

# **Status of 2015 Medium-Term Business Plan**

May 9, 2017

Mitsubishi Heavy Industries, Ltd.

**Shunichi Miyanaga, President and CEO**

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# I. FY2016 Results

# I. FY2016 Results

(※ Profit attributable to Owners of Parent)

(billions of yen)

	FY2015 Actual	FY2016 Actual		
		Actual	Main reasons for variance from FY2015 Actual	
Orders received (Overseas ratio)	4,485.5 (52%)	4,275.6 (48%)	<ul style="list-style-type: none"> <li>Decline in Orders received from overseas markets, MHPS etc. (Decreased investment due to lower oil price)</li> </ul>	4,800.0 —
Net sales	4,046.8	3,914.0	<ul style="list-style-type: none"> <li>LNG carrier*1</li> <li>MRJ</li> <li>Tier1*1</li> <li>MHPS*1</li> </ul> *1 includes yen appreciation Operating income Δ approx. ¥100 billion Δ approx. ¥50 billion	4,000.0 *2
Operating income (Margin)	309.5 (7.6%)	150.5 (3.8%)		240.0 (6.0%)
Net income※	63.8	87.7	<ul style="list-style-type: none"> <li>Asset management benefits (extraordinary profit + approx. ¥ 110 billion) (FCF + approx. ¥ 200 billion)</li> </ul>	100.0
ROE	3.7%	5.1%		5.8%
FCF	7.5	104.6		100.0
Debt/Equity ratio	0.53	0.44	(excl. impact fm South Africa PJ) 0.30	—
Equity ratio	30.5%	32.5%	(excl. impact fm South Africa PJ) 34.4%	—
Interest-bearing debt	1,052.1	925.5	(excl. impact fm South Africa PJ) approx 625.5	—
Dividend per share	12 yen	12yen		12yen

<b>Foreign exchange rates:</b>	119.7yen/\$ 132.6yen/€	108.2yen/\$ 118.6yen/€
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※2 Deterioration of MHPS and further deterioration of LNG Carriers/MRJ reflected from previous forecast

110yen/\$ 120yen/€
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# I. FY2016 Results (2)

## Net Sales and Operating Income by Business Segment

Former segment	FY2015 Actual (A)		(B)-(A)		FY2016 Actual(B)	
	Net sales	Operating income	Net sales	Operating income	Net sales	Operating income
Energy & Environment	1,542.7	154.6	-72.3	-44.1	1,470.4	110.5
Commercial Aviation & Transportation Systems	548.5	54.5	-33.1	-106.4	515.3	-51.9
Integrated Defense & Space Systems	485.0	25.7	-14.4	2.1	470.6	27.9
Machinery, Equipment & Infrastructure	1,432.3	80.0	5.6	-7.5	1,438.0	72.5
Others	177.3	12.6	-1.4	-1.8	175.9	10.7
Eliminations or Corporate	-139.2	-18.1	-17.1	-1.1	-156.3	-19.3
<b>Total</b>	<b>4,046.8</b>	<b>309.5</b>	<b>-132.7</b>	<b>-158.9</b>	<b>3,914.0</b>	<b>150.5</b>

## After segment reorganization\*

FY2016 Actual		
New segment	Net sales	Operating income
Power Systems	1,448.4	108.1
Industry & Infrastructure	1,747.0	50.0
Aircraft, Defense & Space	703.4	0.9
–	–	–
Others	175.9	10.7
Eliminations or Corporate	-160.7	-19.3
<b>Total</b>	<b>3,914.0</b>	<b>150.5</b>

(billions of yen)

\* Use reorganization to integrate Commercial Aviation and Transportation Systems businesses (which face a challenging business environment, such as Commercial Aircraft and Commercial Ship) with other segments that have synergies, then accelerate measures.

## II. Review of FY2017 Targets

# II. Review of FY2017 Targets -1

(billions of yen)

	FY2015 Actual	FY2016 Actual	FY2017		
			Previous target	New target	Factors behind target change
Orders received (Overseas ratio)	4,485.5 (52%)	4,275.6 (48%)	5,500.0 (64%)	4,500.0 (55%)	<p>Reflects uncertainty of global economy and market forecasts</p> <p>MHPS <math>\Delta 350</math>                      Transportation Systems <math>\Delta 220</math>                      Commercial Aircraft <math>\Delta 200</math>                      PT(Metals Machinery) <math>\Delta 120</math>                      Compressor <math>\Delta 110</math></p> <p>Total <math>\Delta 1,000</math></p> <p>Reflects costs of measures to tackle challenges faced in 2016</p>
Net sales	4,046.8	3,914.0	5,000.0	4,150.0	
Operating income (Margin)	309.5 (7.6%)	150.5 (3.8%)	450.0 (9.0%)	230.0 (5.5%)	
Net income *1	63.8	87.7	200.0	100.0	
ROE	3.7%	5.1%	10.2%	5.5%	
FCF	7.5	104.6	200.0	100.0	
Debt/Equity ratio	0.53	0.44	0.4	0.4	
Equity ratio	30.5%	32.5%	35%	33%	
Interest-bearing debt	1,052.1	925.5	900.0	850.0	
Dividend per share	12 yen	12円	*3	*2 12円	

Foreign Exchange Rates

119.7 yen/\$  
132.6 yen/€

108.2 yen/\$  
118.6 yen/€

110 yen/\$  
130 yen/€

110 yen/\$  
120 yen/€

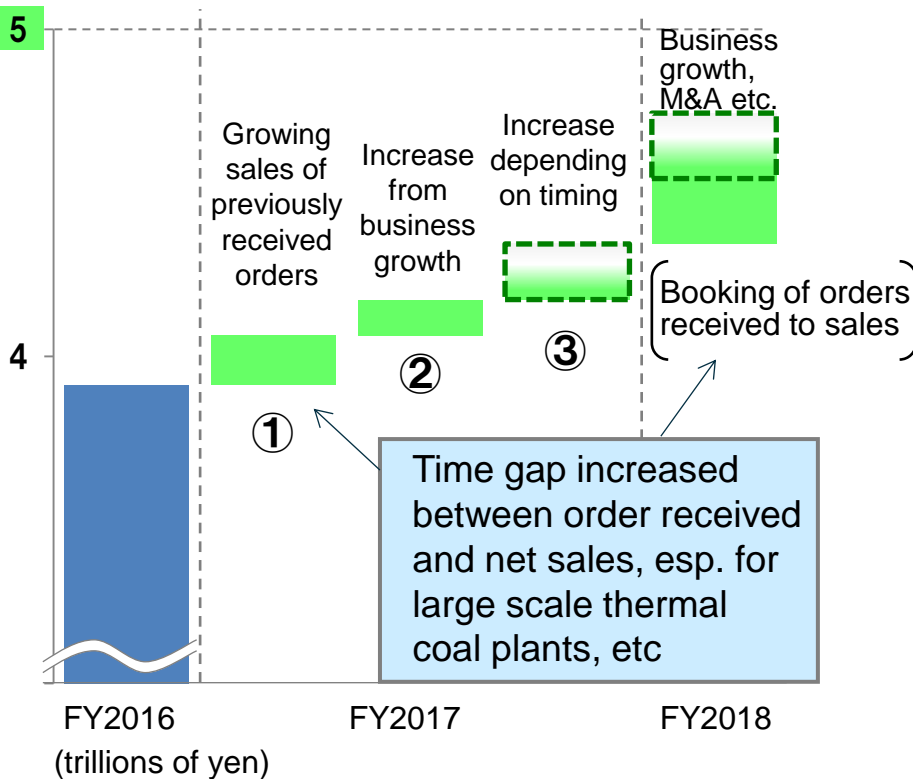
\*3:Payout Ratio 30%±5%

\*1: Profit attributable to Owners of Parent

\*2: MHI is to conduct consolidation of shares(10 shares →1 share) on October 1, 2017. Dividend per share on this material is based on the case before consolidation of shares to be comparable to FY2016.

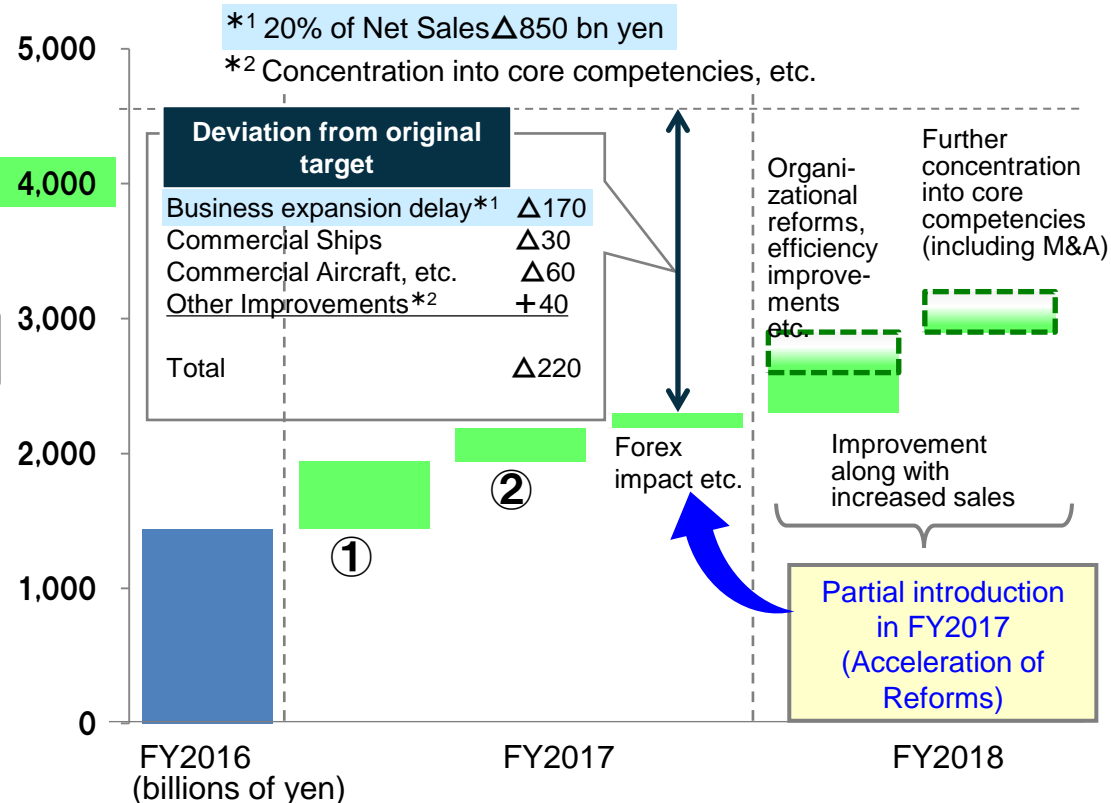
# II. Review of FY2017 Targets -2

## Business scale (net sales)



- ① Previously received orders at MHPS, etc.
- ② Turbochargers, forklift trucks, space systems, etc.
- ③ Land transportation systems, chemical plants, etc.

## Operating income



- ① Improvement from increased sales and PMI acceleration
  - MHPS (P.20-22), M-FET/PT (P.23-24)
- ② Radical measures for commercial ship and commercial aircraft businesses
  - Tier 1/MRJ (P.17-18), Commercial ship (P.19)



## II. Review of FY2017 Targets -3

### Net Sales and Operating Income by Business Segment

(billions of yen)

	FY2016 Actual		FY2017 forecasts		
	Net Sales	Operating Income	Net Sales	Operating Income	Change from FY2016
Power Systems	1,448.4	108.1	1,650.0	145.0 (8.8%)	<ul style="list-style-type: none"> <li>Partial recovery in Net Sales and Operating Income of MHPS</li> </ul>
Industry & Infrastructure	1,747.0	50.0	1,850.0	85.0 (4.6%)	<ul style="list-style-type: none"> <li>Progress on Commercial Ship reforms</li> <li>PMI efforts at PT and M-FET</li> </ul>
Aircraft, Defense & Space	703.4	0.9	650.0	10.0 (1.5%)	<ul style="list-style-type: none"> <li>Reform measures for Tier 1 business</li> <li>Partial recovery of MRJ loss</li> </ul>
Others	175.9	10.7	150.0	10.0	
Eliminations or Corporate	-160.7	-19.3	-150.0	-20.0	
<b>Total</b>	<b>3,914.0</b>	<b>150.5</b>	<b>4,150.0</b>	<b>230.0</b>	

( ) Margin

# III. Evaluation of Overall Progress of 2015 Business Plan

- ① Structural Reforms, such as concentration into core competencies are progressing smoothly and on time
- ② Ongoing risk issues (SONGS/Cruise ships) now settled (see Reference Material p.43-44)
- ③ Optimizing asset management making progress with liquidation and utilization of balance sheet (p.25)

#### ④ Challenges arose in FY2016 outside the scope of the Business Plan prompting fundamental measures for improvement

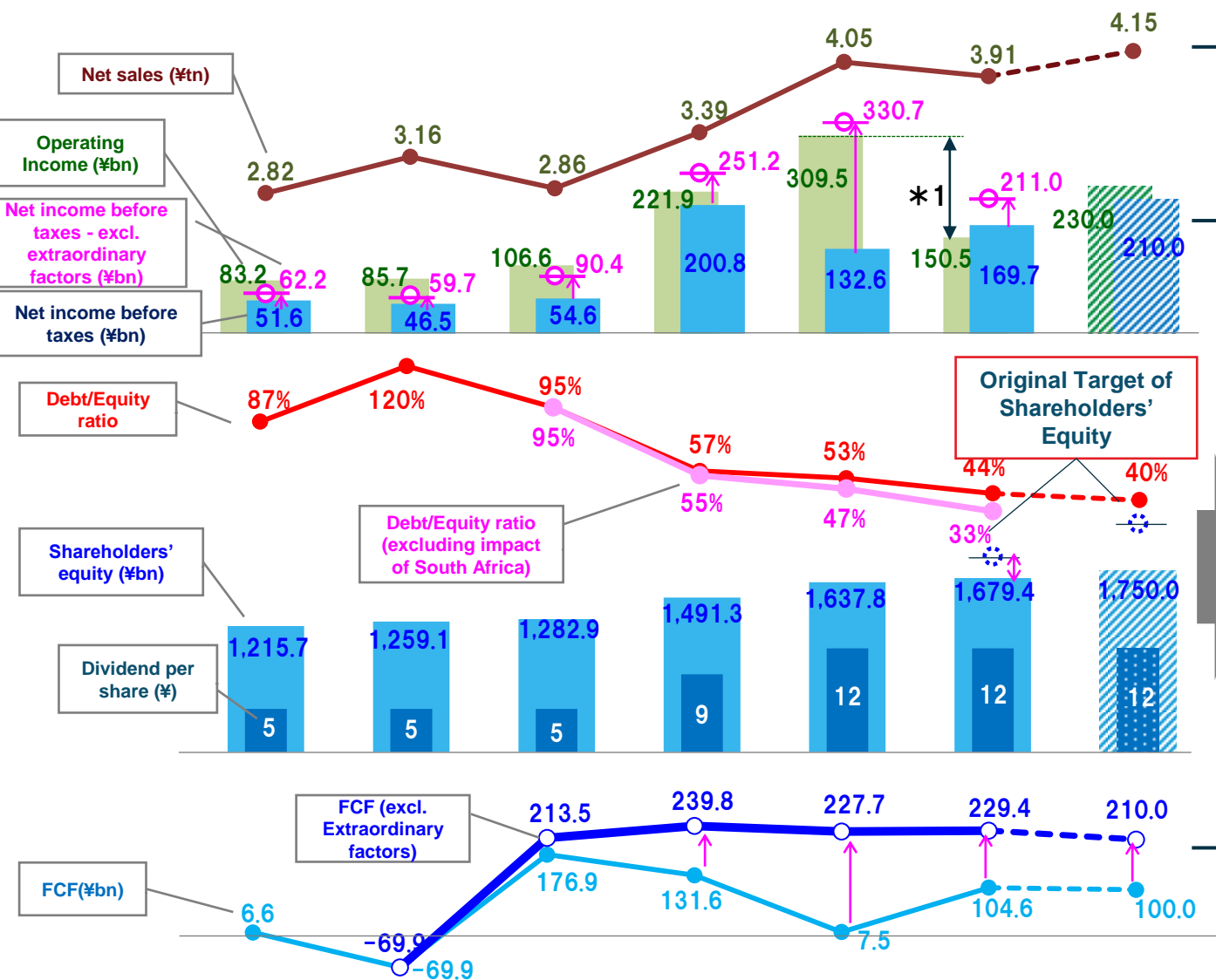
- Commercial Ships → LNG Carriers/insufficient cost improvements and delays (5 ships)
- Commercial Aircraft(Tier 1) → Yen appreciation and further decline in production (B777, Bombardier)
- MRJ → Further delay in development schedule and increase in cost
- MHPS → Delay in business expansion and PMI

- Accelerate measures to solve challenges through business reorganization (resource utilization, prompt decisions, etc.)
- Implementation of immediate measures (including mid-to-long term actions for MRJ, MHPS:P.17-22)

Reinforce above measures,  
commence actions for next  
Business Plan

“Conclusion of Reforms”, reinforce  
organization and systems (P.26-33)

# III. Evaluation of Overall Progress of 2015 Business Plan (2)



- ¥4 trillion business scale reached
- Further action needed to reach ¥5 trillion scale

- Similar to 12 Business Plan level, due to challenges that arose in FY16 (\*1)

(\*1) FY15-FY16 Operating Profit CATSΔ¥100 bn., MHPSΔ¥50 bn.

Improvement of D/E ratio

+

Increase in shareholders' equity (\*2)

+

Maintain dividend of 12 yen/share

(\*2) Due to losses from cruise ship construction and MRJ development delays, the gap between target and forecast needs to be reconciled

FCF improvement (excl. impact from extraordinary factors)

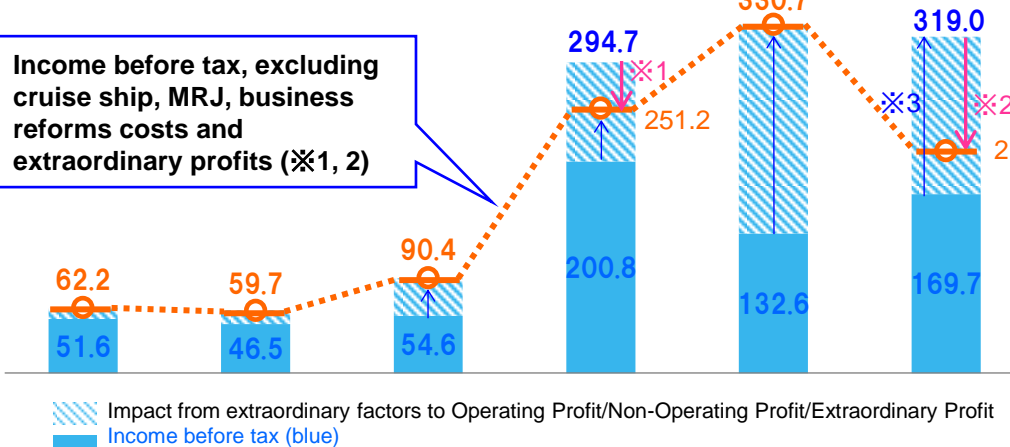
Year (FY)	00~07 Average	'08 Business Plan Average	'10 Business Plan Average	'12 Business Plan Average	FY2015	FY2016	FY2017
Net sales (¥tn)					4.05	3.91	4.15
Operating Income (¥bn)					330.7	211.0	230.0
Net income before taxes - excl. extraordinary factors (¥bn)					251.2	150.5	210.0
Net income before taxes (¥bn)					200.8	169.7	210.0
Debt/Equity ratio					57%	53%	44%
Debt/Equity ratio (excl. impact of South Africa)					55%	47%	33%
Shareholders' equity (¥bn)					1,491.3	1,637.8	1,750.0
Dividend per share (¥)					12	12	12
FCF (excl. Extraordinary factors) (¥bn)					239.8	227.7	229.4
FCF (¥bn)					176.9	131.6	104.6

# III. Evaluation of Overall Progress of 2015 Business Plan (3)

## Improvement in net income before taxes (excluding extraordinary factors)

- ※1: excl. gain on change in equity in FY13 (approx. ¥130bn)
- ※2: excl. extraordinary profit from asset management (approx. ¥110bn)
- ※3: incl. loss from equity method investment (MMC, approx. ¥20bn)

Income before tax, excluding cruise ship, MRJ, business reforms costs and extraordinary profits (※1, 2)

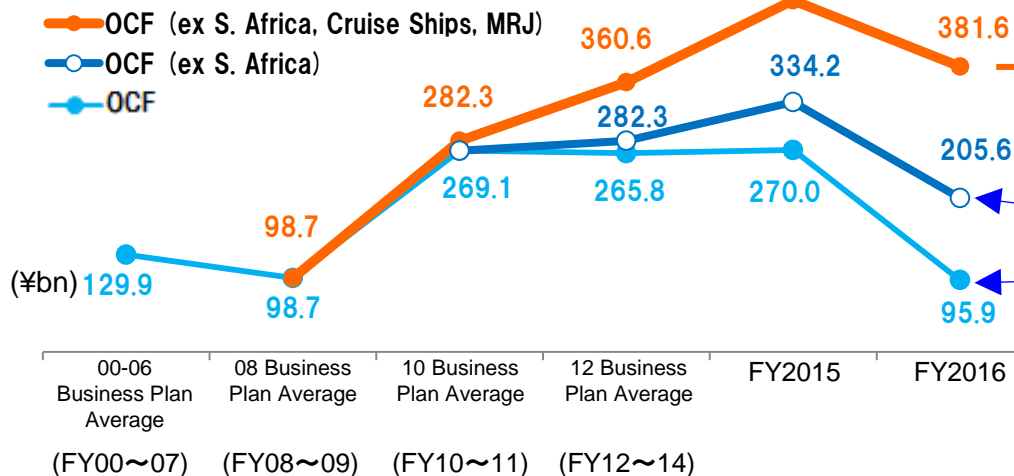


Constant earning capacity

Steady improvement through FY2015

Decline related to lower operating profit due to several challenges in FY2016

## Improvement in operating cash flow (excluding extraordinary factors)



Ability to generate constant cash flow

Operating CF including extraordinary factors

Cruise ships + MRJ

Cruise ships + MRJ + South Africa (loan to MHPS)

### III. Evaluation of Overall Progress of 2015 Business Plan (4)

#### Progress in business structure reforms

Business scale expansion and profitability measures are making steady progress as a result of business structure reforms (with the exception of certain challenging businesses, as shown below)



#### Gap between FY12 and FY16

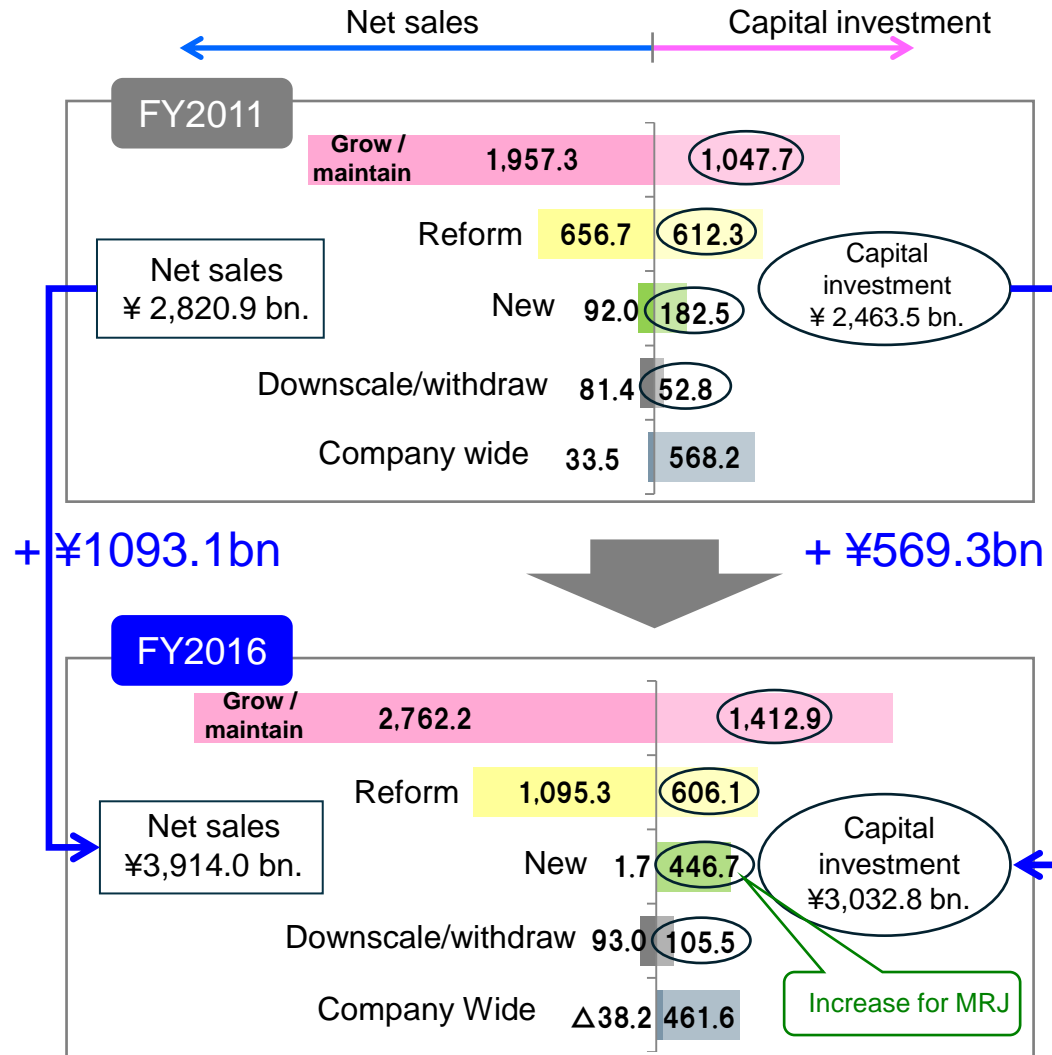
	Orders Received	Net Sales (A)	Total Assets (B)	(A)-(B)	Operating Income	FCF	Remarks
All Businesses (excl. those listed below)	+ 890	+ 710	+ 480	+ 230	+ 120	+120	Steady progress in business scale and profitability improvement
Commercial ships + Commercial Aircraft	▲ 320	+ 30	+ 300	*1 ▲ 270	▲ 80	▲ 120	*1 Cruise ship + MRJ (As already delivered, no further impact from Cruise ship #2 expected)
MHPS (excl. S. Africa)	+ 670 (+ 620)	+ 350 (+ 300)	+ 780 (+ 450)	*2 ▲ 430 (▲ 150)	▲ 50 (▲ 50)	▲ 100 (+ 0)	*2 South Africa PJ + delay in reduction of fixed cost
Total (excl. S. Africa)	+ 1240 (+1190)	+ 1090 (+1040)	+1560 (+1230)	▲ 470 (▲ 190)	▲ 10 (▲ 10)	▲ 100 (+ 0)	



Accelerate improved profit-generating structure through immediate measures (P.17-22)

# III. Evaluation of Overall Progress of 2015 Business Plan (5)

## Accelerate Concentration into Core Competencies (Movement of Net Sales and investment capital by position)



### Major M&A Progress FY2012-2016 (FY2016 developments listed in blue)

Position	Product/business	Sales increase
Grow/maintain	<ul style="list-style-type: none"> <li>Hitachi (thermal power systems)</li> <li>Siemens (metals machinery)</li> <li>Toyo Engineering Works (air-conditioning &amp; refrigeration)</li> </ul>	¥500bn (approx.)
Reform	<ul style="list-style-type: none"> <li>PWPS/Turboden (GT)</li> <li>Nichiyu/UniCarriers (forklift trucks)</li> <li>Federal Broach (machine tools)</li> </ul>	¥300bn (approx.)
New	<ul style="list-style-type: none"> <li>Vestas (offshore wind turbines)</li> </ul>	(equity share)
Down-scale/withdraw	<ul style="list-style-type: none"> <li>Lithium-ion batteries</li> <li>Industrial cranes</li> <li>Fin stabilizers</li> <li>Injection molding machines</li> <li>Sluice gates</li> <li>X-ray treatment equipment</li> <li>Marine diesel engines</li> <li>ETC (electronic toll collection) onboard equipment</li> </ul>	(business transfer, equity share)
Company wide	<ul style="list-style-type: none"> <li>Real estate</li> <li>IT infrastructure operation/maintenance</li> </ul>	(equity share)

(See p.45 for details)

## IV. Progress of Individual Measures

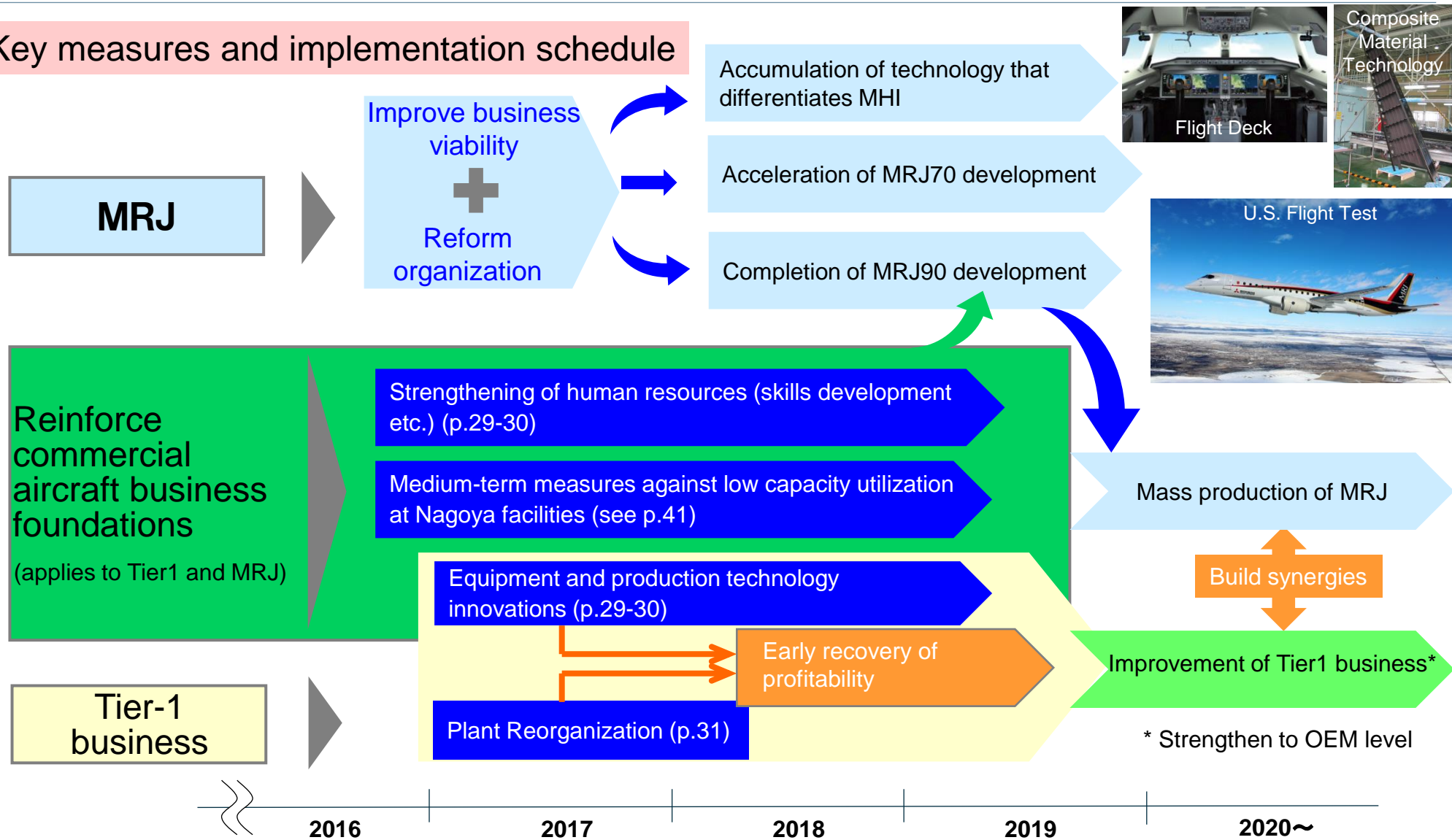
1. Measures for MRJ and Tier1 business
2. Reinforcement of commercial ship business structure reforms
3. Improvement of MHPS management
4. PMI at M-FET
5. PMI at Primetals Technologies (PT)
6. Asset Management Progress

**Immediate measures**



# IV-1. Measures for MRJ and Tier1 business -1

## Key measures and implementation schedule



## Long term strategy for commercial aircraft business

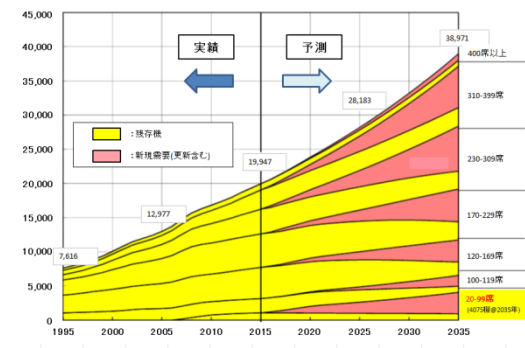
### 1) Reasons for continuation

- High entry barriers (technology, regulation, financing etc.)
- MHI's capabilities (accumulation of technology, skills, financial support)
- Sustainable market growth and continuous technological development

- High possibility of becoming a core business, requires long-term commitment

Continuous high demand growth

Forecast for jet equipment market



### 2) Original business model, enhanced by MHI's advantages

- Pursuing autonomy and synergies between aircraft business and advanced Tier 1 business
- Beyond existing framework, expand business field and increase additional value of MHI business
  - Integration with cyber security technology and ICT
  - Synergy with other MHI businesses, ex. traffic control system, etc.



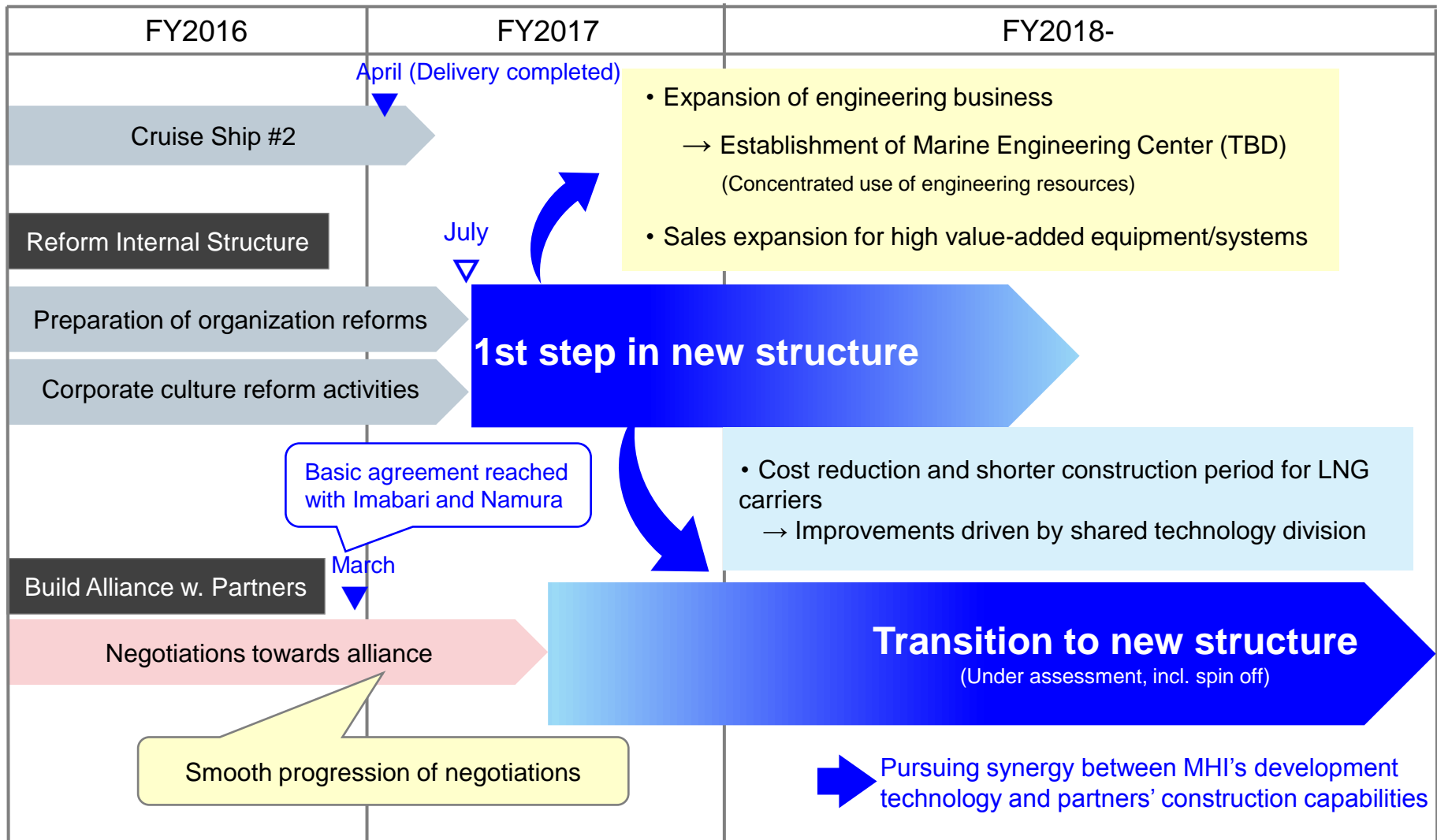
Apply technology



Synergies



## Overall schedule for business structure reforms



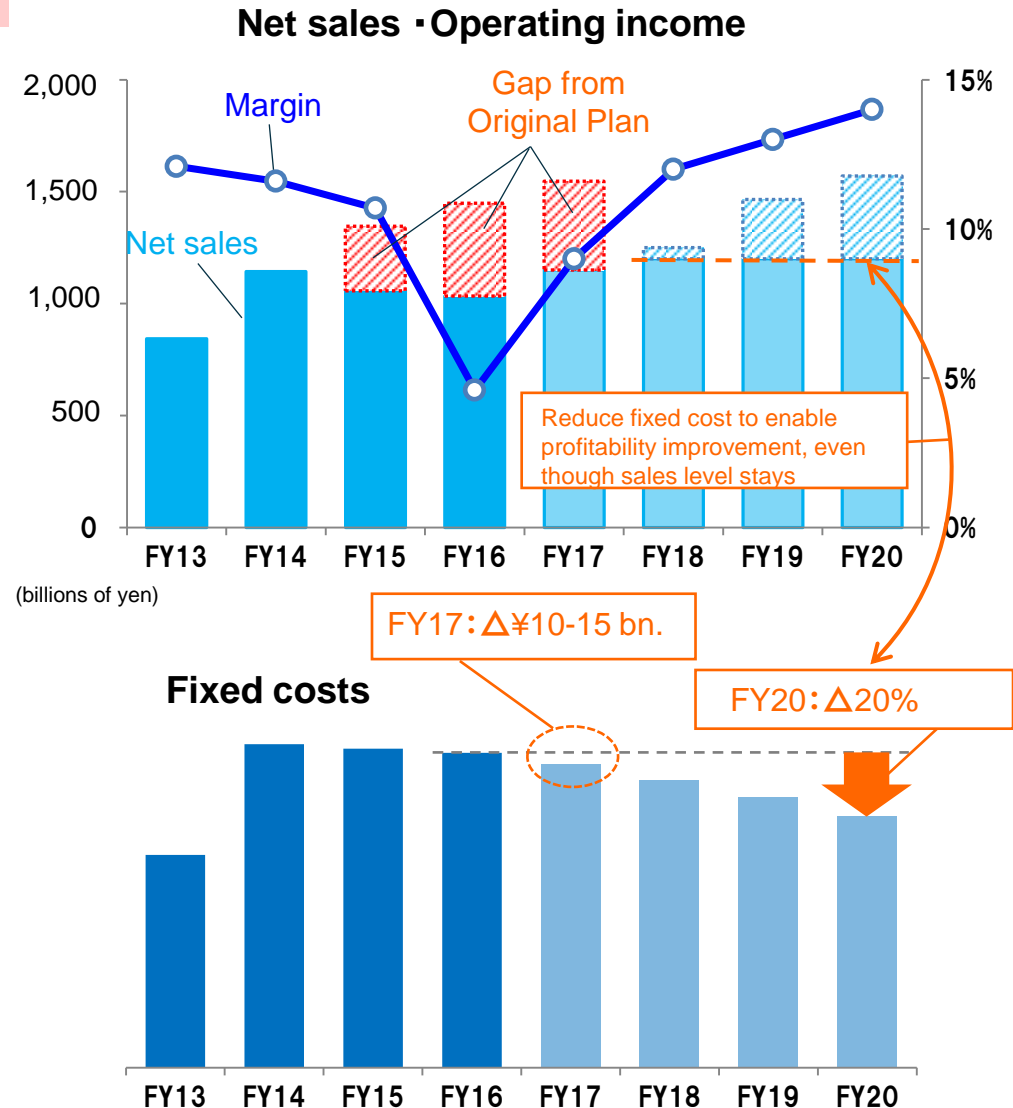
## 1) FY2016 earnings decline and responses

Operating profit fell in FY16 due to yen appreciation, delay in business expansion and time taken to reduce fixed costs



Leveraging the following measures, achieve 10%+ margin with existing level of net sales in 2 years

- Reduce fixed costs → See graph on right
- Reduce variable costs (utilize LCC, etc.)  
→ FY17 : Δ¥20 bn. from FY16
- Accelerate PMI  
→ Introduce chief officer system, strengthen SBU/KPI management system  
→ Re-organize business structure and manufacturing bases (asset optimization, etc.)



## 2) Gas Turbine Business

### Challenge 1

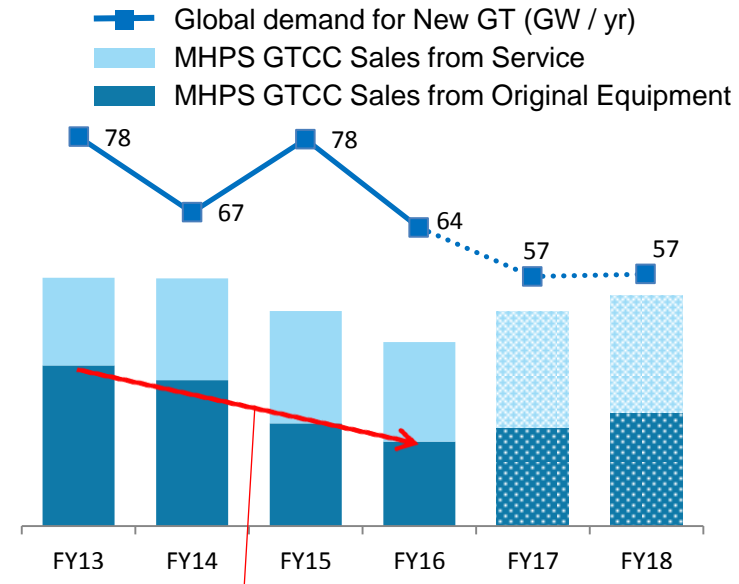
- Sluggish ongoing demand for new GTCC plants worldwide
- **Strengthen service business**
  - LTSA through use of IoT etc. (Long-term maintenance)
  - Expansion of operation support service (See p.22)
- **Strengthen ability to gather information globally and to offer more customer focused proposals**
  - Concentrate human resources into key overseas markets \* (Asia, N. and S. America, Middle East)
  - Strengthen ties with trading companies and expand use of ECA financing

### Challenge 2

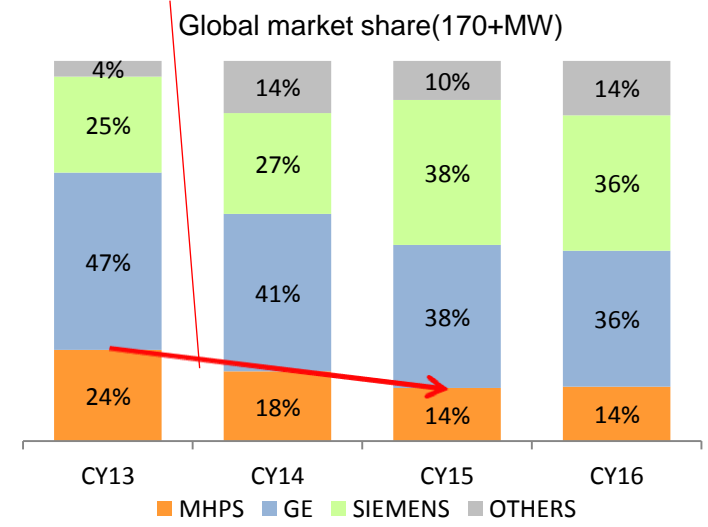
- Increased competition from latest GE model (HA series)
- **Expedite launch of high-performance gas turbine models**
  - Accelerate development of next-generation 1650°C-class gas turbines
  - Delivery in FY2019(bring forward by 1.5 years)
- **Strengthen cost competitiveness** (See p.20)



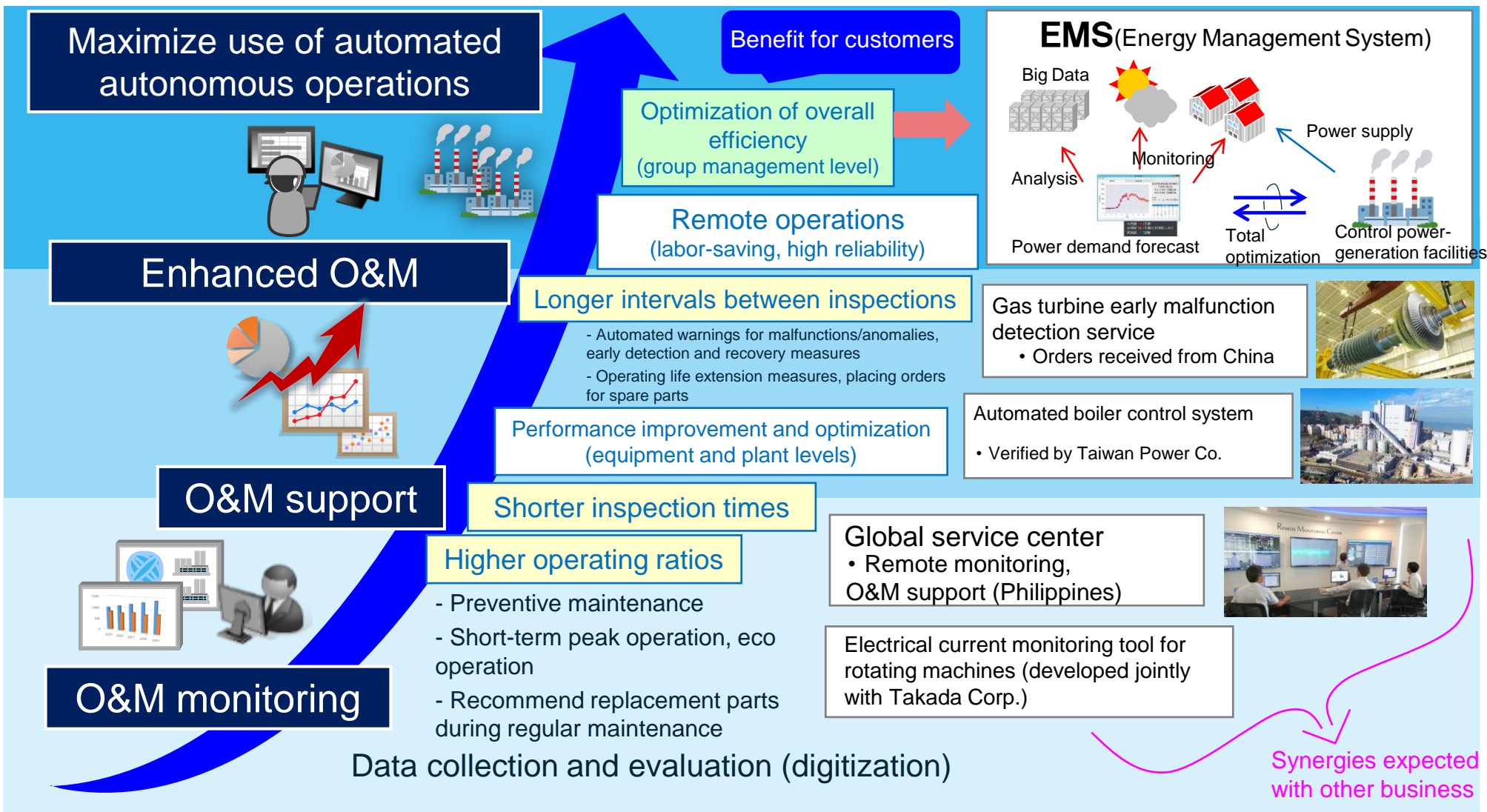
(Renovations due for completion in 2020)



Impact of sales decline in new GTCC equipment for the Japanese market



## 3) Expand service business using IoT, AI, Big Data



# IV-4. PMI at M-FET (forklift truck business)

**Current PMI plan is underway ahead of schedule**



**Apply lessons learned from PMI programs at MHPS and PT**

**Defensive**

**PMI acceleration (through MN and UC merger)**

**Approach**

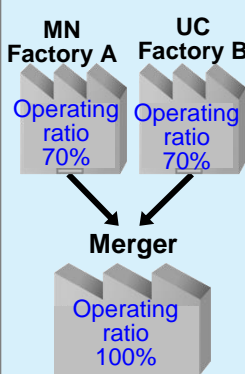
- Integration and elimination of redundant functions and sites
- Reinforcement of procurement and factory productivity enhancement



**Outcome**

- Reduction of fixed costs  $\Delta 10\%$
- Operating income margin improvement 4  $\rightarrow$  8%

**Integration Process**



**Aggressive**

**From single product business to solutions business**

**Approach**

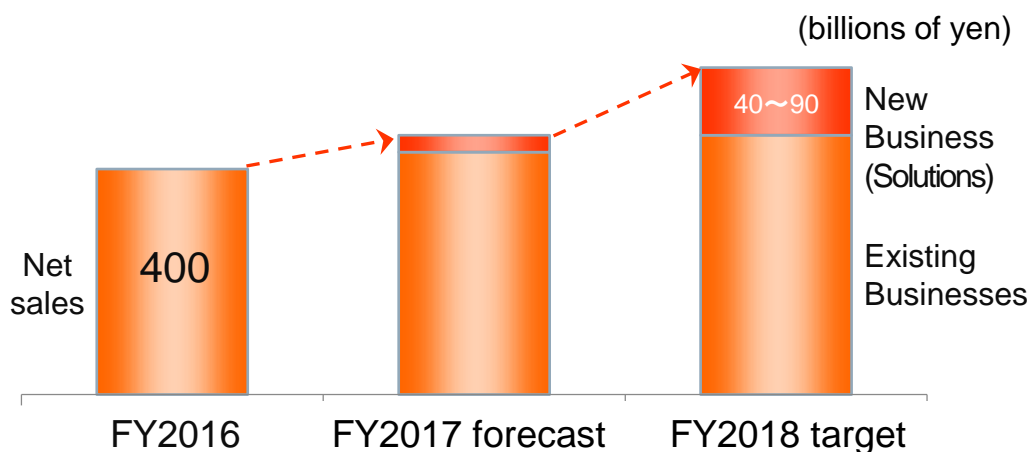
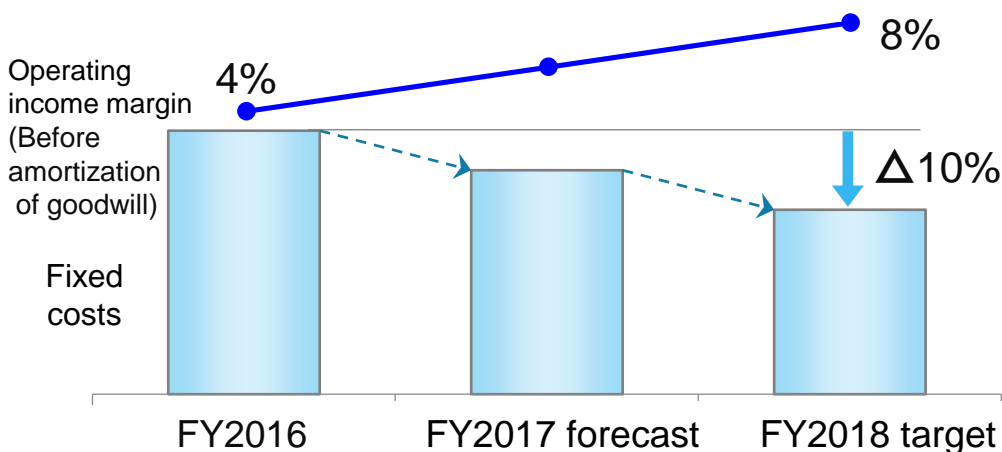
- Next-generation forklift trucks
- AGV (Automated Guided Vehicles), logistics robots
- V2G (Vehicle to Grid) etc.



**Outcome**

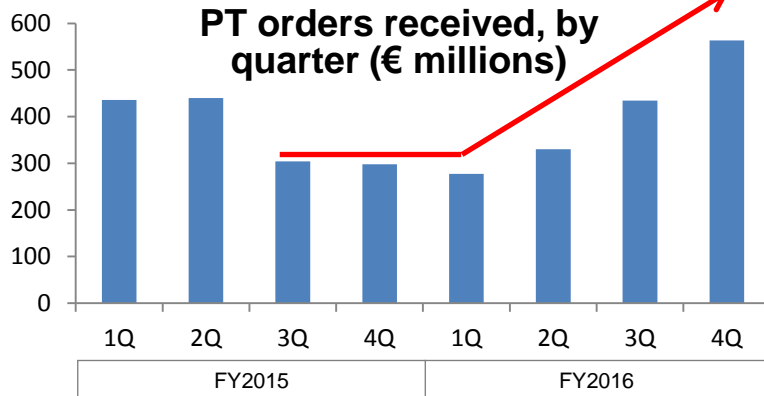
- Sales expansion: 400 billion  $\rightarrow$  Over  $\text{¥}500$  billion

**Laser Guide Type AGF (Automated Guided Forklift)**  
(launched in Japanese market in April)



# IV-5. PMI at Primetals Technologies (PT)

Order received now in a gradual recovery trend

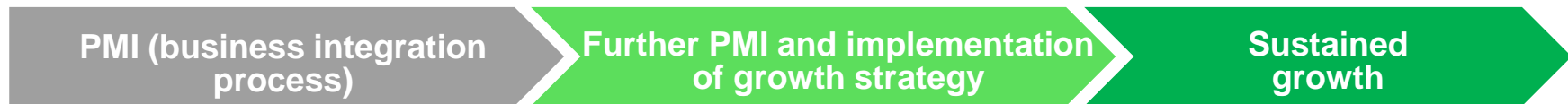


Worldwide manufacturing capacity surplus continues

Promote PMI to enable profit even at €1.5 bn. scale

EBITDA improvement target  
(FY2016→2019)

+ €85m

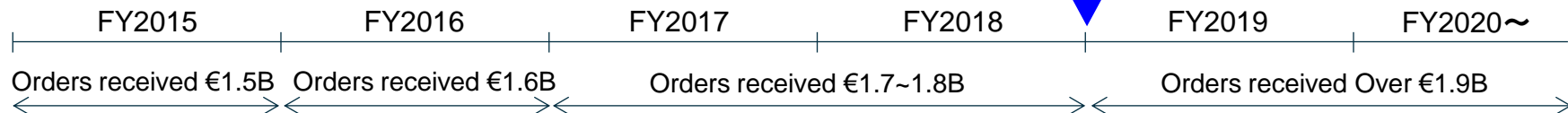


- Consolidate organization (completed)  
Business segments: 10 → 7  
Organizational functions: 26 → 9
- Optimize work force scale (8,000 → 7,100)
- Eliminate redundant R&D costs (completed)

- Consolidate overseas locations (Approx. 40 → 26)
- Expand market share through implementation of growth strategy
  - Improved utilization of key technologies
  - Reform of business model
  - Expansion of alliances

Achieve top global position and stabilization of earnings

Completion of PMI



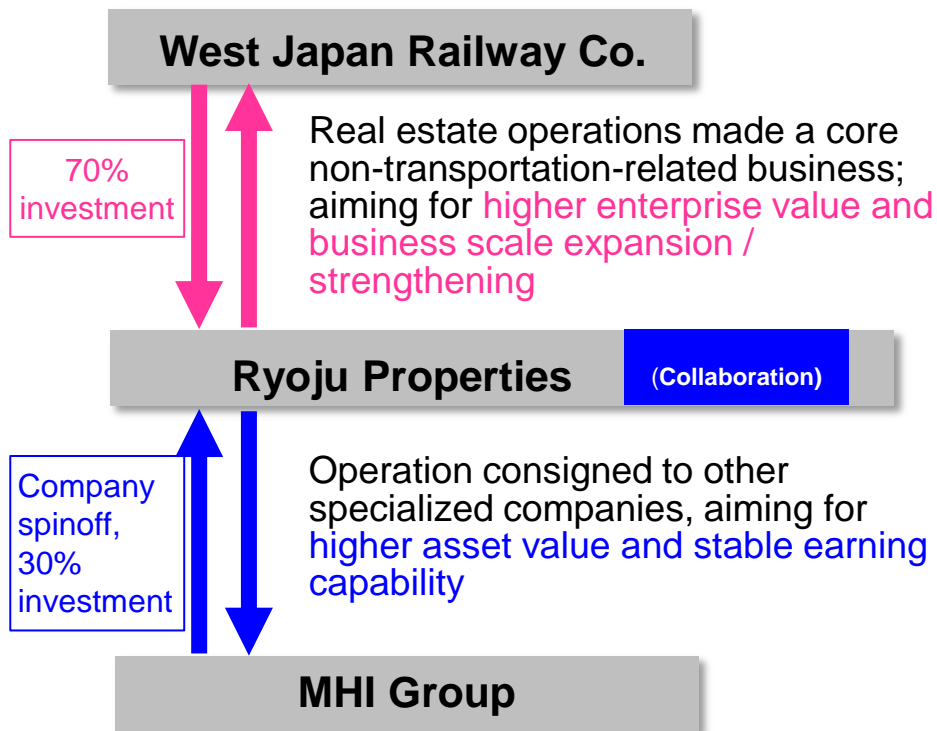


# IV-6. Asset Management Progress

Aims and progress status of asset management

Promote enhanced value and utilization of assets through asset shuffling, collaboration with other companies, etc., avoiding simple selloffs → refer to examples below

## Ryoju Estate business (majority stake transferred in September 2017)



## MHI Yokohama Bldg. (sold in March 2017)

- Sold in March 2017 (asset liquidation)  
→ In near term, used for MHPS head office functions, etc.
- Enhance total asset value through use of acquired capital



Yokohama Bldg.

Asset shuffling

## Reconstruction of Daiichi Tamachi Building (slated for completion in 2023)

- Greater convenience  
→ Proximity to Marunouchi (global headquarters), etc.
- Increase in total floor space  
→ Higher added value and profitability



New Tamachi Bldg.

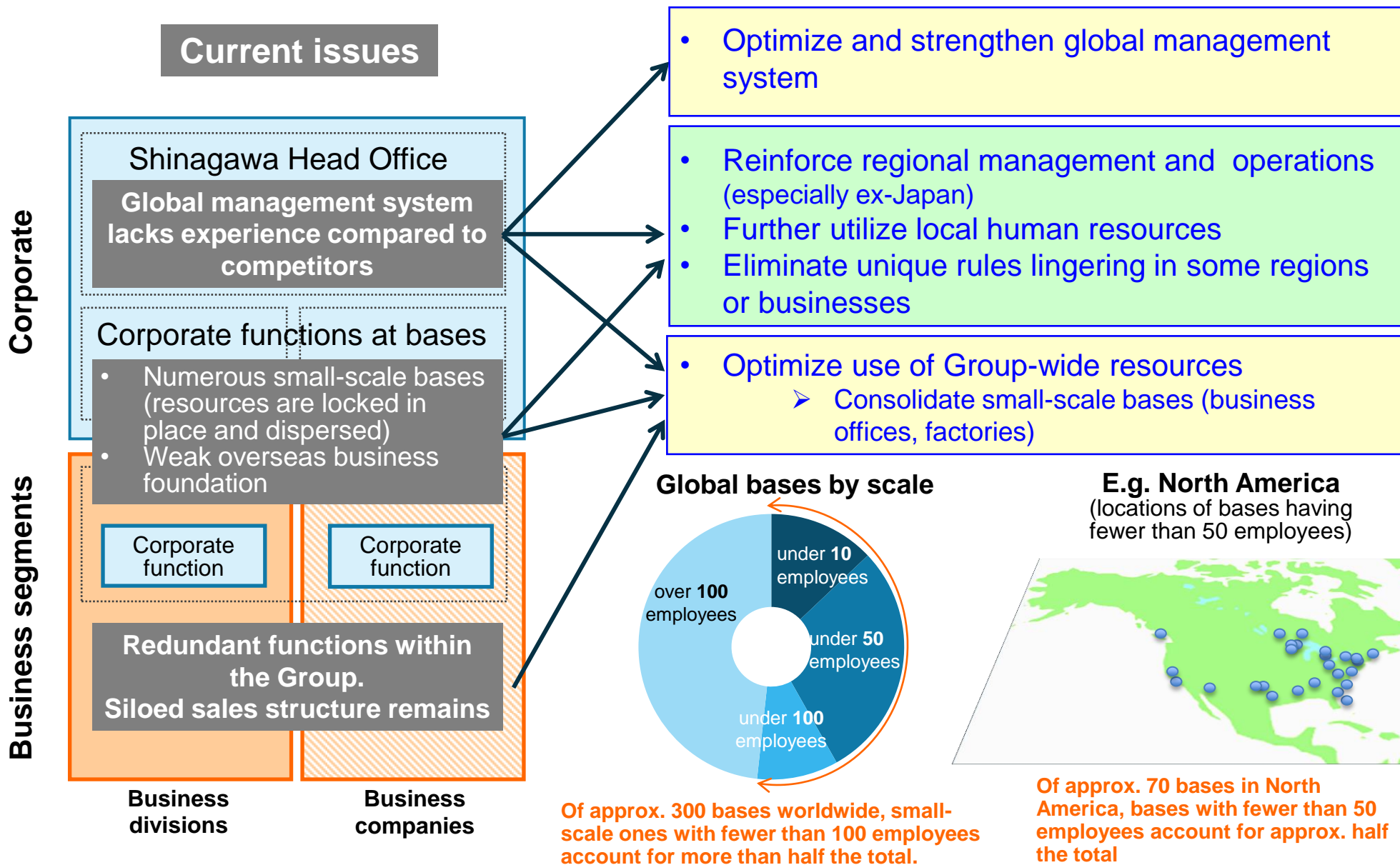


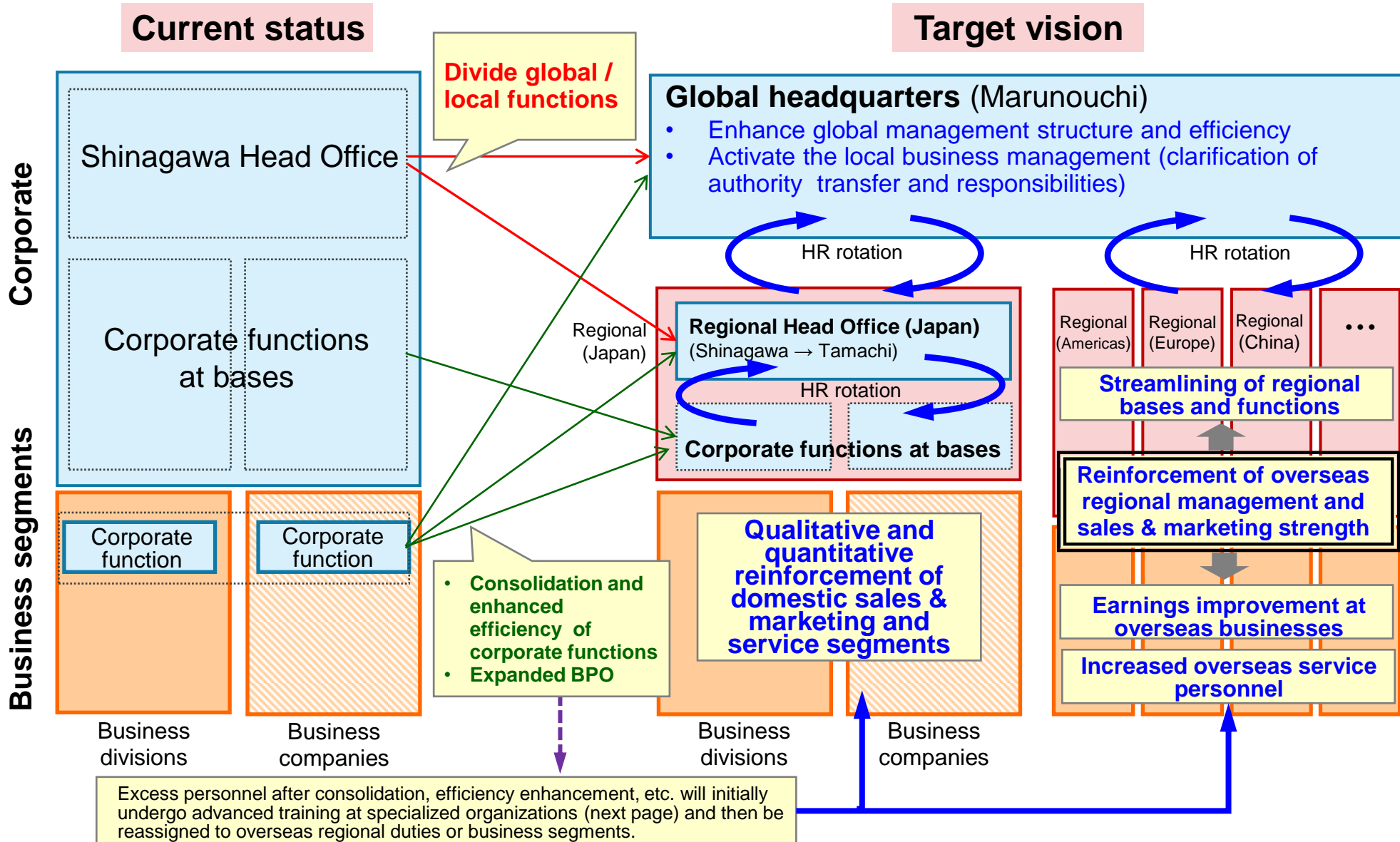
Daiichi Tamachi Bldg.

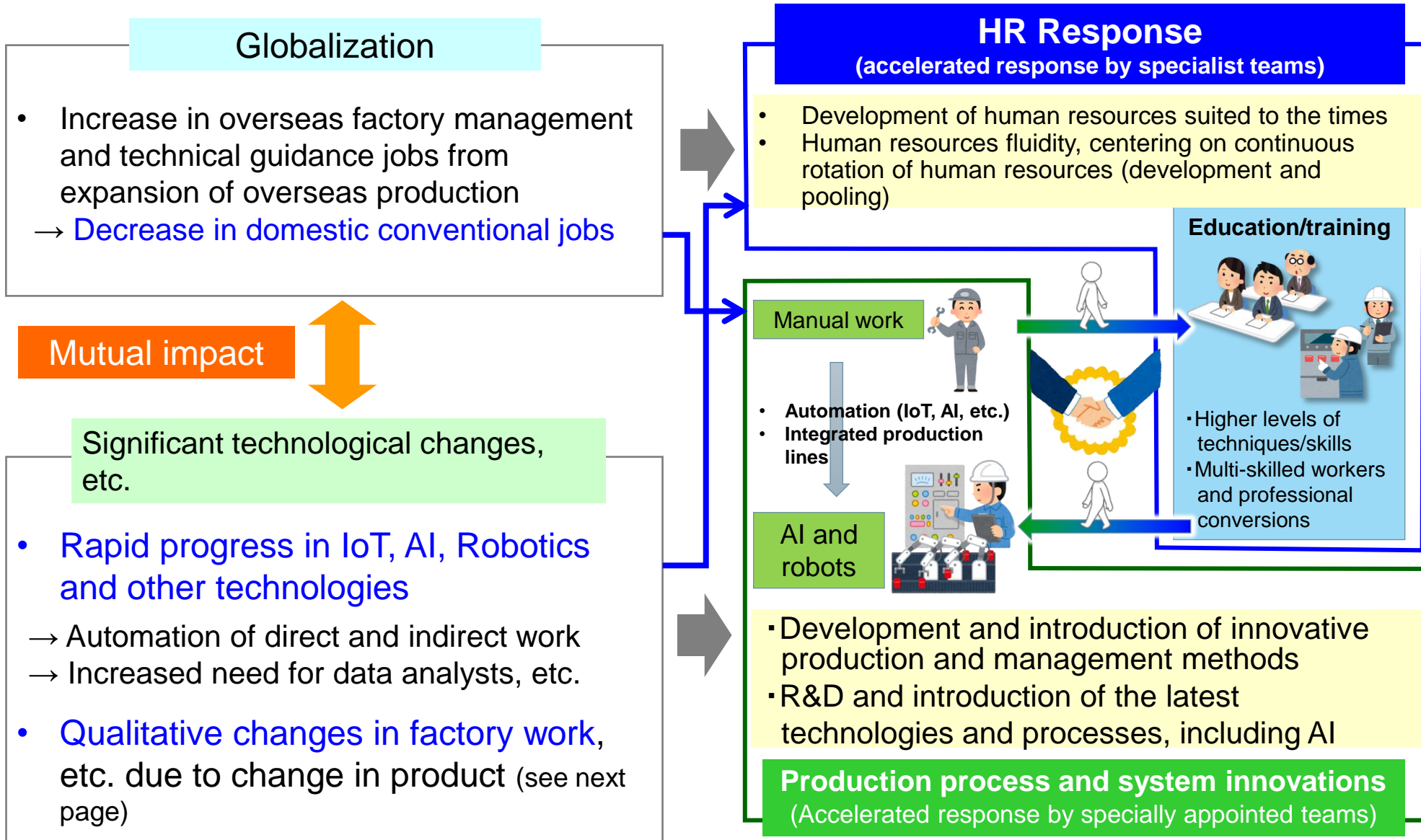
## V. Organization and system reinforcements toward “Conclusion of Reforms”

- Preparations for “big leap” in 2018 Business Plan

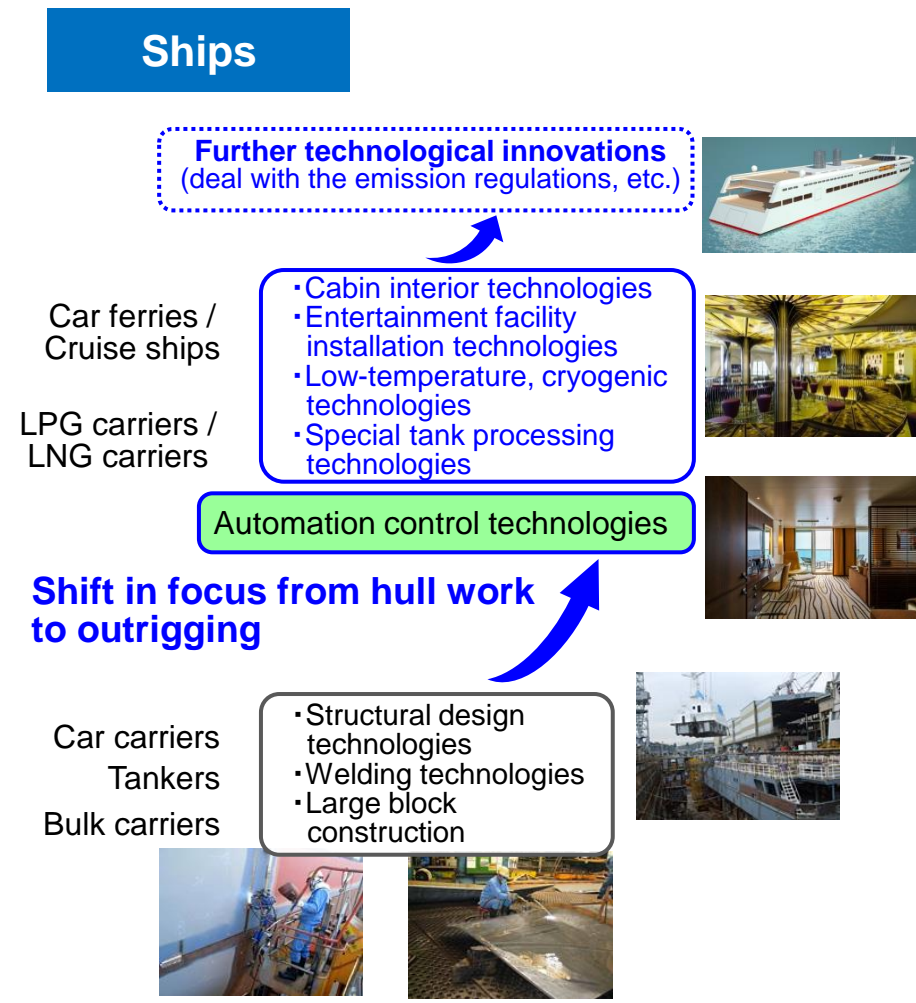
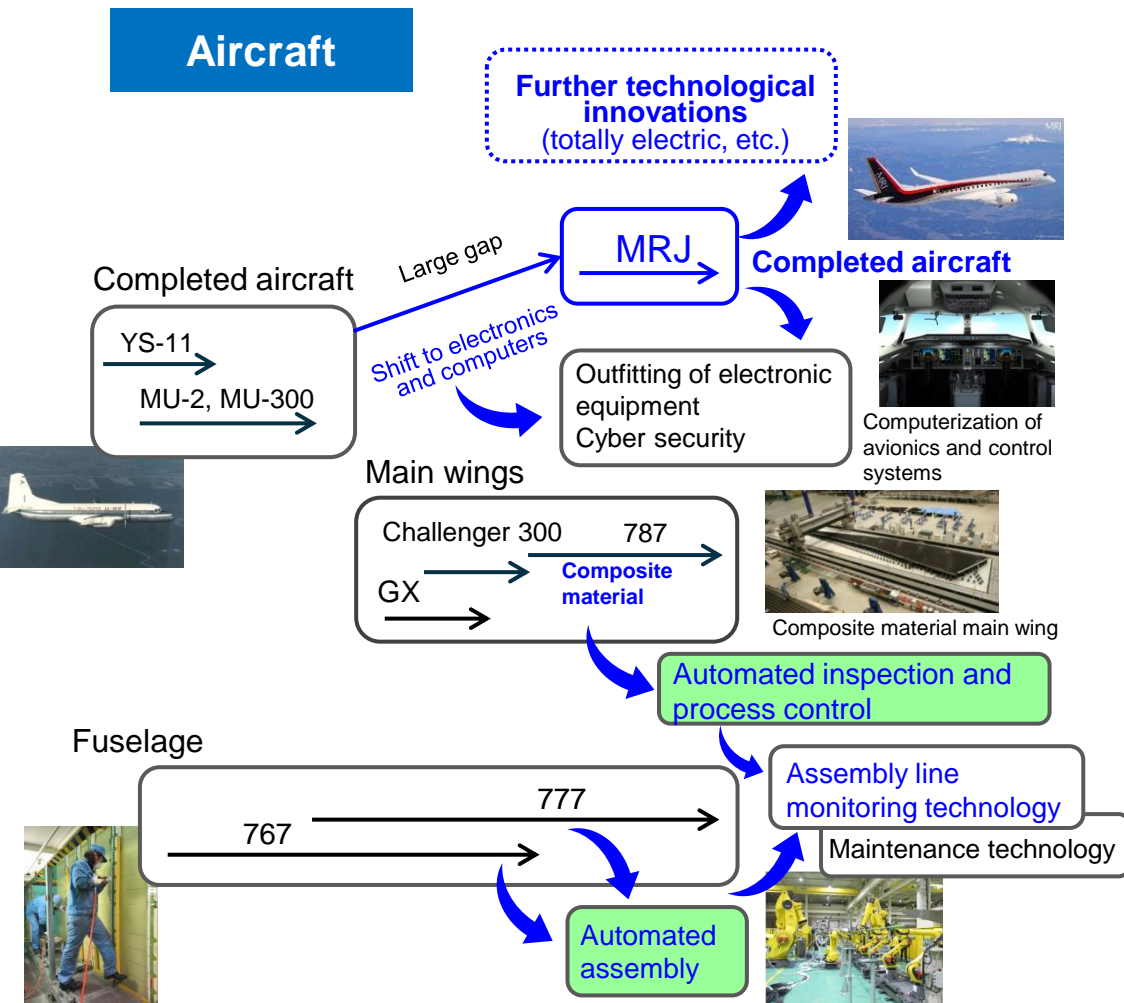
1. Global and Local Management Optimization
2. Production Innovation
3. Asset Management Reinforcement
4. Innovation Laboratory (tentative name)







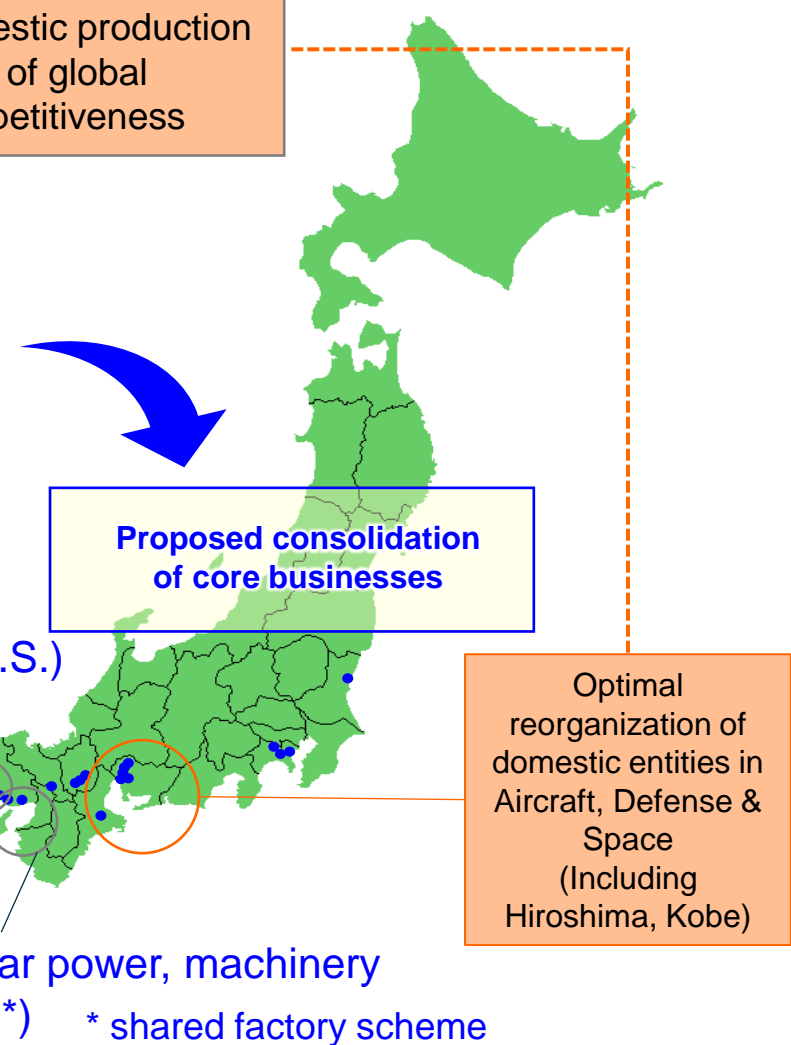
Tackle changing needs for technological and skills areas through education and productivity innovation (previous page)



Power and Machinery Business	Aerospace Business
<ul style="list-style-type: none"> <li>Reduction of domestic production scale in tandem with expansion of global production</li> <li>Domestic production facilities scattered and dilapidated (Decline in competitiveness)</li> </ul>	<ul style="list-style-type: none"> <li>Expansion in domestic production</li> <li>Lack of global competitiveness</li> </ul>

**Countermeasures**

- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>Consolidation and reorganization of bases</li> <li>Investment through use of IoT/AI</li> <li>Broaden and deepen skill sets</li> <li>Increase value of land and facilities through asset management</li> </ul> | } | <p><b>Productivity improvement target <math>\geq 30\%</math></b></p> |
|--|---|--|



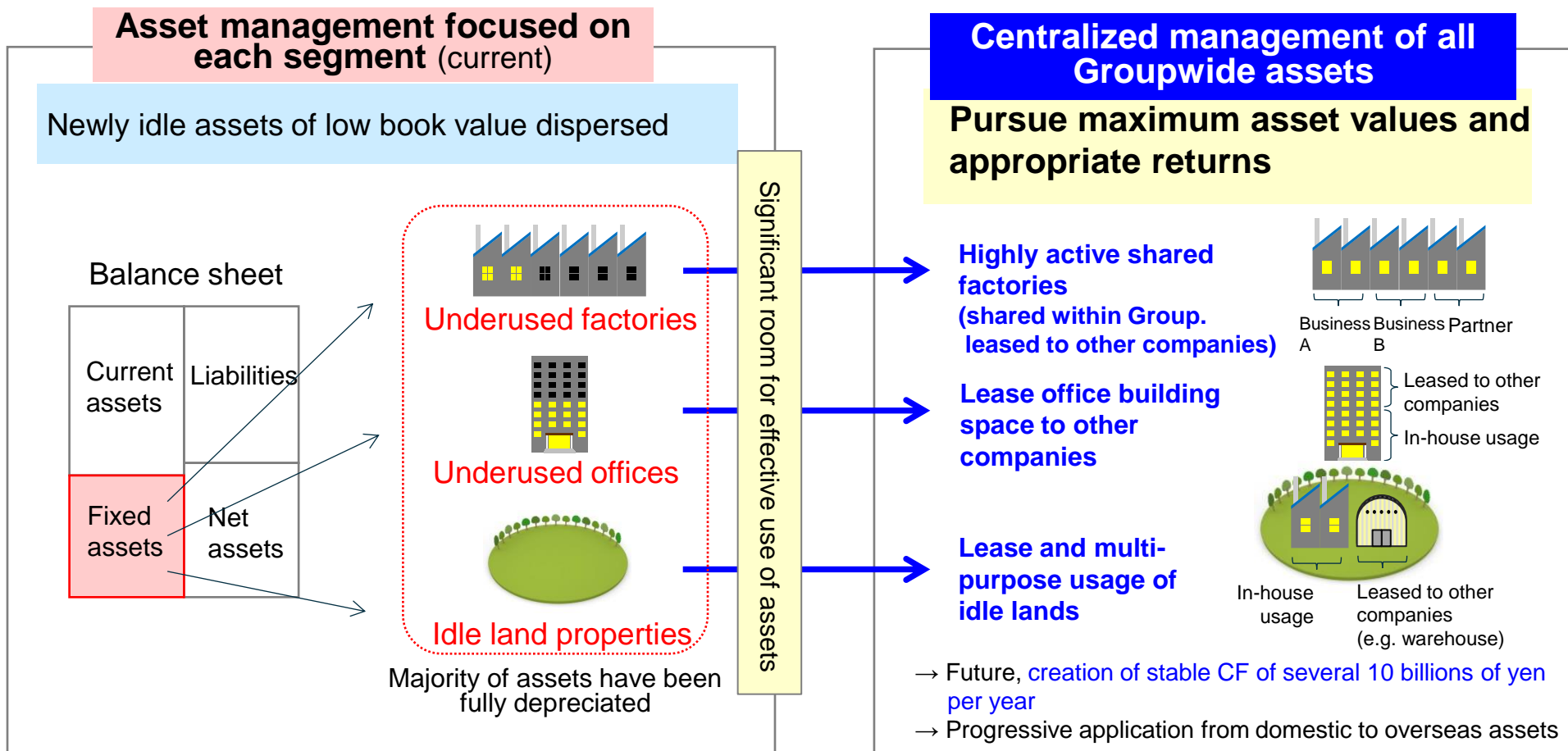
Metals machinery (Hiroshima, U.S., Mexico, China)  
Compressors (Hiroshima, U.S.)

Gas turbines (Takasago + U.S.)

Shipbuilding (Nagasaki, Shimonoseki)

Nuclear power, machinery (Kobe\*) \* shared factory scheme

## Further carry out current measures, propose and **implement asset management beyond the conventional framework** as measures ahead of the 2018 Business Plan





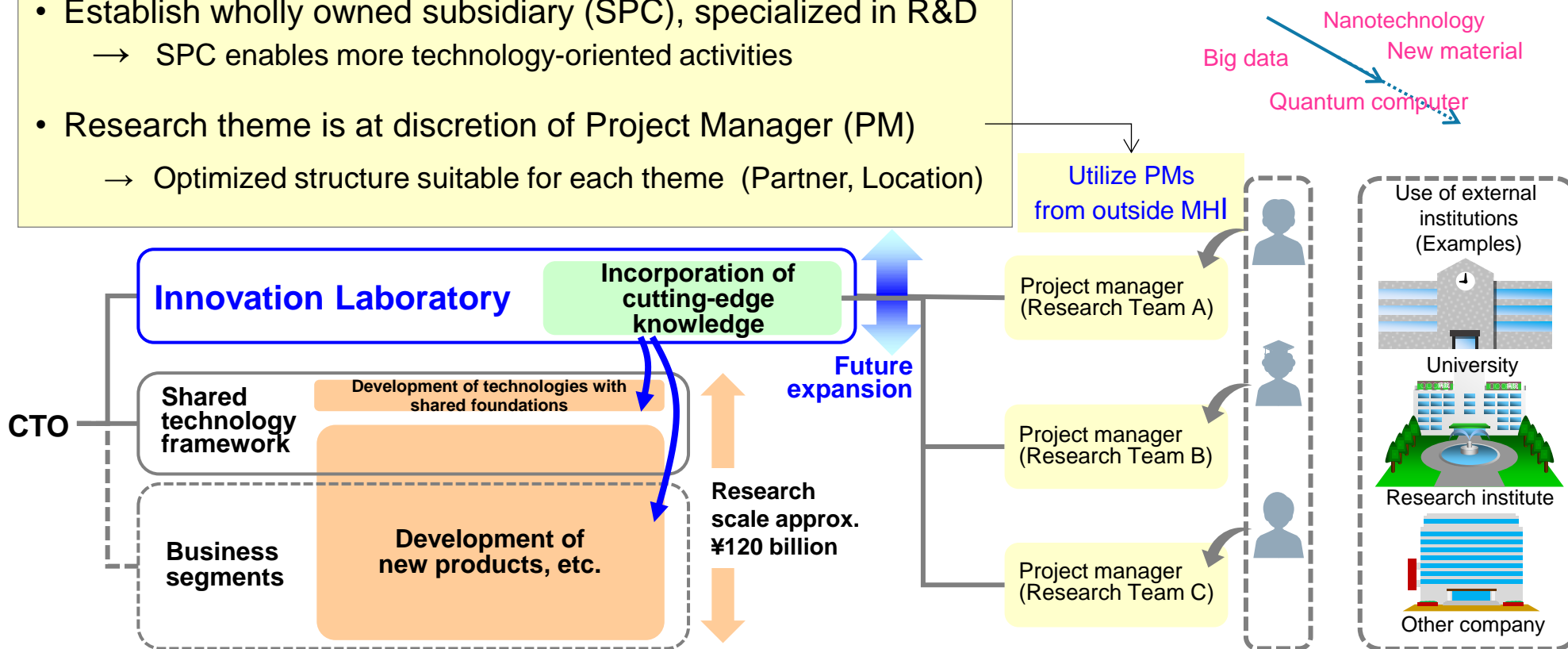
## Objective

Garner leading-edge knowledge and ideas from external sources, utilize for foundational technologies and new product development

→ Conduct cooperative research globally with “Novel ideas and approaches”

## Organization format (plan)

- Establish wholly owned subsidiary (SPC), specialized in R&D
  - SPC enables more technology-oriented activities
- Research theme is at discretion of Project Manager (PM)
  - Optimized structure suitable for each theme (Partner, Location)



# VI. Summary

## Numerical targets for 2015 Business Plan

- FY2017 targets have been adjusted → Orders received: 4.5 trillion yen, Net income: 100 billion yen, etc. (P.7)
  - Reflecting uncertainty of global economy and market forecast
  - Bake in sufficient funds to tackle challenges that occurred in 2016
- Original targets will be shifted to second year of 2018 Business Plan

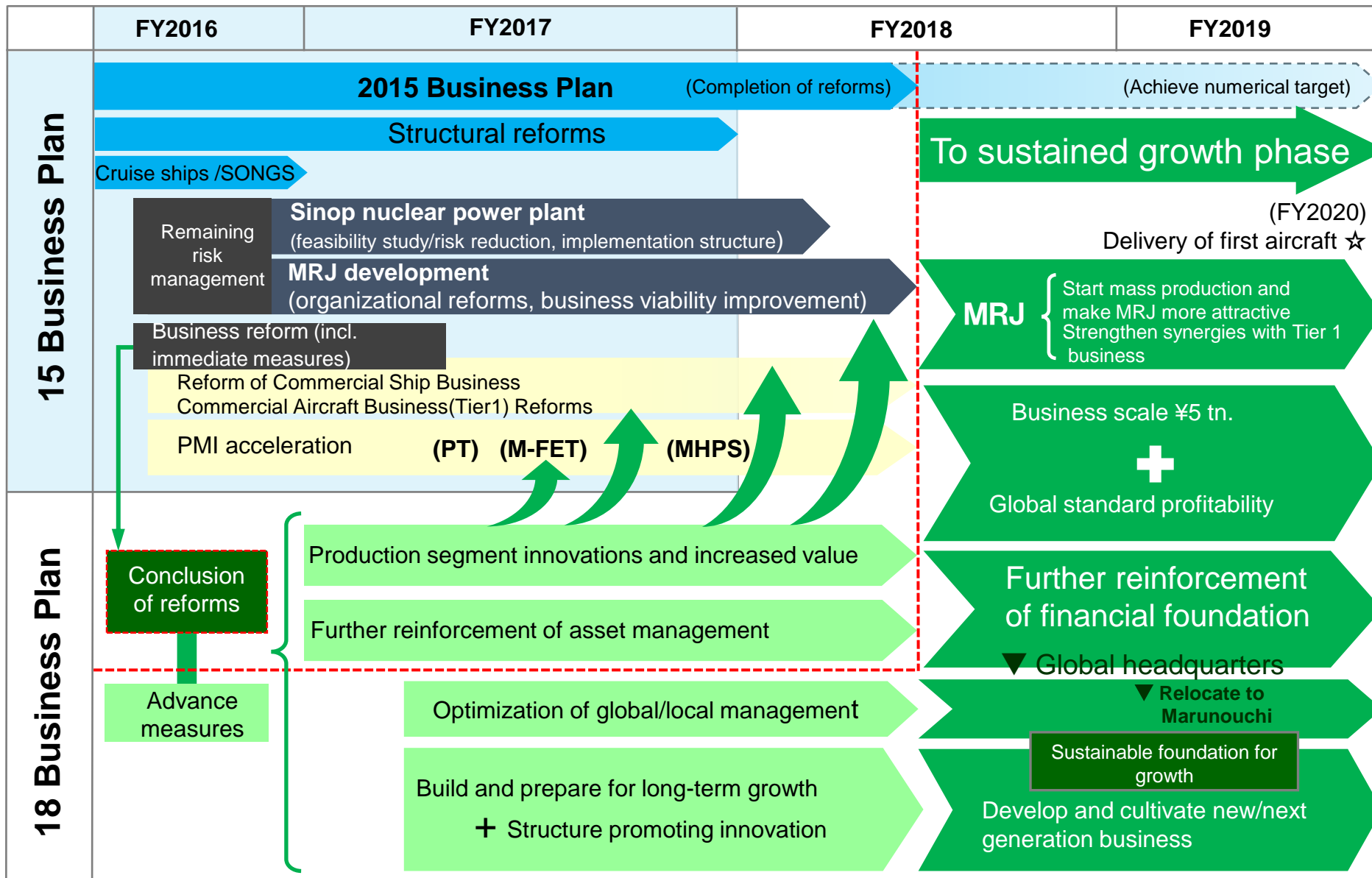
## Conclusion of Reforms

- Complete reforms in 2017, and compile additional measures (e.g. MRJ reforms) by 1H FY2018

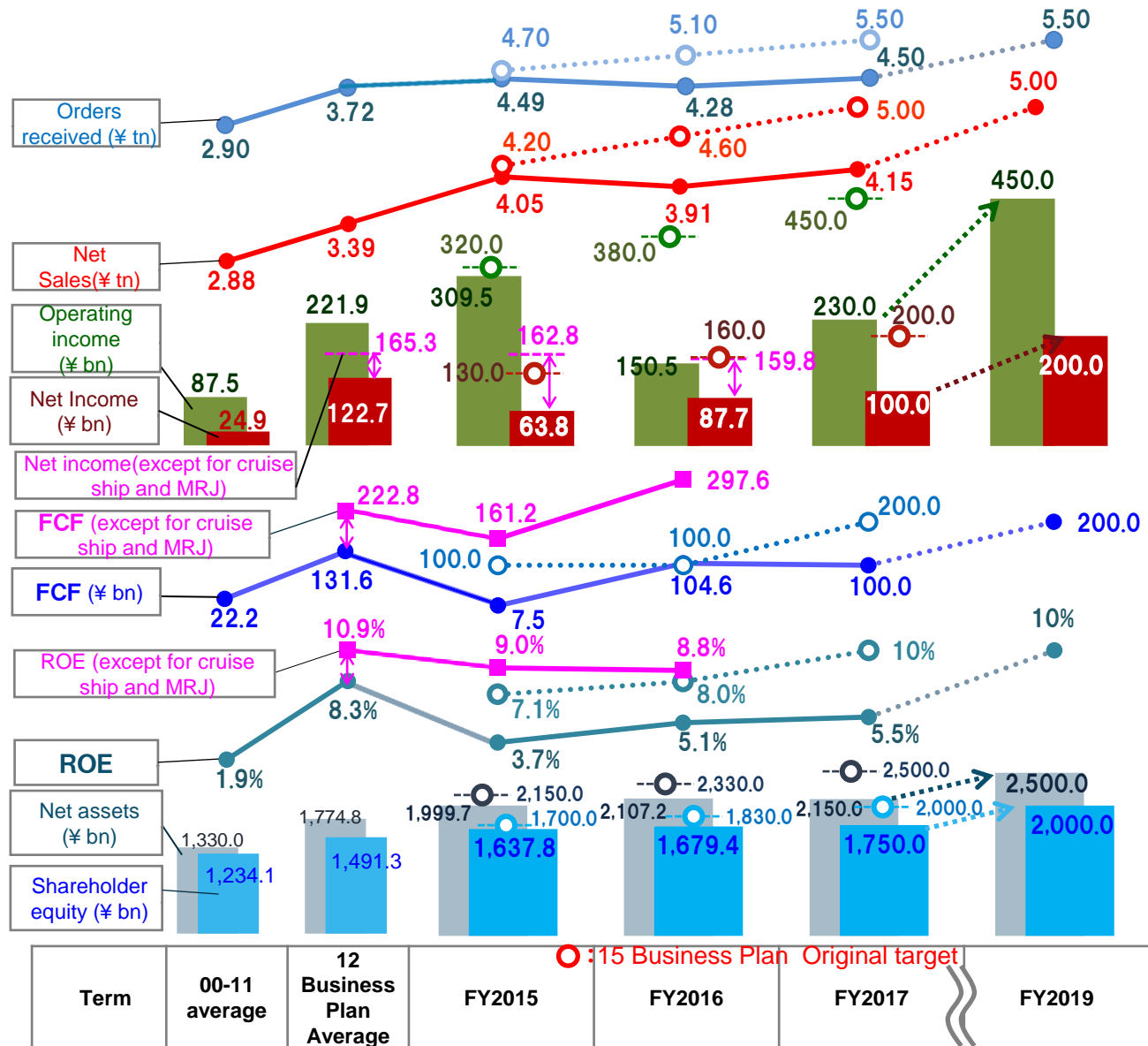
## Smooth transition to 2018 Business Plan (continuous growth phase)

- Implementation of advance measures necessary for long-term sustained growth (pp.26-33)
- As machinery/engineering conglomerate, build long-term sustainable growth plan\*

\*Establish long-term direction of business portfolio within FY17, with leading-edge technology and complex system engineering at core



# VI. Summary -3



## Keys to achieving numerical targets

### Business scale

- ✓ Business expansion of JV such as MHPS (Incl. market recovery)
- ✓ Business growth in engineering/service field

### Profitability & Financial Foundation

- ✓ Achieving business scale of 5 trillion yen  
→ Achieve scale merit
- ✓ Completion of reforms  
→ Profitability recovery from challenging businesses
- ✓ Continuous concentration into core competence
- ✓ Reinforcement of risk management
- ✓ Enhancement of asset management



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# Reference Materials

1. Technology topics in FY2016 - P.40
2. Medium-term measures against low capacity utilization at Nagoya facilities - P.41
3. Investments relating to AREVA of France - P.42
4. SONGS arbitration - P.43
5. AIDA Cruise Ship Construction Project - P.44
6. Acceleration of concentration into core competencies - P.45

## Completion of world's largest CO<sub>2</sub> capture plant in Texas, USA



- Captures 4,776 tons per day of CO<sub>2</sub> from coal-fired power plant
- MHI Group has delivered 11 commercial CO<sub>2</sub> capture systems worldwide. (top share of global market)

## Large-output Organic Rankine Cycle 5-stage axial turbine



- "5-stage 16MW" multi-stage large-scale axial turbine resolving vibration and other issues and achieving outstanding efficiency

## Start of operation of new electric steelmaking furnace (Mexico)

- World's most efficient electric furnace, cuts power consumption and CO<sub>2</sub> emissions by 25% and reduces production costs by near 20%

## Advanced AGV (automated guided vehicle) employing laser guidance

- Material handling capacity increased by more than 20% by laser guidance and proprietary optimized operation algorithms applying onboard AI

## Stealth and high-maneuverability technologies enabling realization of Advanced Technology Demonstrator (X-2)



- Extremely high stealth capability and outstanding maneuverability with flying capability not possible with conventional aircraft  
→ Airframe system and advanced engine system integration

## Combustion stabilization technology for H3 rocket engine (LE-9)

- Development of key technologies to control high-frequency combustion vibrations
- In March 2016, applicability has been demonstrated in full-size proto-type firing tests

## Exhaust pulsation energy-using technology for high-performance vehicle-use turbochargers

- World's first nonstationary performance evaluation technology for turbochargers, factoring in intermittent engine exhaust gas flow

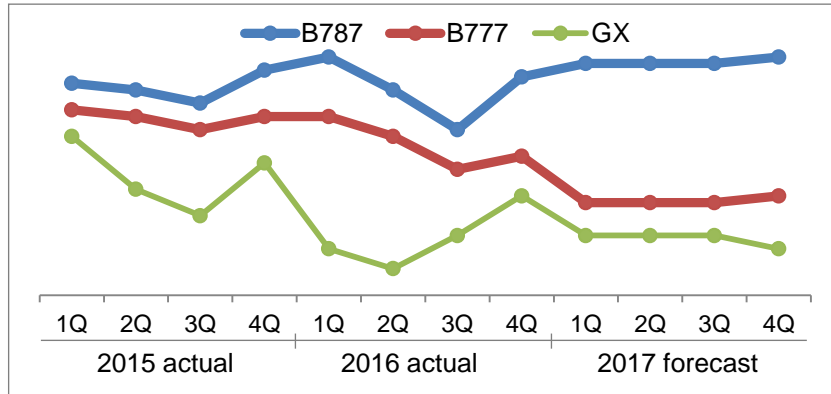
## Mobile combat vehicle (production launched in FY2016)

- Combat vehicle featuring outstanding mobility and air transport capability
- World's highest level of firing accuracy while traveling and outstanding mobility

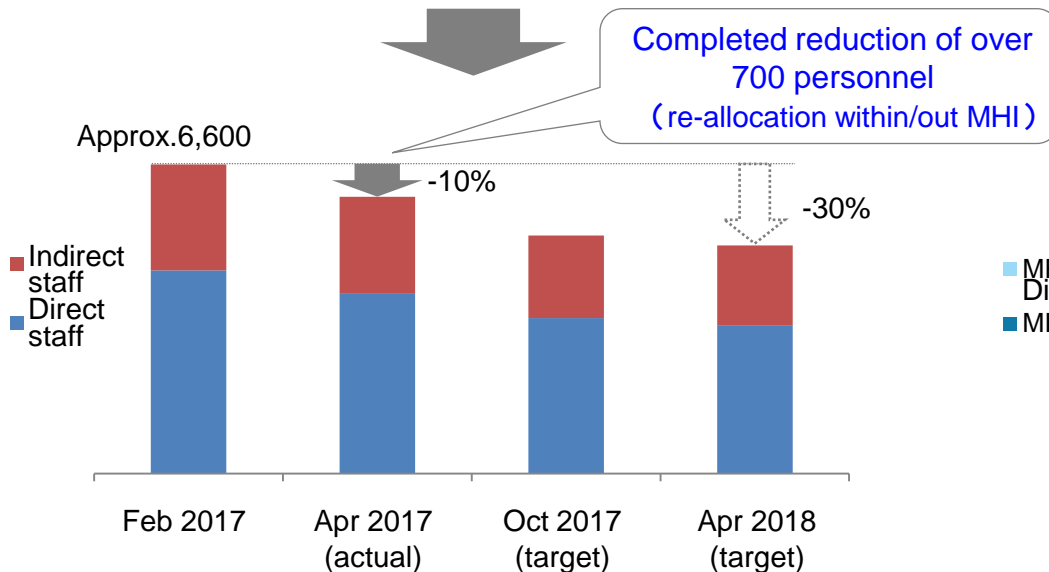
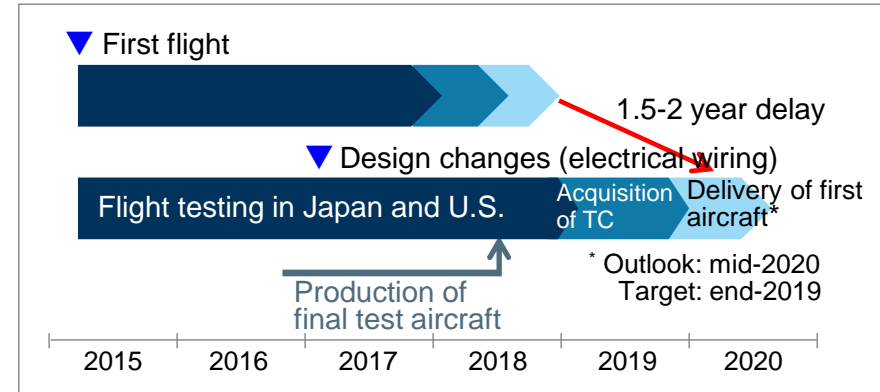


# Reference 2: Medium-term measures against low capacity utilization at Nagoya facilities

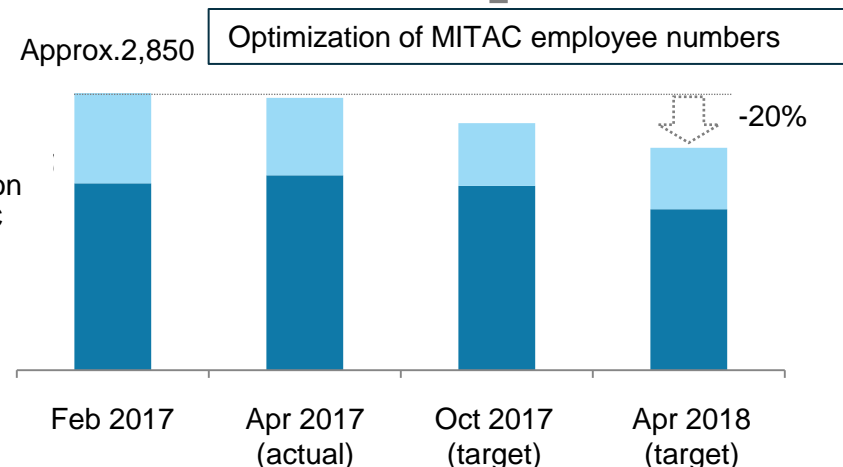
## Measures for Tier1 production volume and staff



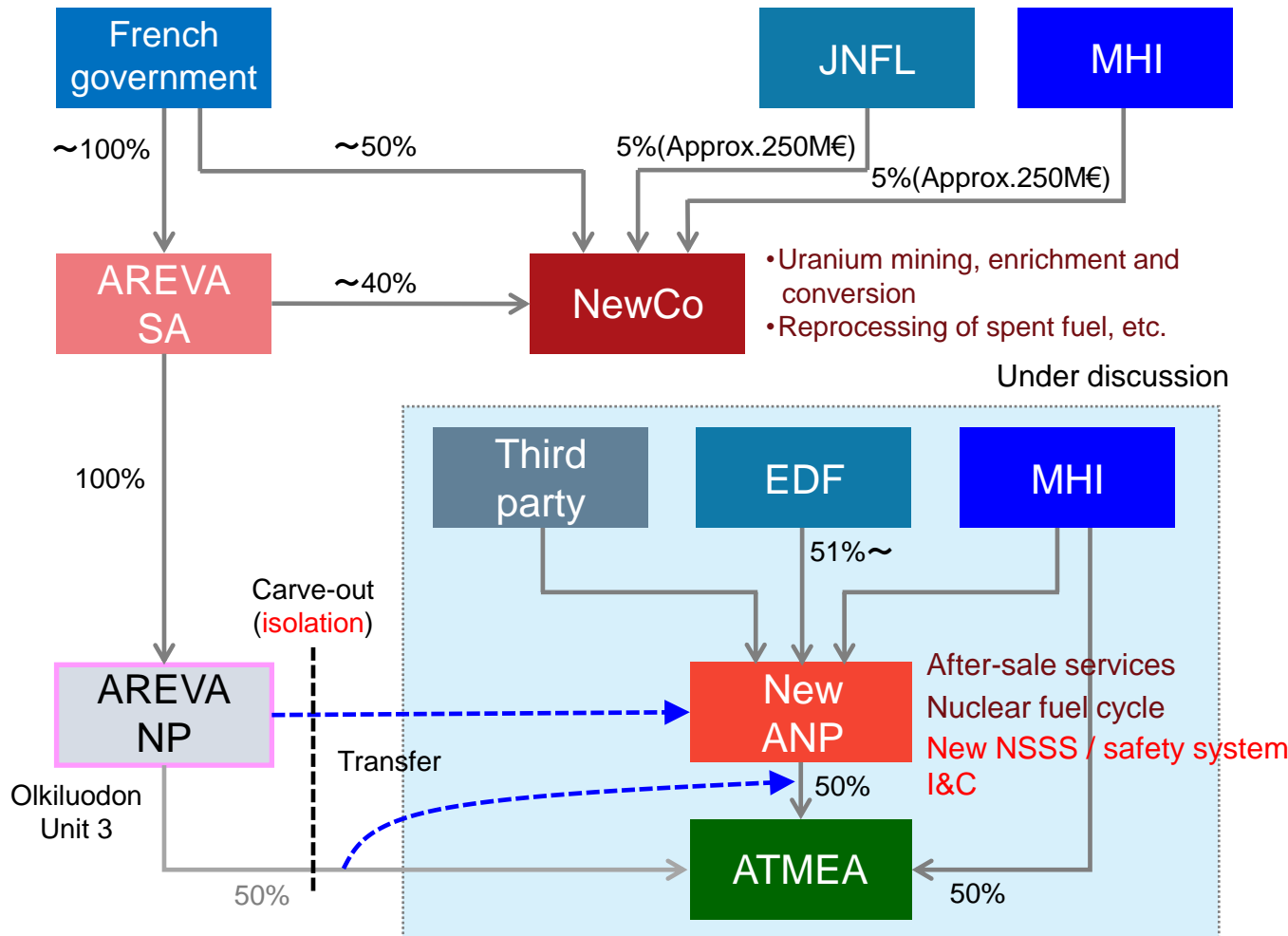
## Measures for MRJ timetable and staff



Maintaining staff for mass production, by temporary re-allocation



- Investment into stable earnings businesses after separation of existing risks
- Creation and expansion of business opportunities through strengthening of strategic relationships with EDF and New AREVA



## Purpose of investment into NewCo

- Reinforce collaboration with global leader (AREVA) in field of nuclear fuel cycle

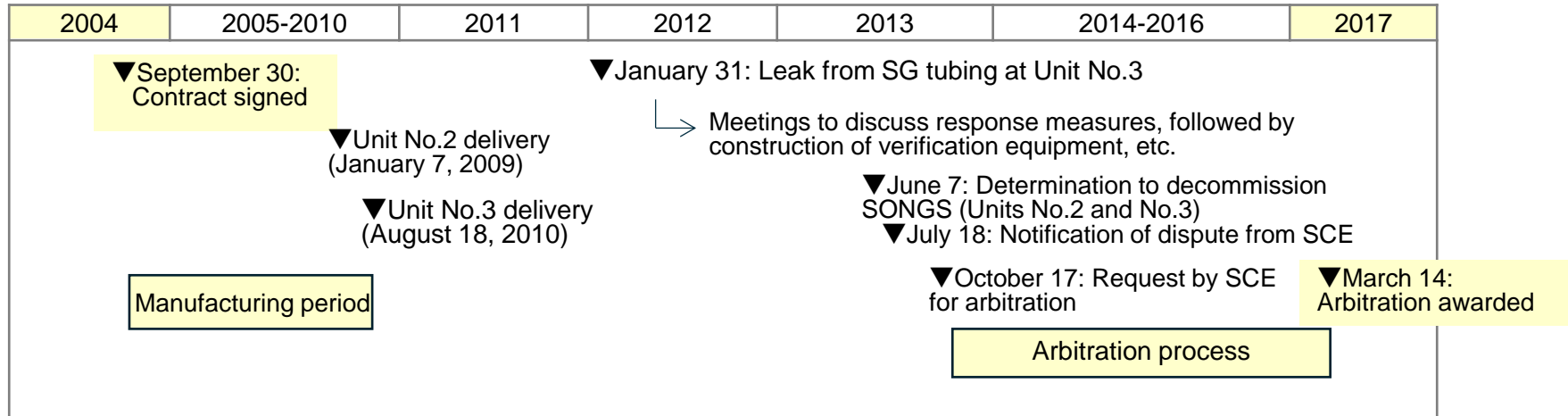


Strengthen MHI's response capability to reactor decommissioning and fuel cycle

## Purposes of investment into New ANP

- Increase business opportunities, including ATMEA, through expanded collaboration with EDF
- Achieve stable profitability at New ANP
  - After-sale services and fuel cycle
  - Reactor-related engineering business (no EPC risk)

## Chronology from contract signing to passage of arbitration award



\* SONGS comprises 3 units; MHI supplied SGs to Units No.2 and No.3. (The decision to decommission Unit No.1 was made in 1992.)

## Arbitration award

- Upper limit of responsibility stipulated in contract (approx. US\$137 million) is valid. As claimed by MHI
- MHI to pay approx. US\$118 million, after adjustments for expenses already paid, interest, etc.
- Rejection of SCE and other claimants' allegation of fraud and gross negligence by MHI (award sought: US\$6.667 billion)
- SCE and other claimants to bear majority (approx. US\$58 million) of MHI's arbitration expenses

## Construction and gain/loss record

(in billion yen)

		FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
1st ship	Original	Basic design	Detailed design	Procurement	Launch			
	Actual	Basic design	Detailed design	Procurement	Launch		Delivery	
2nd ship	Original		Detailed design	Procurement	Launch			
	Actual		Detailed design	Procurement	Launch		Delivery	
Gain / Loss	Operating income	-9.3	6.0	-0.1	0	0	0	
	Extraordinary loss	-	-	-64.1	-69.5	-103.9	-34.3	Finished except for normal warranty
	Cumulative to date	-9.3	-3.3	-67.5	-136.0	-239.9	-274.2	



# Reference 6: Acceleration of concentration into core competencies: M&A

	Company	Product/Business	PMI Status and Results to Date				
			Agreement date	Net sales contribution	Other results,		
Acquisition	Federal Broach (USA)	Machine tools	Apr 2012	Approx. JPY 5bn	Business expansion and stabilization from lineup integration		
	PWPS(USA) , Turboden(Italy)	Gas turbines	Dec 2012	Approx. JPY 80bn	Business expansion from added lineup in small/medium GT		
	Daily Equipment (USA)	Forklift trucks	Jan 2012	Approx. JPY 1.5bn	Expansion of after-sale servicing business		
	Concast (India)	Metals machinery	Jun 2012	Approx. JPY 2.5bn	Strengthening of upstream product lineup		
	Toyo Engineering Works	Refrigeration systems	Jan 2014	Approx. JPY 16bn	Strengthening of engineering business		
	UniCarriers Holdings	Forklift trucks	Jul 2015	Approx. JPY 185bn	Further business scale growth and expanded global market share		
JV	MHI-led	Nippon Yusoki	Forklift trucks	Nov 2012	Approx. JPY 130bn	Business expansion from achievement of full lineup	
		Hitachi	Thermal power generation systems	Nov 2012	Approx. JPY 300bn	Business expansion from full GT lineup (small to large), expansion of unique technologies	
		Siemens (Germany)	Metals machinery	May 2014	Approx. JPY 150bn	Business expansion from achievement of full lineup	
		IHI Metaltech	Metals machinery	Jul 2013	Approx. JPY 10bn	Strengthened lineups of aluminum rolling mills, etc.	
		Mahindra & Mahindra (India)	Agricultural machinery	May 2015	(equity-based)	Stronger competitiveness in domestic and global markets	
	part-ner-led	Equal	Vestas (Denmark)	Wind turbines	Sep 2013	(equity-based)	Early achievement of strategic model (BMW) development and order receipt targets
			Ryobi	Commercial printing machinery	Jun 2013	(equity-based)	Business strengthening from product lineup and production integration
		Fuji Xerox	Document-related	Oct 2013	-	Reductions in direct/indirect costs from standardization and effective document-related processes	
		Miyaji Engineering	Bridges	Nov 2014	(equity-based)	Scale merits, Market share increase	
		Japan Tunnel Systems	Tunneling shield machine	May 2015	(equity-based)	Assured capture of domestic demand and accelerate business expansion overseas	
		Fuji Oozx	Automobile engine valves	Jan 2016	(equity-based)	Market share expansion and enhanced market presence	
		Ube Machinery	Injection molding machines	Jul 2016	-	Expansion of product lineup and sales network, reductions in production costs	
		JR West	Real estate	Oct 2016	(equity-based)	Boost corporate value through partnership with JR West	
NTT Data	Operation and maintenance of IT	Mar 2017	-	Sophistication of IT service and strengthening global readiness			
Transfer	HIDROMEK (Turkey)	Motor graders	Nov 2013	-	Promotion of business concentration into core competence		
	Delta Electronics (Taiwan)	Lithium rechargeable batteries	Apr 2014	-	Promotion of business concentration into core competence		
	Sumitomo Heavy Industries Material Handling Systems	Industrial cranes	May 2015	-	Promotion of business concentration into core competence		
	Michinori Holdings	Shonan Monorail	May 2015	-	Promotion of business concentration into core competence		
	Tohmei Industries	Ship stabilizers	Mar 2016	-	Promotion of business concentration into core competence		
	Sato Tekko	Sluice gates	May 2016	-	Promotion of business concentration into core competence		
	Hitachi	X-ray medical equipment	Aug 2016	-	Promotion of business concentration into core competence		
	Kobe Diesel	Marine diesel engines	Dec 2016	-	Promotion of business concentration into core competence		
Furuno Electric	ETC onboard devices	Jan 2017	-	Promotion of business concentration into core competence			
Withdrawal	Ecovix (Brazil)	Shipbuilding	Jan 2016	(equity-based)	Promotion of business concentration into core competence		

■ :Overseas  
 Blue :FY2016 initiatives



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