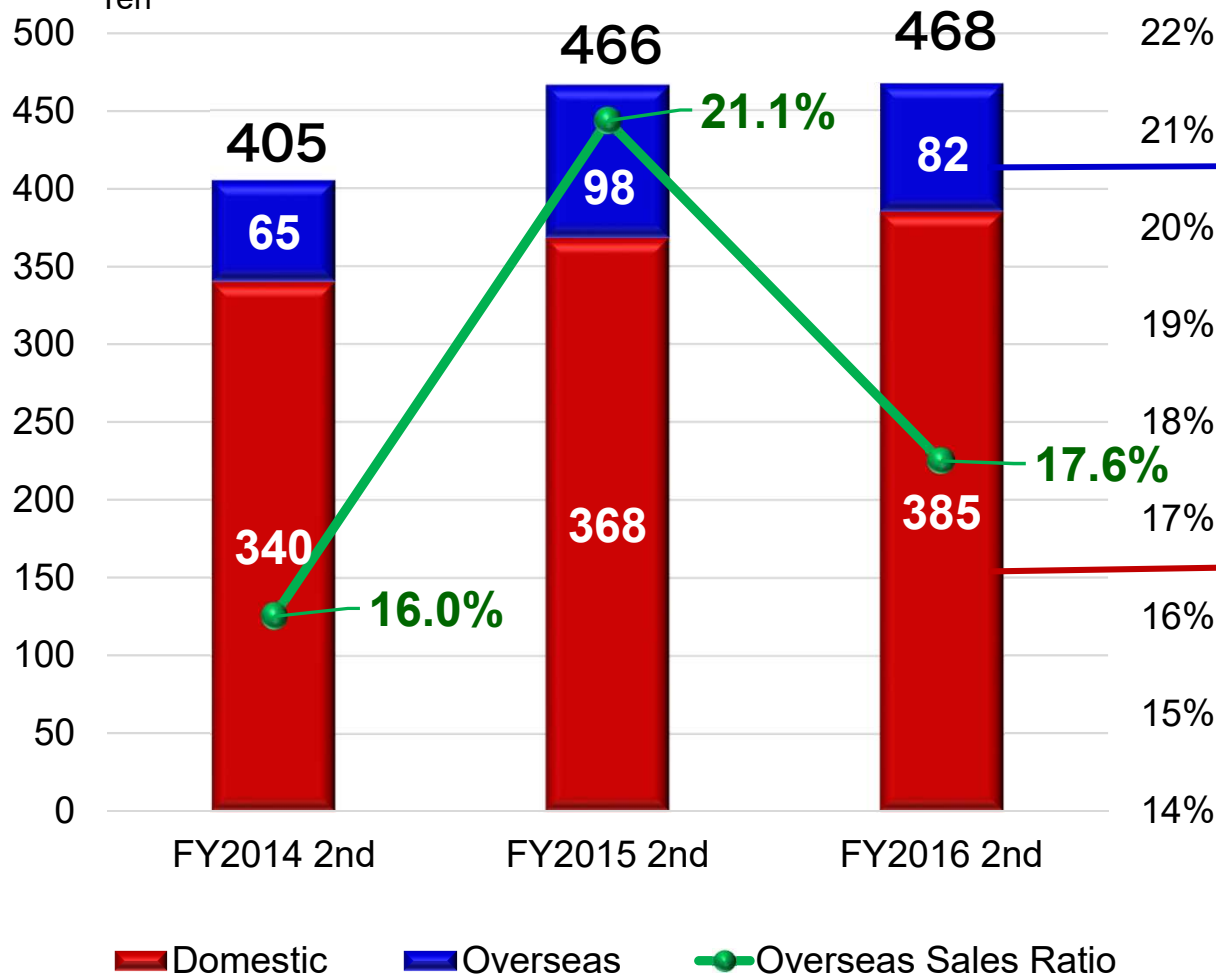
Unit: 100 Million of Yen



※Others: New Business and Environment

## Domestic and Overseas Sales

Unit :  
100 Million of  
Yen



👉 Overseas sales are affected by currency exchange rate by 14~18%. Decrease is based on Yen.

👉 Domestic sales are increased by Marine and Special equipment.

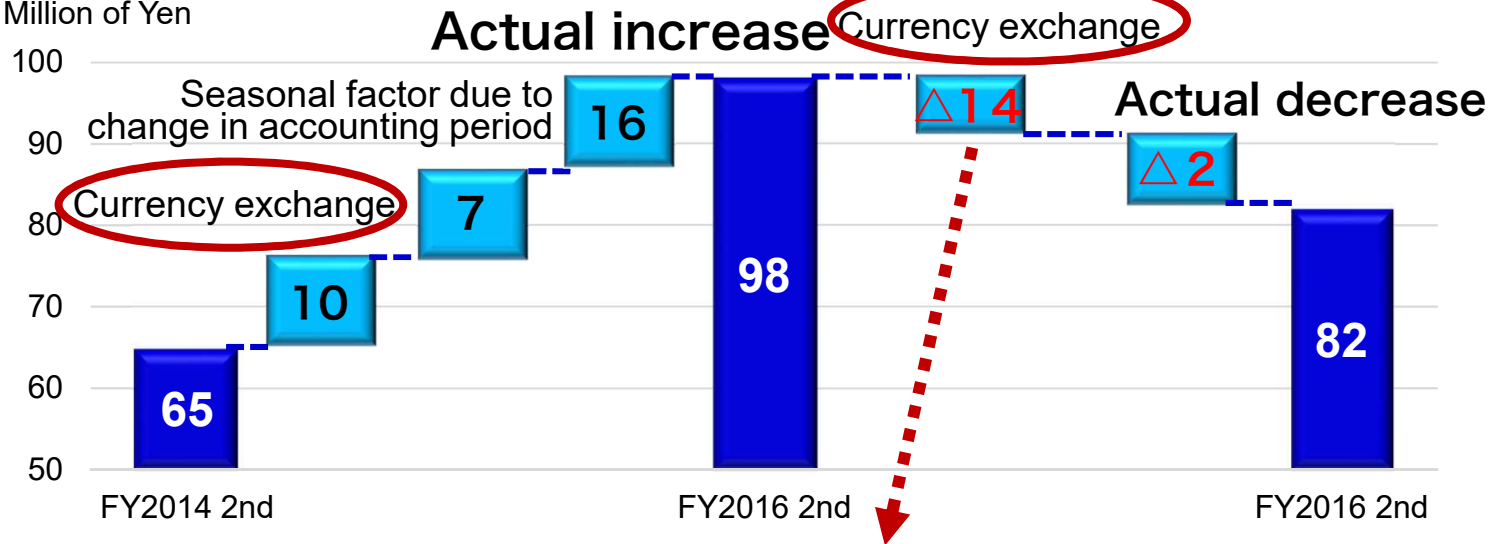


## 2 FY2017 2nd Quarter Summary Overview

### Analysis

Overseas sales is affected by currency exchange rate and some sales delay to 3rd quarter and after. Seasonal factor of last year.

Unit: 100 Million of Yen

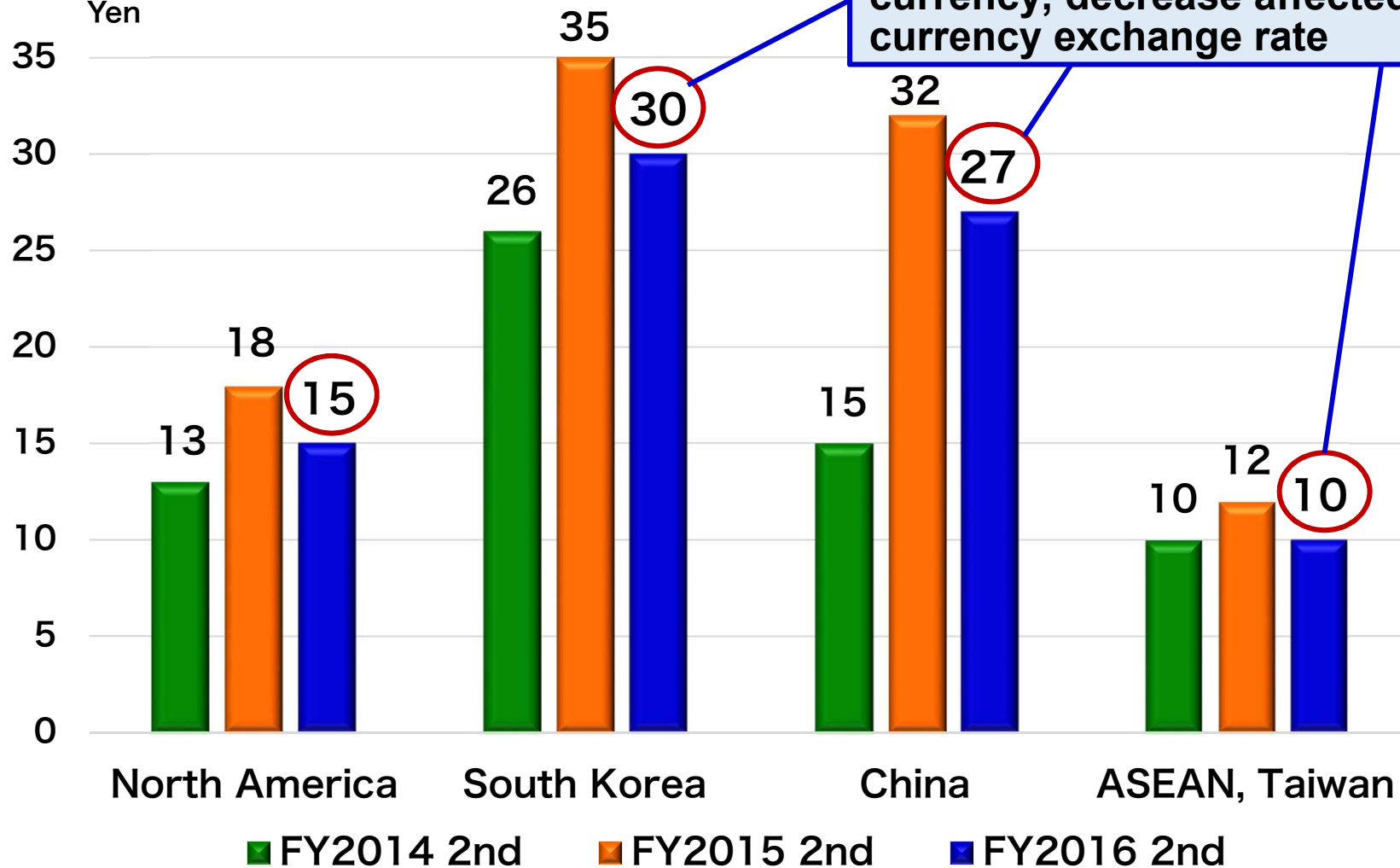


Currency exchange (average rate)	FY2015	FY2016	Planned rate in FY2016
USD	121.87	105.20	105.00
CAD	96.12	81.10	85.00
Yuan	19.45	15.92	16.00
Won (100W)	10.77	9.22	9.50
Rupiah (100Rp)	0.91	0.80	0.80
TWN	3.89	3.28	3.50

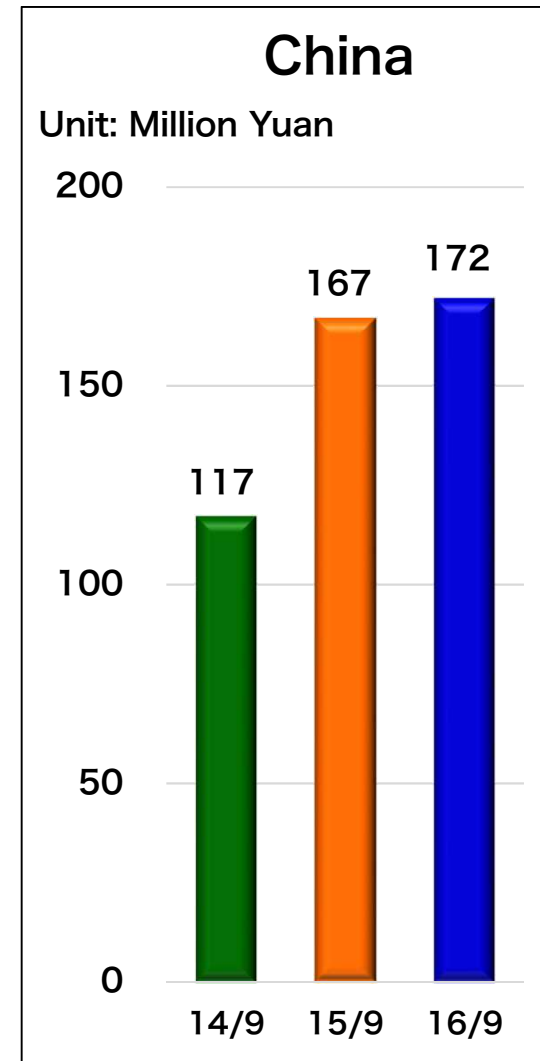
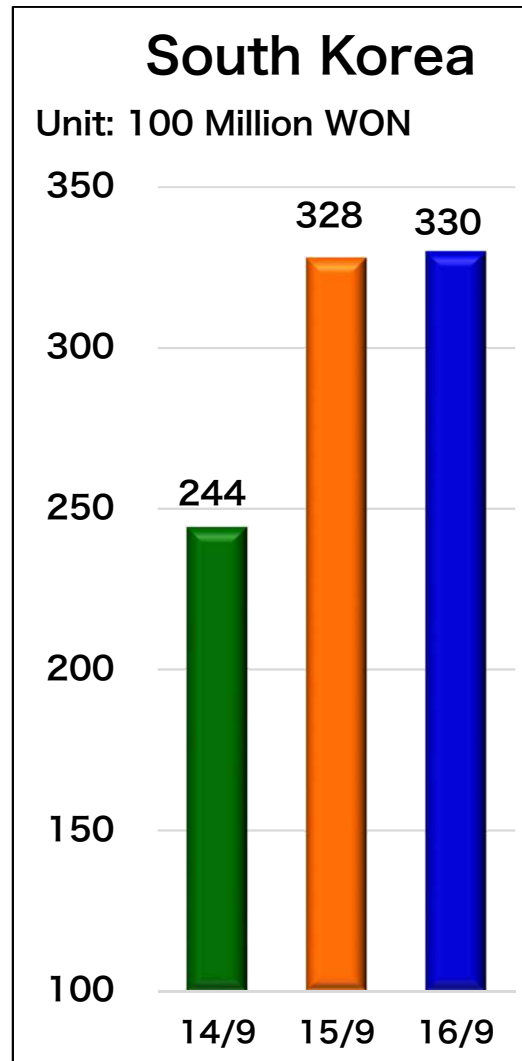
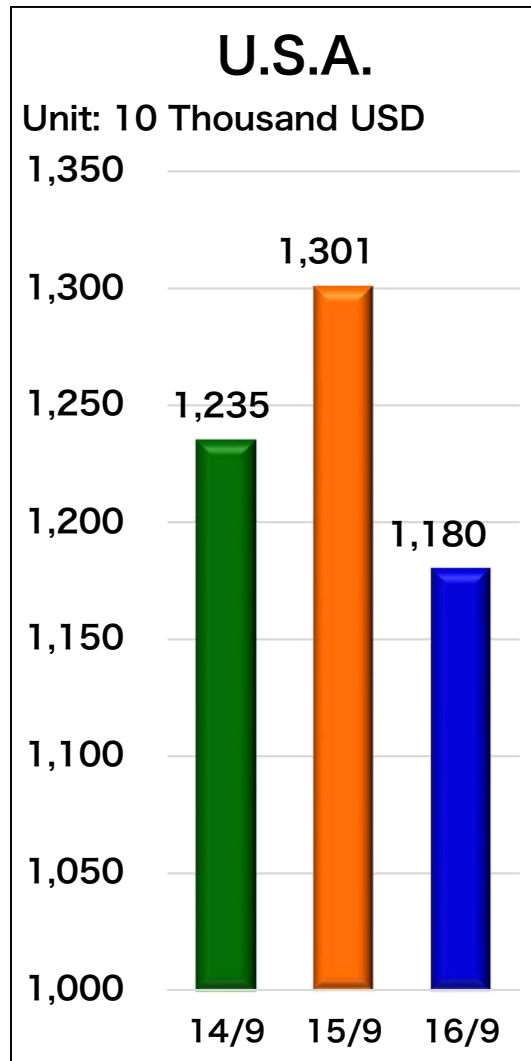
### Overseas Sales (Based on Yen)

Unit: 100 Million of

Yen

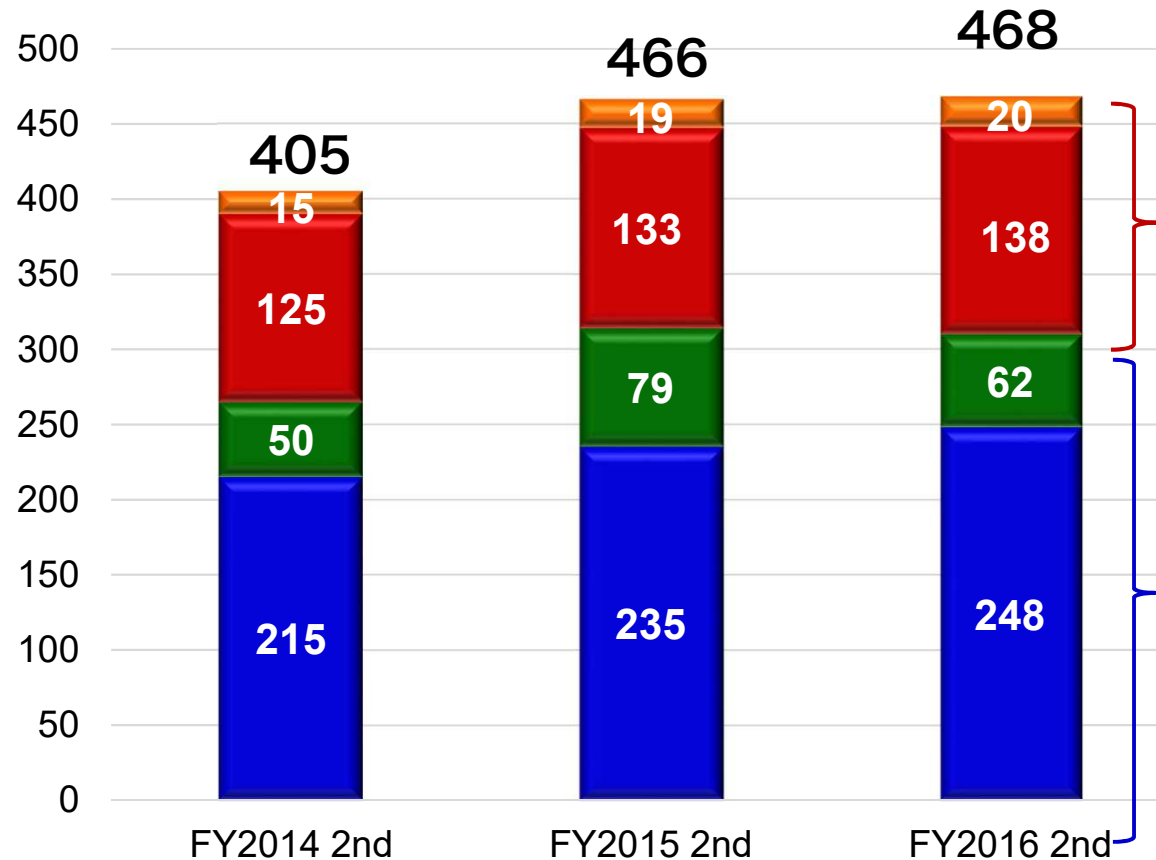


### | Main Overseas Sales (Based on local currency)



## Analysis by Segment

Unit: 100 Million Yen



👉 Maintenance business remained strong in Domestic and Overseas markets even affected by currency exchange rate. (+600 million Yen)

👉 Some products sales delay to 3rd quarter and after both in Domestic and Overseas markets. (△400 million Yen)

■ Domestic sales

■ Overseas sales

■ Domestic maintenance

■ Overseas maintenance

## 3. Profit Share and Stock

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### 3 Profit Share and Stock

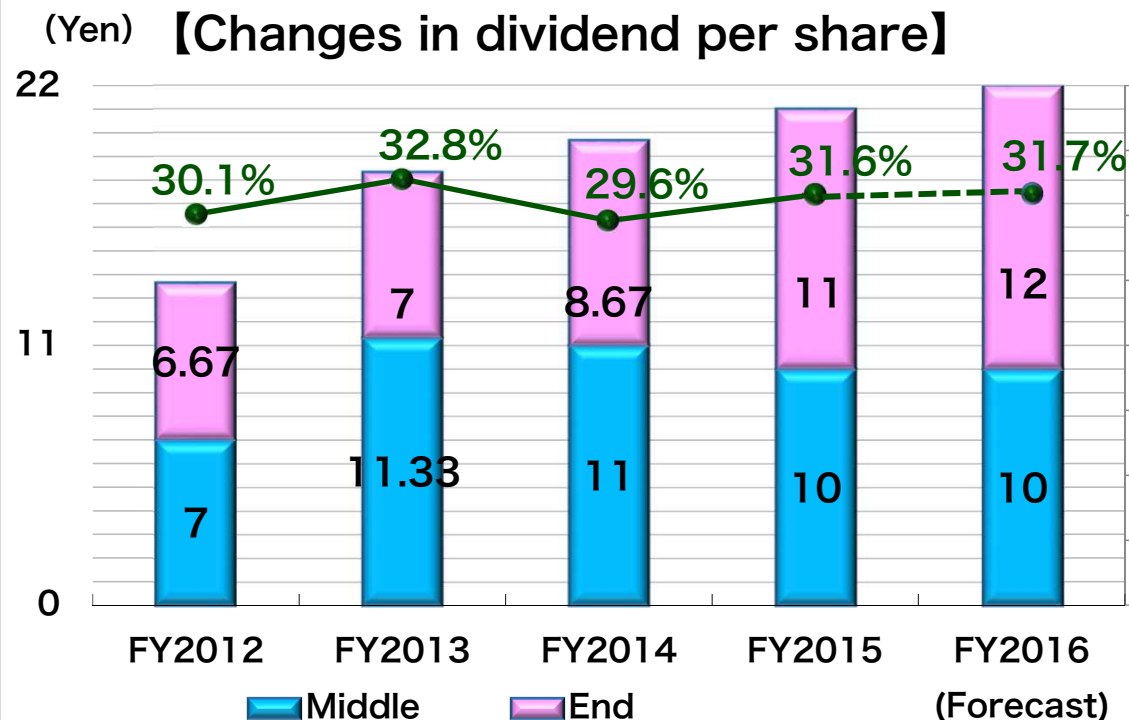
- ① Sustain **Stable** Dividends
- ② Targeting **30%** of the consolidated payout ratio

FY2015

Middle 10 yen  
End 11 yen  
Total 21 yen

FY2016

Middle 10 yen  
End 12 yen  
Total 22 yen -Forecast



(Reference)

Holdings of treasury stock  
※ As of September 30, 2016

- Total number of issued shares  
(Without Treasury shares)  
112,546,778 shares
- Treasury Share  
12,744,334 shares

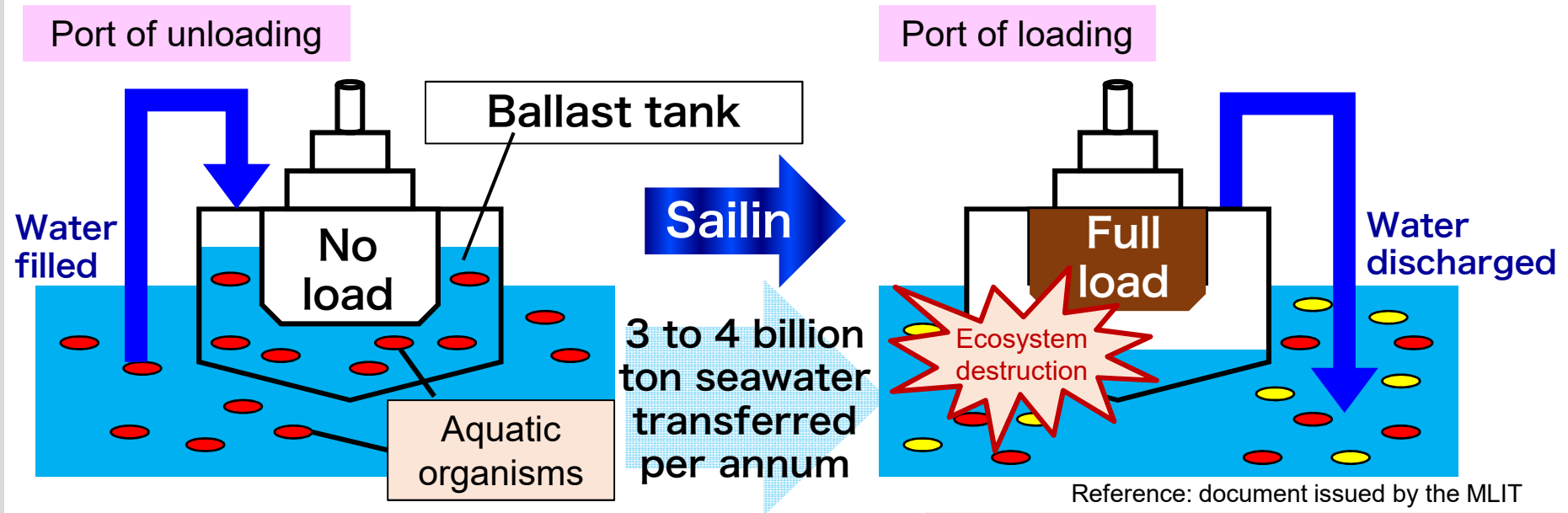
## 4. Ballast Water Management System

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## Ballast water management convention

“Ballast water” is the seawater taken into a ship’s tank to provide stability to the ship.



Reference: document issued by the MLIT

Ratified on September 8<sup>th</sup>, 2016  
Effective on September 8<sup>th</sup>, 2017  
according to the IMO

Aquatic organisms transferred from the port of unloading to that of loading

Environmental problems such as ecosystem destruction

Ballast water management convention adopted in 2004

Approx. 170 countries of IMO members adopted



## Market & Sales of the BWMS

Market size: Vessels in the world: 80 to 100 thousand

MIURA's target: 19,000 vessels

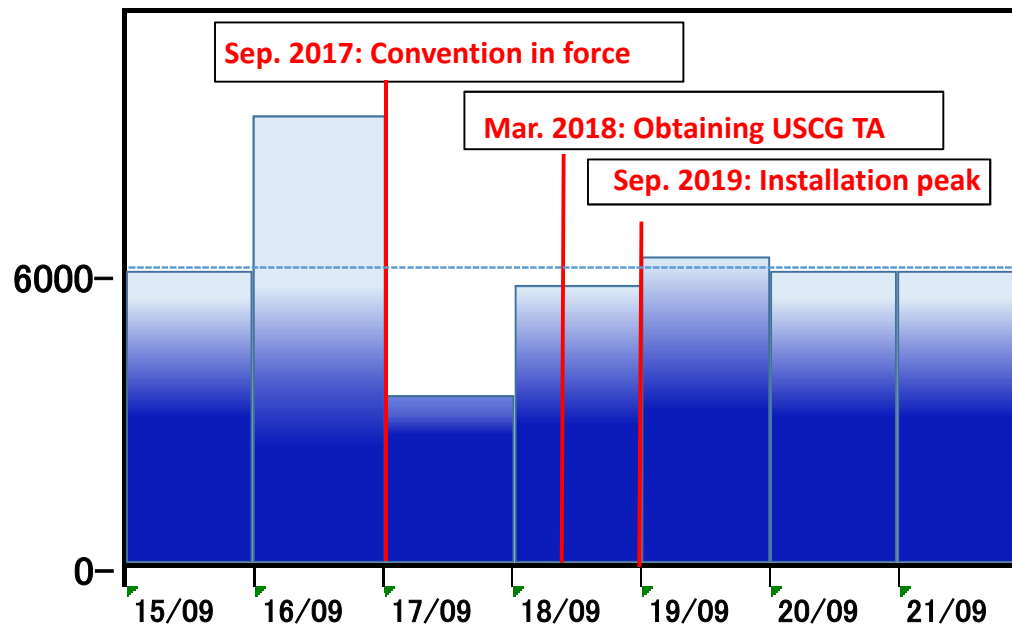
(small/medium vessels of 20 to 60 thousand DWT\*)

<Plan for FY 2018>

**BWMS installation: 720 units**

**Sales expected: 10 billion JPY**

### Docking schedule of vessels in service



• Docking timing: Intermediate survey every 2 or 3 years and special survey every 5 years

New market  
born!



### BWMS installation timing

Newly built vessels	September 2017 or after
Vessels in service	Periodic inspection in September 2017 or after

## Ballast water treatment methods

Method	Principle	Advantage	Disadvantage
UV	Sterilization by ultraviolet	<ul style="list-style-type: none"> <li>• No chemical</li> <li>• No matter which of seawater or brackish water is used</li> </ul>	<ul style="list-style-type: none"> <li>• Sterilization difficulty for larger organism</li> <li>• High electricity consumption</li> </ul>
Electrolysis	Sterilization by chlorine generated from electro-chlorination	<ul style="list-style-type: none"> <li>• No filter (depends on the conditions)</li> </ul>	<ul style="list-style-type: none"> <li>• Neutralization chemical required for discharge</li> <li>• High electricity consumption</li> <li>• Temperature control required</li> <li>• No chlorine generated in freshwater area</li> </ul>
Chemical	Sterilization by chemical	<ul style="list-style-type: none"> <li>• Low electricity consumption</li> </ul>	<ul style="list-style-type: none"> <li>• Neutralization chemical required for discharge</li> <li>• Chemical stock &amp; temperature control required</li> <li>• Environmental load possibility due to chemical</li> </ul>

## Ballast water management convention & USCG rule

### USCG (United States Coast Guard) rule

Requires ballast water management to vessels sailing in the water area of North America (effective in January 2016)

→Regardless of the effect of the ballast water management convention

Ratified on  
September 8<sup>th</sup>, 2016

Effective on  
September 8<sup>th</sup>, 2017

Ballast water  
management convention

12 months after fulfilling  
ratification conditions

January 2016

January 2021

Unique standards based on  
the ballast water  
management convention

AMS approval valid for 5 years  
after installation  
(As a temporal measure  
before TA under USCG rule)

USCG rule

Fiducial installation date: January 2016

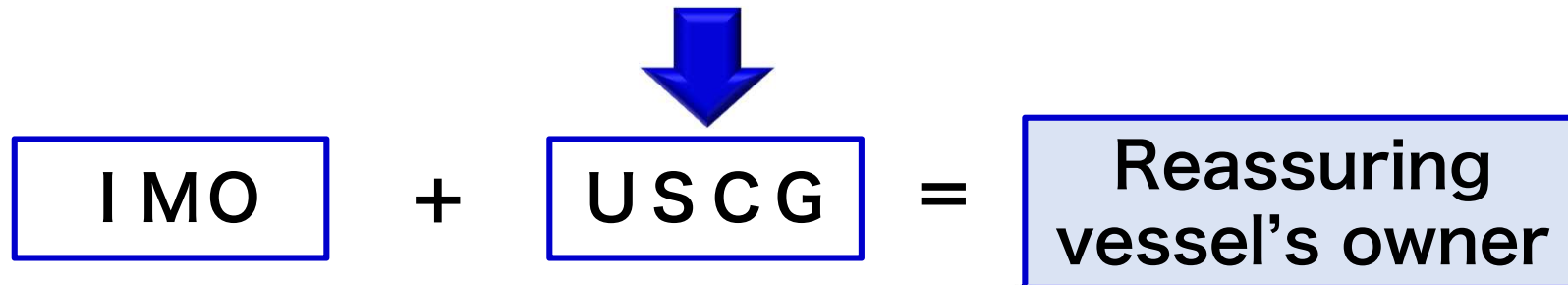
Freshwater testing

※ TA=Type approval

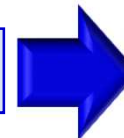
## Why USCG type approval (TA)?

	Other than North America	North America
IMO	○	—
USCG	—	○

Vessels sailing worldwide need both TA of IMO and USCG.



BWMS manufacturer with both TA



**Competitive advantage**

No manufacturer gained USCG type approval as of October 2016.

## Major manufacturer

	IMO	Method
Japan	MIURA CO.,LTD	Filter + UV
	J F E	Filter + Chemical
	Kuraray	Filter + Chemical
Korea	TECHCROSS	Filter + Chemical + Electro-chlorination
	PANASIA	Filter + UV
China	Qingdao oversea	Filter + Electrocatalysis
	SunRui	Filter + Electrolysis
	Headway	Filter + Electrocatalysis
	BSKY	Filter + UV
Europe	Alfa-Laval	Filter + UV
	Optimarin	Filter + UV
	Ocean Saver	Filter + Chemical + Electro-chlorination

IMO approved 69 manufacturers including the manufacturers above (As of October 28, 2016) .

## MIURA's approval acquisition

### Ballast water management convention

Instead of the "CERTIFICATE OF BALLAST WATER MANAGEMENT SYSTEM" obtained in March 2014, the equivalent designation approval from the MLIT due to the domestic law amendment in April 2016 has been obtained.

### USCG rule

Planning to obtain in FY2017

As for vessels sailing in the water areas of North America, the ballast water management has been required since January 2016. The ballast water management convention is applied to the requirements temporary. The equipment with AMS approval is essential.

### 5-year-valid AMS approval (temporal measure before TA under USCG rule)

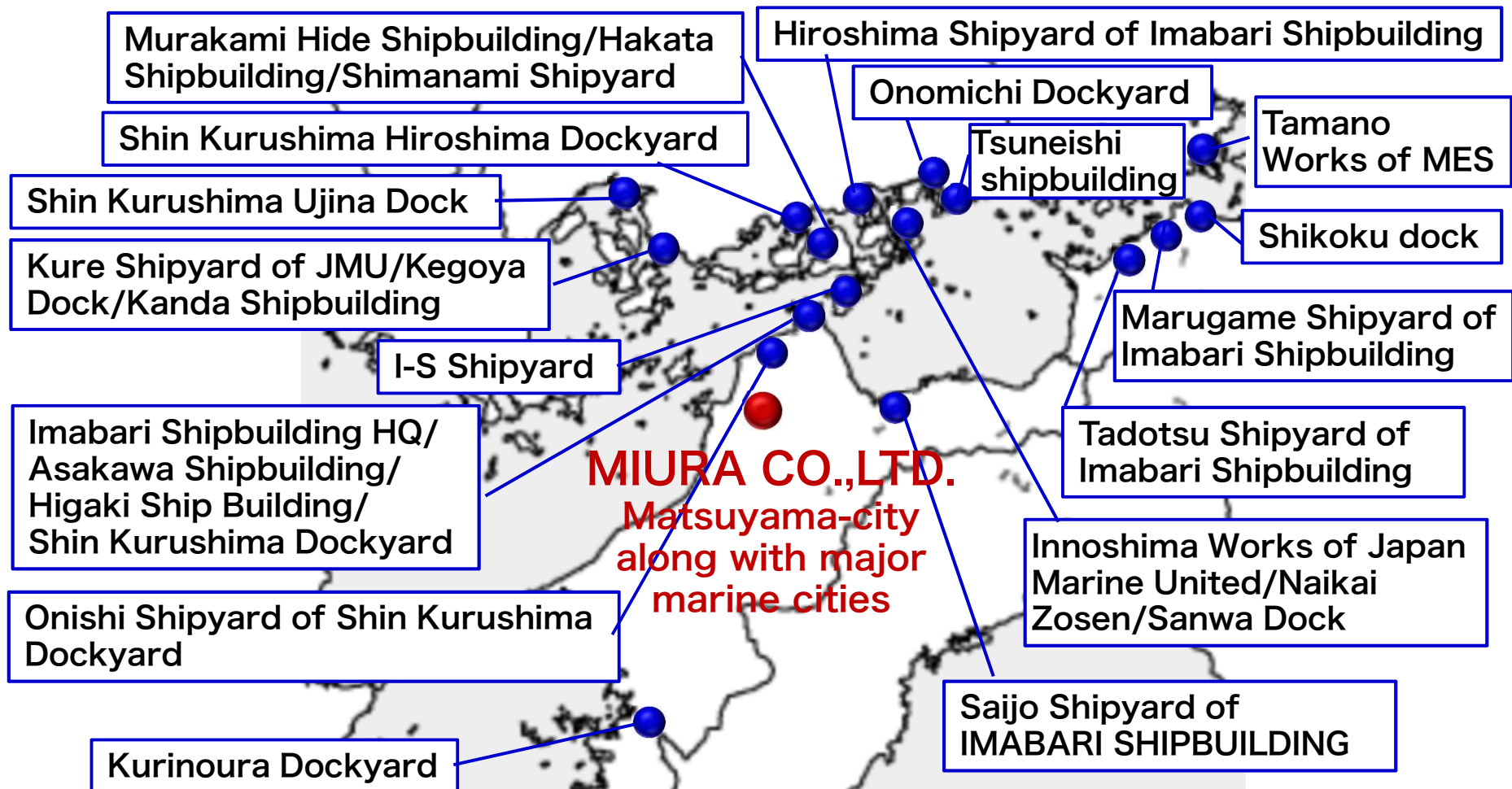
Obtained in November 2014 (Seawater/brackish water) & March 2016 (Freshwater)

→ The AMS approval enables the vessel even without TA to sail in the various waters specified by the USCG for 5 years after installation.

TA=Type approval

## World-class marine cities

Ship Machinery Department with its 50 year history – developing together with neighboring marine cities

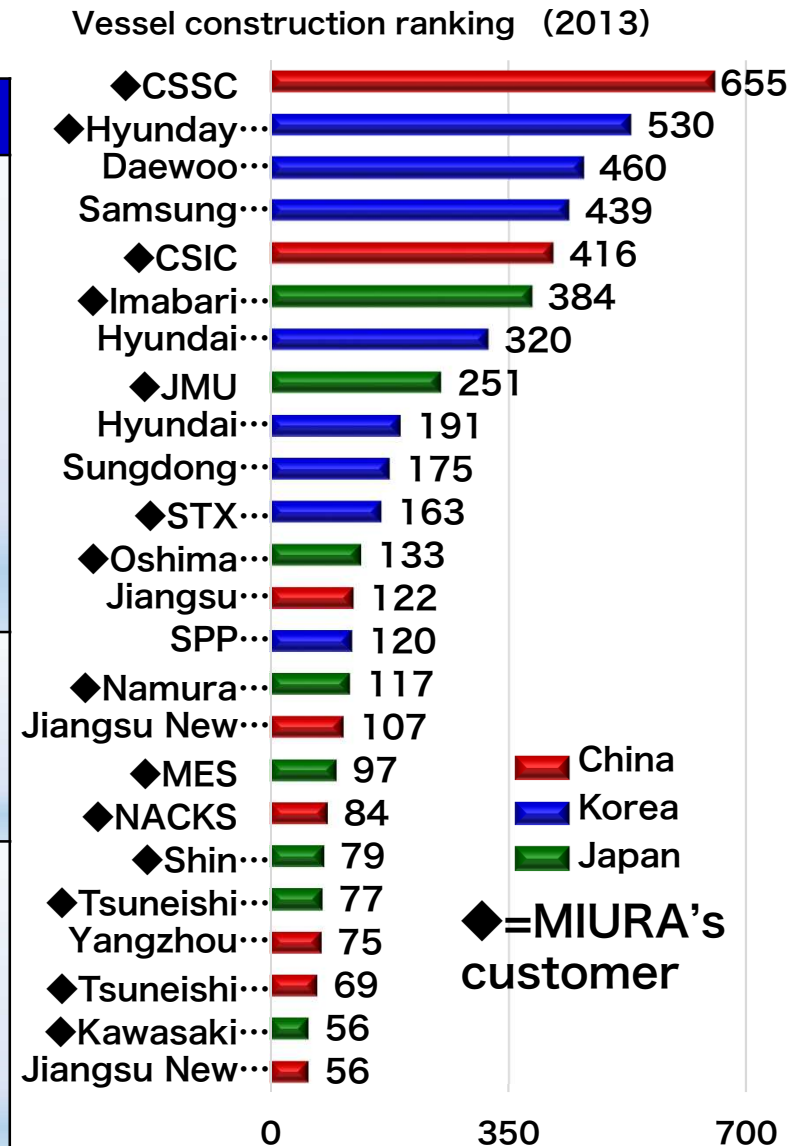


According to MILT Chugoku and Shikoku Regional Department Bureau



## Major customers

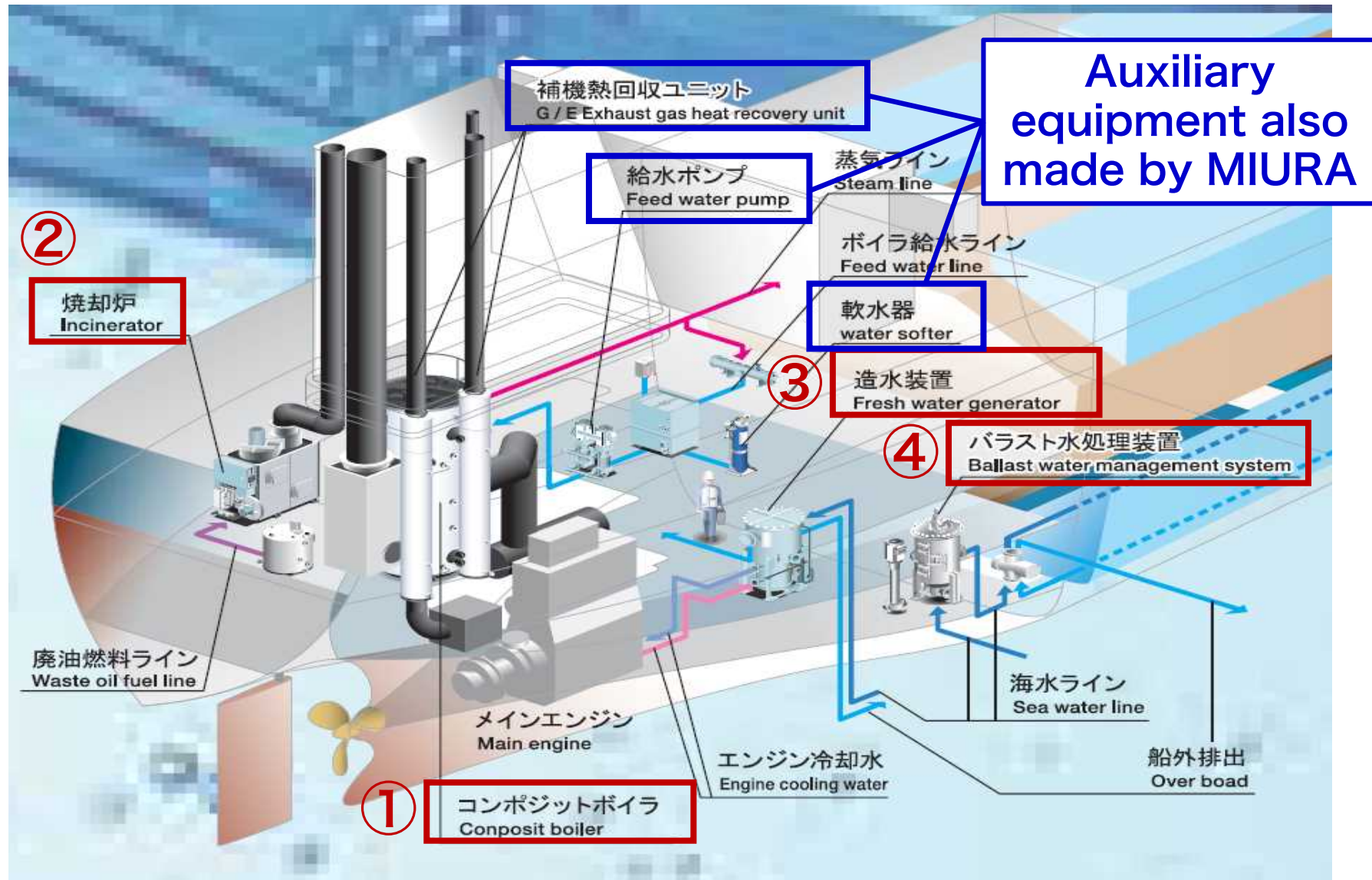
	Customers
Japan	IMABARI SHIPBUILDING/Japan Marine United Corporation (JMU)/ Oshima Shipbuilding/TSUNEISHI SHIPBUILDING/NAMURA SHIPBUILDING/SHIN KURUSHIMA DOCKYARD GROUP/ Mitsui Engineering & Shipbuilding (MES)/Kawasaki Heavy Industries/Mitsubishi Heavy Industries
China	COSCO GROUP/CSIC GROUP/CSSC GROUP NANTONG COSCO KH SHIP ENGINEERING (NACKS)
Korea	DAE SUN SHIPBUILDING & ENGINEERING Hyundai Heavy Industries/ HANJIN HEAVY INDUSTRIES & CONSTRUCTION/ CO.,LTD. STX Offshore & Shipbuilding



※The present ranking may have changed due to factors such as the merger.



## Ship total solution (MIURA's 4 item set)



## Target

### In-service vessels



7% share  
Approx.  
1,330  
vessels

×1.5 units = Approx. **2,000 units** of BWMS

2,000-unit installation in 5 years

### Newly-built vessels

Target:  
32% share

Units to be installed at shipyard: Approx. 1,000 units/year

1,000 units × 0.32 = 320 units

### FY2018

- 400 units/year for in-service vessels
- 320 units/year for newly-built vessels

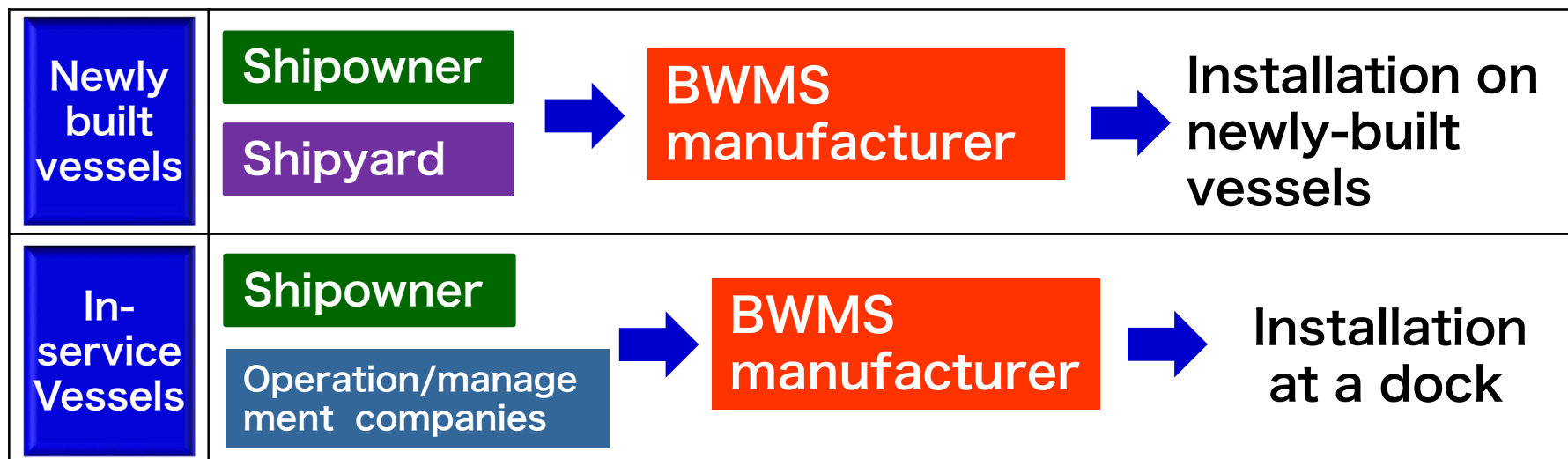
Total: 720 units



Sales target:  
10 billion  
yen

## Sales strategy

Newly-built vessels	In-service vessels
<u>Marine boiler connection</u> → Great trust between MIURA and its users (shipyard & shipowner)	<u>Appealing to shipowners, operation/management companies</u> → Branching out into the Netherlands to appealing to shipowners in Europe



Sale to shipowners in Europe



MIURA NETHERLANDS established

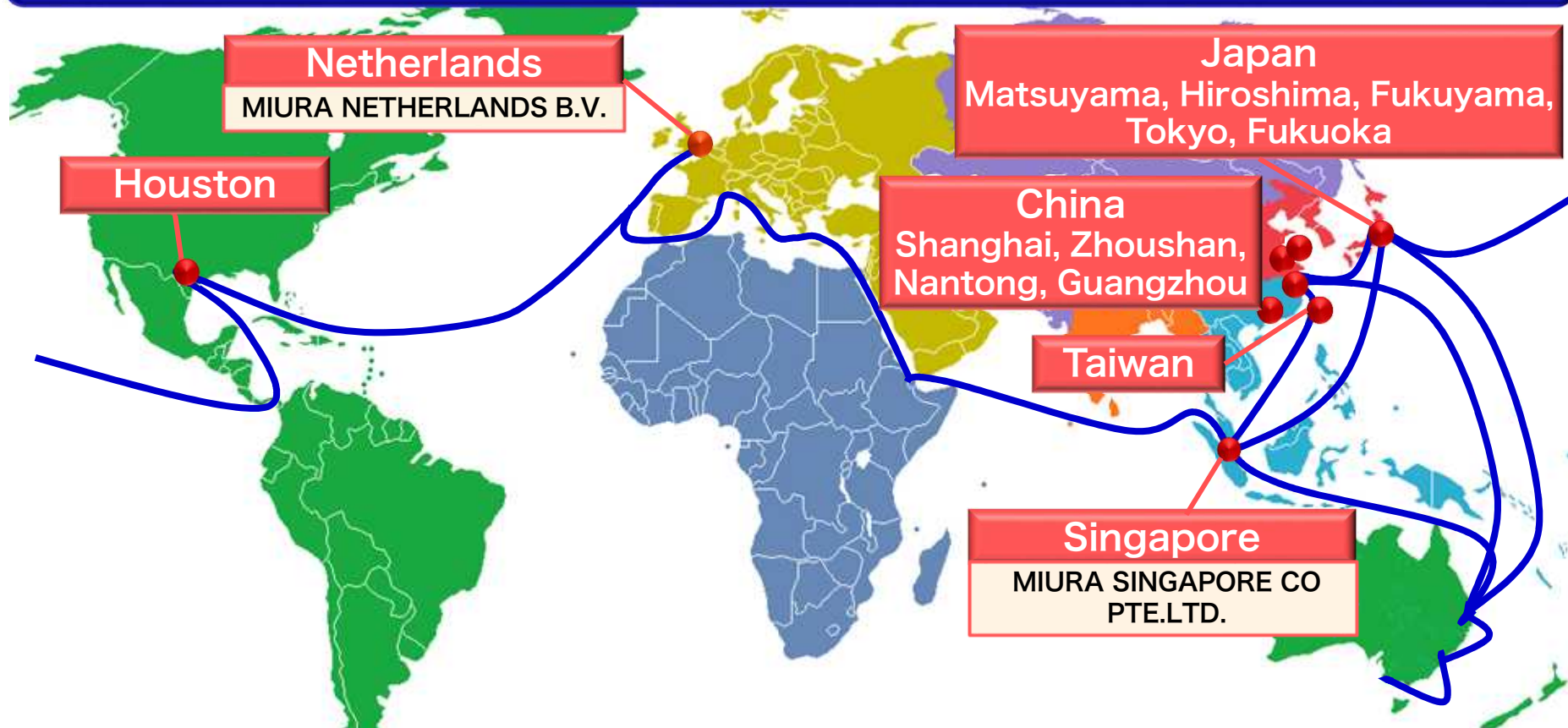
Sale to shipbuilding industry in China



Branch network expansion in Asia

## Marine maintenance

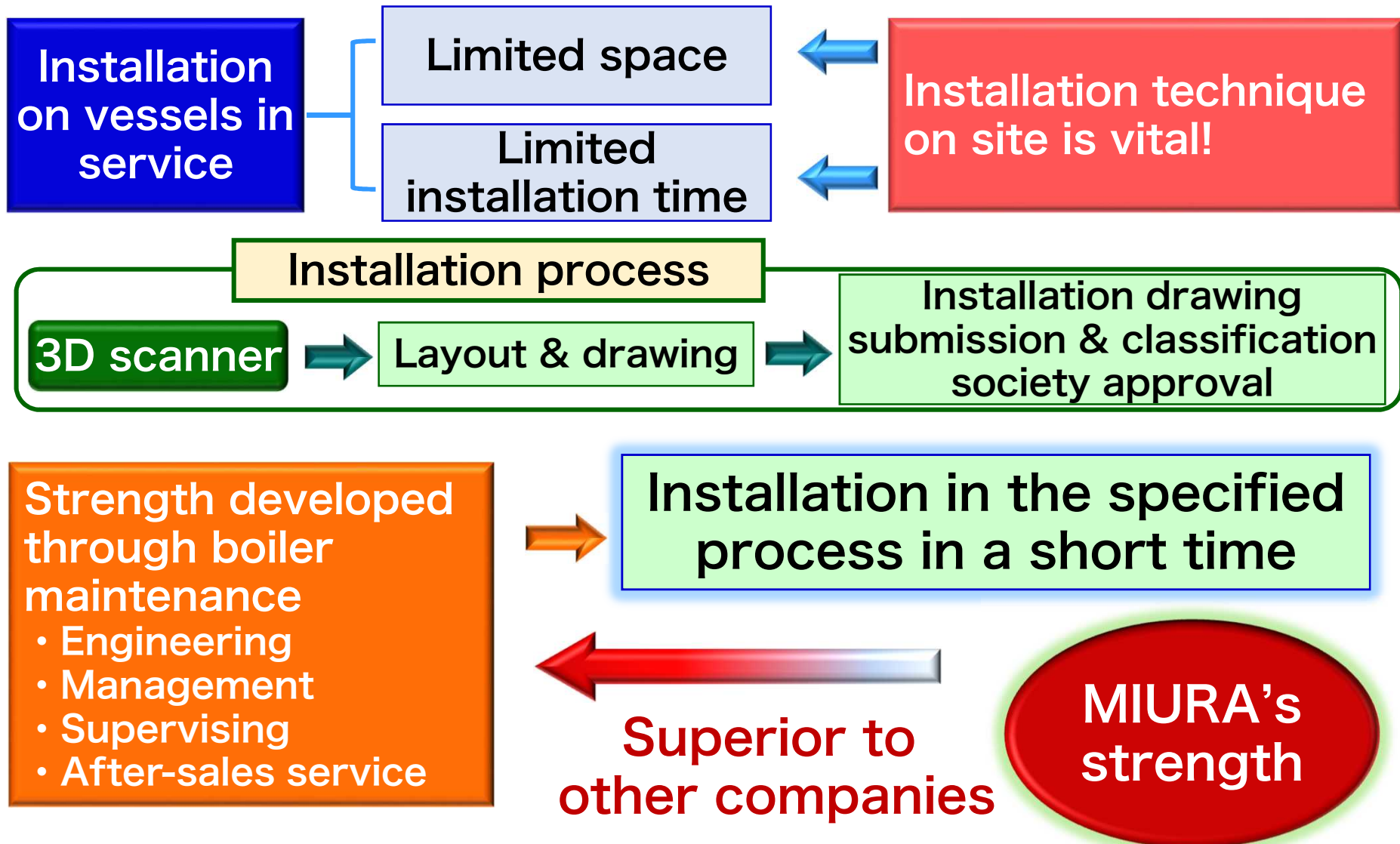
Expansion regarding worldwide installation & maintenance needs of BWMS



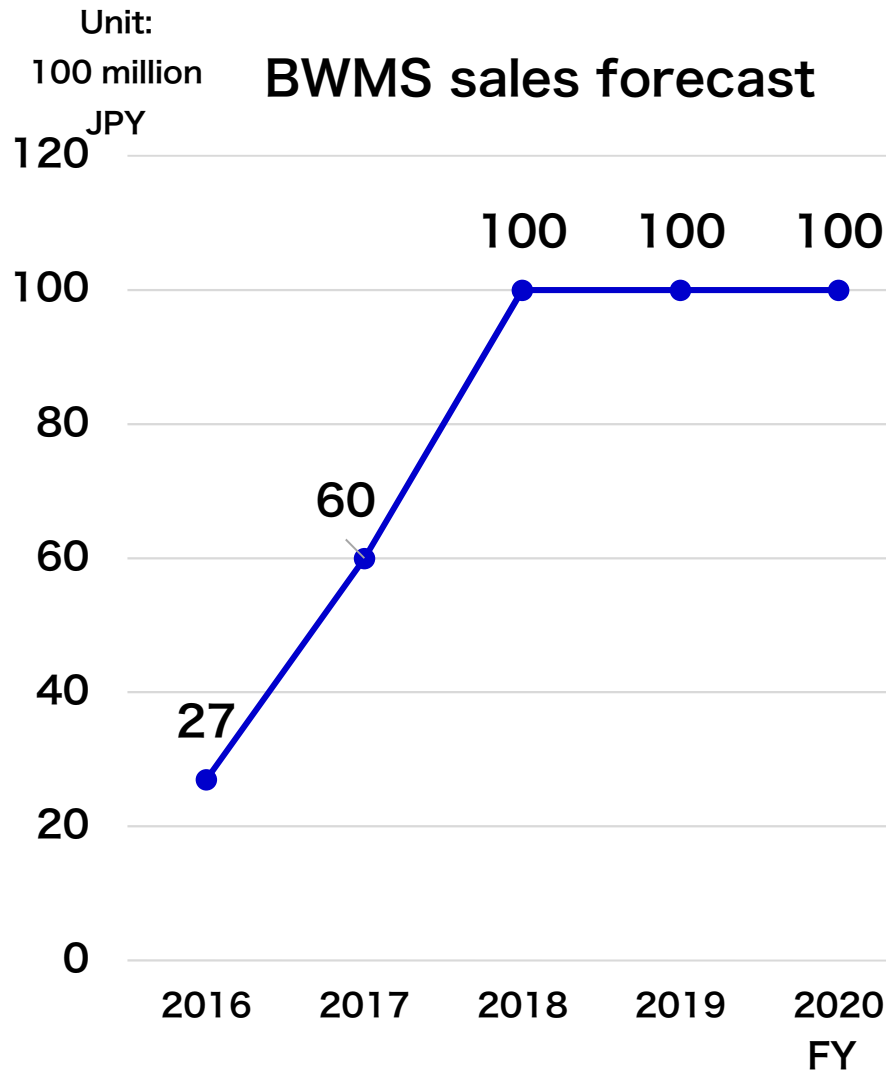
Present bases: 5 in Japan, 4 in China, each in Singapore, Taiwan, Houston, and the Netherlands



## Installation technique



## Sales peak and forecast



### Maintenance sales

Inspection/maintenance when docking

### Docking cycle

In service

2.5 years later

5 years later

7.5 years later

10 years later

- Replacing consumables
- Checking operation history to suggest maintenance plans

Basically overhauling

# 5. Reference

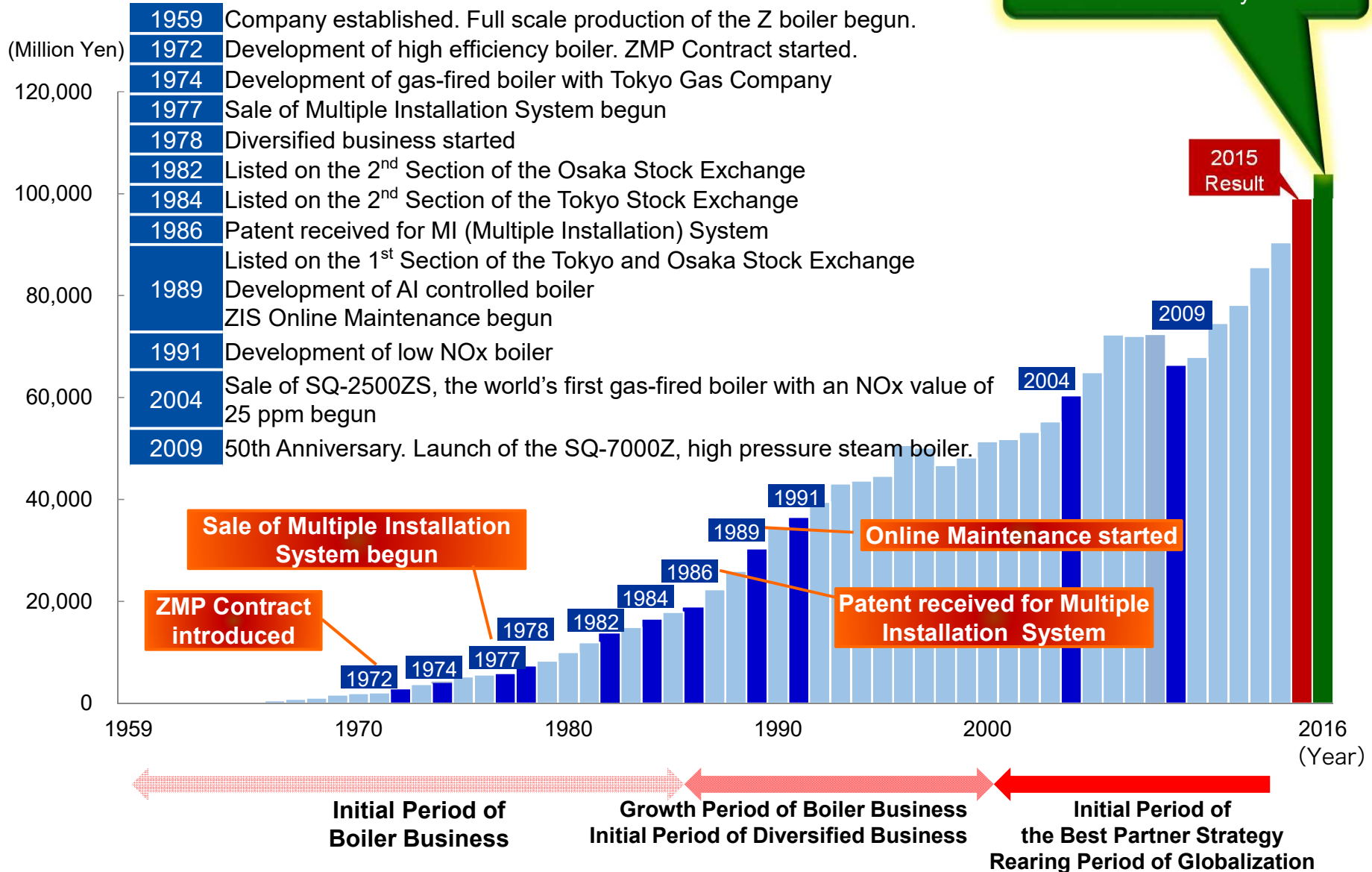


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# 5 Reference

## History



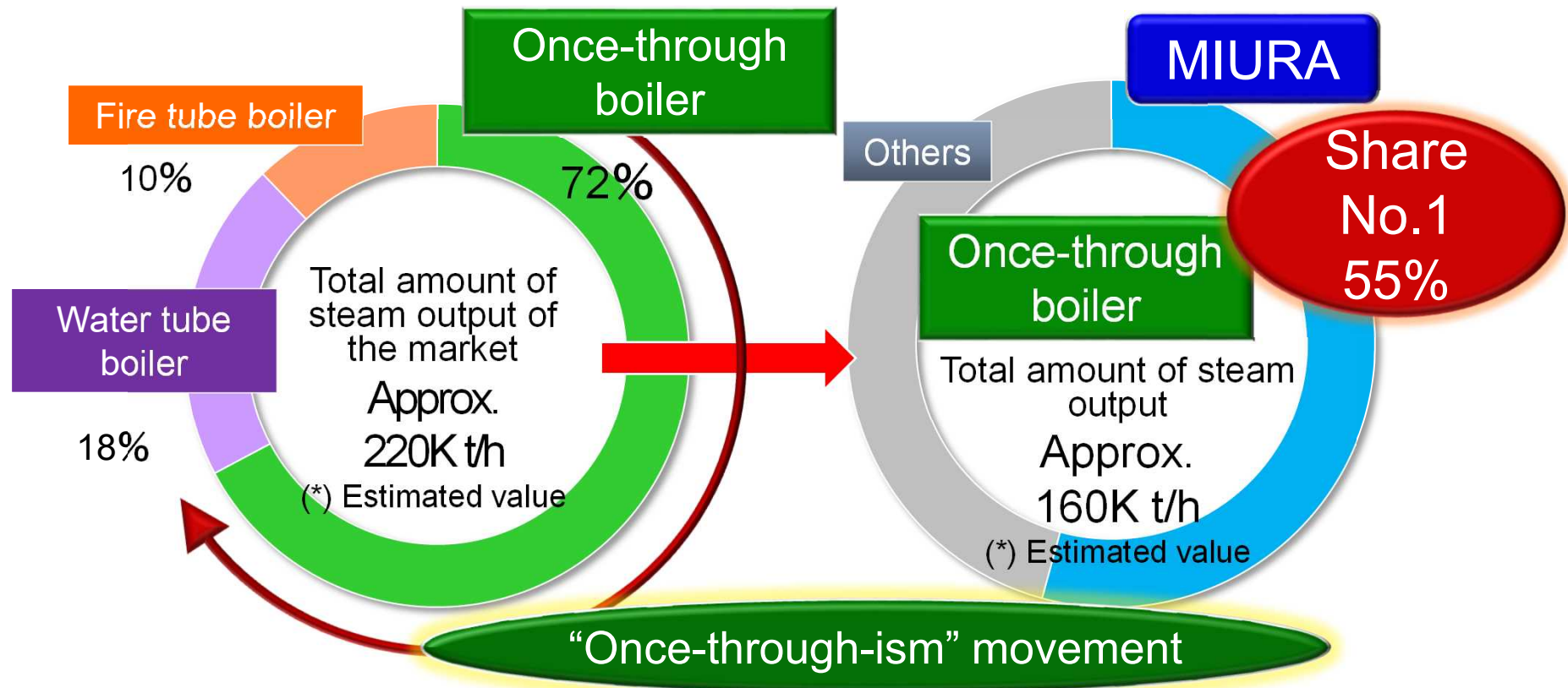


## Domestic share

\*Boilers for power generation excluded

### Domestic boiler market

### Domestic once-through boiler market



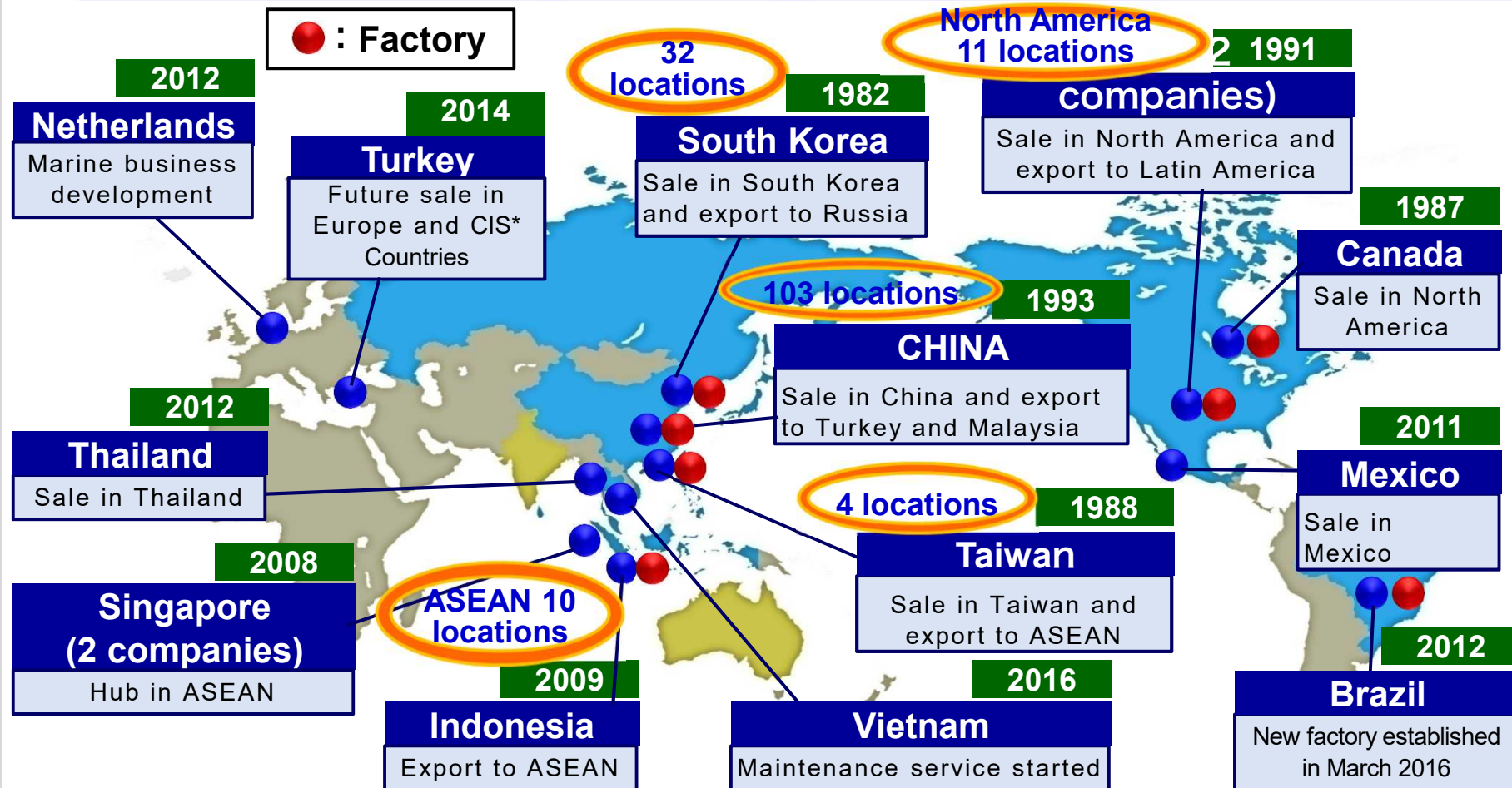
#### Competitors

- NIPPON THERMOENER CO., LTD
- IHI PACKAGED BOILER CO.,LTD
- Hirakawa Corporation
- SAMSON CO.,LTD.
- Kawasaki Thermal Engineering Co., Ltd.
- YOSHIMINE CO.,LTD.

(Note) The share of once-through boilers is based on MIURA's investigation and the actual results may differ from that.

Appropriate location, production, and sales to establish global network

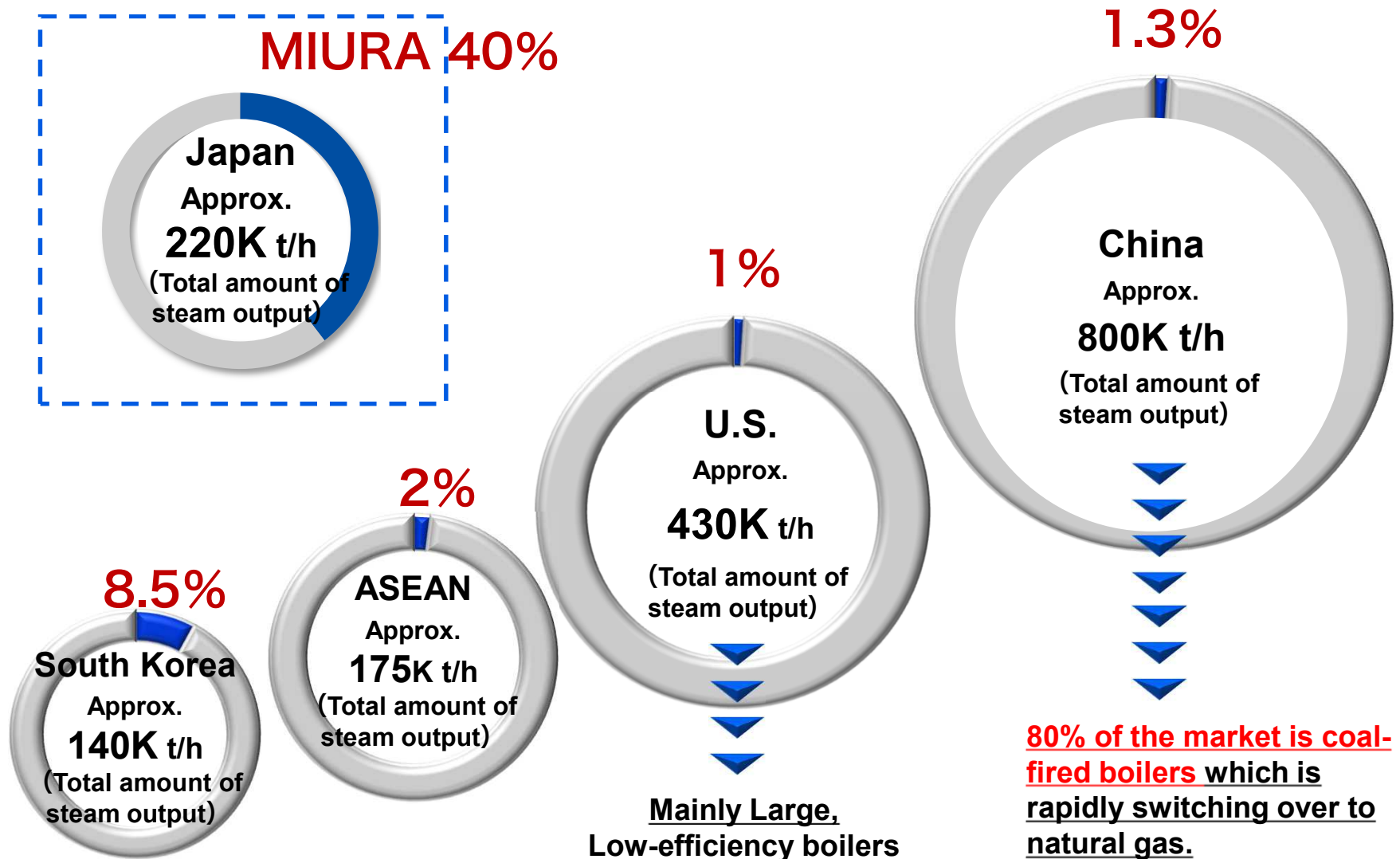
**15 companies, 7 factories, Sales and Maintenance in 19 countries**



\*CIS Countries The abbreviation of Commonwealth of Independent States: Republic of Azerbaijan, Republic of Armenia, Republic of Uzbekistan, Republic of Kazakhstan, Kirghiz Republic, Republic of Tadzhikistan, Republic of Turkmenistan, Republic of Belarus, Republic of Moldova, Russia (Turkmenistan and Moldova are associate countries).

## Boiler Market Share

\*Based on steam volume



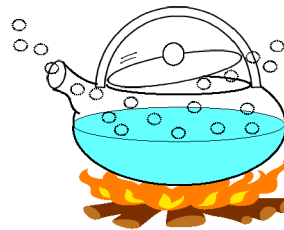
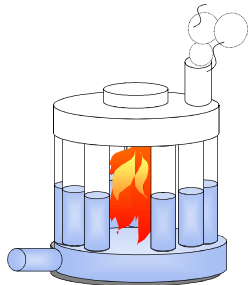
## What is a Boiler?

Equipment which generates steam.  
It is **necessary** for factories, schools, hospitals and high-rise buildings.

### Uses

Heating, or process based power generation, sanitation etc...

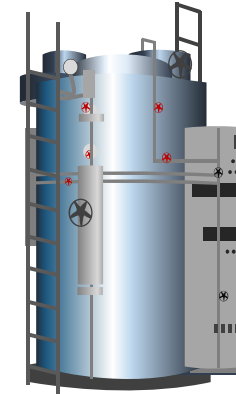
※Same principal as a kettle.



## 【Types of boilers ~ Same capacity ~】



Once-through Boiler



Water Tube Boiler

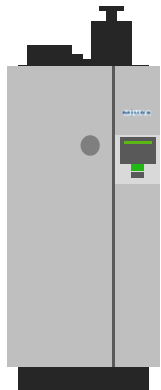
## 【Steam Advantages】

- Five times more energy than hot water
- Compressible
- Easily acquired since it uses water
- Recyclable – Water to steam to water
- Sanitary

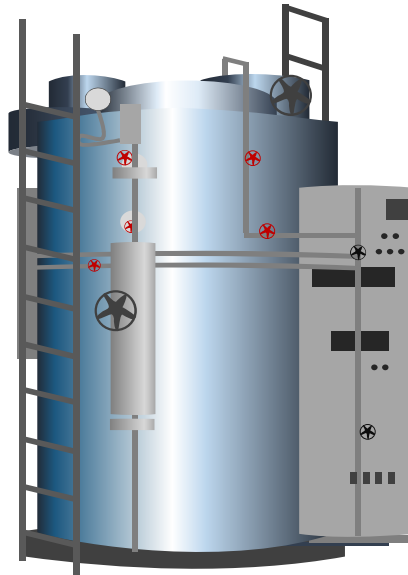
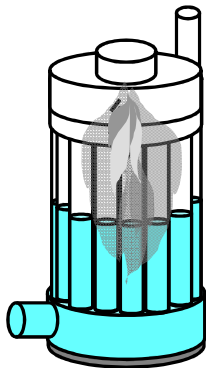


Fire Tube Boiler

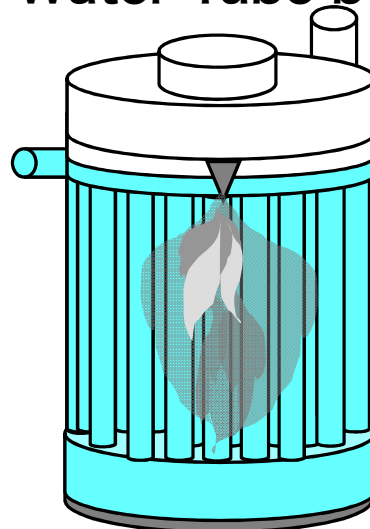
## | Types of Boilers ~ Same capacity ~



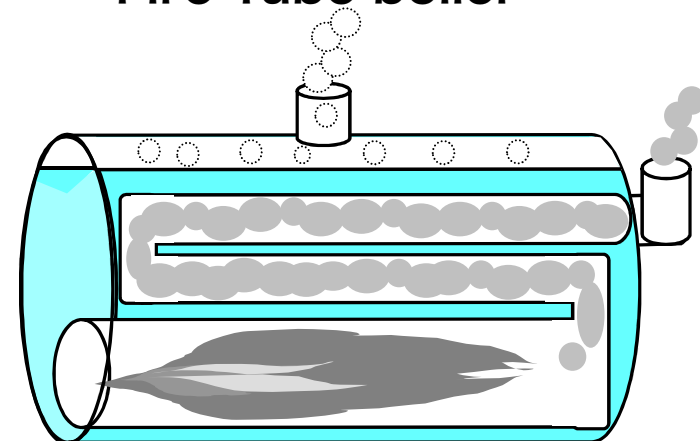
Once-through boiler



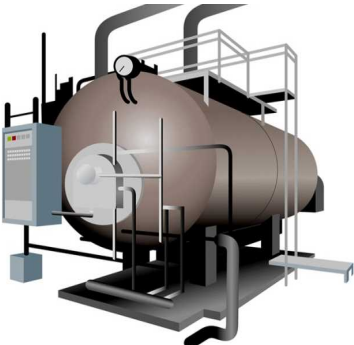
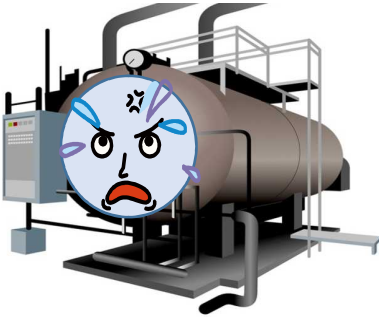
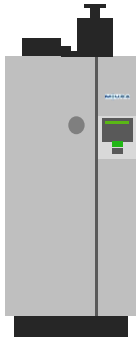
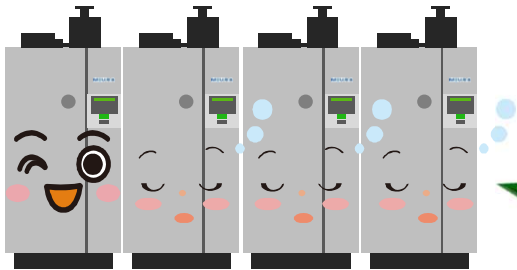
Water Tube boiler



Fire Tube boiler



## Merit of Once-through Boiler

Capacity per unit	Efficiency at low load
<b>Large</b>	<b>Low</b>
 <p>Fire tube boiler</p>	 <p>Always in full operation</p>
<b>Small</b>	<b>High</b>
 <p>Once-through boiler</p>	 <p>Only required number of boiler in operation</p>

**Multiple Installation System** is the steam supply system which developed uniquely in Japan.

**Multiple installation** is to install a number of small-capacity boilers.



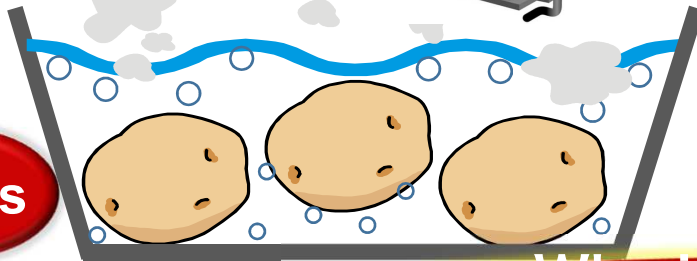
## MIURA MI (Multiple Installation) System

Provides steam of required amount when needed, reducing operation costs and emission of CO<sub>2</sub> and NO<sub>x</sub>.

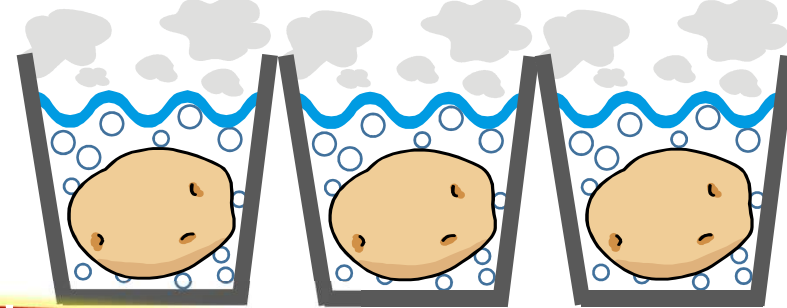
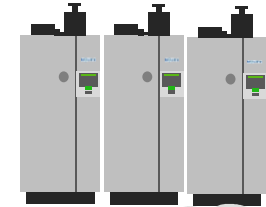
One large capacity boiler



3 pcs

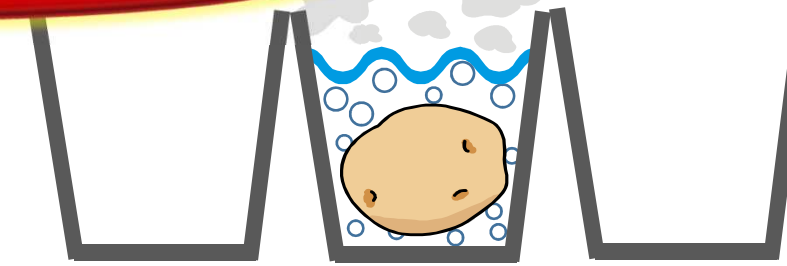
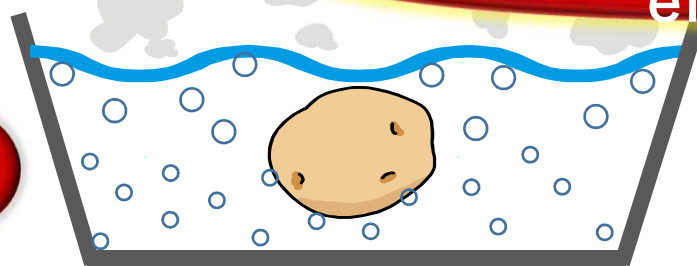


Small capacity boilers in MI system



Why is MI system efficient?

1 pc



Same water content even if the number of potatoes reduced

Energy Saving

Space Saving

Water content reduced when the number of potatoes reduced

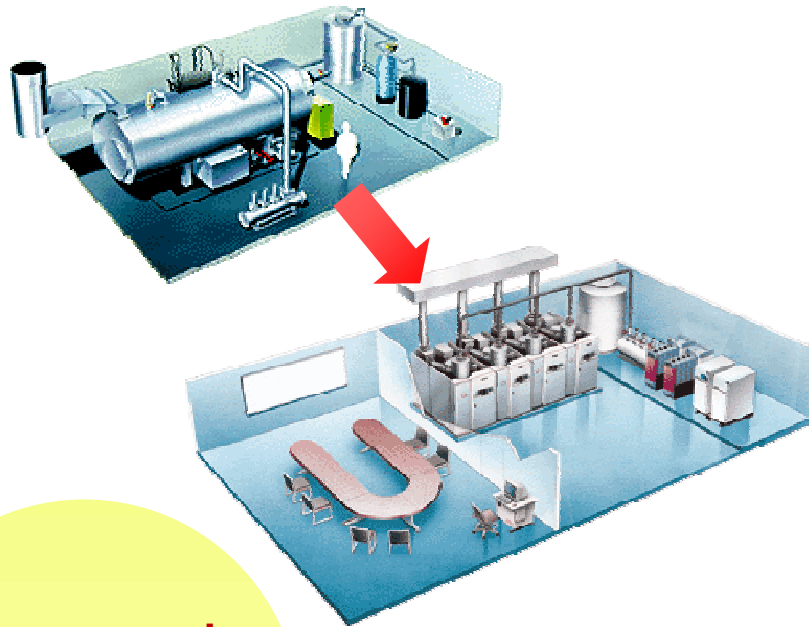
Labor Saving

Low pollution

In 1986 M I system patented

**M I system** (Multiple Installation system)

Once-through boiler design makes energy savings a reality.



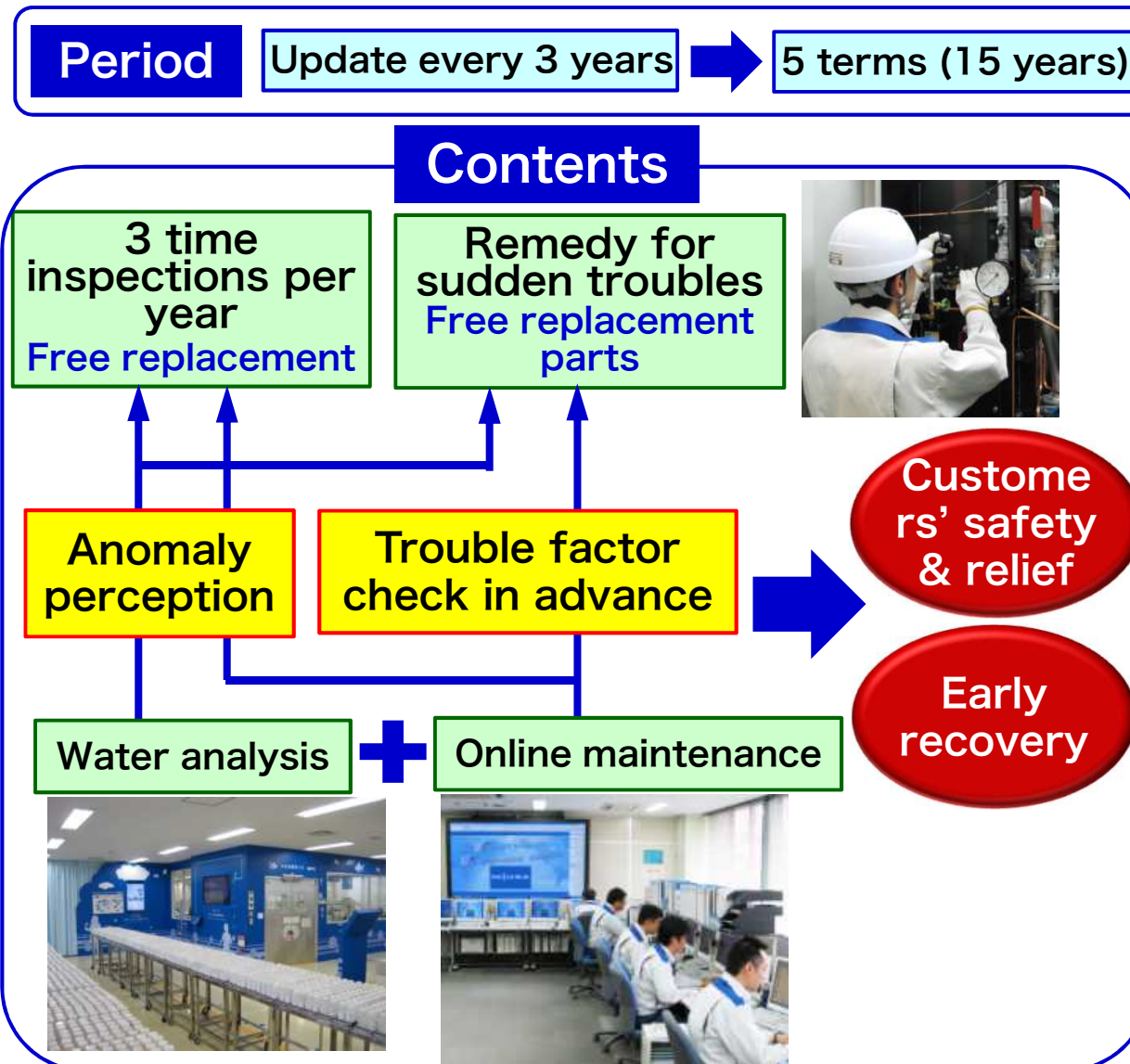
- Energy-saving
- Space-saving
- Labor-saving
- Low pollution



Provide steam when needed and only when needed, low operation costs and reduction of CO<sub>2</sub> and NO<sub>x</sub>.

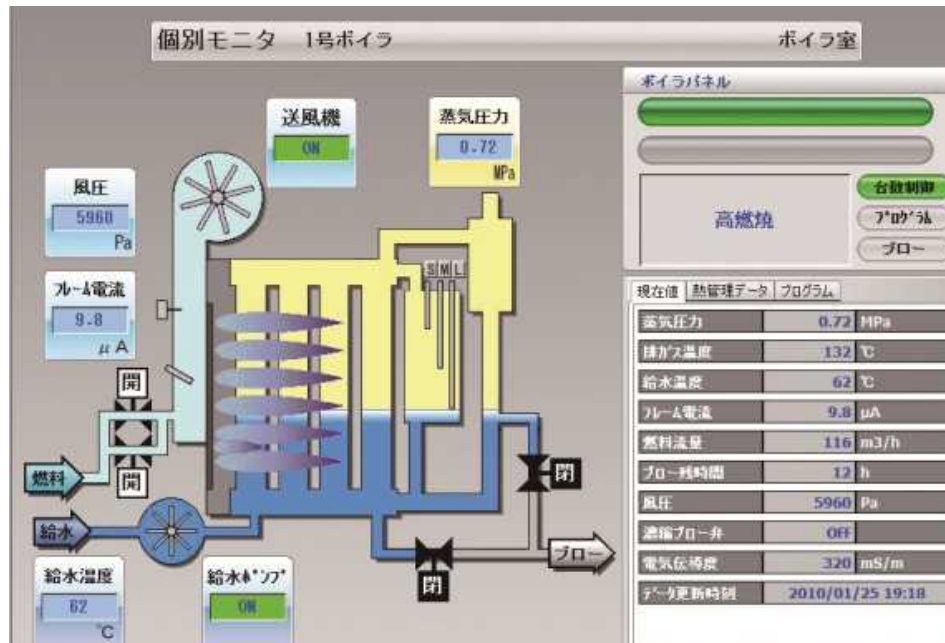


## What is ZMP Contract?



## Online Maintenance

Maintaining high profitability with “IoT” for 27 years



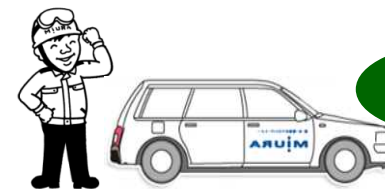
Remote monitoring

Monitoring

User

Troubleshooting via Telephone (Data collection/analysis)

Approx. 56,000 units under contract  
\*Including equipment other than boiler (As of October, 2016)



Visit

Trouble factor grasped

Preparation in advance

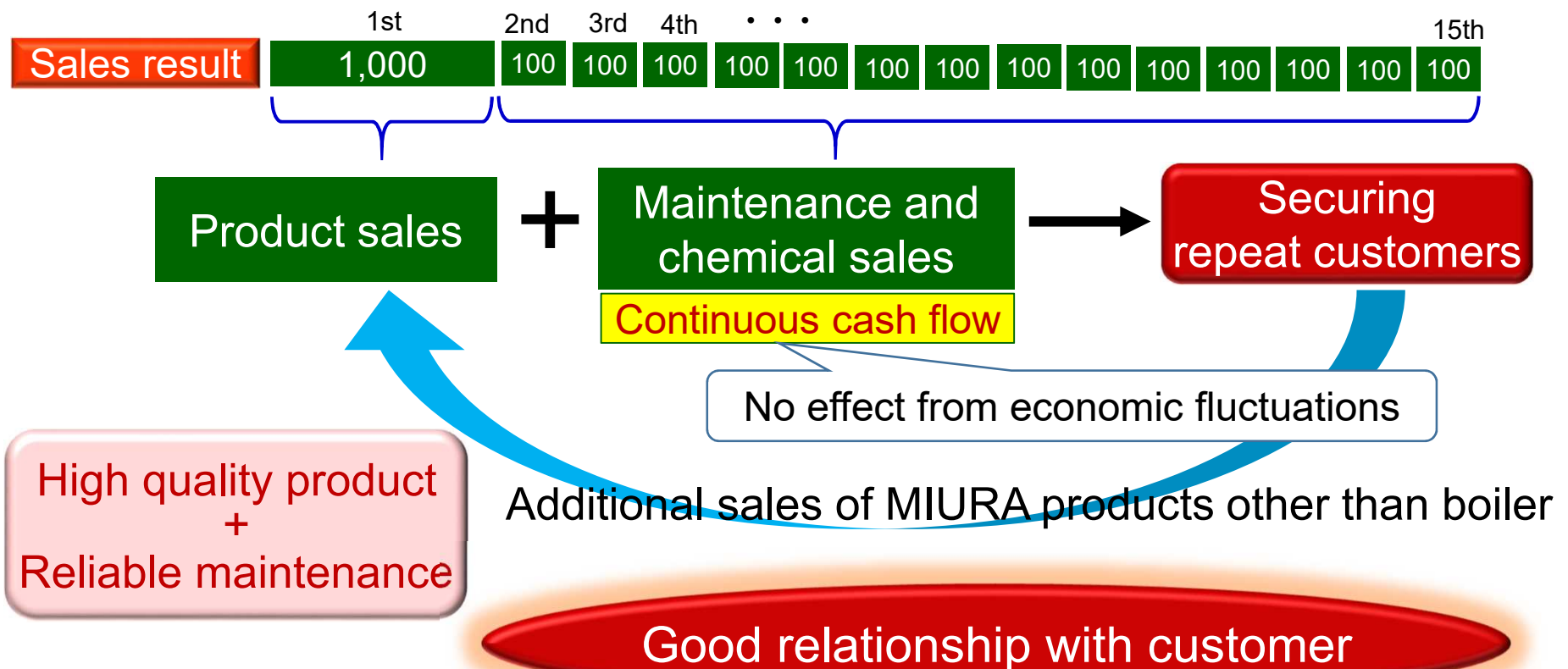
Early recovery

Much more effective, easier maintenance work

## Boiler Lifespan and MIURA Business Model

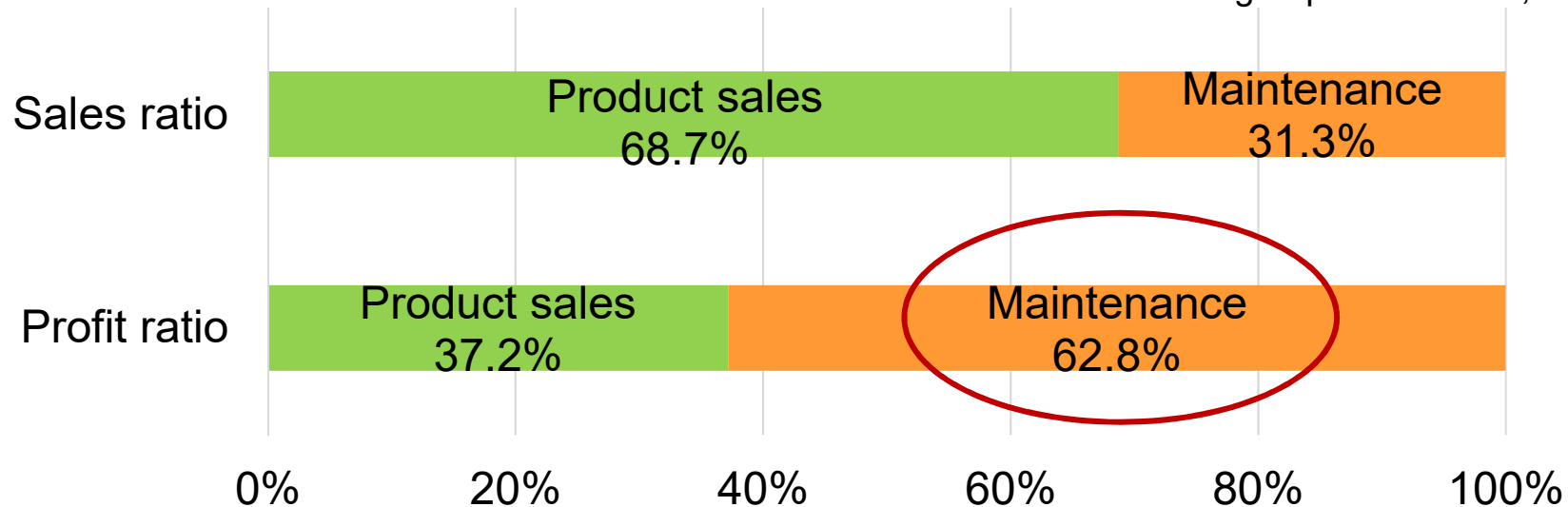
Not only the product sales, but maintenance & consumables sales

Assuming a boiler has a lifespan of 15 years,



## Maintenance Brings Profits

\*The whole MIURA group as of March, 2016



### MIURA Maintenance Network

Offices

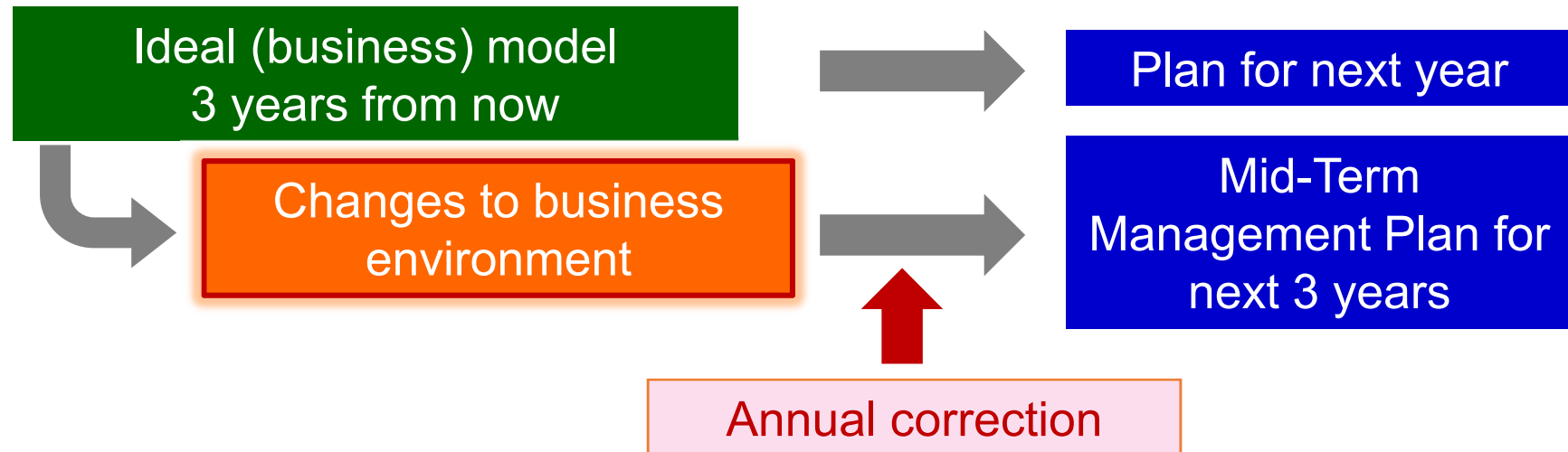
Approx. 100 offices

Service Engineers

Approx. 1,000 engineers



## Mid-Term Management Planning



### Rolling Plan

To respond to business environment changes, MIURA updates its three-years Mid-Term Management plan every year.

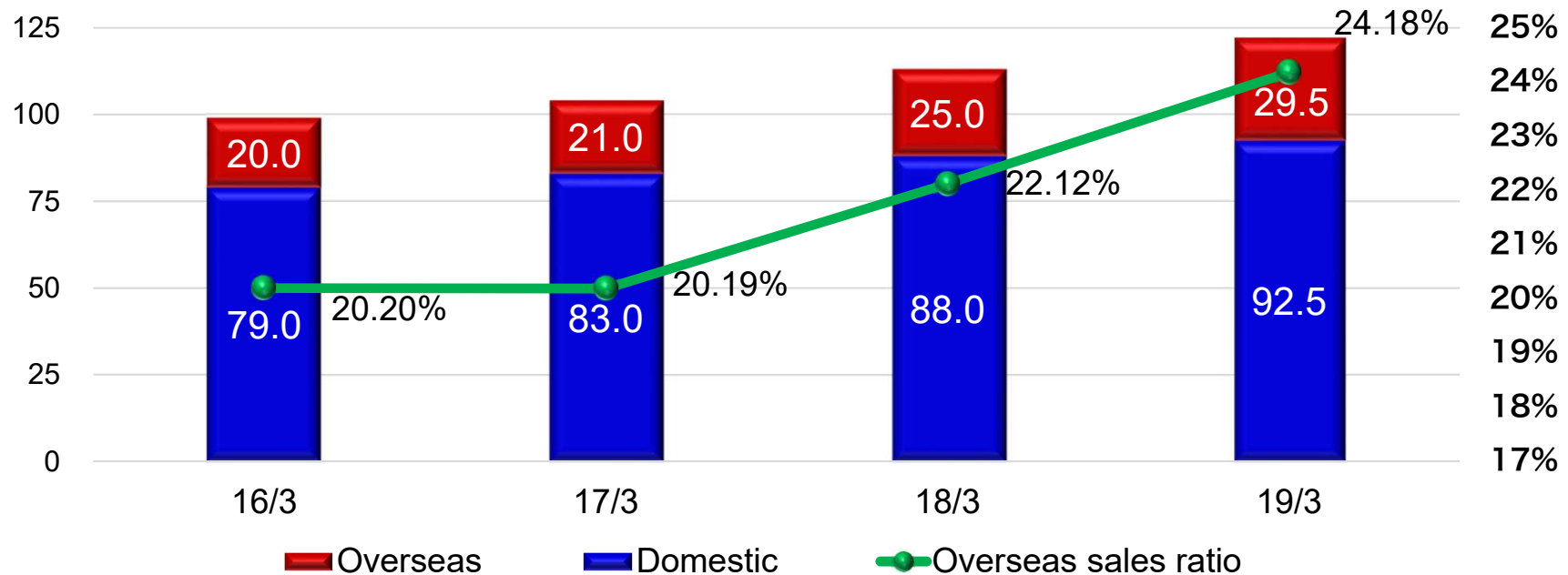
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Mid-Term Management Plan 2016	2016—2018				
Mid-Term Management Plan 2017		2017—2019			
Mid-Term Management Plan 2018			2018—2020		

## Mid-Term Management Plan for FY2016




Unit: Billion Yen

	FY 2015	FY 2016 Plan	FY 2017 Plan	FY 2018 Plan
Net sales	99.0	104	113	122
Operating profit	10.2	10.4	11.5	12.8

Unit : Billion Yen



## Growth Strategy for Mid-Term Management Plan

		FY 2015	FY 2016 Plan	FY 2017 Plan	FY 2018 Plan
Domestic	Total	790	830	880	925
	Boiler	550	555	560	565
	Aqua	26	30	35	40
	Marine equipment	75	97	120	140 
	Food & Medical equipment	88	95	105	110
	Special equipment	33	33	38	45 
	Others	18	20	22	25
Overseas	Total	200	210	250	295
	Americas	43	47	60	70
	South Korea	66	60	60	65
	China	67	73	90	110 
	ASEAN, Taiwan	24	30	40	50
Total		990	1,040	1,130	1,220



## MIURA awarded from the Japan Institute of Marine Engineering

The Japan Institute of Marine Engineering (JIME) held its 50<sup>th</sup> anniversary commemorative ceremony on September 27<sup>th</sup>, 2016. The JIME inaugurated in April 1966, aiming at the progress and development regarding engineering and technology of the marine engines and equipment. Not only contributing to the marine engine improvement and safety, the JIME has been working on environmental researches such as energy saving and marine pollution prevention. MIURA, who joined the JIME in 1974, has been awarded the contribution award for its remarkable contribution to the stable institute-operation fundamentals over the years, such as the international conference support and boiler-related study activities. MIURA will continue to serve our customers even better with various products including the “Ballast Water Management System HK” contributing to the world’s marine environment preservation, on the mission to “help customers all over the world in energy conservation and environmental preservation” .





Your best partner for **Energy**, **Water**, and **Environment**,  
 helping customers all over the world  
 in energy conservation and environmental preservation,



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 world in the fields of energy, water, and the environment!

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Energy, Water and Environment**



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