

EQUIPMENT HYUNDAI ROBOTICS HYUNDAI HEAVY INDUSTRIES HYUNDAI ELECTRIC & ENERGY SYSTEMS HYUNDAI ROBOTICS HYUNDAI ELECTRIC & ENERGY SYSTEMS HYUNDAI ROBOTICS HYUNDAI HEAVY INDUSTRIES HYUNDAI ELECTRIC & ENERGY SYSTEMS HYUNDAI ROBOTICS HYUNDAI HEAVY INDUSTRIES HYUNDAI ELECTRIC & ENERGY SYSTEMS

INVESTOR RELATIONS 2018

# HYUNDAI HEAVY INDUSTRIES HOLDINGS

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# Establishment of Holding Company

1. Transition to Holding Company
2. Corporate Governance Reform
3. Corporate Governance Structure
4. Financial Structure
5. Business Strategy of Holding Company
6. Dividend Policy

# 1. Transition to Holding Company

Holding company was officially established with corporate name changed to “Hyundai Heavy Industries Holdings Co., Ltd” on Mar 30<sup>th</sup>, 2018,

## Business Reformation Progress

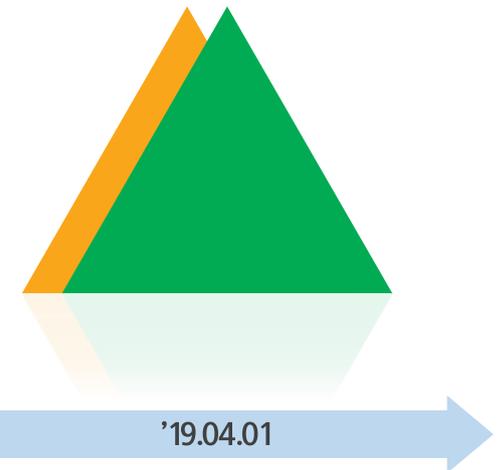
- ('17.06.21) Elimination of new circular shareholding  
Sold HRC shares held by HMD
- ('17.07.08) Approval from Fair Trade Commission on holding company
- ('17.08.02) HRC rights offering in return for in-kind contribution  
Met the regulatory condition on Holding company  
(must hold 20% shares of listed company, 40% shares of unlisted company)
- ('17.08.18) Elimination of existing circular shareholding  
Purchased HEE, HCE shares held by HMD
- ('17.11月) Participated rights offering / bonus issue of subsidiaries  
HCE, HEE
- ('18.03.16) Participated in rights offering of subsidiaries  
HHI

'17.04.01

'18.03.30

'19.04.01

- ('18.03.30) Corporate name change  
Approval on corporate name change to HHH from HRC at 1<sup>st</sup>  
General Shareholder's Meeting
- ('18.04.11) Change listing
- ('18.08.22) Completed elimination of circular ownership structure  
(HHI shares held by HMD)
- (Later) Resolve issues related to great-grandchild company  
(HMD shares held by HSHI)

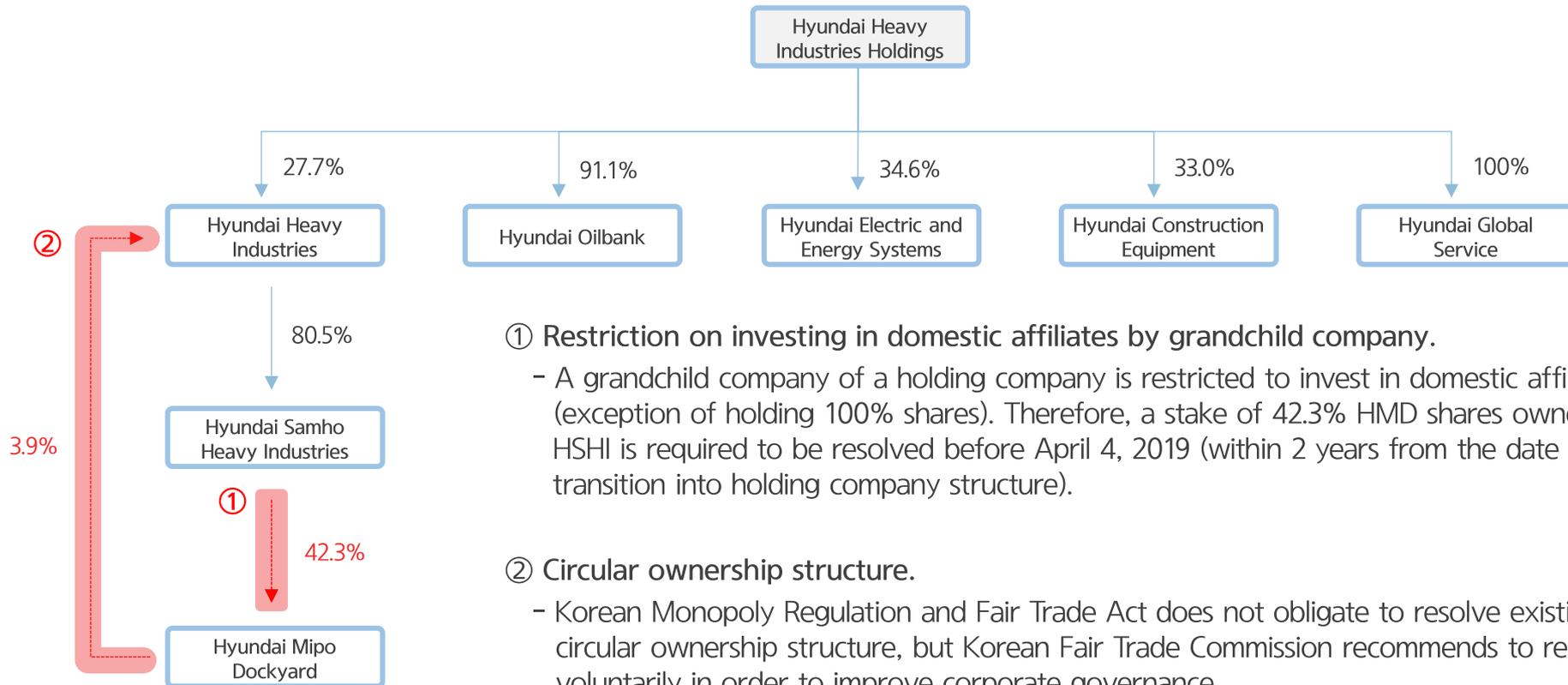


## 2. Corporate Governance Reform(1/2)

- Completion of holding company structure by resolving issues related to great-grandchild company and circular ownership structure.

→ Achieve transparent governance structure and eliminate uncertainty.

### HHI Group Business Restructuring



① Restriction on investing in domestic affiliates by grandchild company.

- A grandchild company of a holding company is restricted to invest in domestic affiliates (exception of holding 100% shares). Therefore, a stake of 42.3% HMD shares owned by HSHI is required to be resolved before April 4, 2019 (within 2 years from the date of transition into holding company structure).

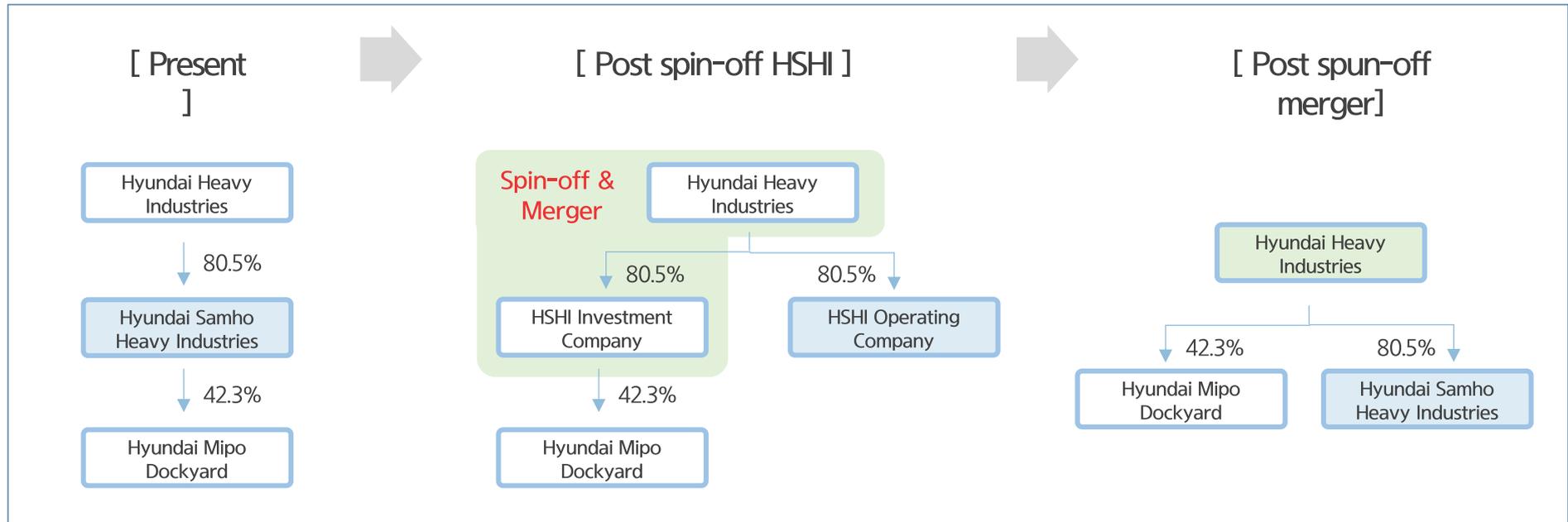
② Circular ownership structure.

- Korean Monopoly Regulation and Fair Trade Act does not obligate to resolve existing circular ownership structure, but Korean Fair Trade Commission recommends to resolve voluntarily in order to improve corporate governance.

## 2-1. Corporate Governance Reform(2/2)

### ① Eliminating restriction on investing in domestic affiliates by grandchild company : Spin-off & Merger of HSHI

- Spin-off Samho Heavy into an Investment Company and Operating Company followed by a merger between Hyundai Heavy and Samho Heavy's Investment Company.  
 → Minimize cost (Refer appendix for details of spin-off & merger rate)



### ② Resolving cross-holding structure : Share Acquisition

- HHH's acquisition of HHI shares owned by HMD (completed on August 22, 2018)

## [Spin-off Merger Ratio]

### Assessment of HHI Merger Value

- Merger value per share is determined by the average price of 1) weighted average of 31 days prior to BoD date, 2) weighted average of 7 days prior to BoD date, 3) the closing price prior to BoD date.

	Value per share (KRW)	Value (KRW Trillion)	Remarks
A. Weighted average price of 31 days	106,029		7/22 ~ 8/21
B. Weighted average price of 7 days	109,145		8/15 ~ 8/21
C. The closing price	111,500		8/21
Merger Value per share (Average of A,B,C)	108,891	7.53	* Base Price

### Assessment of HSHI Investment Company Merger Value

- Unlisted HSHI Investment Company merger value per share is determined by the intrinsic value per share.  
(\* Intrinsic value = Book value X 40% + Profit value X 60%)

	Value (KRW trillion)	Value per share (KRW)	Remarks
Book value (40%)	1.11	67,091	* Book value of HMD share
Profit value (60%)	0.78	46,941	* HMD share price (Average price of 31 days, 7 days , closing day)
Merger value per share	0.91	55,001	* Intrinsic value

## [Spin-off Merger Ratio]

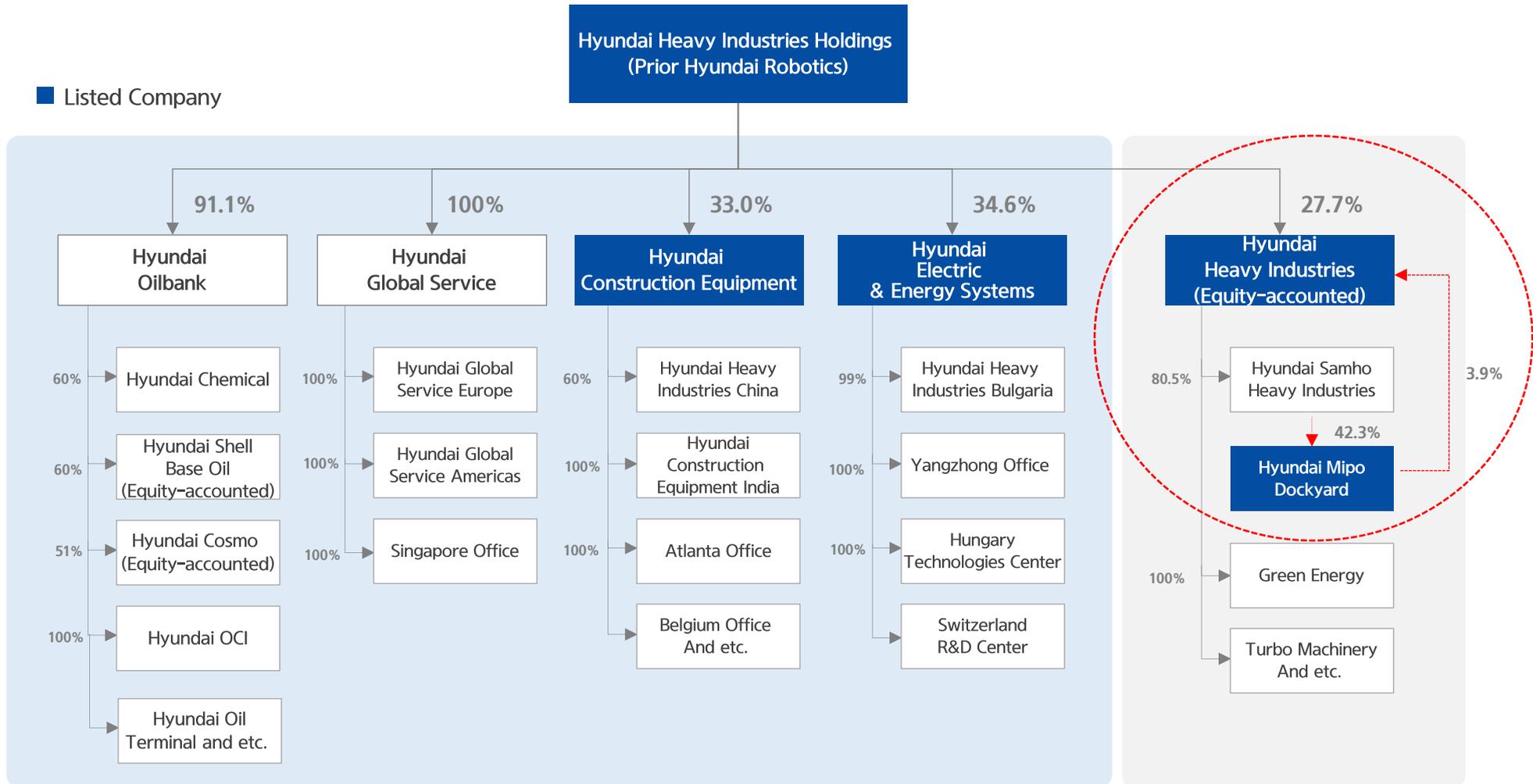
### Spin-off Merger Ratio

Categories	HHI	HSHI Investment Company	Remarks
Merger value per share (KRW)	108,891	55,001	* Excluding HSHI shares owned by HHI shares = 9,175,858 no. of shares
Merger ratio	1	0.5051006	Shares of HSHI Investco = (9,175,858 × spin-off ratio) = <u>3,205,970</u> no. of shares
Spin-off ratio		0.3493919	Allocation of new HHI shares = (3,205,970 × Merger Ratio) = <u>1,619,337</u> no. of shares
Spin-off merger ratio (Spin-off ratio × Merger ratio)		0.1764781	
Distribution of merged new shares		1,619,337 shares	→ 9,175,858 × 0.1764781

### Others

- ① The new shares after spin-off and merger is not allocated to HSHI shares of 80% which is owned by HHI.
- ② The new shares after spin-off and merger obtained by appraisal right is not allocated to HSHI treasury stock.

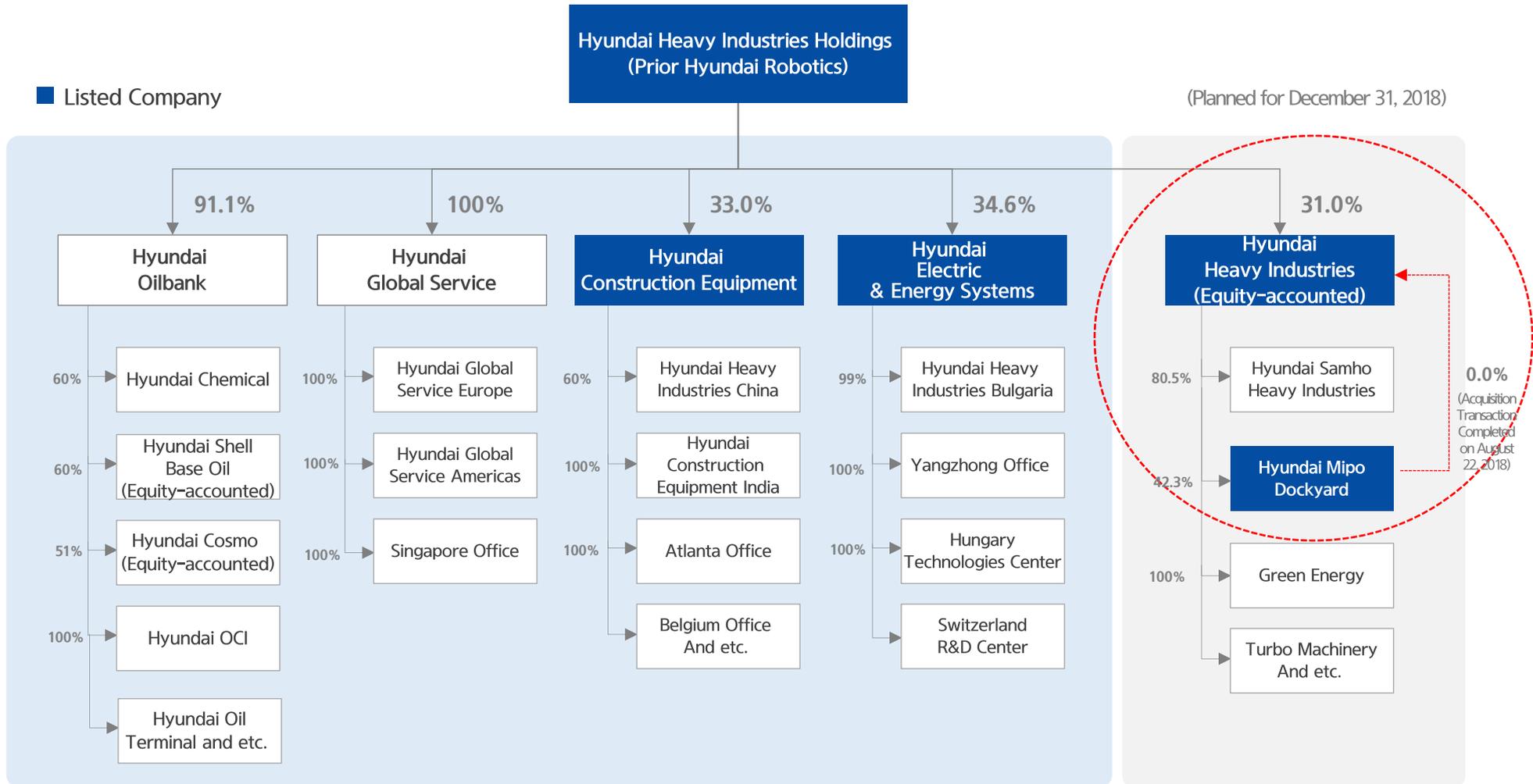
### 3. Corporate Governance Structure (Before Reform)



Note 1 : Equity-accounted investees - Hyundai Heavy Industries, Hyundai Shell Base Oil, Hyundai Cosmo

Note 2 : Consolidation of 34 subsidiaries.

### 3. Corporate Governance Structure (After Reform)



Note 1 : Equity-accounted investees - Hyundai Heavy Industries, Hyundai Shell Base Oil, Hyundai Cosmo

Note 2 : Consolidation of 34 Subsidiaries.

## 4. Financial Structure

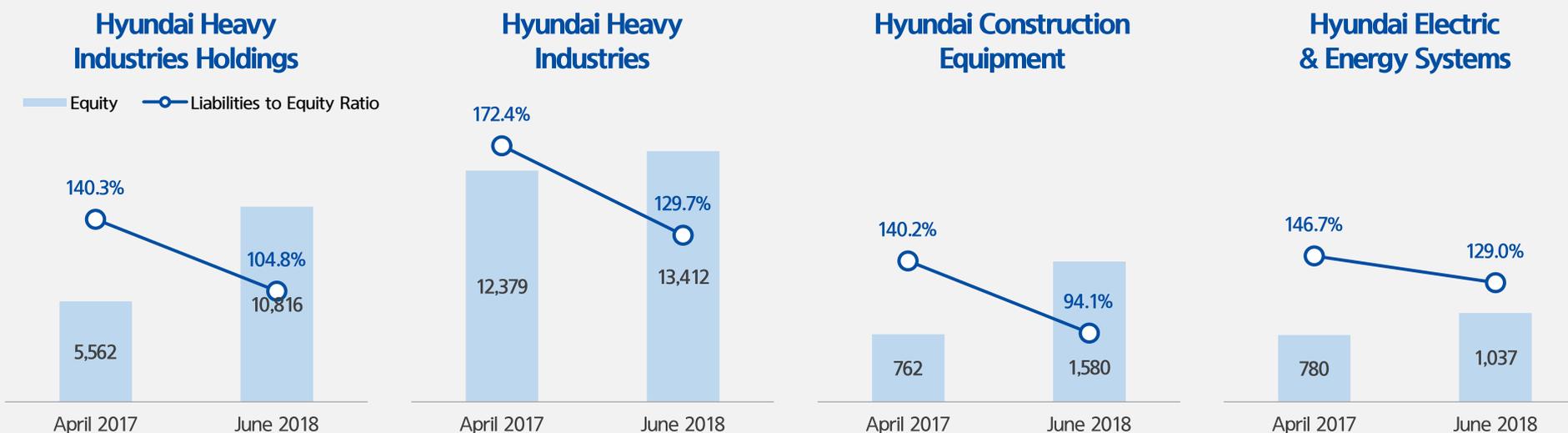
Secured strong financial structure through rights offering and improved business results.

(Unit : Billion KRW)

Categories	Hyundai Heavy Industries Holdings		Hyundai Heavy Industries		Hyundai Construction Equipment		Hyundai Electric & Energy Systems	
	'17.4.1	'18. 6.30	'17.4.1	'18. 6.30	'17.4.1	'18. 6.30	'17.4.1	'18. 6.30
Asset	13,367.2	22,150.2	33,713.9	30,805.2	1,829.5	3,066.7	1,924.5	2,374.6
Liabilities	7,805.0	11,334.5	21,335.3	17,393.6	1,067.8	1,486.5	1,144.3	1,338.1
Equity	5,562.2	10,815.7	12,378.6	13,411.6	761.7	1,580.2	780.2	1,036.5

Note 1 : Consolidated basis of each business entities

(Unit : Billion KRW)



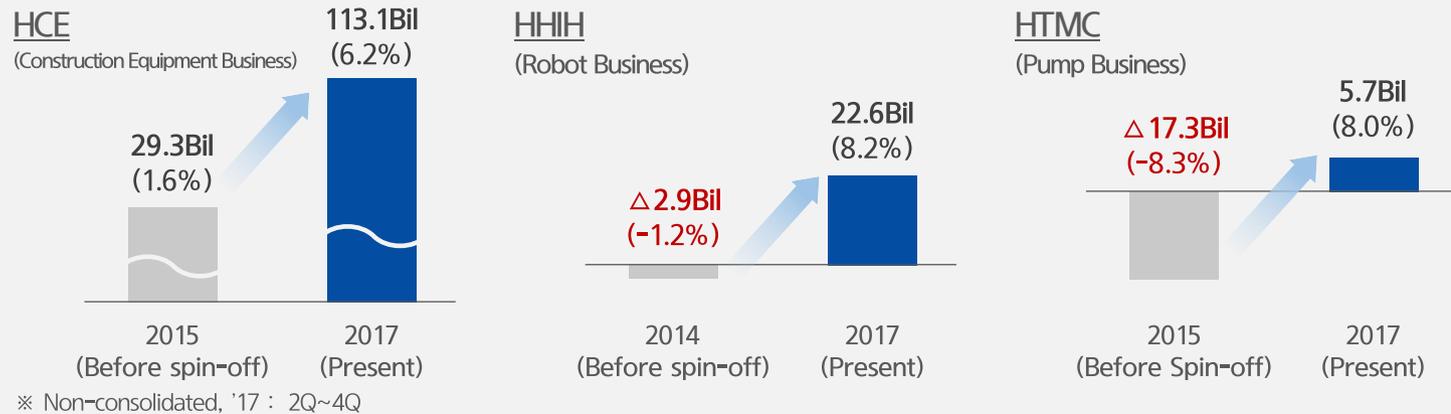
# 5. Holding Company Business Strategy

## Investment Strategy

“ Rather than securing earnings through internal trade within group (Brand loyalty, rent), We pursue enlarging the value through excavating and fostering various business opportunity in adjacent area ”



## Investment Performance (Comparing Operating Income)



## Future Highlights

- ✔ Pushing forward IPO plan of Hyundai Oilbank in 2018
- ✔ Considering proper chance to list Hyundai Global Service and Robot Business after fostering
- ✔ Identifying and fostering key business innovation opportunities to link with 4<sup>th</sup> Industrial Revolution

## 6. Dividend Policy

Improved visibility of dividend payout for investors.

### Hyundai Heavy Industries Holdings

- Dividend Payout Ratio with more than 70% (Non-consolidated net income basis)
    - Majority of net income will be returned to shareholders as a form of dividend since HHHH will not require capital expenditure such as investment in facilities.
  - Price-dividend yield would be more than 5%  
based on the closing market share on August 22, 2018.
- (Average dividend payout ratio of 4 major holding companies(SK, LG, GS, CJ) was 59.8% for the past three years, non-consolidated net income basis)

### Subsidiaries

- Dividend Payout Ratio with more than 30% (Non-consolidated net income basis)
  - A same policy cannot be applied to all subsidiaries; however, dividend payout ratio with more than 30% will be maintained for each subsidiaries.

# Hyundai Robotics (Robot Business)

1. Business History
2. Business profile & Major products
3. Core competitiveness
4. Market view
5. Growth strategy

# 1. Business History

## Independent and profitable business based on 35 years of history



- Oct, 1984  
HHI Robot business team established

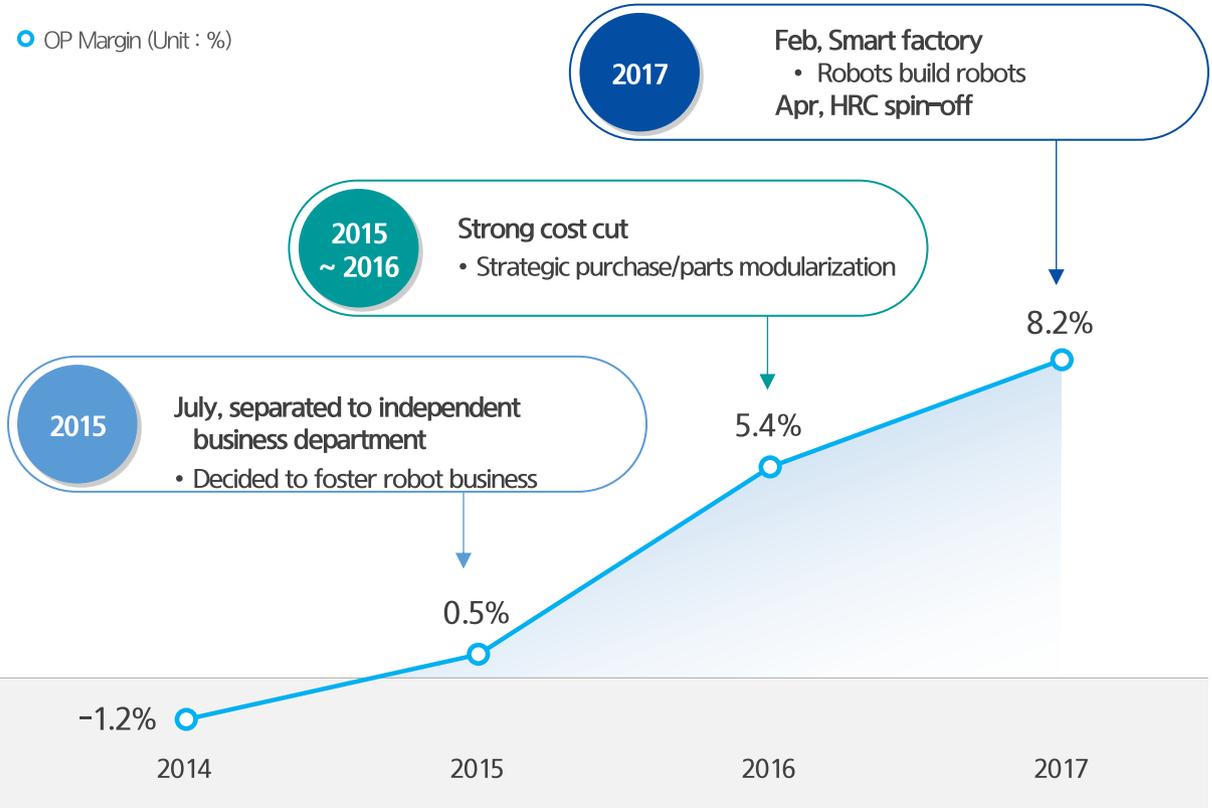


- Nov, 1995
  - 2 kinds of independent robot model
  - Internalization of development controller



- May, 2007
  - Developed LCD robots

OP Margin (Unit : %)



Sales(bil KRW)

246.1

253.7

254.8

274.5

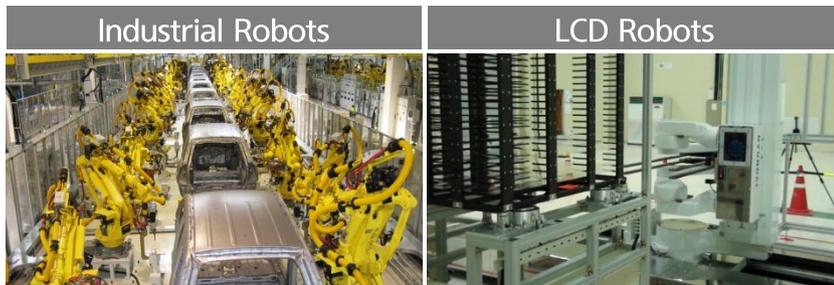
Note 1) Robot business sales figures only – excluding investment part

Note 2) As HRC had ben spun off on Apr 1, 2017, yearly figures of 2017 is only for investor's reference(1Q result is estimated).

## 2. Business profile & Major products

### Business Information

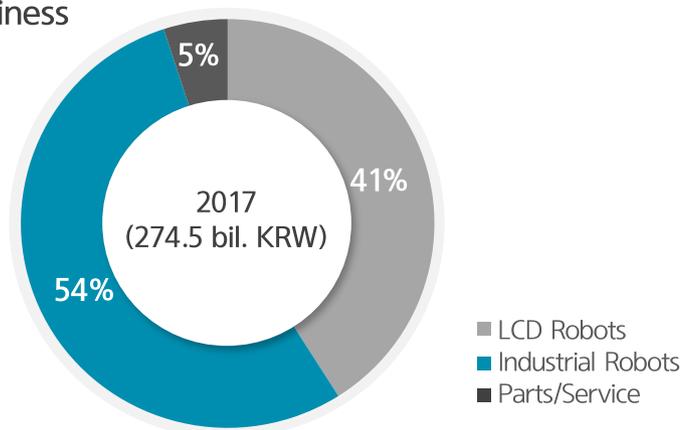
‘Develop and produce  
general industrial robots and LCD robots’



Mainly used in the automotive industry where productivity increase and labor cost decrease is crucial

Mainly used in a clean environment like the LCD industry

### • Sales by Business



Note) Robot business sales

Note) 2017 sales above includes the numbers of '17. 1Q prepared by the Company as a reference only for investors since the Company is split as of Apr. 1, 2017.

### Core Product and Clients

#### • Industrial Robots



	Local Clients	Global Clients
Automotive	Hyundai & Kia Motor Company	BHMC(China), Saipa(Iran) etc.
Automotive Suppliers	Sungwoo Hightech, Sewon, Saehan etc.	Beycelik(Turkey), Gestamp(India) etc.
Others (non-automotive)	World ENG etc.	Haier (China) etc.

#### • LCD Robots

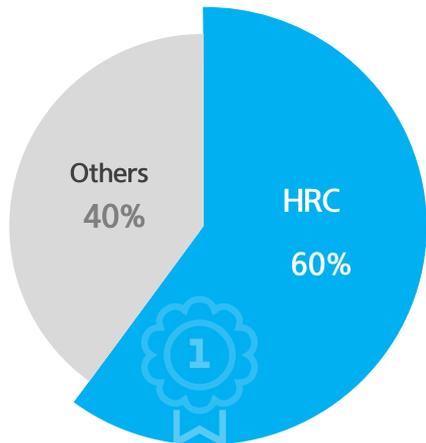


	Local Clients	Global Clients
Clients	LG Display	BOE, CSOT, AUO, Tianma, CPT, LGD CA etc.

### 3. Core competitiveness

#### Unrivaled market position

- 1<sup>st</sup> company in local market
  - Customer pre-occupation by early entrance to market



**HYUNDAI MOTOR GROUP**

Maintained exclusive relationship through joint process development since 1984

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**LG Display**

After LCD robots joint development in 2007, we're constantly delivering industrial robots(occupied over 50% in cumulative basis)

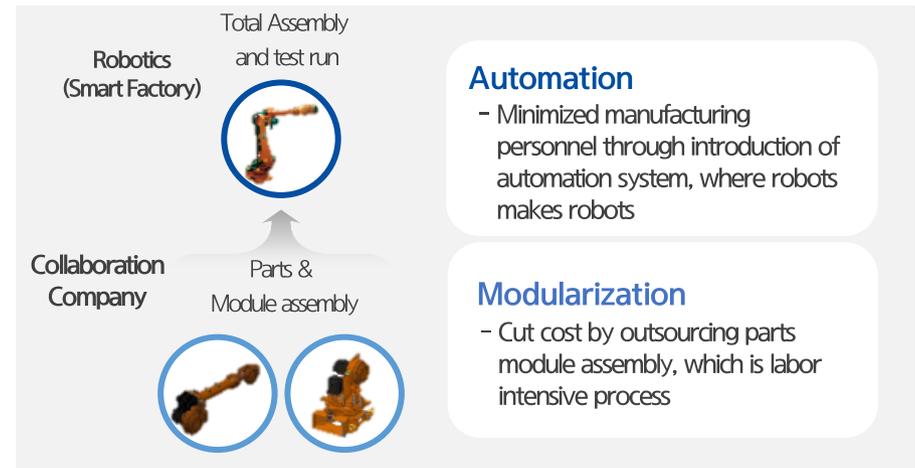
Note : 2018 Fuji economic report, based on articulated robot sales figures

- Securing various foreign clients in Korea-leading industries

Automotive	Home appliance	LCD

#### Strong cost competitiveness

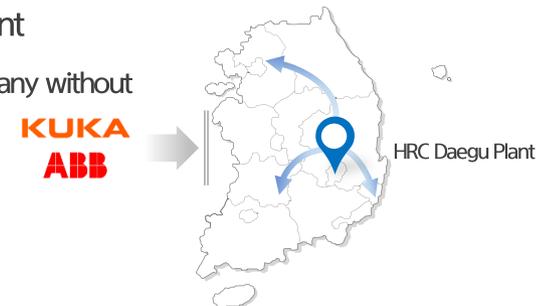
- Maximized efficiency through manufacture automation, modularization



※ In case of globally leading companies, there are many companies manufacture with their own personnel in cellular method

- Additional 10% of structural competitiveness in local market with manufacturing plant

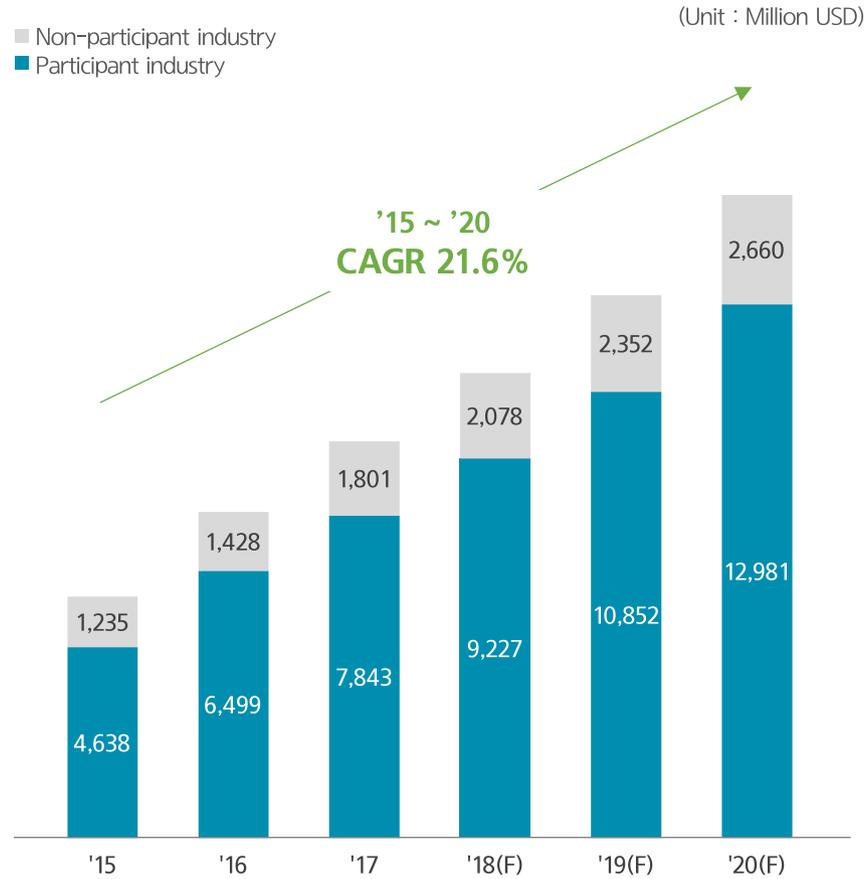
- Compared to global company without local plant, over 8% of cost competitiveness (Tax + shipping expenses)



## 4. Market View

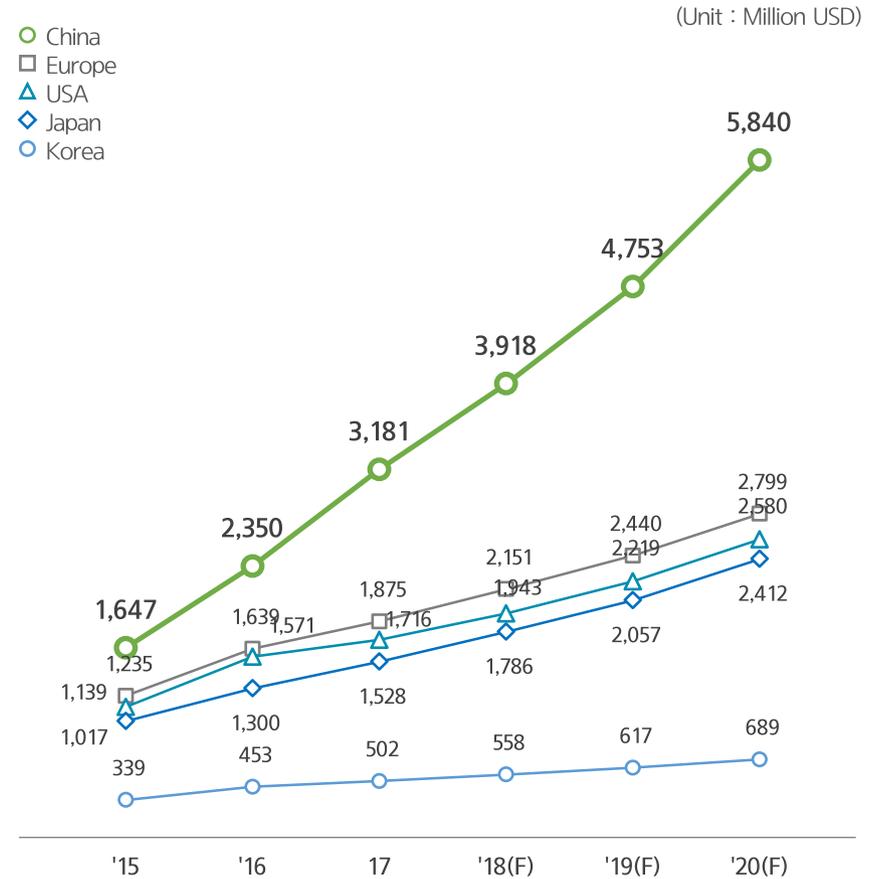
Global industrial robotic industry is expected to show annual growth of 21.6% until 2020

### Industrial Robotic Industry Growth and Forecast



Note : Non-participant industry – food, service area robots  
Source : Fuji Economic Report, 2018.03

### Growth and Forecast by Country



Source: Fuji Economic Report, 2018.03

## 5. Growth Strategy

### Robot System<sup>1)</sup> Business

- The demand for automation rises due to the increase in minimum wages and the stress on the importance of worker safety
  - The growth of potential customers who prefer a package that can be directly used in their factories is expected.
- The sales in the robot system business are three times larger than those when robots are just sold, and the robot system business can also secure high profitability.

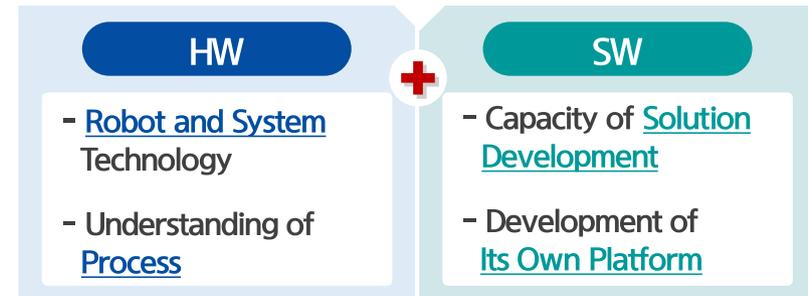


**Move the sales base to the capital area,**  
which has many potential customers

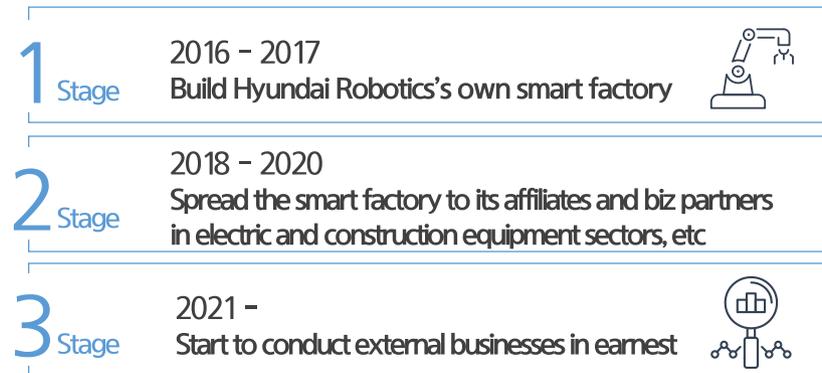
**Secure diverse industry customers**  
such as home appliance, smelting, food, etc

### Smart Factory Solution Business

- Provide the differentiated total solution combined with production technology and SW



#### Business Promotion Stage



1) Robot system: This system package configures the application (e.g. welding machines), surrounding facility, and control SW for each work together to allow a customer to use them immediately from the beginning of the robot-based automation process.

# Hyundai Oilbank

1. Company Introduction
2. Business Profile
3. Core Competitiveness
4. Subsidiaries & Affiliates
5. Major CAPEX

# 1. Company introduction

## General Overview

Name	Hyundai Oilbank Co., Ltd.
CEO	Moon Jong Bak
Established	January 1964 (incorporated into the HHI group : Aug. 2010)
Capital	1,225.4 bil. KRW (as of Dec. 2017)
Employees	2,243 (Hyundai Oilbank: 1,833, Subsidiaries: 410)
Location	Chungcheongnam-do, Seosan-si, Daesan-eup, Pyeongsin 2-ro 182

## Business Overview

- Established in 1964 as the 1<sup>st</sup> Korean private oil company
- Hyundai Oilbank & 5 affiliates (Hyundai Shell Base Oil, Hyundai Chemical, Hyundai Oil Terminal, Hyundai Cosmo, Hyundai OCI Carbon)
- Consists of #1 & #2 Plant in Chungnam Daesan Complex
- 2,244 gas stations & 8 oil terminals in major cities
- Capacity: 431KB/day, upgrade ratio: 38.2% (2017)



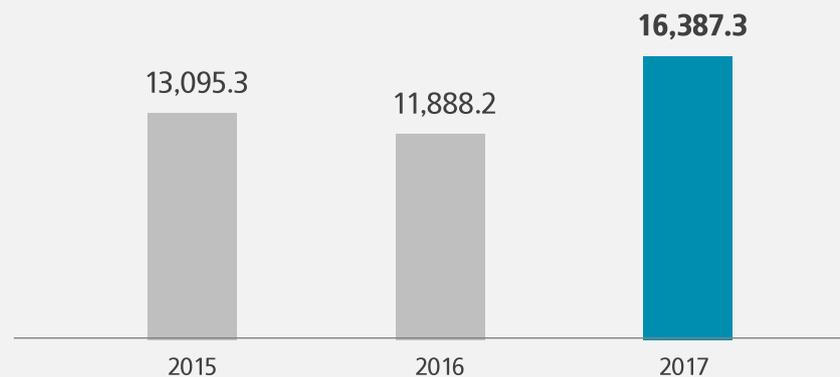
#1 Plant	#2 Plant	Total
121 KB (160KB)	310 KB (360 KB)	431 KB (520KB)

Note 1 : As registered to the Ministry of Trade, Industry and Energy in Dec. 2017 (Expected capacity for 2018)

## Earnings

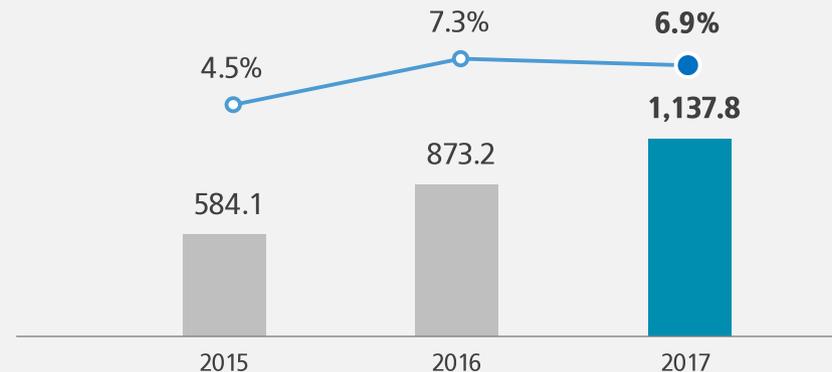
### • Consolidated Sales

Unit: bil. KRW



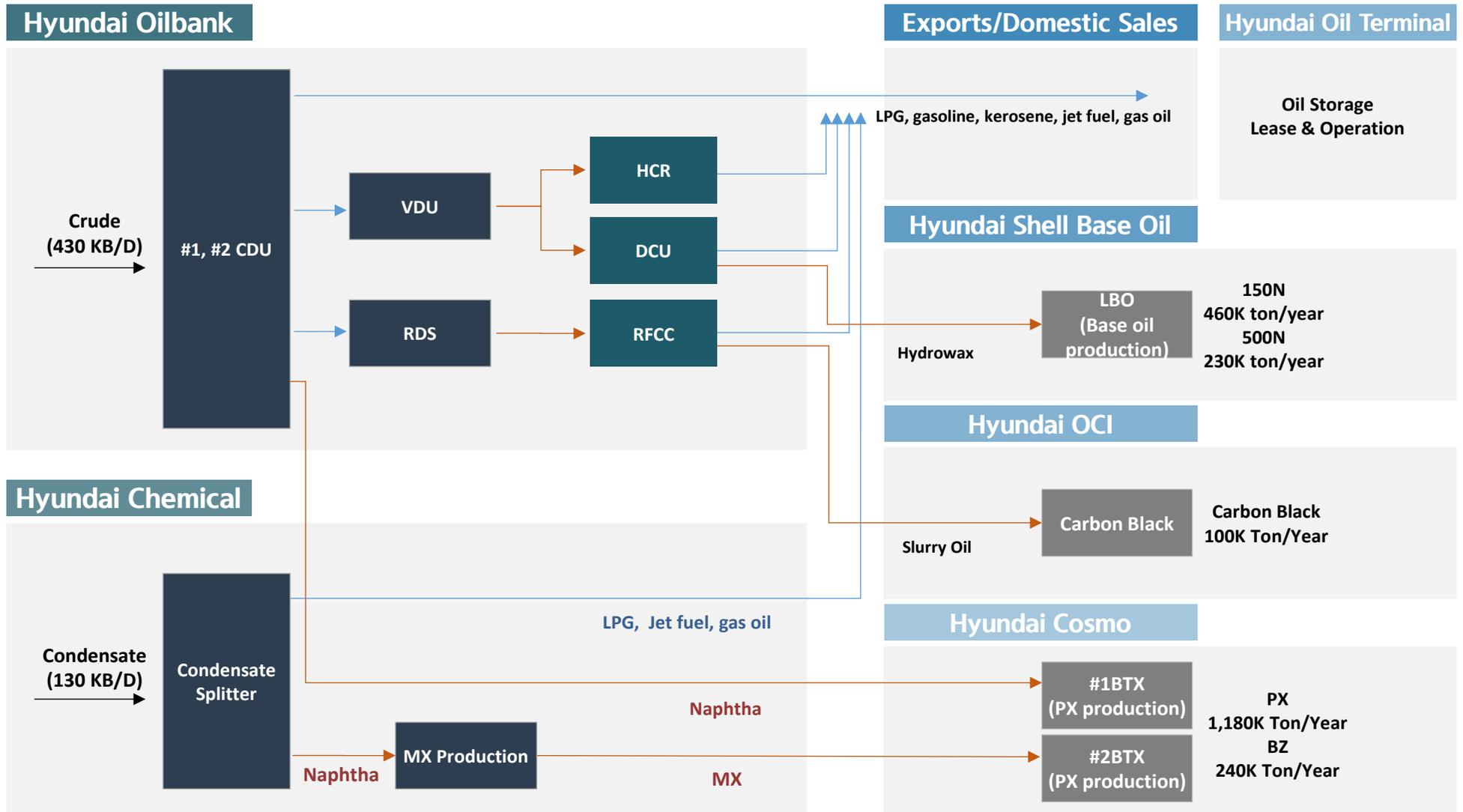
### • Consolidated Operating Profit & Ratio

Unit: bil. KRW



## 2. Business Profile

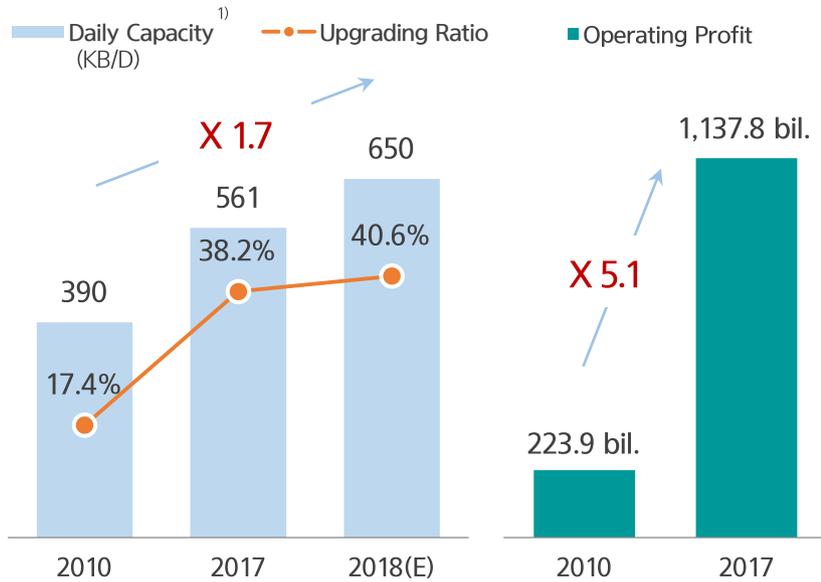
Our businesses include traditional petroleum refining and other non-petroleum businesses including petrochemicals, oil storage, lube base oil, and carbon black.



Source: Company data

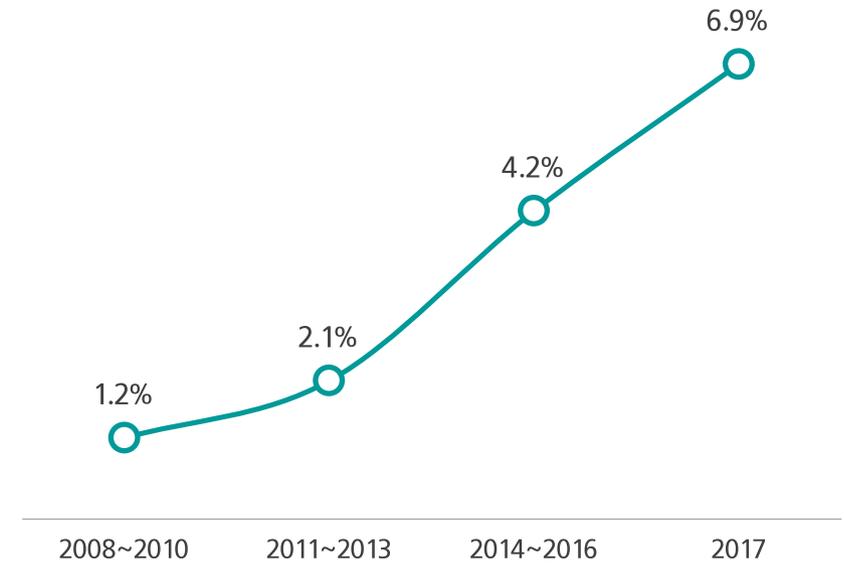
### 3. Core Competitiveness ① – Rapid growth of key businesses

#### Rapid Growth since Joining the HHI Group



1) Including Hyundai Chemical's CSU(130K barrels)

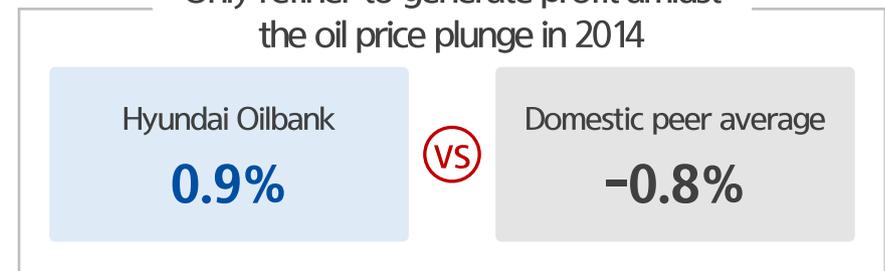
#### Operating Profit Margin Growth



#### Hyundai Oilbank operating profit growth



#### Only refiner to generate profit amidst the oil price plunge in 2014

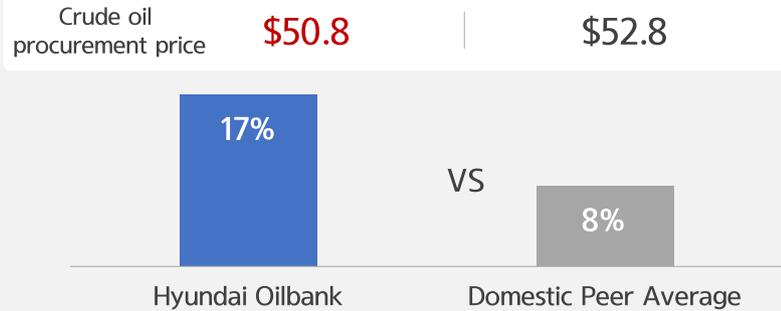


### 3. Core Competitiveness ② - Cost competitiveness

#### Highest Cost Efficiency and Complexity Ratio

“Production of high value-added products from heavy crude oil via differentiated facilities”

##### Low Cost Crude Input Ratio



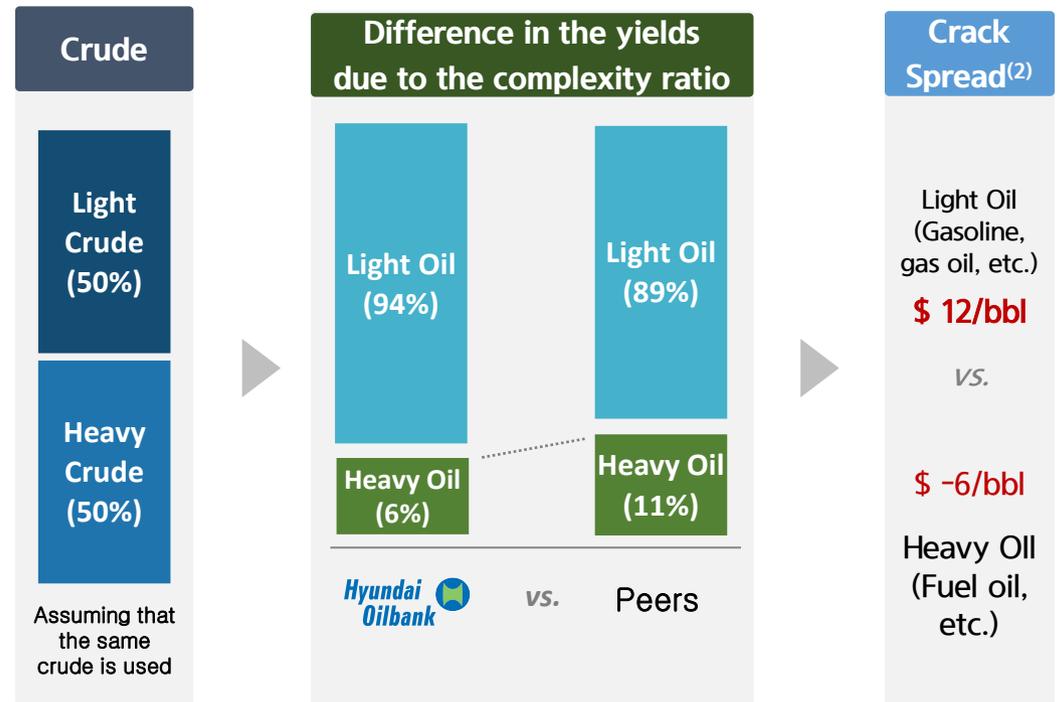
##### Production of High Value-added Products via Differentiated Facilities

	Hyundai Oilbank	Company K	Company G	Company O
Refining capacity	520*	840	790	580
Upgrading facility capacity	211*	199	274	148
Complexity Ratio	40.6%	23.7%	35.4%	25.5%

#### Benefits of High Complexity Ratio

##### Complexity Ratio

Ratio of upgrading facilities' capacity to CDU's Capacity. The higher it is, the lower the production of low value-added heavy oil<sup>(1)</sup>, leading to higher profit.



Source: Ministry of Trade, Industry and Energy(KOREA), Energy Statistics  
 ※ Capacity expansion to be completed in 2018 (Domestic peers as of 2017)

Source: Company Data, company Disclosure, Ministry of Trade, Industry and Energy(KOREA), Energy Statistics  
 Note: (1) High-sulfur heavy oil & asphalt  
 (2) 2015~2017 Heavy oil (HSFO 380) & light oil (gasoline, gas oil, kerosene) crack (Platts)  
 (3) Including capacity increase from SDA construction and HCR/DCU expansion (expected in '18.4Q) & Excluding condensate refining capacity

### 3. Core Competitiveness ③ – Secured growth potential through diversification

#### Fully Integrated Business Portfolio



#### Continuous expansion of non-refining business, Increase non-refining operating profit, improve portfolio stability

**Petrochemical Business**

**2009**  
Established Hyundai Cosmo Petrochemical

**2013**  
Began commercial operations of the #2 BTX Plant

**2014**  
Established Hyundai Chemical

**2016**  
Began commercial operations of the MX Plant

**Lube Base Oil Business**

**2012**  
Established Hyundai and Shell Base Oil

**2014**  
Began commercial operations

**Oil Terminal Business**

**2012**  
Established Hyundai Oil Terminal

**2013**  
Completed the construction of an oil storage facility for petroleum and petrochemical products

**2014**  
Began to manage oil reservoirs under contract with Hyundai Oilbank

**New Business**

**Carbon Black Business**

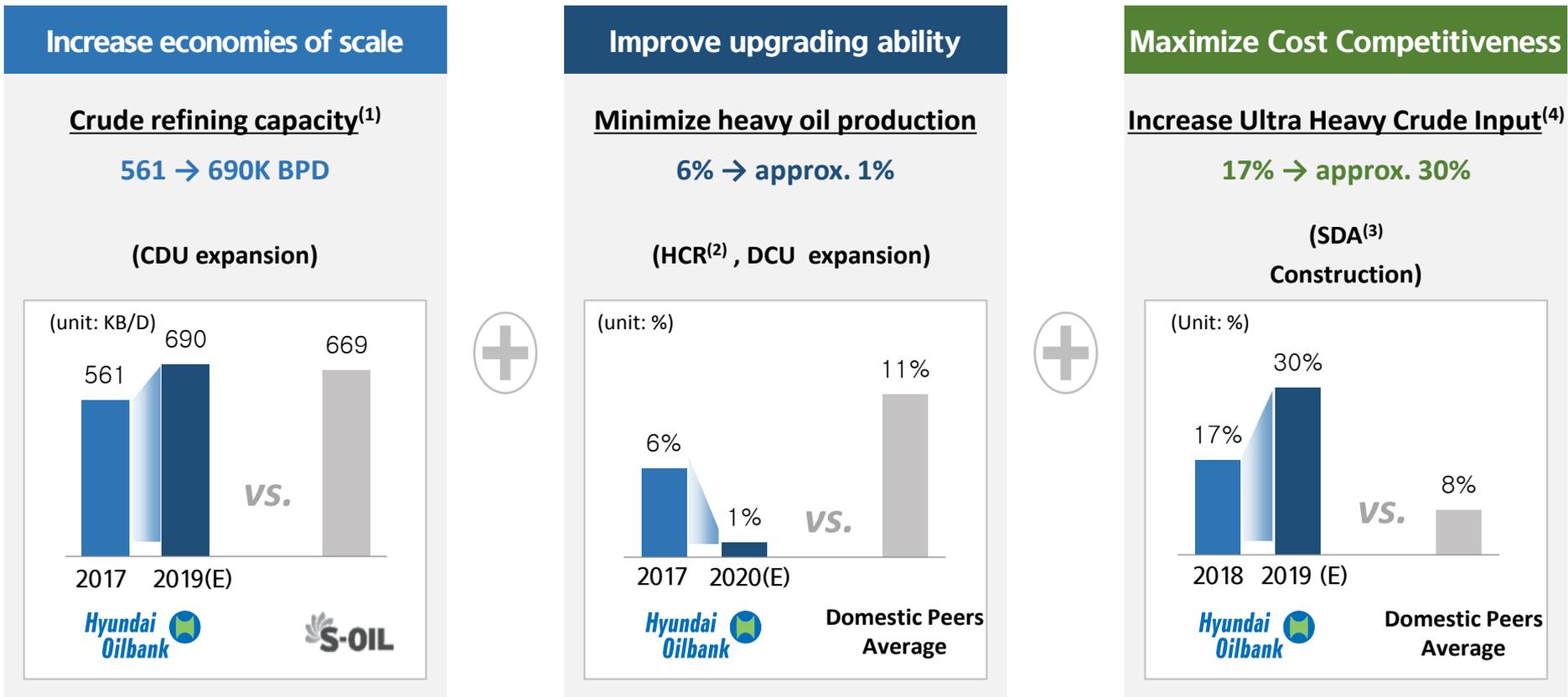
**2016**  
Established Hyundai OCI

**2018**  
Plan to begin commercial operations

### 3. Core Competitiveness ④ Economies of scale & improved cost competitiveness

Strengthen industry leading profitability through improving our upgrading ability & cost competitiveness  
 Expect profit to increase as we increase our refining capacity to match S-Oil’s capacity

#### Hyundai Oilbank’s refining growth roadmap



Source: Company Data, disclosure

Note: (1) 2017 430K BD CDU + 130K BD Condensate Splitter, 2018 520K BD CDU + 130K BD Condensate Splitter, 2019 520K BD CDU + 170K BD Condensate Splitter

(2) HCR(Hydrocracker) : Heavy oil upgrading facility that uses hydrogen injection;

(3) SDA(Solvent De-Asphalter): Residue/asphalt separation unit

## 4. Affiliates - Overview

	Unconsolidated affiliates		Hyundai Oilbank			
	50%	60%	60%	100%	51%	100%
Subsidiary (Year Established)	Hyundai Cosmo (2009)	Hyundai Shell Base Oil (2012)	Hyundai Chemical (2014)	Hyundai Oil Terminal (2013)	Hyundai OCI (2016)	Overseas Affiliates, etc. (4 Total)
JV partner (stake)	Cosmo Oil (50%)	Royal Dutch Shell (40%)	Lotte Chemical (40%)	※ First Korean refining company to commercialize the tank terminal business	OCI (49%)	Singapore, Shanghai Affiliates and 2 others
Major Business	Para-xylene, Benzene Production	Lube Base Oil Production	Mixed Xylene Production	Oil Storage	Carbon Black Production	
Production Capacity	PX 1.18 mil. Ton/Year BZ 240K Ton/Year	150N 460K Ton/Year 500N 230K Ton/Year	130K B/D (Refining) MX 1 mil. Ton/Year	280,000 KL (Storage)	100K Ton/Year	
'17 Sales	2,388.2 bil. KRW	708.6 bil. KRW	3,373.6 bil. KRW	32.8 bil. KRW	53.6 bil. KRW	
'17 Operating Profit	115.4 bil. KRW	123.7 bil. KRW	267 bil. KRW	9.1 bil. KRW	3.2 bil. KRW	

Note 1 : All numbers are as of 2017

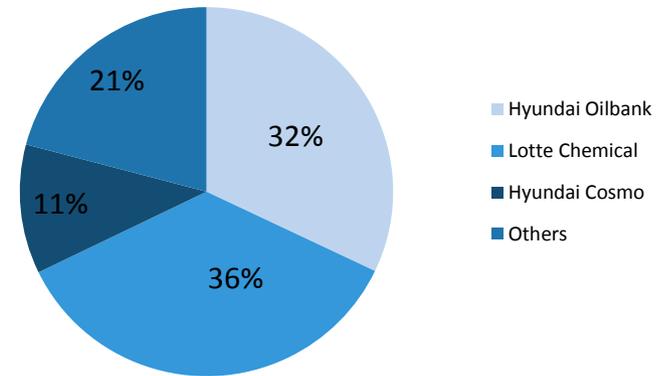
Note 2 : Hyundai OCI commenced commercial operation in Feb. 2018

## 4. Hyundai Chemical - Subsidiary

### Overview

- Established: 2014. 05. 20
- Capital: 480 bil. KRW (2017)
- Major Business: Condensate refining & MX production
- Location: Chungcheongnam-do, Seosan-si, Daesan-eup, Pyeongsin 2-ro 182
- Refining Capacity: Condensate 130 KB/D
- Production Capacity: MX 1 mil. Ton/Year
- Number of Employees: 208

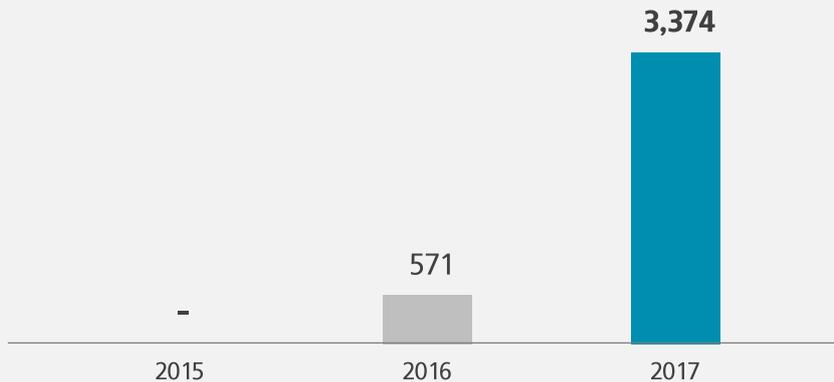
### Customer breakdown



### Sales & Operating Profit

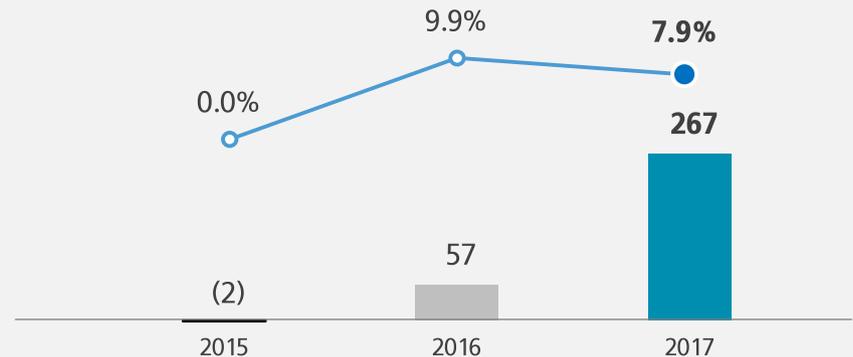
#### • Sales

Unit : bil. KRW



#### • Operating Profit(margin)

Unit: bil. KRW

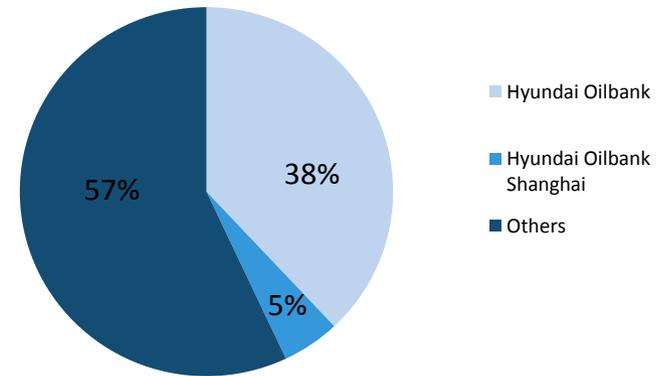


## 4. Hyundai Cosmo - Affiliate (equity method)

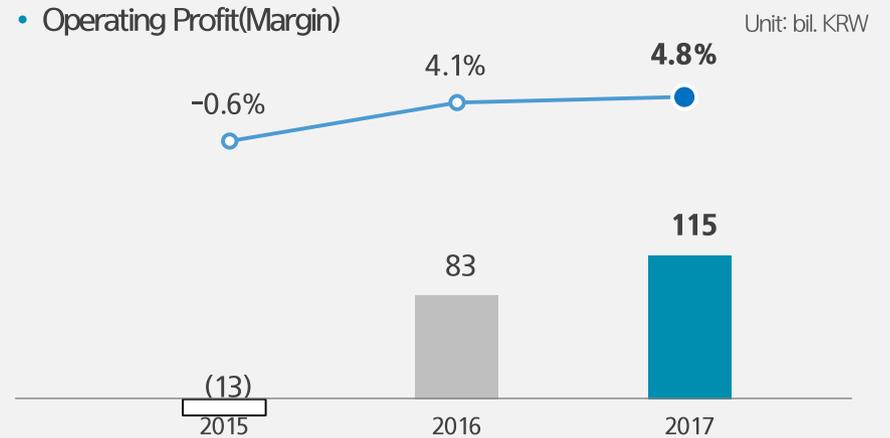
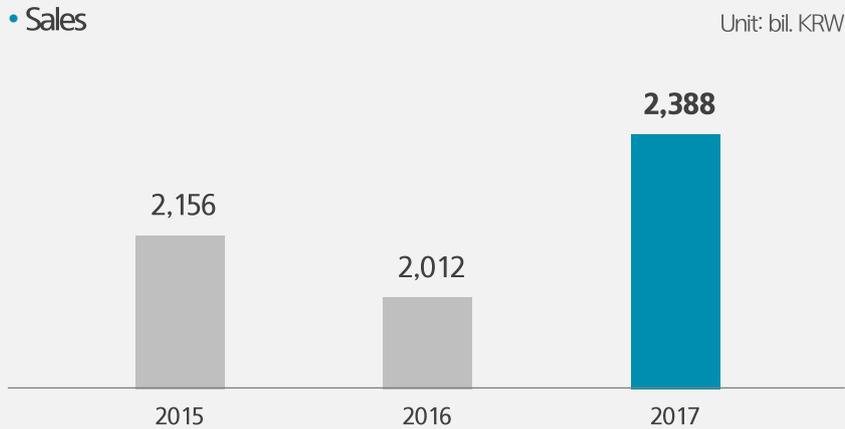
### Overview

- Established: 2009. 11. 26
- Capital: 632.2 bil. KRW (2017)
- Major Business: PX, BZ production & sales
- Production Capacity: PX 1,180K Ton/Year ; BZ 240K Ton/Year
- Number of Employees: 17

### Customer breakdown



### Sales & Operating Profit

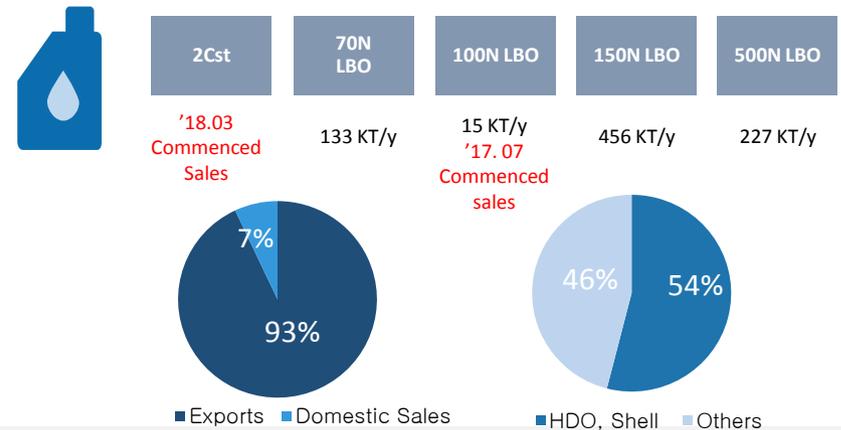


## 4. Hyundai Shell Base Oil – Affiliate (equity method)

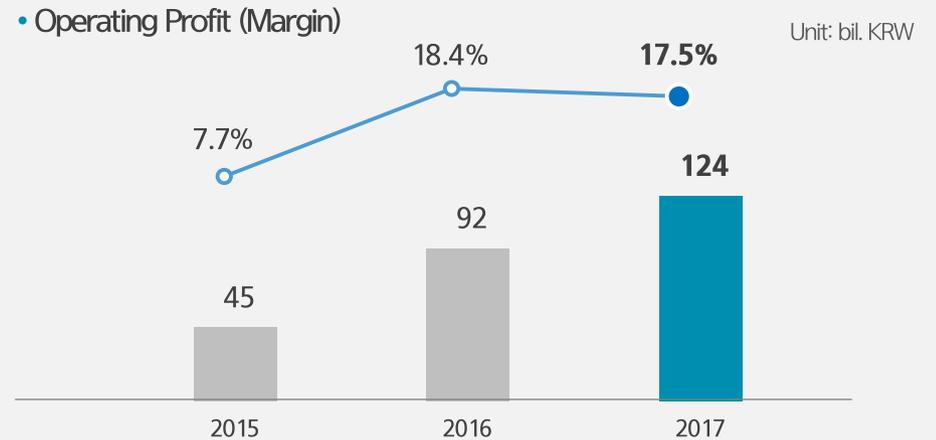
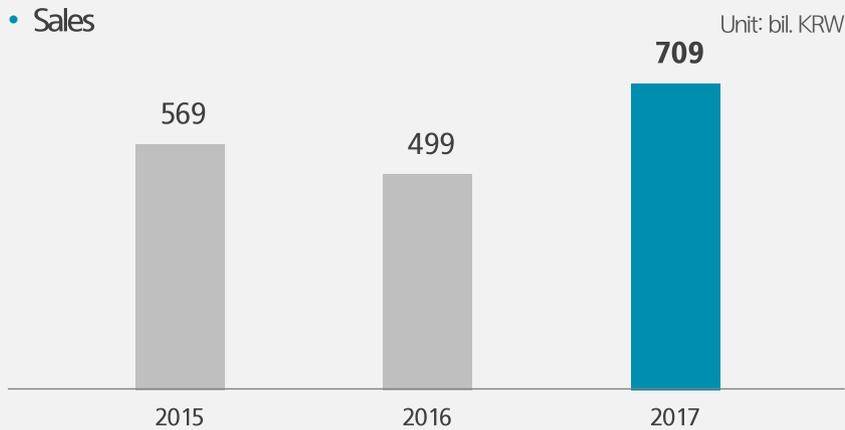
### Overview

- Established: 2012. 04. 12
- Capital: 13 bil. KRW (2017)
- Major Business: Lube base oil production using hydrowax
- Production Capacity: Group II 150 Neutral 460K Ton/Year  
500 Neutral 230K Ton/Year  
70 Neutral 130K Ton/Year
- Number of Employees: 17

### Sales Overview



### Sales & Operating Profit

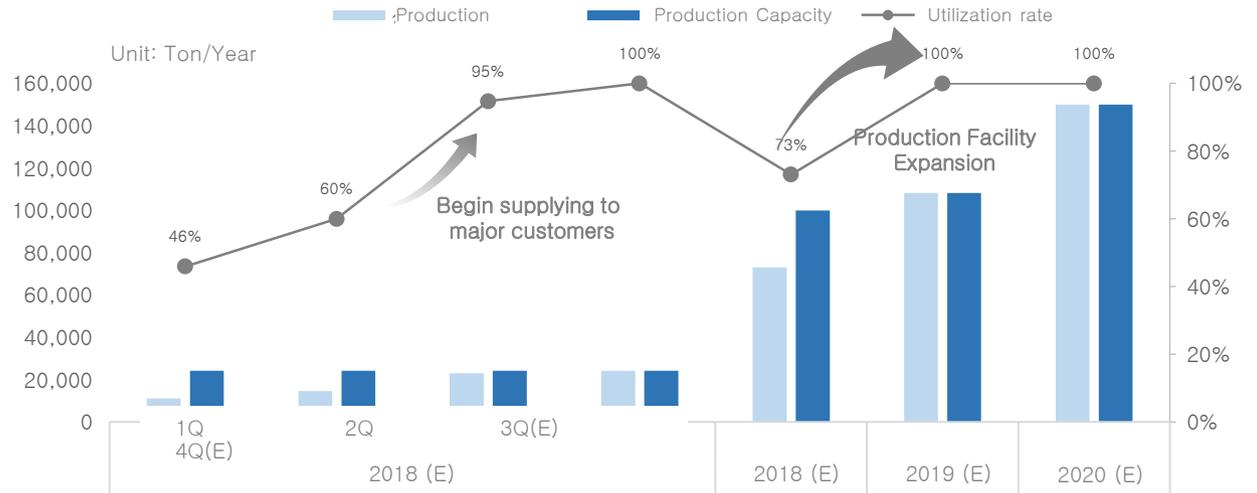


# 4. Hyundai OCI - Subsidiary

## Overview

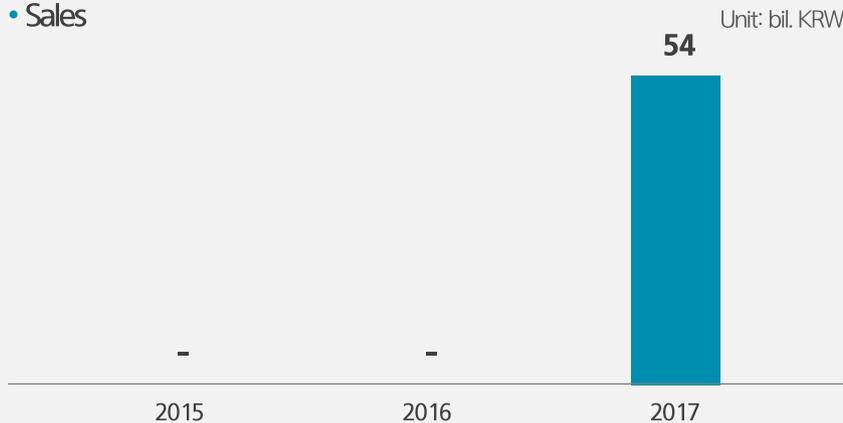
- Established: 2016. 02. 17
- Capital: 104 bil. KRW (2017)
- Major Business: Carbon black production
- Production Capacity: Carbon black 100K Ton/Year  
Benzene 45K Ton/Year
- Number of Employees: 97

## Production Status & Forecast

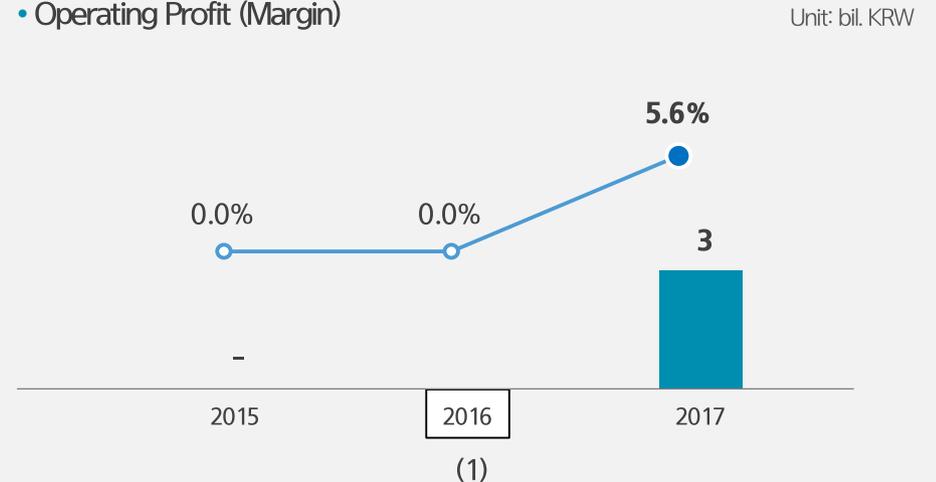


## Sales & Operating Profit

### • Sales



### • Operating Profit (Margin)



Note: HOC began supplying to major customers between June and July of 2018  
Expansion (50K Ton/Year) began in 2018.08 and is expected to be completed in 2019.11; production capacity reflects this expansion

# 5. 2018 Major Capital Expenditure

## 2018 Major Capital Expenditure

**CDU/HCR/DCU Revamp**

```

graph LR
    CDU[CDU: 431 → 520 KB/D] --> Residue((Residue))
    Residue --> HCR[HCR: 42 → 50 KB/D]
    Residue --> DCU[DCU: 36.5 → 50 KB/D]
            
```

- Total Investments : 230 bil. KRW
- Expected Benefits (September 2018)
  - Increase feedstock capacity
  - Increase light oil (Jet Fuel, Diesel) yield

**SDA (Solvent-De-Asphalt) Construction**

```

graph LR
    Residue((Residue)) --> SDA[SDA]
    SDA --> MHC[MHC (Mild Hydrocracker)]
            
```

- Total Investments : 200 bil. KRW
- Expected Improvements (September 2018)
  - Cut costs by increasing input of low-price crude
  - Conversion of ARDS process to MHC process

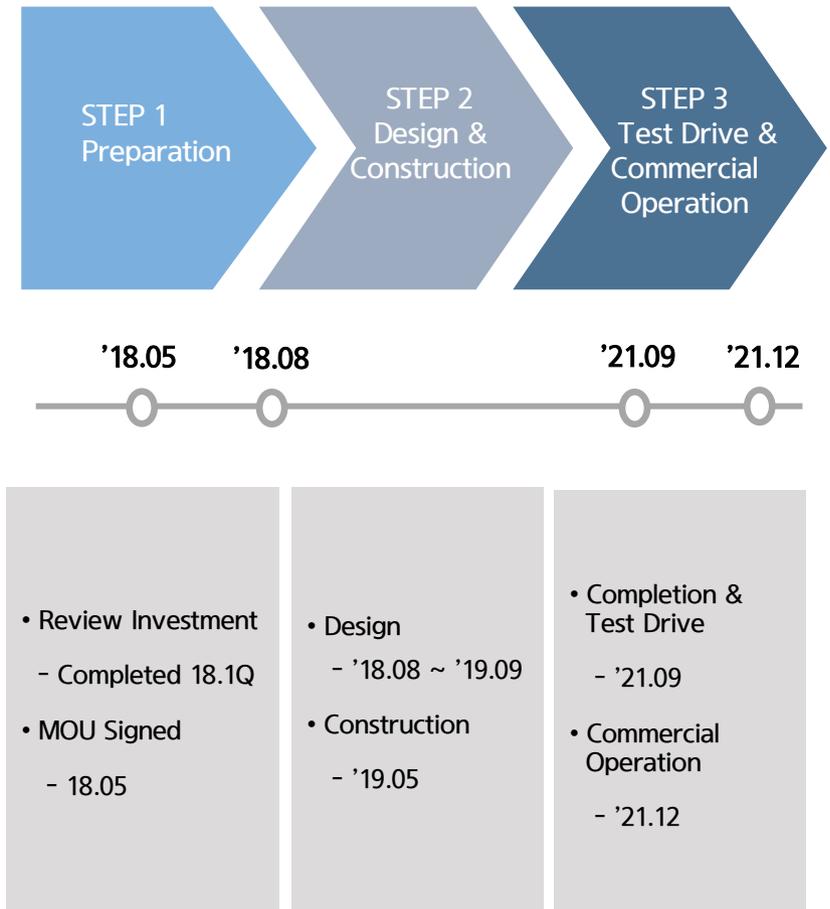
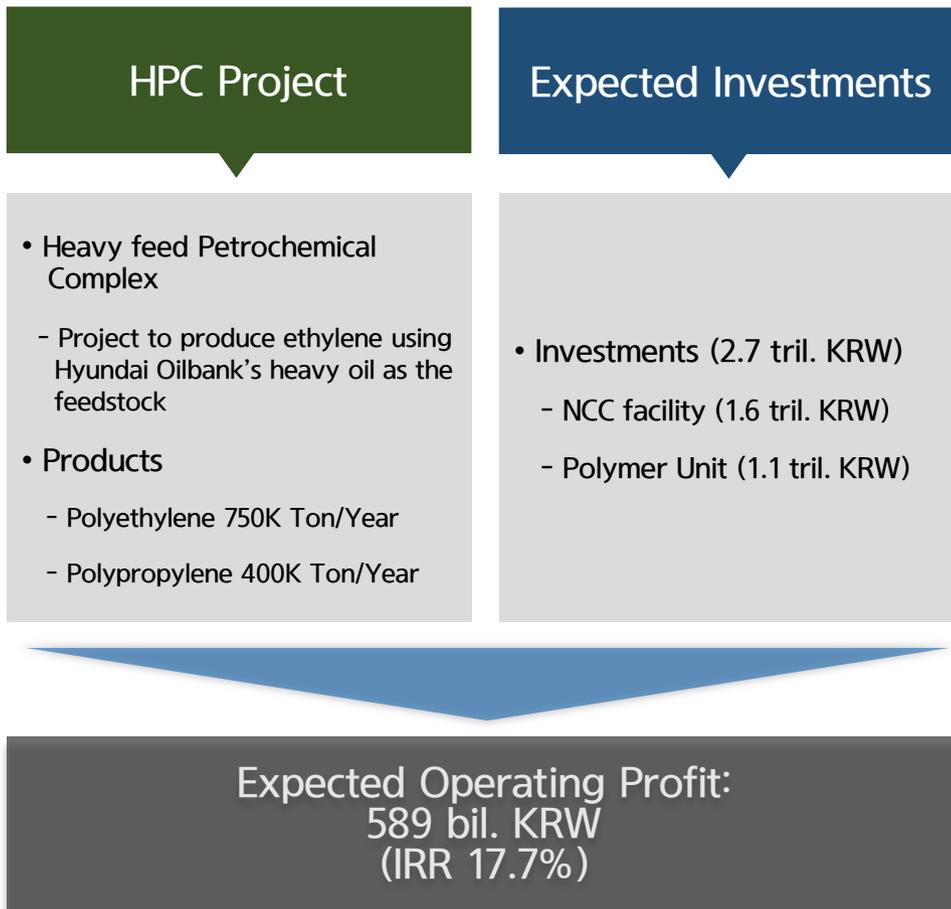
**Carbon Black, LBO Revamp**

```

graph LR
    CB[Carbon Black: 100K Ton/Year → 150K Ton/Year] --> LBO[LBO: 20 KB/D → 25 KB/D]
            
```

- Total Investments : 80 bil. KRW
- Expected Improvements
  - Increase carbon black production by 50K ton (2019)
  - Increase base oil production by 5 KB/D (Sep. 2018)

# 5. Investment Plan : HPC



# Hyundai Global Service

1. Company Introduction
2. Corporate History
3. Business Profile
4. Market Trends
5. Business Strategy
6. Financial Performance
7. 2018 Management Plan
8. Mid-term Business Plan

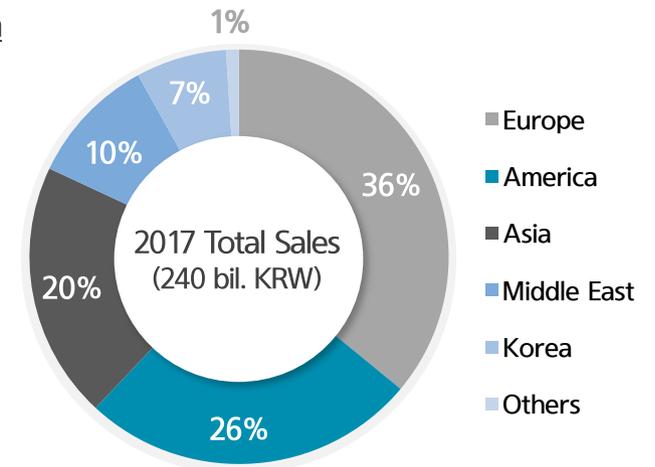
# 1. Company Introduction

## General Information

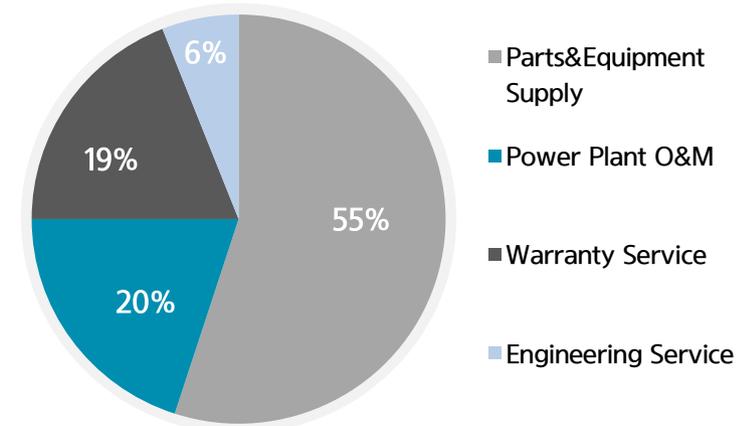
Company's Name	Hyundai Global Service Co., Ltd.
CEO	Ki Sun Jeong Kwang Hean An
Establishment Date	Nov. 2016 (Ship A/S center : Jan. 2015)
Capital	20billion KRW (As of December 31, 2017)
Number of Employee	274 (As of December 31, 2017)
Main Business	Service Business Related to Vessel & Power Plant
Location	Centum Science Park, 79, Centum jungang-ro Haeundae-gu, Busan 48058, Korea
Home Page	<a href="http://www.hyundai-gs.com">http://www.hyundai-gs.com</a>

## Sales Revenue (2017)

### • Sales by Region



### • Sales by Division



Note 1 : Consolidated basis

## 2. Corporate History



- Jan. 1995
  - Launched LTS (Life Time Service) Business (HHI Maritime A/S Dept.)

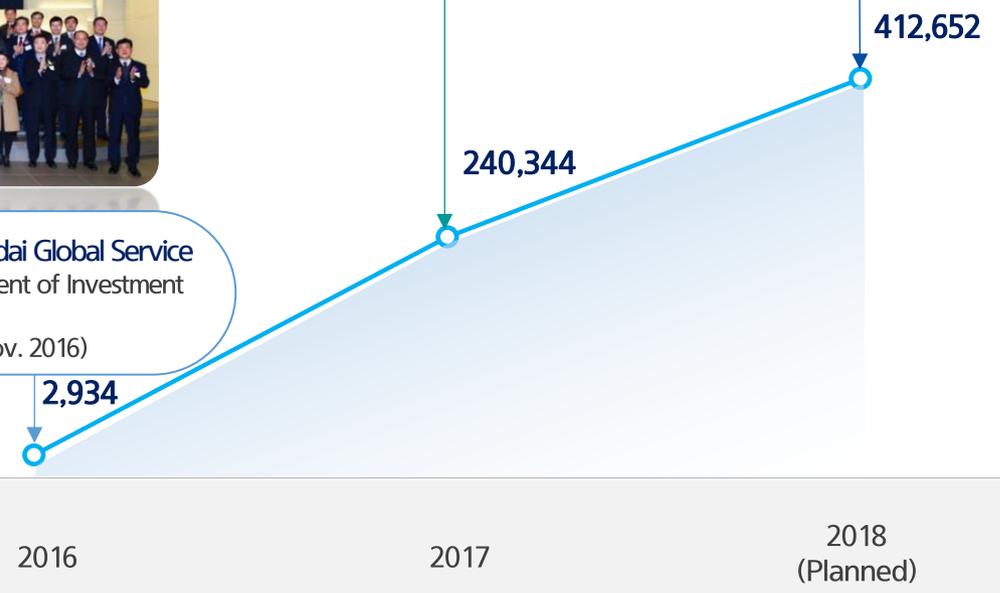
- Jan. 2015
  - Launched Integrated Maritime A/S Center in HHI Group



- 2016
  - Incorporation of Hyundai Global Service
    - Signed MOU Agreement of Investment with Pusan City
    - Incorporated HGS (Nov. 2016)

- 2017
  - Global Network Expansion
    - Acquired HGS Europe
    - Incorporated HGS Americas / Singapore
  - Acquisition of DNV-GL ISO 9001:2015 Certification

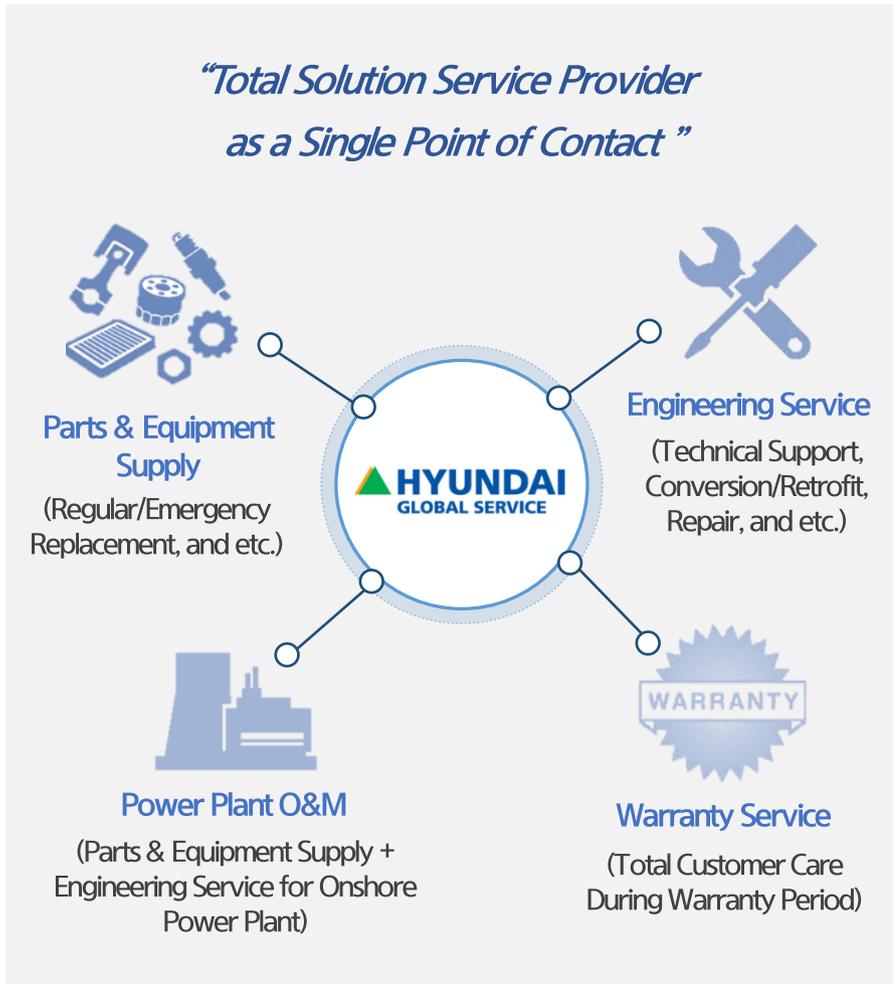
- 2018
  - Early Achievement of 100 mil. USD Order Contracts of Eco-Friendly Business (125 mil. USD in 1st half)
  - Incorporation of HGS Colombia (Planned)
  - Acquisition of DNV-GL ISO 14001:2015 Certification



Sales (Unit : mil. KRW)	2016	2017	2018 (Planned)
	2,934	240,344	412,652

### 3. Business Profile

#### Main Business



#### Group Synergy

<b>HHI Group Built Ships</b>	<b>14% Market Share of Global Operating Ships</b> Customer’s Value Oriented in Hyundai Brand Power
<b>2-Stroke Engines (HHI Produced)</b>	<b>24% Market Share of Global 2-Stroke Engines</b> Aftermarket Business Privilege Given from Licensors (by Contract)
<b>4-Stroke Engines (HiMSEN, HHI Licensed)</b>	<b>Cumulative Production Records → Total 10,986 Units</b> Sole Provider of Aftermarket Service (Spare Parts, Engineering, and etc.)



*“HGS was Spun off in 2017 from HHI to Exclusively Focus on Service Business Areas (High Growth Expected)”*

- ※ Cumulative Shipbuilding and Engine Production Records in 2017 (HHI Group)
  - Cumulative Shipbuilding : 3,117 Units
  - Cumulative 2-Stroke Engine Production : 4,030 Units

## 3. Business Profile

### Business in Detail



#### Parts & Equipment Supply

- *A Wide Range of Marine Spare Parts Supply for Customers (Regular / Emergency)*

- Engine Spare Parts
  - 2-Stroke Engine
  - 4-Stroke Engine
  - Turbocharger
- Auxiliary Machinery Spare Parts
  - Marine Pump / Steam Turbine
  - Submerged Cargo Pump
  - Side Thruster
- Vessel Propeller & Shaft
- Outfitting Parts
  - Valve & Pipe
  - Navigation
- Electrical Equipment Spare Parts
  - AMS, PMS (ACONIS)
  - Switch Board & Panel
  - Circuit Breaker
  - Sensor
- Eco-Machinery Parts
  - FGSS : Vaporizer, Heat Exchanger
  - SCR : Urea Dosing & Supply Unit
  - BWTS : Neutralization Unit, UV Lamp
- Reconditioning Service
  - Reconditioning for Core Parts



#### Engineering Service

- *Providing Entire Life Time Service from Delivery of Ships to Scrapping*

- Cost Saving & Energy Efficient Solutions
  - Bulbous Bow Retrofit
  - Propeller Re-design (Energy Saving Device)
  - Trim Optimization for Vessels
  - Slow Steaming for Engine
- Eco-Friendly Operations
  - BWTS Retrofit
  - SOx Regulation : Scrubber, ME-GI, DF Engine retrofit
  - NOx Regulation : NOx Measurement, SCR Retrofit
  - Retrofit for New Panama Canal Requirement
- Technical Support
  - Structure Analysis
  - Vibration Measurement
  - Repair Plan for Hull Damages
  - Damage Stability Calculation
- Maintenance Support
  - Engine, Side Thruster, COP System, Switch Board
  - Emergency Support & Trouble Shooting
  - Dry Docking Service
  - Service Engineer Dispatch & Consulting
- Bunkering
  - Fuel Oil Supply for Vessels (HFO, MGO, MDO, LSFO)



#### Power Plant O&M

- *O&M Service Provision For Customers to Keep the Plant Safe and to Maintain Efficient Condition*

- Engine & Aux. Equipment Parts Sales
  - Boiler
  - Air Compressor
  - Air Starter
  - Purifier
  - HiMSEN Engine parts
  - Turbo Charger
- Power Plant Warranty Service
  - 2/4-Stroke Engine Warranty Service
  - Emergency A/S Repair Service
  - Technical Support Service
- Operation & Maintenance (O&M)
  - Engine & Aux. Machinery Operation
  - Scheduled Maintenance
  - Professional Training for Local Engineers
  - Management for Major Defects
  - Supervision of Local Engineer Operation
  - Trouble Shooting & Report



#### Warranty Service

- *Providing Total Customer Care Services during Warranty Period for Ships Built by the World's Best Shipyard (HHI Group)*

- HHI Group Shipyards Warranty Service
  - Warranty Service for the Vessels Built by Hyundai Heavy Industries (HHI), Hyundai Samho Heavy Industries (HSHI), Hyundai Mipo Dockyard (HMD)
  - Drillship/FPSO/LNG/PCC/Tanker/Container Claim Management & Support
- Feedback Service
  - Service Engineer Dispatch & Consulting
  - Root Cause Analysis
  - Risk Management & Technical Support
- Life Time Service
  - Post Warranty Service (Parts Supply & Engineering Service)
  - Providing Certificates and Information for Vessels

Outline

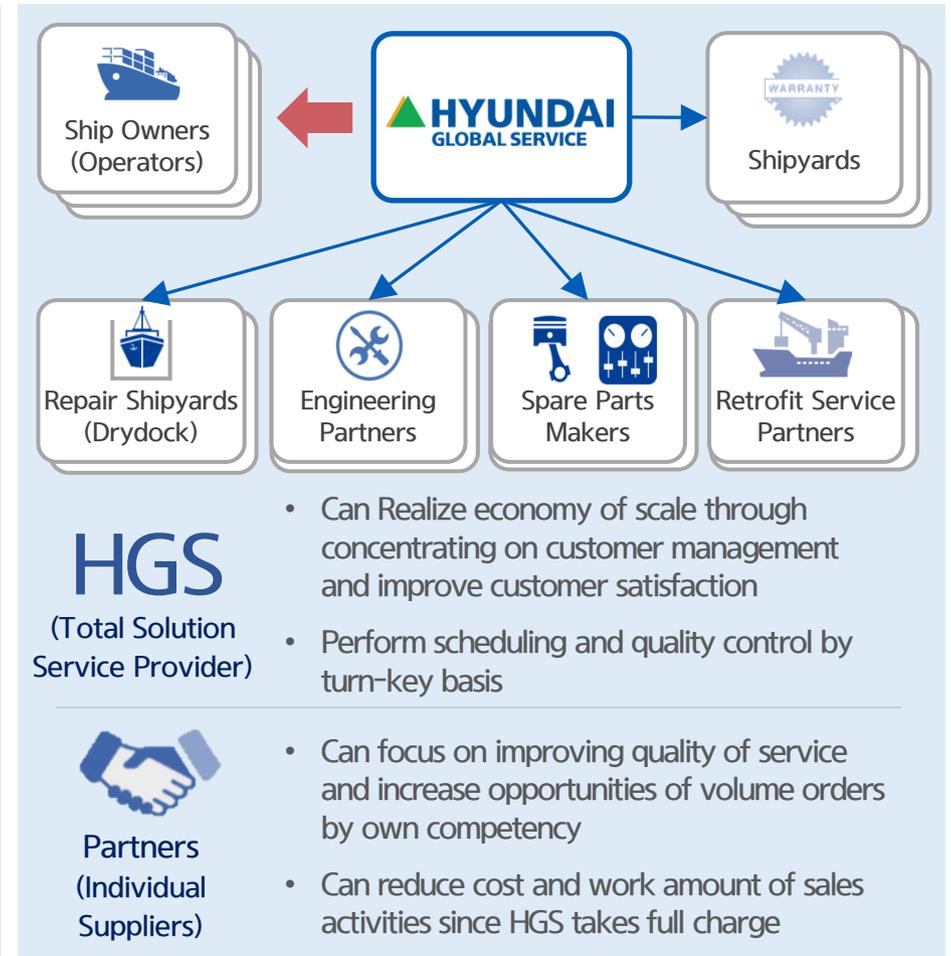
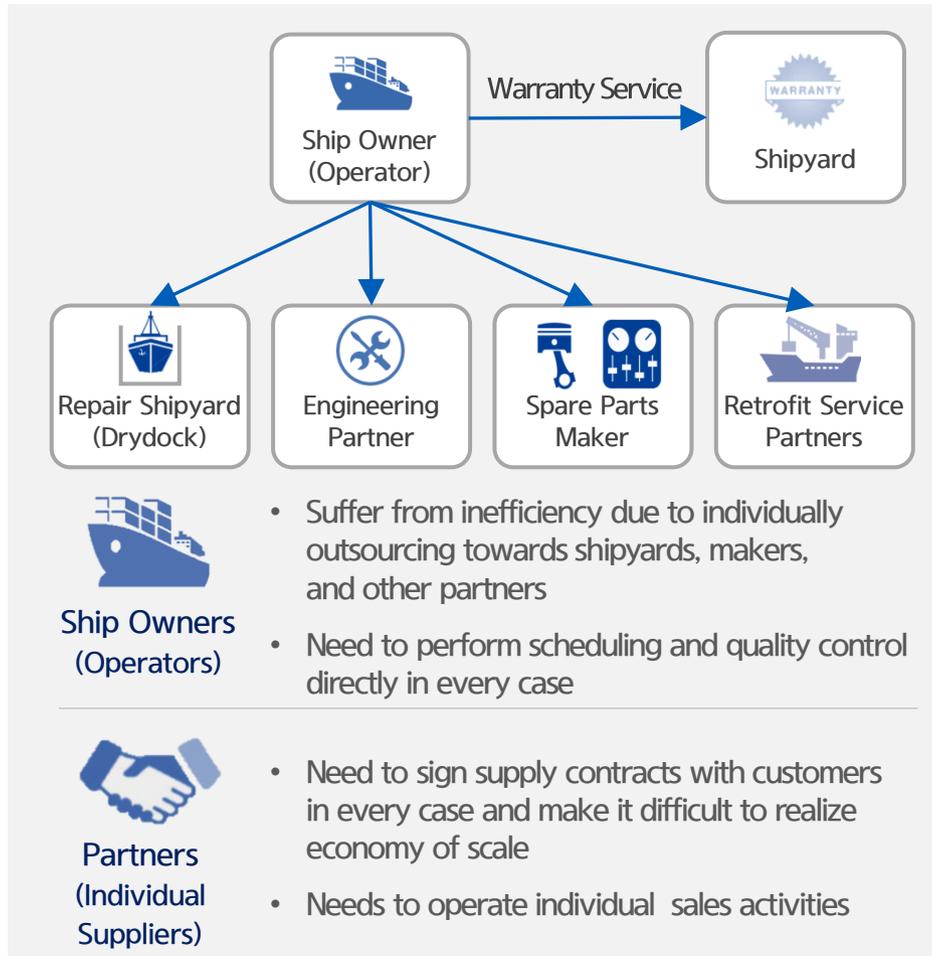
Details

### 3. Business Profile

#### <AS-IS> Individual Outsourcing Model



#### <TO-BE> Total Solution Service Model



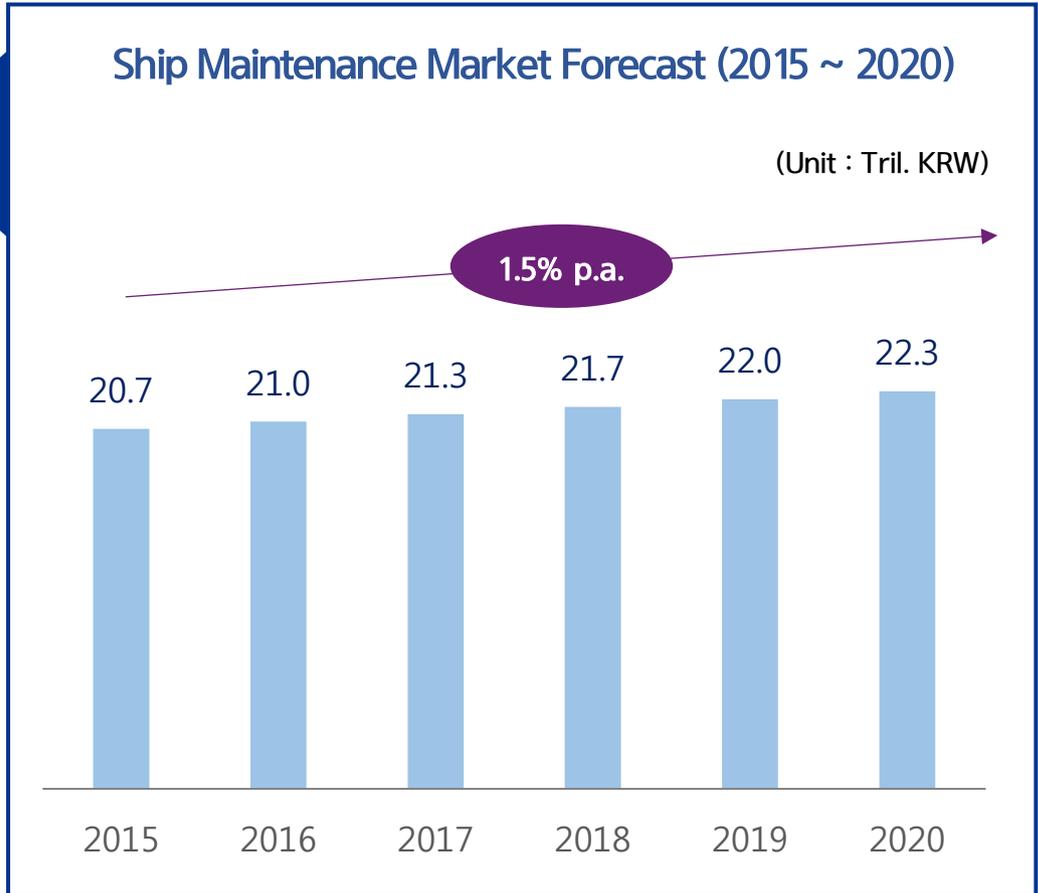
## 4. Market Trends

### Solid Growth of Ship Maintenance Market



Richard Sadler  
前 CEO, Lloyds Register

“ Korean shipyards have *neglected ship maintenance market* despite of their competence in technology...  
 ...*only concentrate on warranty service* which is a very small part compared to 20~25 years of vessel's life in average  
 Despite of market's slump of shipbuilding industry, they need to invest for service business ...  
 ...Ship maintenance market could be a business that has a future for the next 30 years at least ”

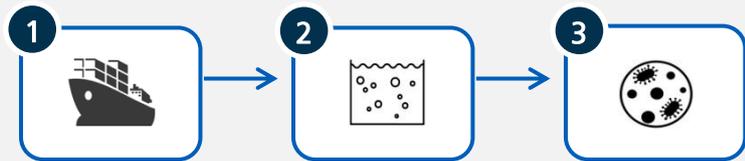


Source : Euro Monitor

## 4. Market Trends ①

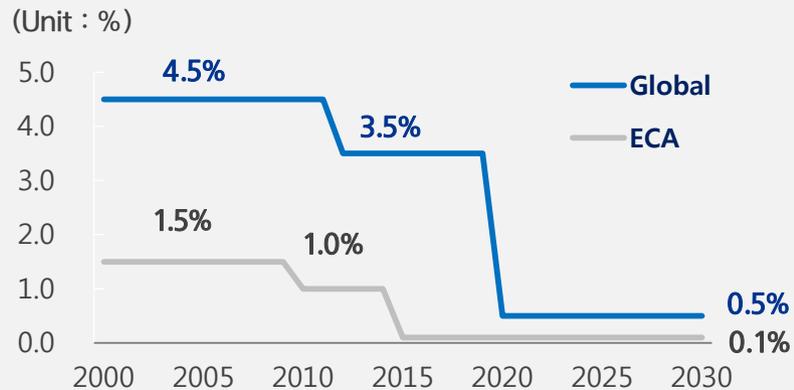
### Rapid Growth of Eco-friendly Retrofit Market

#### [Background of BWTS Mandatory : USCG / IMO]



- Larger scale vessels preferred
- Increased trade through economic development
- Significant amount of transfer of marine species carried in vessels' ballast water
- Non-native species could devastate the ecosystem
- Death of Native species because of bacteria

#### [Environmental Regulation Plan for SOx : IMO]



#### “Market Size is Expected to Grow Significantly until 2021 ”

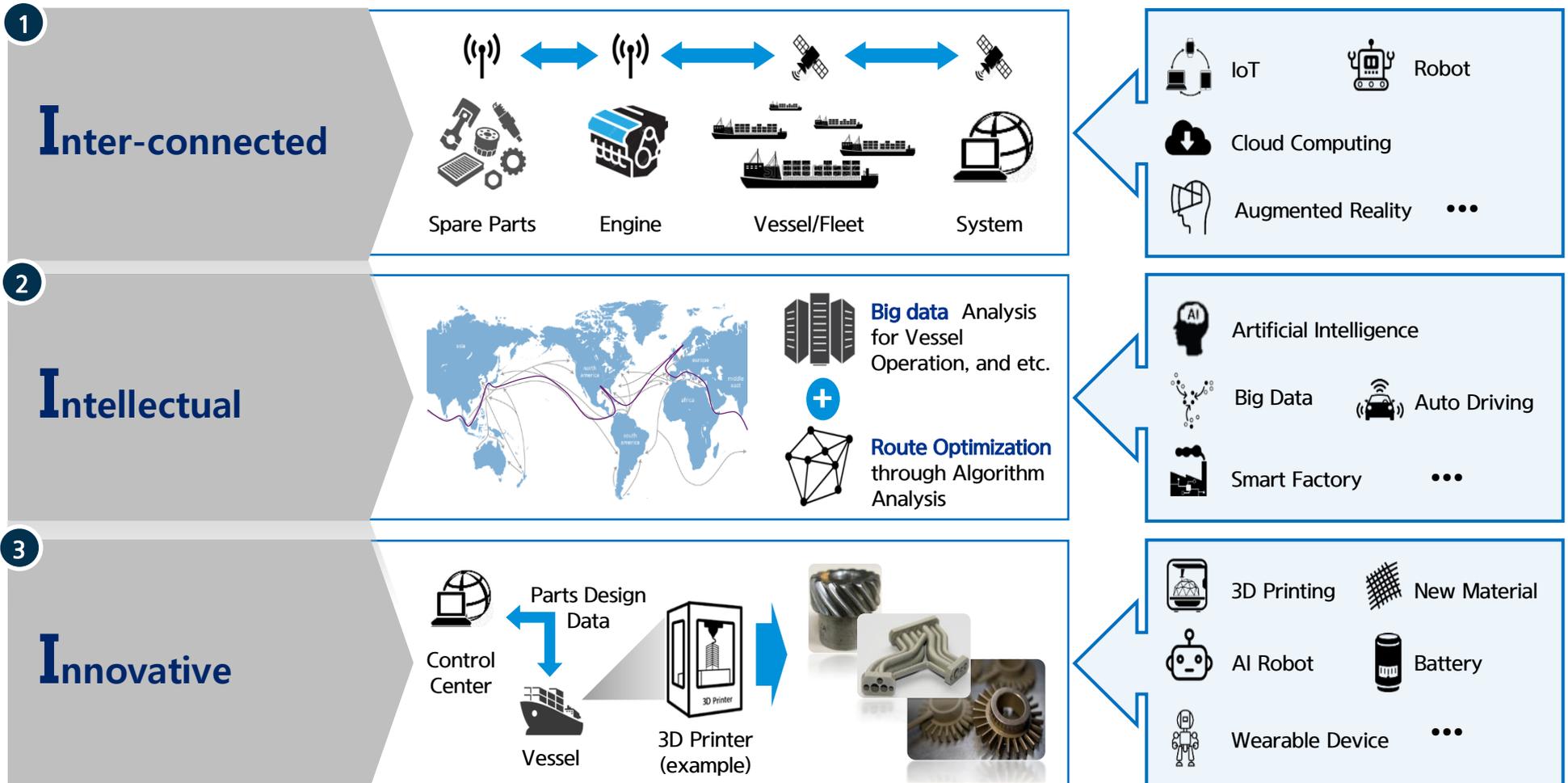
(Unit : bil. USD)



Source : IMO,  
 QYR Machinery & Equipment Research Center, 2016  
 Visiongain, The Ballast Water Treatment System Market 2012~2022

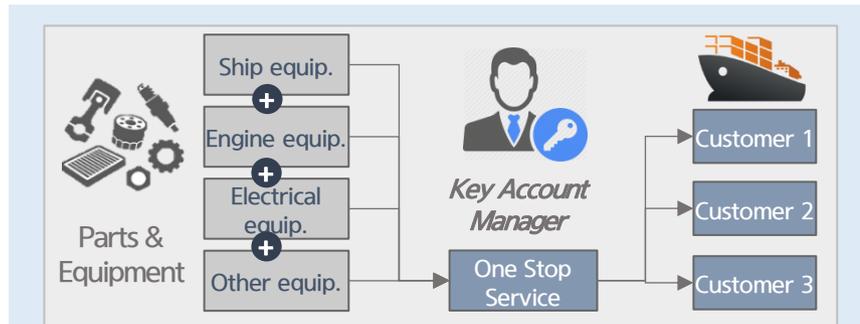
# 4. Market Trends ②

## Change of Paradigm through Innovative Technology



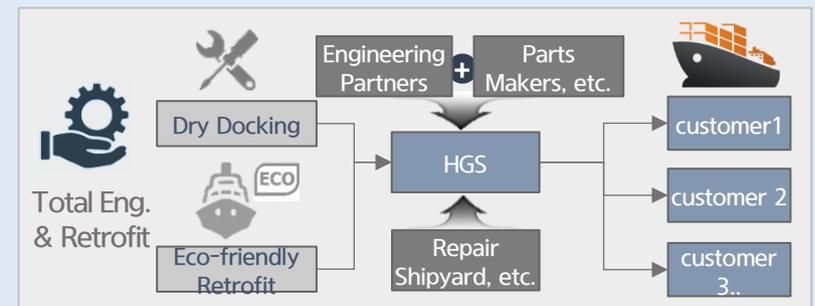
## 5. Business Strategy ① - One Stop Service (OSS)

### Unification of Parts & Equipment Supply Channel



- Key Account Manager(KAM) : Provide various parts and equipment in package units by unification the sales channels of customer
  - Building a virtuous cycle that leads to increased sales by reflecting VOC that KAM heard in equipment development
- Conducting local sales channels by expanding overseas sales and logistics bases and Building differentiated Supply Chain Management system
- Efficient Stock management through demand predictive analytics by instituting and applying Big-Data Solution → focus on business capabilities and strengthen delivery competitiveness

### Turn-key Service Business (Engineering Service)

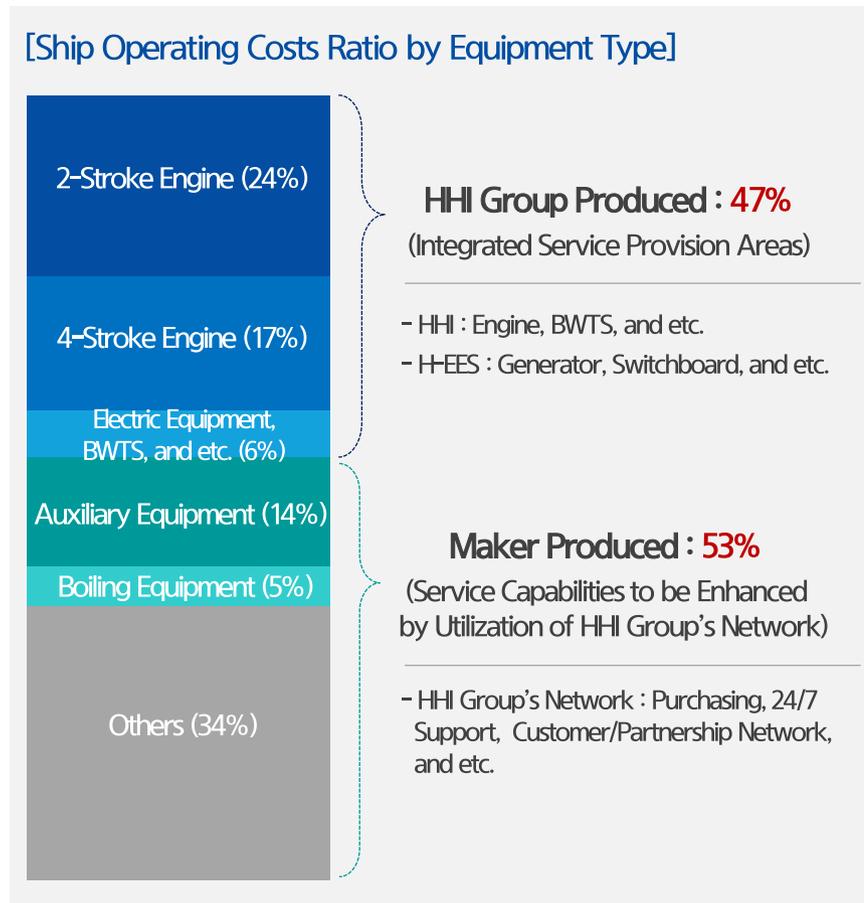


- Targeting Dry Docking service market where massive maintenance occurs because of Turn-key based business founded on Engineering business capabilities and technology service market that is constantly occurring during ship operations and anchorage.
  - Increase service capabilities by using HHI group built ship's floor plan and engineer
  - Establish business cooperation relations with Domestic and international Repair shipyard and repair partners.
- HGS has sales authority of eco-friendly equipment Retrofit such as Hi-Ballast, Hyundai Scrubber and etc.
  - Enable active response to Demand of BWTS and Scrubber Retrofit because of International environment regulation on emission of Ballast water and SOx

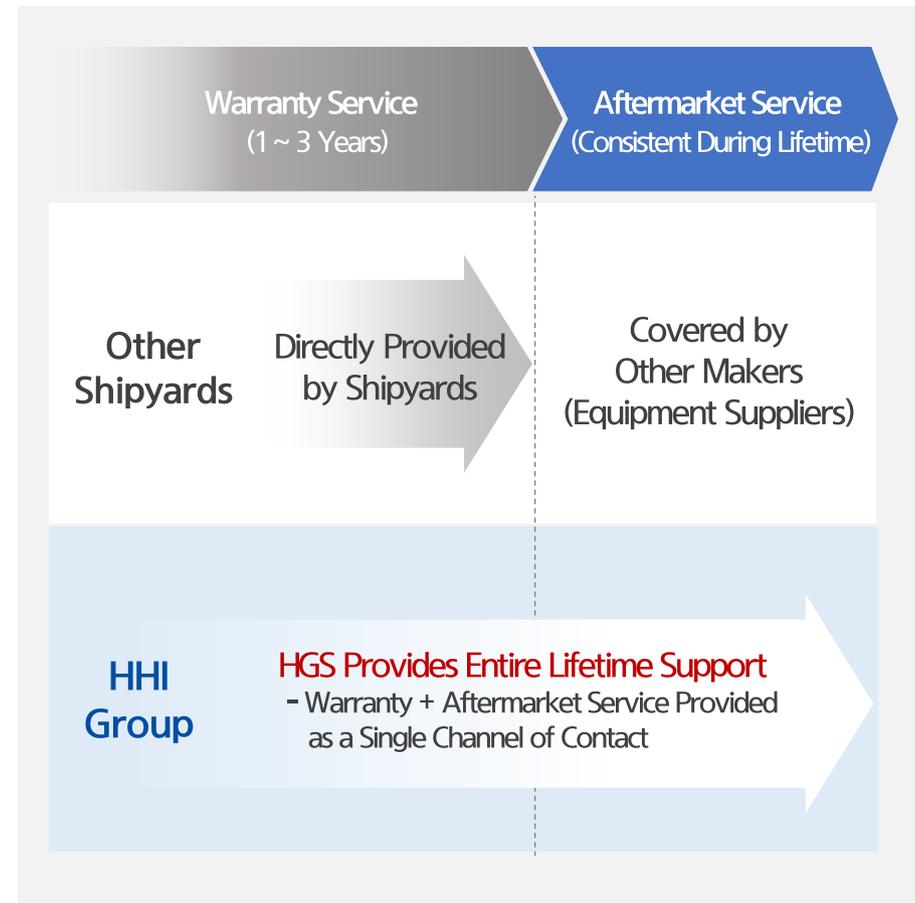
*“Expand new business horizon  
with differentiated service & engineering capabilities”*

## 5. Business Strategy ② - Lite Time Service (LTS)

### Integrated Service Business (Parts & Equipment Supply + Maintenance)



### Differentiated Lifetime Support : Flow Map (Below)

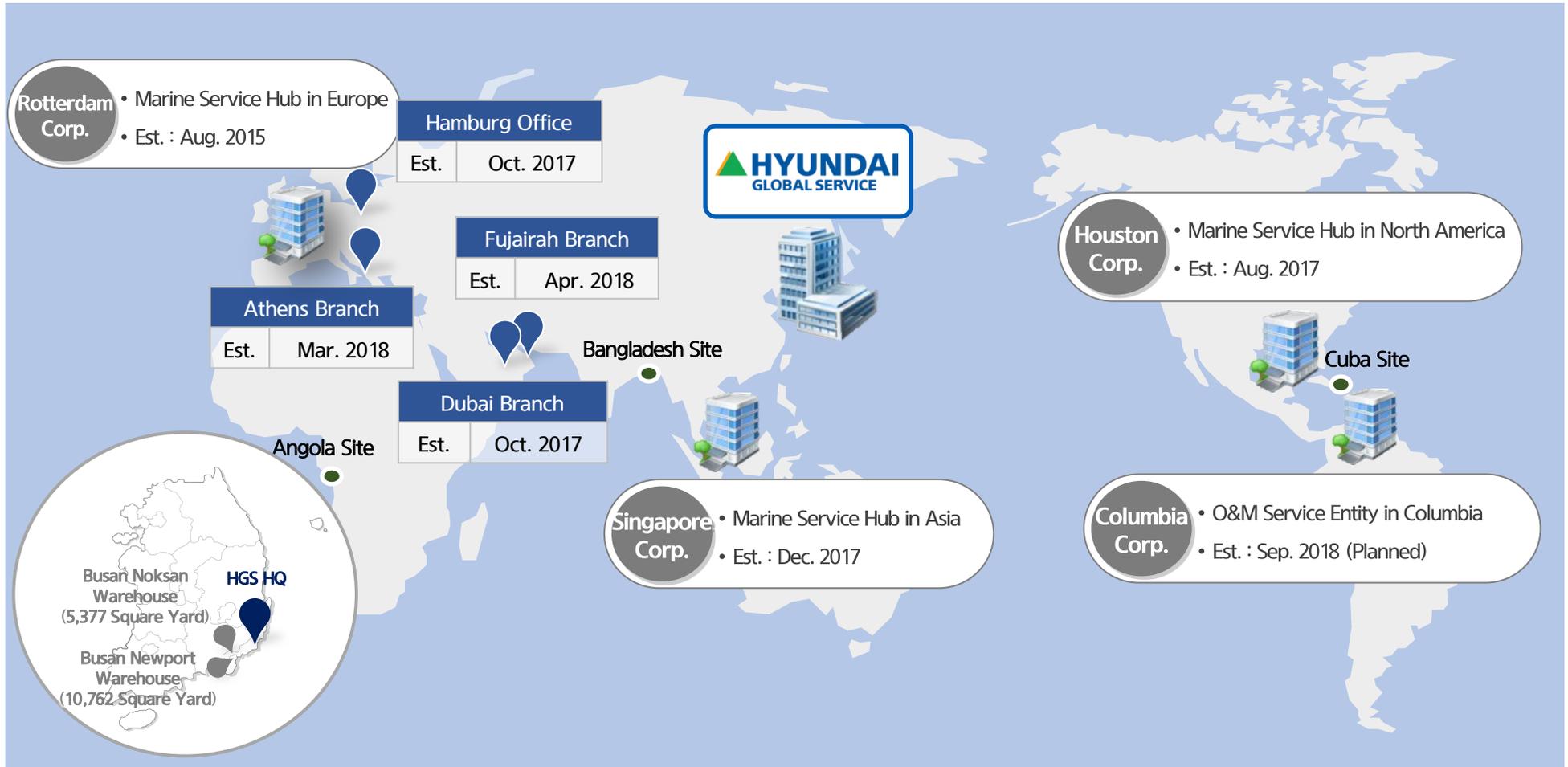


Source : Ship Operating Costs 2017/18, Drewry Reports

※ Parts & Equipment Supply and Maintenance Costs, VLCC Over 300 DWT)

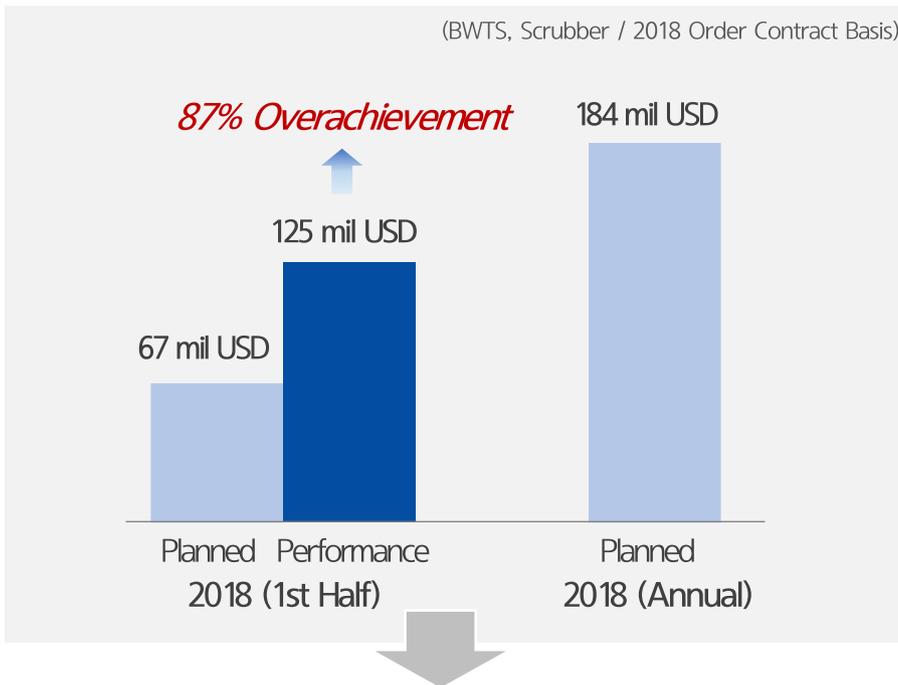
## 5. Business Strategy ③ - Global Network Expansion

### Overseas Network Plan in 2018 (4 Corporations + 3 Branches + 1 Office)



*“In order to maximize customer response capability, HGS continues expanding its global network and service coverage in every corner of service needs”*

### Eco-friendly Retrofit Business Performance



- Posses retrofit business rights within HHI group
- Enhances client’s credibility with “Hyundai” brand
- Secures technical capabilities with shipbuilding floor plan/design and skilled engineers of HHI group

### Competency of HGS in Retrofit Business

- #### 1 Sole Retrofit Service Provider within HHI group

  - Exclusive retrofit sales rights given for internally developed/designed BWTS, Scrubber (by HHI Group)
  - Superiority in delivery time and price (Target price compared to competitors : BWTS 90% / Scrubber 75%)
- #### 2 Capabilities to Secure Quick Reference

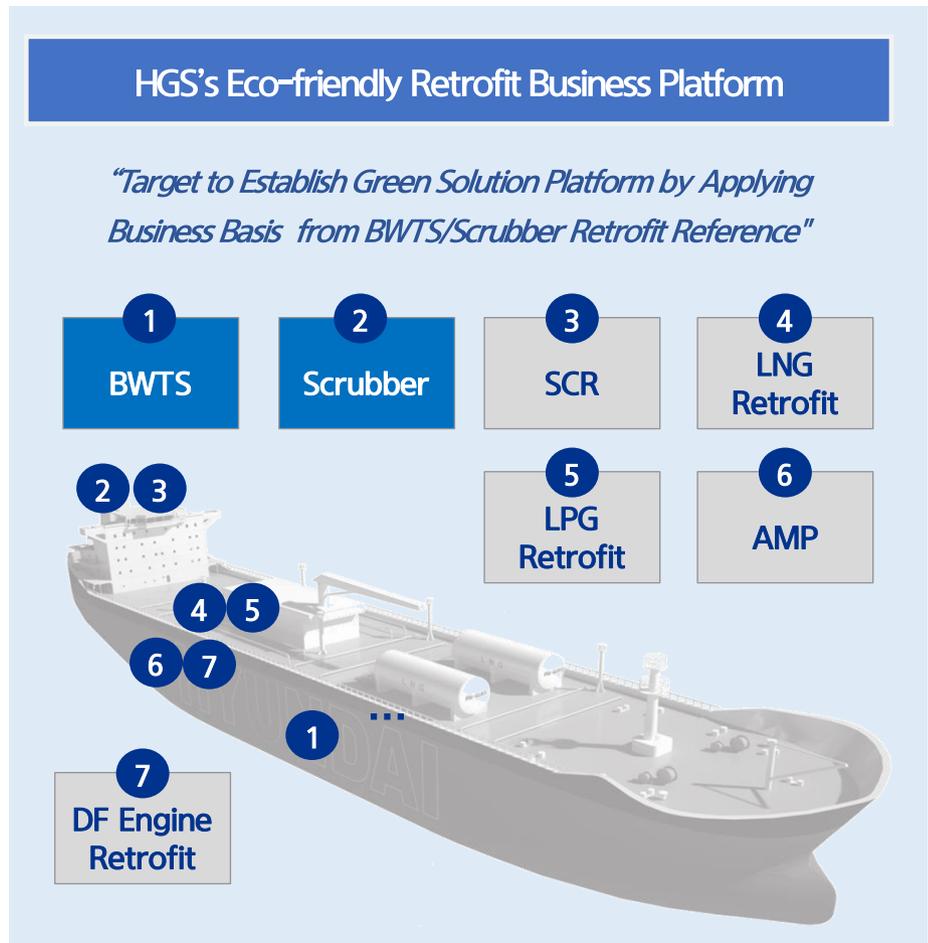
  - All kinds of shipbuilding floor plan, designs, engineers from HHI Group can be supported to respond customer needs
- #### 3 Customer’s Credibility with “Hyundai” brand name

  - Customer’s credibility with the name of the world’s best shipyard, HHI Group
  - Guaranteed service from HGS, as a “Total Solution Service Provider”

## 5. Business Strategy ④ - Future Business : Green Solution

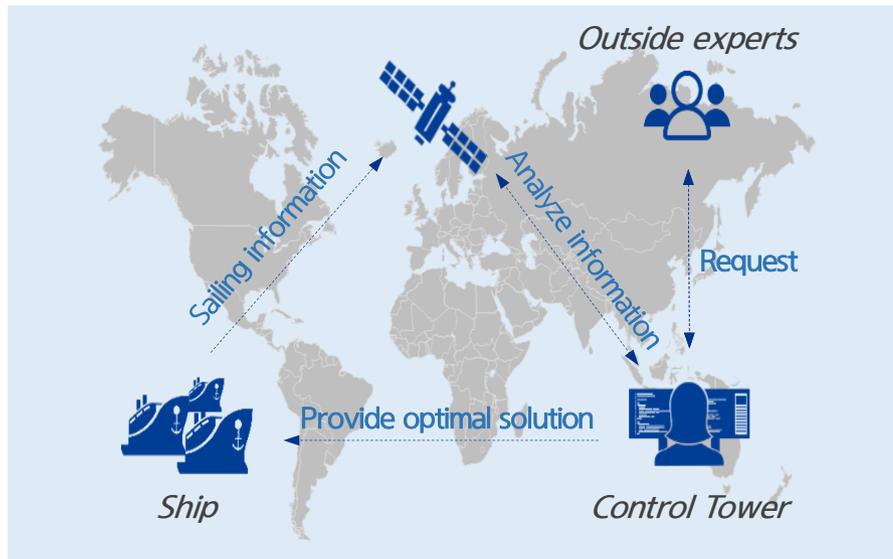
### “Total Green Solution Provider”

Eco-friendly Regulations		HGS's Suggestions		
Emission Regulation	Sulfur Oxides (SOx)	Scrubber Retrofit	LNG / LPG / DF Retrofit	MDO / MGO / LSFO Bunkering
	Nitrogen Oxides (NOx)	SCR Retrofit		
	Particular Matter/ Carbon	AMP Retrofit		
Energy Efficiency Improvement	Integrated Smartship Solution			
Ballast Water Regulation	BWTS Retrofit			



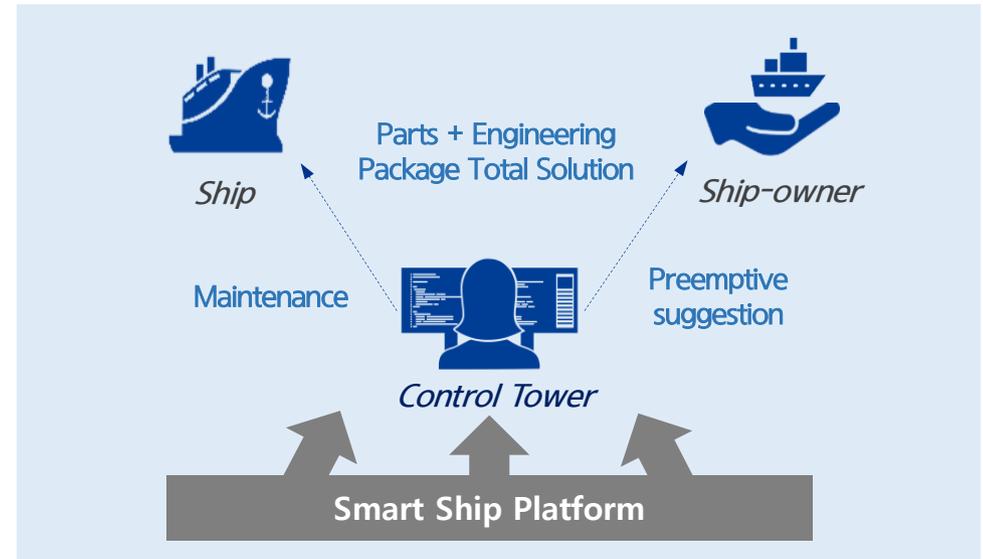
## 5. Business Strategy ⑤ - New Business (Digital Transformation)

### Improving Efficiency of Ship Operation



- Real-time Monitoring of Ship's Route Information
- Providing Best Solution by Analyzing Collected Information

### Improving Efficiency of Ship Maintenance



- Reduce the cost of A/S and speed up by using collected information
- Provide remote diagnose service by establishing on-land monitoring center (2<sup>nd</sup> half)

#### ISS

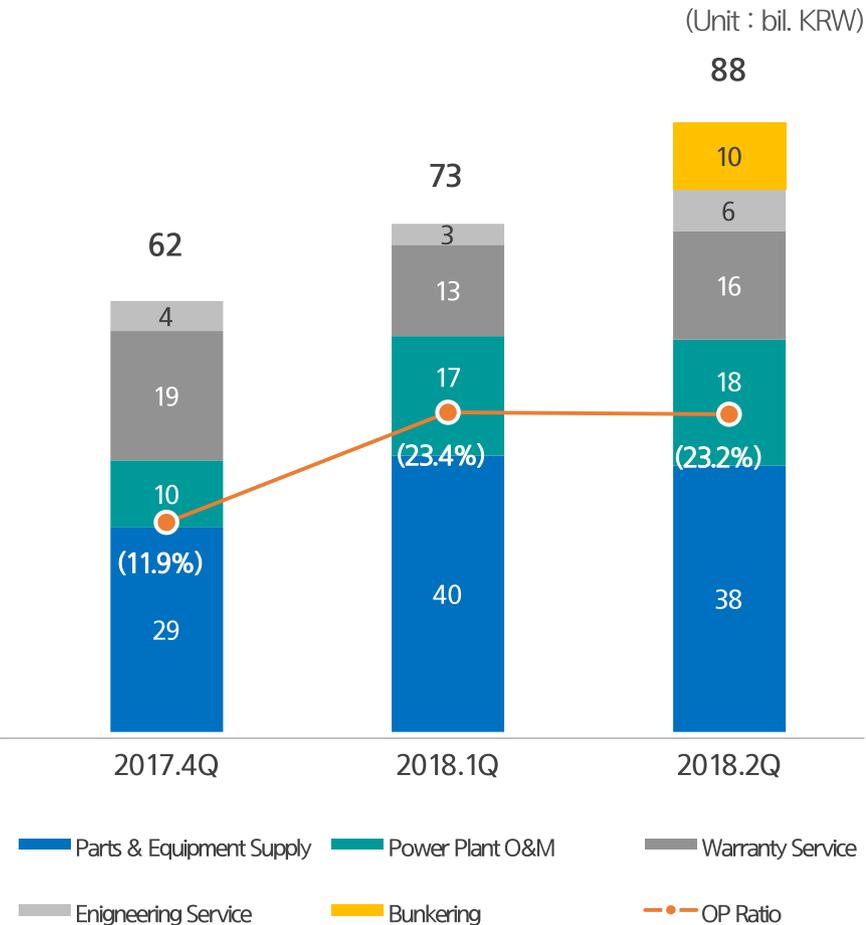
- Monitoring sailing condition
- Optimization alarm system
- Real-time analysis

- ISS(Integrated Smartship Solution) : Efficient operation and fleet management solution
- Planning for aggressive marketing with ISS which connects whole equipment
- Especially, 4-stroke engine is linked to Hi-EMS(Hyundai Intelligent Engine Monitoring System)



## 6. Financial Performance

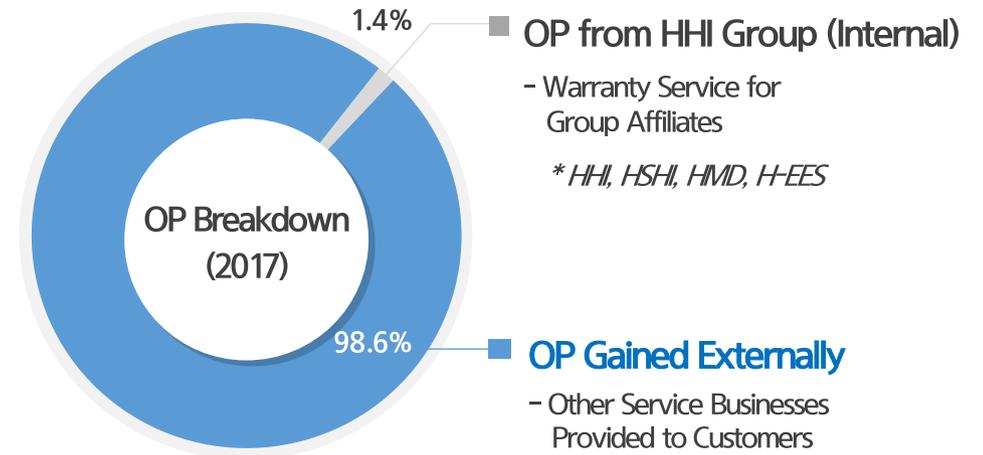
### 2018. 2Q Performance (Sales, OP)



Note1 : '17. 4Q, Non-consolidated basis  
 Note2 : '18.1Q / 2Q, Consolidated basis

### OP Breakdown

*“High Margin Comes from Customer Satisfaction”*

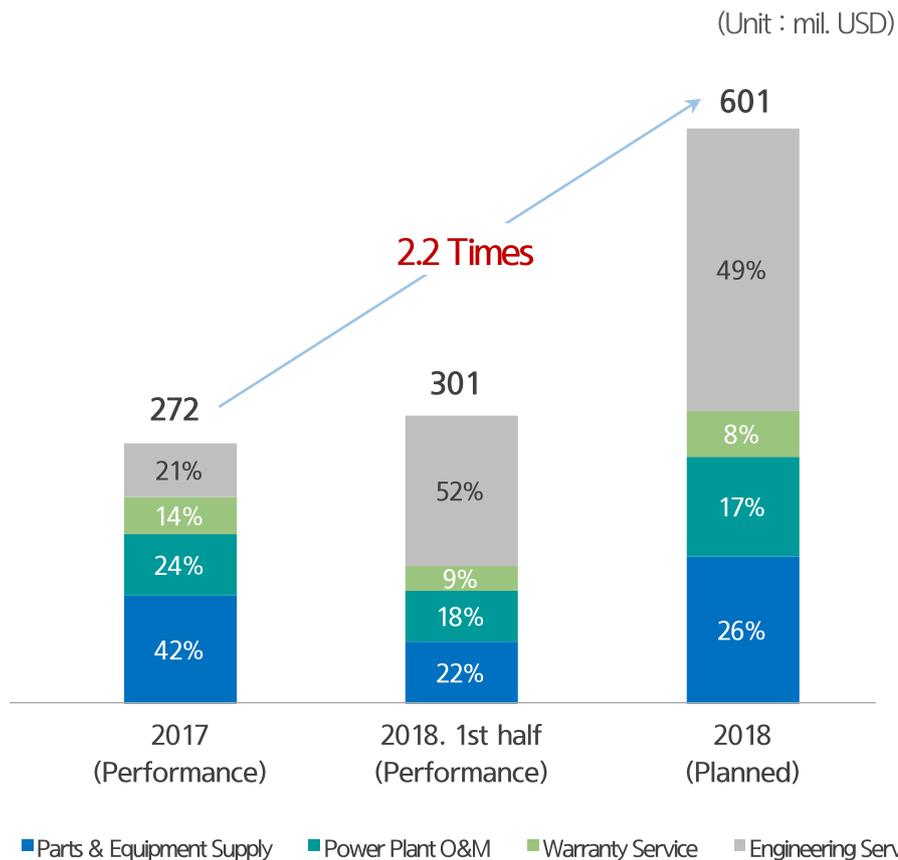


- 2017 Market Capitalization of Wartsila (Global Leading Service Company)  
 → **13.7 trillion KRW** (Sales 6 tril, OP 0.7 tril, PER 27 times)

Source : 2017 Consolidated F/S

## 7. 2018 Business Plan

### 2018 New Orders Target (YoY)



Note 1 : Consolidated basis (Bunkering Business Performance Included in Engineering Service)

### 2018 Major Order Contacts by Project

- **Engineering Service – BWTS / Scrubber Retrofit**

- International Seaways BWTS Retrofit
- Doun Kisen KK Scrubber Retrofit
- OSIL Scrubber Retrofit, and etc.

- **Technical Service - Others**

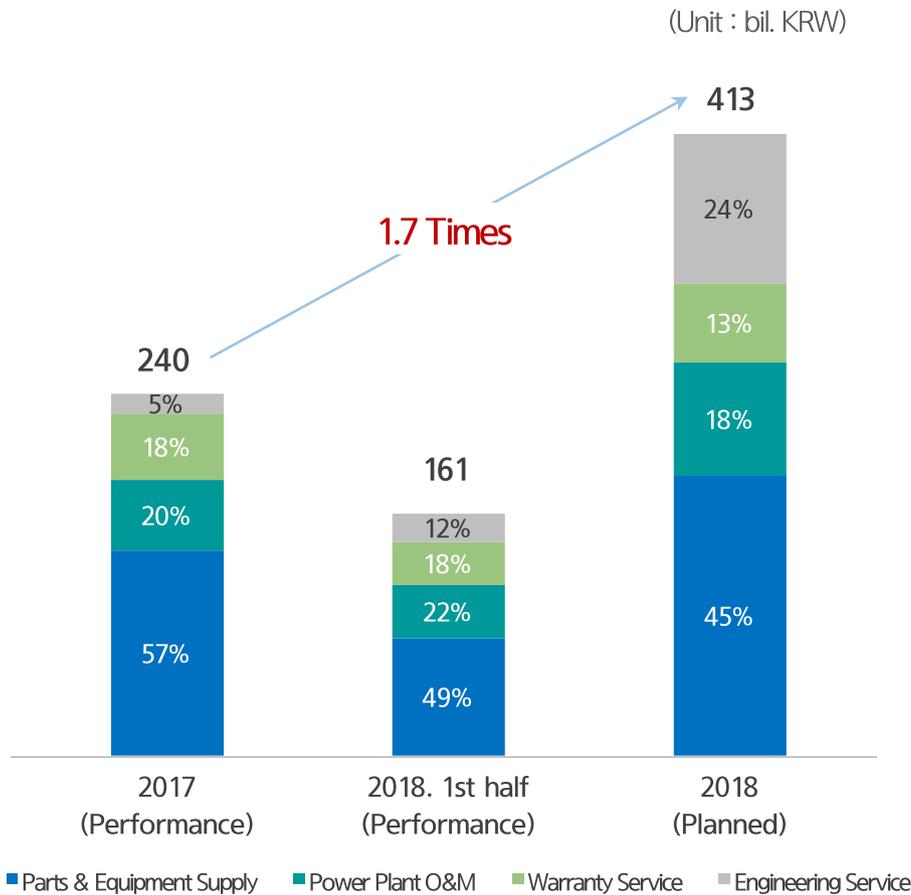
- CMA CGM社 HiMSEN Engine Maintenance (Regular)
- UASC社 AMP Retrofit
- Propeller / Side Thruster Maintenance, and etc.

- **Onshore Power Plant O&M**

- Cuba Power Plant Site : Spare Parts Supply (Regular)
- Brazil Power Plant Site : Spare Parts Supply (Regular)
- Columbia Power Plant Site : Full O&M (5 years), and etc.

## 7. 2018 Business Plan

### 2018 Sales Target (YoY)



Note 1 : Consolidated basis (Bunkering Business Performance Included in Engineering Service)

### Plan for Achieving Sales Target in 2018

#### • Engineering Service

- Establish fast response systems to meet diverse customer needs by building global clusters (local service partners, drydocks, and etc.)
- Enhance engineering service competence and draw customer's attention by operating local workshop and global academy

#### • Onshore Power Plant O&M

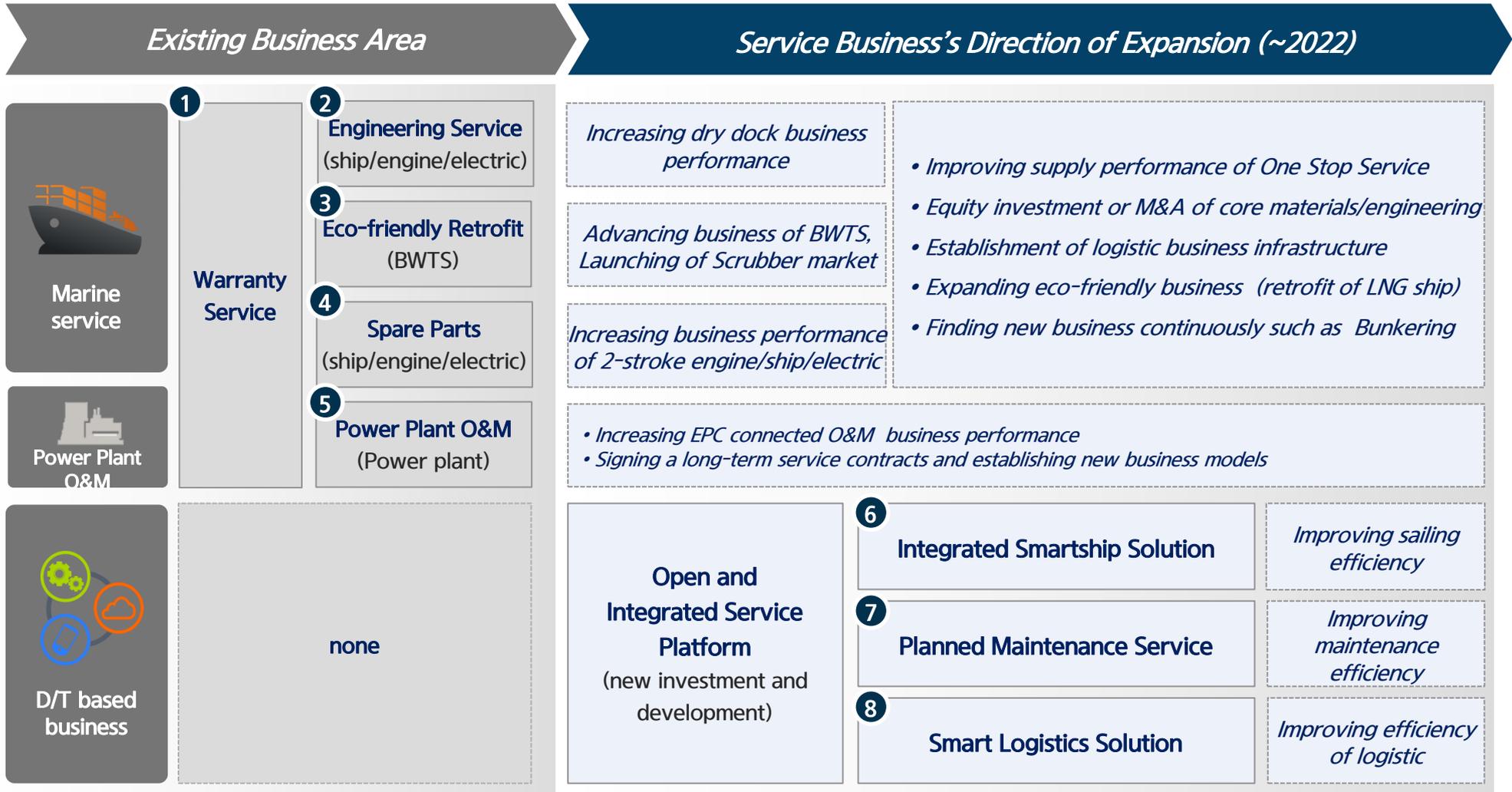
- Promote performance improvement service for aging 2/4-Stroke engines in power plant sites
- Expand O&M business by establishing a foothold in Central & South America

#### • Parts & Equipment Supply

- Expand direct dealing of integrated parts & equipment supply and increase stock volume for fast delivery time
- Apply differentiate price strategies by detailed categories through Big-Data analysis
- Activate PWS business from warranty service to aftermarket business

# 8. Mid-term Business Plan

## Business Goal in 2022 (Sales 2 trillion KRW, Profit 400 billion KRW)



# Financial Results

1. Summary of Financial Results
2. Financial Results by Entities

# 1. Summary of Financial Results(1/2)

## Quarterly Summary

(Unit : Billion KRW)

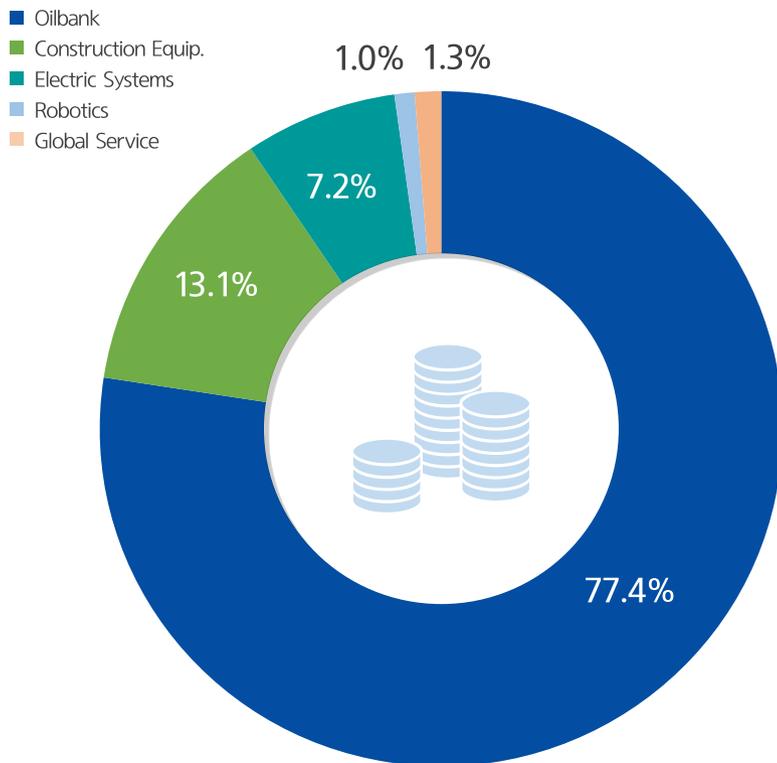
Categories	'17				'18			Remarks
	2Q	3Q	4Q	Cumulative	1Q	2Q	Cumulative	
Sales	4,197.5	4,415.8	5,676.1	14,289.4	6,285.8	6,935.4	1,3221.2	
Operating Profit	251.1	552.2	131.6	934.8	358.3	341.3	699.6	
Profit Margin	6.0%	12.5%	2.3%	6.5%	5.7%	4.9%	5.3%	
Non-operating Profit	(56.1)	385.1	(39.7)	286.5	(52.1)	-69.6	-121.7	
Net Income	395.1	863.4	(215.6)	1,042.9	245.5	173.7	419.2	
Net Margin	9.4%	19.6%	(3.8%)	7.3%	3.9%	2.5%	3.17%	

Note 1 : Based on K-IFRS consolidated basis

Note 2 : Entity newly established after demerger in April 2017; therefore 1Q 2017 results are excluded

# 1-2. Summary of Financial Results (2/2)

## 2Q 2018 Sales Breakdown



Note 1 : Consolidated basis excluding equity method

## 2Q 2018 Operating Profit

(Unit : billion KRW)

### Refinery



### Non-refinery



Note 2 :Equity method and dividends are excluded

## 2. Financial Results by Entities

### 2Q 2018 Financial Results

(Unit :billion KRW)

Category	'18.2Q			'18.1Q			'17.2Q			Remarks	
	Sales	Operating Profit	OPM	Sales	Operating Profit	OPM	Sales	Operating Profit	OPM		
Hyundai Heavy Industries Holdings	66.6	4.9	7.4%	392.1	317.6	81.0%	64.6	7.1	11.0	'18.1Q Dividends : 312.7	
Hyundai Oilbank	5,435.1	313.6	5.8%	4,778.0	282.7	5.9%	4,039.7	188.5	4.7%		
Consolidation Entities	Hyundai Construction Equipment	922.7	75.1	8.1%	930.5	61.8	6.6%	-	-	-	Joined Aug. 2017
	Hyundai Electric & Energy Systems	507.5	3.7	0.7%	430.1	-30.8	(7.2%)	-	-	-	Joined Aug. 2017
	Hyundai Global Service	87.6	20.3	23.2%	73.0	17.1	23.4%	76.4	25.9	33.9%	
Equity Method	Hyundai Heavy Industries	-64.2	-64.2	-	7.9	7.9	-	-	-	-	'18.2Q HHI Net Loss : 233.7
	Adjustment	-19.9	-12.1	-	-320.9	-328.3	-	-1.1	-9.2	-	
	<b>Total</b>	<b>6,935.4</b>	<b>341.3</b>	<b>4.9%</b>	<b>6,290.7</b>	<b>328.0</b>	<b>5.2%</b>	<b>4,179.6</b>	<b>212.3</b>	<b>5.08%</b>	

Note 1 : Hyundai Heavy Industries Holdings unconsolidated basis

Note 2 : Hyundai Oilbank, Hyundai Electric &amp; Energy Systems, Hyundai Construction Equipment consolidated basis

Note 3 : Hyundai Global Service '17.2Q unconsolidated basis, '18.1Q,2Q consolidated basis

Note 4 : Reclassified Hyundai and Shell Base Oil from consolidation entity to non-controlling interest

# Appendix

## Summary of Financial Statements

1. Summary of Financial Statements (HHIH)
2. Summary of Financial Statements (HDO)
3. Summary of Financial Statements (HGS)

# 1. Consolidated Financial Statement of HHHH

## Consolidated Income Statement

Unit: bil. KRW

Category	'18.2Q	QoQ	YoY	'18.1Q	'17.2Q
Sales	6,935.4	10.2%	65.9%	6,290.7	4,179.7
Cost of Goods Sold	6,353.1	11.6%	64.6%	5,692.2	3,860.7
Gross Profit	582.3	-2.7%	82.5%	598.5	319.0
Operating Profit	341.3	4.1%	60.8%	328.0	212.3
OP margin	4.92%	-5.6%	-3.1%	5.21%	5.08%
Non Operating Income & Loss	-69.6	95.5%	192.4%	-35.6	-23.8
Profit before Tax	271.7	-7.0%	44.1%	292.3	188.6
Income Tax	98.0	74.1%	-150.4%	56.3	-194.5
Net Income	173.7	-26.4%	-54.7%	236.0	383.1

Note 1 : K-IFRS consolidated basis

Note 2 : Reclassified Hyundai and Shell Base Oil from consolidation entity to non-controlling interest

## Consolidated Balance Sheet

Unit: bil. KRW

구 분	Dec '16	Dec '17	Jun. '18
Current Assets	4,111	7,827	8,352
(Cash & Cash Equivalents)	572	1,126	1,026
Non-current Assets	8,944	13,061	13,799
<b>Total Assets</b>	<b>13,055</b>	<b>20,889</b>	<b>22,151</b>
Current Liabilities	4,922	6,529	7,535
(Short-term borrowings)	2,769	2,939	3,905
Non-current Liabilities	2,665	4,258	3,799
(Long-term borrowings)	2,157	3,392	2,887
<b>Total Liabilities</b>	<b>7,587</b>	<b>10,787</b>	<b>11,335</b>
Paid-in Capital	60	81	81
Others	4,511	6,460	6,366
Retained Earnings	-	947	1,365
Non-controlling interests	897	2,614	3,004
<b>Total Shareholder's Equity</b>	<b>5,468</b>	<b>10,102</b>	<b>10,817</b>
<b>Total Liabilities &amp; Shareholder's Equity</b>	<b>13,055</b>	<b>20,889</b>	<b>22,151</b>

## 2. Consolidated Financial Statement of HDO

### Consolidated Income Statement

Unit: KRW bil.

	'18.2Q	QoQ	YoY	'18.1Q	'17.2Q
Sales	5,435.2	13.8%	34.5%	4,778.0	4,039.7
Cost of sales	5,031.1	14.6%	33.9%	4,389.0	3,757.8
Gross profit	404.1	3.9%	43.3%	389.0	281.9
Operating profit	313.6	10.9%	66.4%	282.7	188.5
OP margin	5.8%	-0.1%p	1.1%p	5.9%	4.7%
Non operating income & expenses	-66.3	-	-	5.5	-0.7
Profit before tax	247.3	-14.2%	31.7%	288.2	187.8
Income tax	62.0	-10.5%	39.0%	69.3	44.6
Net income	185.3	-15.3%	29.4%	218.9	143.2

Note: Consolidated in accordance with K-IFRS

### Consolidated Balance Sheet

Unit: KRW bil.

	'16.4Q	'17.4Q	'18.2Q
Current assets	3,033.2	4,103.5	4,062.1
(Cash & cash equivalents)	300.6	148.2	185.0
Non-current assets	6,375.5	6,837.7	6,934.4
<b>Total assets</b>	<b>9,408.7</b>	<b>10,941.3</b>	<b>10,996.5</b>
Current liabilities	3,088.0	3,797.7	3,666.0
(Short-term borrowings)	1,102.0	1,015.4	1,039.6
Non-current liabilities	1,885.3	2,081.7	2,198.1
(Long-term borrowings)	1,691.3	1,860.0	1,976.6
<b>Total liabilities</b>	<b>4,973.3</b>	<b>5,879.4</b>	<b>5,864.1</b>
Paid-in capital	1,225.4	1,225.4	1,225.4
Others	458.1	440.8	453.8
Retained earnings	2,496.0	3,064.2	3,109.4
Non-controlling interest	255.9	331.5	343.8
<b>Total equity</b>	<b>4,435.4</b>	<b>5,061.9</b>	<b>5,132.4</b>
<b>Total liabilities &amp; equity</b>	<b>9,408.7</b>	<b>10,941.3</b>	<b>10,996.5</b>

### 3. Consolidated Financial Statement of HGS

#### Consolidated Income Statement

Unit: bil. KRW

구 분	'18.2Q			'18.1Q	'17.2Q
		QoQ	YoY		
Sales	87.6	20.0%	14.7%	73.0	76.4
Cost of Goods Sold	63.1	22.8%	28.3%	51.4	49.2
Gross Profit	24.5	13.2%	-9.9%	21.6	27.2
Operating Profit	20.3	18.7%	-21.6%	17.1	25.9
OP margin	23.2%	-0.2%P	-10.7%P	23.4%	33.9%
Non Operating Income & Loss	3.0	-	-	0.1	0.9
Profit before Tax	23.3	35.5%	-13.1%	17.2	26.8
Income Tax	6.2	29.2%	-3.1%	4.8	6.4
Net Income	17.1	37.9%	-16.2%	12.4	20.4

#### Consolidated Balance Sheet

Unit: bil. KRW

구 분	Dec '16	Dec '17	Jun. '18
Current Assets	142.9	203.6	253.5
(Cash & Cash Equivalents)	57.7	39.1	57.5
Non-current Assets	1.9	5.5	9.0
<b>Total Assets</b>	<b>144.8</b>	<b>209.1</b>	<b>262.5</b>
Current Liabilities	18.9	43.0	65.4
(Short-term borrowings)	-	-	-
Non-current Liabilities	0.6	0.2	2.0
(Long-term borrowings)	-	-	-
<b>Total Liabilities</b>	<b>19.5</b>	<b>43.2</b>	<b>67.4</b>
Paid-in Capital	20.0	20.0	20.0
Others	105.2	105.7	105.4
Retained Earnings	0.1	40.2	69.7
<b>Total Shareholder's Equity</b>	<b>125.3</b>	<b>165.9</b>	<b>195.1</b>
<b>Total Liabilities &amp; Shareholder's Equity</b>	<b>144.8</b>	<b>209.1</b>	<b>262.5</b>

