

Doosan Infracore 2016 Integrated Report

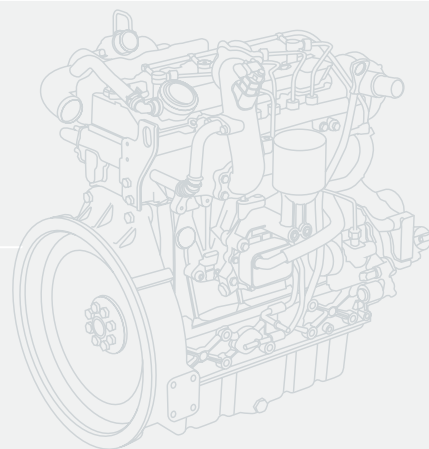
WINNING

TEAM

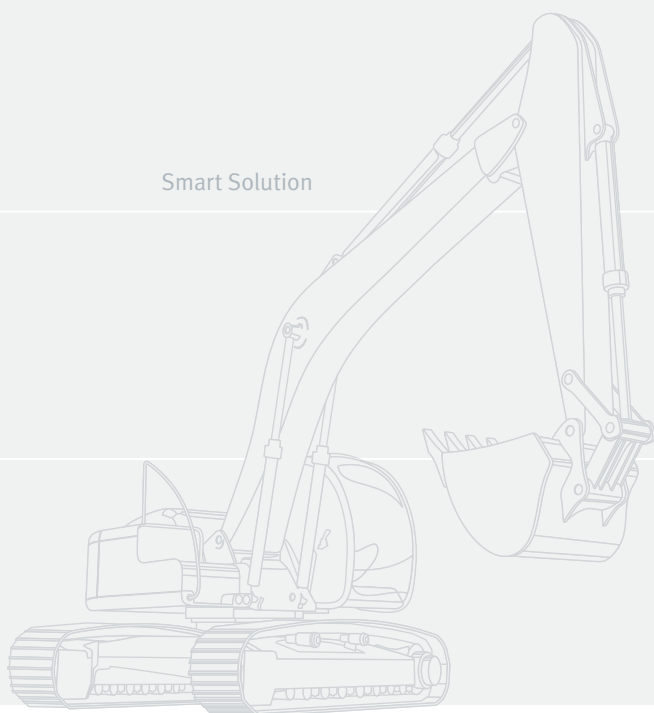
Customer Value



Sustainable Growth



Smart Solution



About This Report

Reporting Purpose

This is Doosan Infracore's fifth Integrated Report containing its annual and sustainability management reports. Doosan Infracore publishes an integrated report to share with its stakeholders the processes whereby it generates its financial and non-financial performance results and boosts its corporate values generated through the interaction of its diverse Corporate Social Responsibility (CSR) activities. Doosan Infracore strives to incorporate CSR throughout all business activities and makes continued efforts to improve its integrated report.

Reporting Process

To produce a comprehensive report on Doosan Infracore's financial and non-financial performance as well as social and environmental values, various departments related to the company's strategy, sales, investor relations and communications have participated in its planning. Thirty five working-level teams worked together in its planning. Thirty five working-level teams worked together to compile this Integrated Report, with a focus on performance results and future plans of the company.

Reporting Period

This report presents quantitative data about the company's performance during the 2016 calendar year. However, the company's qualitative activities mentioned in the report, including the composition of the BOD, include developments recorded until the end of April 2017.

Reporting Scope

This report is mainly on the activities and accomplishments made by the company's worksites in Korea and China. Some qualitative activities, however, include those undertaken at the company's overseas worksites. The CSR Facts & Figures section includes the quantitative outcomes of the worksites in Korea for the last three years. Figures on the worksites in China are on activities and accomplishments in 2016, after the execution of the overseas worksite CSR roll-out.

External Assurance

This report has been assured by Samjong KPMG, an independent assurance service provider, to ensure the propriety and integrity of the reporting processes as well as the accuracy and credibility of its contents. Its Assurance Report is attached in the Appendix.

Disclaimer

This report contains details of some future activities, events and situations based on the company's plans and estimations of future financial outcomes, which may turn out to be inaccurate in the event of changes in the global business landscape. The plans and estimations draw upon the best information available at the time of completion of this report, with due consideration given to future business environments as well as the company's elaborate business strategies. Doosan Infracore, therefore, would like to remind its stakeholders that this report contains some predictions that may be affected significantly due to the risks, uncertainties and other factors involved in the company's global operations.

Reporting Method

Printed Material

This report is published in Korean, English, and Chinese to communicate better with our global stakeholders.



PDF

This report is available in PDF format which can be downloaded at www.doosaninfracore.com.



Contact Us

CSR part, Communication, Doosan Infracore
23rd Fl. Doosan Tower Building,
275 Jangchungdan-ro, Junggu, Seoul (04563), Korea
E-mail: csr.di@doosan.com

2016 DOOSAN INFRACORE INTEGRATED REPORT

MANAGEMENT ANALYSIS

- 02 CEO Message
- 04 Company Profile
- 06 Business Model
- 08 Performance Review 2016

OUR STRATEGY

- 14 Strategy Overview
- 16 Customer Value
- 24 Sustainable Growth
- 32 Smart Solution

- 37 Doosan Bobcat



OUR RESPONSIBILITY

- 46 CSR Structure
- 52 Transparent and Ethical Management
- 58 Customer Satisfaction and Quality Management
- 63 Integrated EHS System
- 71 Shared Growth with Our Suppliers
- 76 Employee Value Proposition
- 83 Supporting Development of Local Communities

APPENDIX

- 87 Performance Summary
- 88 Consolidated Financial Statements
- 92 CSR Facts & Figures
- 97 Independent Auditors' Report
- 98 Independent Assurance Report
- 100 Global Network



Doosan Group

The oldest and one of the fastest growing in Korea

Our Heritage

With 121 years of history, Doosan is the oldest enterprise in Korea. It is also a company with the great potential, having undergone continuous changes and achieving significant growth throughout the years. Doosan has continued to grow since its inception. In the twentieth century, it emerged as one of the country’s strongest consumer goods companies specializing in beer and beverages. At the dawn of the new millennium, however, Doosan embarked on a massive transformation to become a global company by developing new growth engines and entirely overhauling its business portfolio. Through a series of successful mergers and acquisitions, Doosan has completely transformed itself from a consumer goods company into an Infrastructure Support Business (ISB) provider, specializing in a wide range of industrial infrastructure such as construction equipment, energy, and production facilities.

Our Growth Engine

Behind the success of Doosan is its unwavering “trust in people.” This was something our founder firmly believed in this concept and said, “Investment in people makes the foundation for business.” This belief is well summed up in our 2G Strategy (Growth of People, Growth of Business). The 2G strategy has been the driver of our past successes and will guide us through our journey toward prosperity in the future. At the heart of the 2G Strategy is the virtuous circle of “growth of people laying the foundation for the growth of the company, and the latter leading back to the former.” With its trust in its staff and continuous investment in human capital, Doosan was able to successfully complete bold restructuring and innovative business portfolio transformation.

Our Future

Doosan hopes to become a “Proud Global Doosan,” with firm belief and trust in people. “Proud Global Doosan” means becoming a company of which each stakeholder is proud. Our stakeholders include employees, customers, shareholders, and society as a whole. Our vision is to become a company in which all of our stakeholders can take pride.

2016 Financial Highlights

(Unit: KRW billion;
based on consolidated financial statements)

Sales

16,410.7

Operating Income

917.2

Total Assets

28,664.8

Total Equity

7,900.9

The Doosan Way – Our Beliefs and Philosophy

DOOSAN CREDO

The Doosan Credo is a set of principles that represent Doosan’s philosophies and our unique way of doing business. These principles have been the foundation of Doosan’s success for the past century. The Doosan Credo is integral to every aspect of our business and people, clearly guiding our decisions and the way we do business. Through the realization of these values, Doosan accomplishes its ultimate goal. The Credo consists of Doosan’s “Aspiration” and “Core Values.”

Aspiration

Doosan’s ultimate goal is the creation of a “Proud Global Doosan.”

In our Vision, each of our employees and all of our stakeholders will be proud of and benefit from their association with Doosan. Every employee takes great pride in being a member of the Doosan team. Each customer recognizes and appreciates Doosan’s high-quality goods and services. Every shareholder values our fair and high levels of profit.

Core Values

Doosan people practice the nine core values of the Doosan Credo.

Doosan people practice the nine core values of the Doosan Credo everywhere we operate, every day, to build a “Proud Global Doosan.” These values guide the way we do business, the way we treat each other, and the way we work with all of our partners. The nine core values of the Doosan Credo are as follows:

People	Cultivating People	Integrity and Transparency
Inhwa	Customers	World-class Technology and Innovation
Profit	Social Responsibility	Safety and Environment

Affiliates

Infrastructure Support Business	Doosan Corporation	Consumer & Service Business	Auxiliary Organizations
Doosan Infracore	Doosasn Corporation Electro-Materials	Oricom	Dongdaemun Future Foundation
Doosan Heavy Industries & Construction	Doosan Corporation Mottrol	Hancomm	Doosan Yonkang Foundation
Doosan Bobcat	Doosan Corporation Glonet	Doosan Magazine	Doosan Art Center
Doosan Engineering & Construction	Doosan Corporation Industrial Vehicle	Doota Mall	Doosan Leadership Institute (DLI)
Doosan Engine	Doosan Corporation Fuel Cell	Doosan Bears	
Doosan Mecatec	Doosan Corporation Doota Duty Free	Doosan Cuvex	
	Doosan Corporation Information & Communications	Neoplux	

Building your tomorrow today

CEO MESSAGE



I sincerely thank all of you for your warm interest and trust in Doosan Infracore.

Backed by ardent support from our beloved customers, shareholders, and stakeholders, last year Doosan Infracore focused its efforts company-wide into revitalizing its business and successfully generating profit despite harsh market conditions. Through this Integrated Report, we would like to review the last year’s achievements, explain our plans for the future, and renew our resolutions for continued growth.

Market Conditions and Accomplishments in 2016

We successfully generated profit through structural improvement and competitiveness enhancement.

In 2016, Doosan Infracore posted KRW 5,729.6 billion in sales, a slight decrease compared to the previous year. The decrease is due to the continued stagnation of the construction equipment market. A global economic downturn, low oil prices, and a low-growth trend contributed to the sluggish market. However, we generated an operating income of KRW 490.8 billion, a KRW 585.9 billion increase from the previous year’s negative performance. The dramatic turnaround was made possible by improvements we made in the cost structure, sales from China, and the profitability of Doosan Bobcat. Net income exceeded market expectations by growing KRW 975.5 billion to KRW 116 billion on the increase in operating income and the decrease in interest costs following the sale of the Machine Tools Business Group.

In addition, we improved our liquidity by over KRW 1 trillion through the sale of the Machine Tools Business Group. Additional funds were acquired by successfully listing Doosan Bobcat on the Korea Exchange (KRX), subsequently reducing the debt ratio and strengthening the financial soundness.

We also continued to bolster our fundamental competitiveness. Production efficiencies and product quality further improved as the construction of our advanced Incheon Excavator Plant was completed and the Doosan Production System (DPS) was upgraded. New diesel engines were developed in compliance with the toughened Euro 6 emissions standards. The telematics 2.0 device and DoosanCONNECT™ service were rolled out as part of our effort to expand the provision of smart solution services. Customer satisfaction was also enhanced through execution of various programs aimed at strengthening dealers’ service competencies, including DoosanCARE in which experts make visits to customers.

Outlook and Plans for 2017

We will implement our new vision, ‘Global Leader in Infrastructure Solutions,’ and build up a foundation for sustainable growth.

Our competitors are all focused on securing a cost advantage amid a difficult market environment, each contributing to fierce price competition. In addition to product competitiveness, they are working on ICT-linked solutions, new technologies, and service differentiation. In consideration of these market movements, Doosan Infracore has adopted a new vision and mid-to long-term strategies. Through these strategies, we seek to continue to expand our business scope as a total solution provider offering top-quality products, better values, and unprecedented customer convenience, thus grow into a global leader in the infrastructure support business (ISB). In 2017, as a way to strengthen our abilities to execute the vision and strategies, we plan to concentrate on the following four tasks.

First, we will maximize customer value by offering reliable products and services.

We will develop and introduce products that satisfy market demands and customer needs while strengthening dealers’ service capabilities, with an aim to further improve the service quality that customers can actually feel and appreciate. We will substantially improve product quality thus turning crisis into opportunity and increase customer trust. We also will actively pursue quality enhancement with the mindset that we produce perfect quality products.

Second, we will pursue continued growth based on business growth and cost competitiveness.

We will increase sales by bolstering our channel competitiveness and diversifying products and markets. We will increase aftermarket sales by expanding our portfolio of parts and building network to smooth distribution. In addition, through cost competitiveness enhancement and manufacturing innovation, we will manage risks associated with foreign exchange and price competition.

Third, we will increase the development and supply of smart products and solutions.

We will constantly upgrade the telematics 2.0 device and DoosanCONNECT™ service, both developed using in-house technology. Furthermore, we will improve not only customer services but also our own value chain by using field data collected through telematics. This will also enable us to expand our business. In response to the problems of increasing older populations and decreasing skilled technicians, we will expedite the development of unmanned/automated construction technologies.

Fourth, we will bolster our business portfolio by developing new growth engines.

We will better prepare Doosan Infracore for the future by defining a new business direction that can lead us to new revenue sources. We will actively develop new business models by evaluating from many angles to explore business opportunities from machinery manufacturing to relevant businesses.

This year marks the 80th anniversary of Doosan Infracore which was founded as Korea’s very first large-scale machinery manufacturing company. As we have overcome countless crises and difficulties to reach where we are today, we will continue to develop strong capabilities through which we can withstand the crisis or the environmental changes of any magnitude, based on trust and mutual understanding.

Doosan Infracore will grow into a true global leader by faithfully executing its social duties as a responsible corporate citizen. We will build up partnerships based on the principle of the virtuous cycle together with suppliers all across the globe by implementing mutually beneficial programs. We will steadily conduct strategic social contribution activities for local communities and future generations. We will help keep the environment clean by developing eco-friendly technologies and products, increasing resource efficiencies, and reducing greenhouse gas emissions. Workplace safety management will be further strengthened, so that employees and suppliers can work in a safer environment.

Invigorated by your unwavering trust and support, Doosan Infracore will take another step forward toward A Proud Global Doosan.

Thank you.

Sohn Dong-youn

Chief Executive Officer
Doosan Infracore Co., Ltd.

COMPANY PROFILE

Doosan Infracore was founded in 1937 as Chosun Machine Works, the first large-scale machine manufacturing factory in Korea. Through continuous growth for the last 80 years, it has become the nation's top machine manufacturing company. Its product line-up includes construction equipment, engines, a variety of attachments, and utility equipment. Based on its world-class competitiveness, Doosan Infracore is moving forward to grow into a global leader in the infrastructure support business (ISB).

Company Name	Doosan Infracore Co., Ltd.
Year Founded	1937
CEO	Sohn Dong-youn
Main Business Areas	Production and sales of construction equipment and engines
Employees	3,919 (Excluding employees of Doosan Bobcat due to its IPO)

2016 Financial Highlights

(Unit: KRW million;
based on consolidated financial statements)

Sales
5,729,550

Operating Income
490,818

Total Assets
10,026,809

Total Capital
3,448,377

Business Overview

Construction Equipment

The Construction Equipment Business Area has supplied high-quality medium and large heavy equipment to industrial sites since 1977, contributing to the development of the global infrastructure industry. The Construction Equipment Business Area has prestigious global brands such as Doosan, Bobcat, and Geith, with product line-up ranging from compact to medium and large construction equipment. It has production bases in Korea, North America, China, and Europe. It provides world-class products in compact and heavy construction equipment and attachments, portable air compressors, lighting systems, and portable power equipment.

Engine

Established in 1958, the Engine Business Area produced the first diesel engine in Korea, and has continued to expand its business portfolio. It supplies diesel and gas engines for buses and trucks, power generators and ships, as well as various industrial engines across the world. Based on its product line-up that meets increasingly stringent world-wide environmental regulations, the Engine Business Area is emerging fast as the world's top-tier engine manufacturer. It has been enhancing its global competitiveness by attracting new customers for existing products and exploring new markets and new business opportunities.

Brand

Doosan is a comprehensive brand of ISB that provides diverse products world-wide in the areas of construction equipment, such as excavators, wheel loaders, articulated dump trucks, and mobile power generators, as well as engines.



Bobcat is a world-class brand of compact equipment in diverse areas including construction, industrial, landscaping, agriculture, and other industries, and provides services encompassing everything from design and manufacturing to distribution and support.



Doosan Portable Power provides durable and reliable products, ranging from air compressors, lighting system, and mobile generators to light compaction, drill modules, light towers, and mobile security equipment.

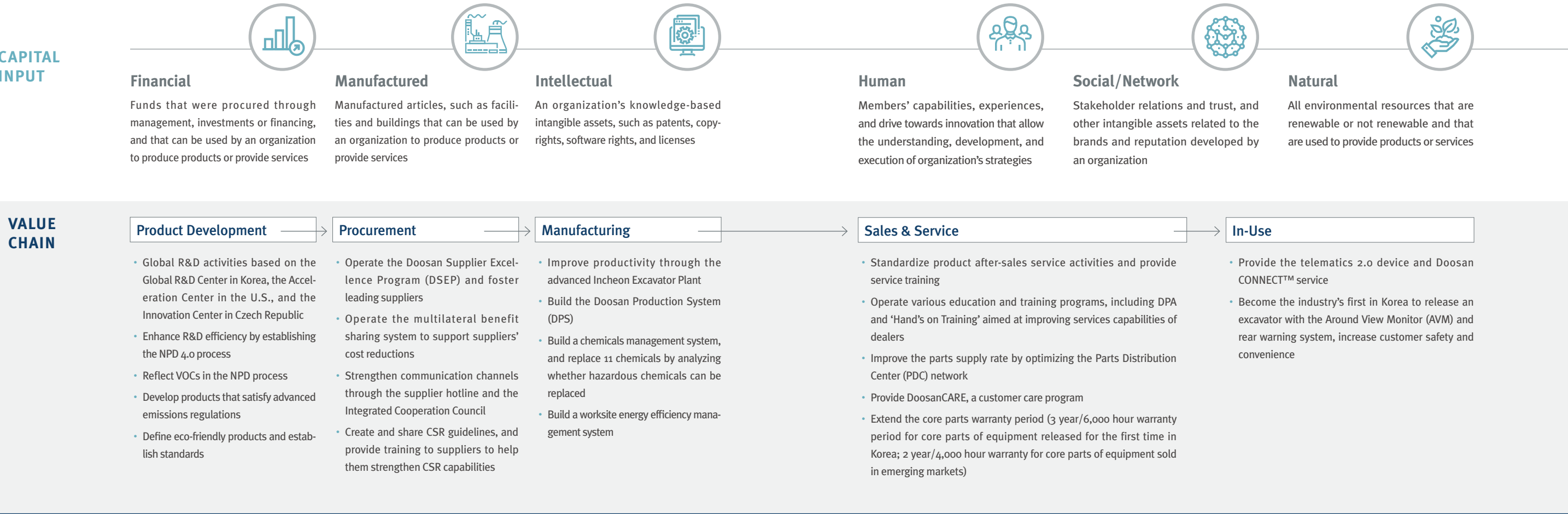


Geith, a brand of large attachment products for excavators, has earned praise and recognition from customers around the world by supplying products and services renowned for their excellent quality and reliability for more than 50 years.



BUSINESS MODEL

Doosan Infracore’s business model is a series of processes that involve making various capital inputs into the corporate value chain to accomplish strategic objectives and to generate short-, mid-, and long-term values. In operating its business model, Doosan Infracore considers social and environmental issues and seeks to balance sustainable corporate growth and social development.



KEY PERFORMANCE IN 2016

Financial	Manufactured	Intellectual	Human	Social/Network	Natural
<div>SalesKRW 5,729.6 billion</div> <div>Operating incomeKRW 490.8 billion (turned positive thanks to improvement in cost structure, increased sales in China, and continued profitability improvements of Doosan Bobcat)</div> <div>AssetsKRW 10,026.8 billion (year-on-year decrease of KRW 1,356.4 billion due to the sell-off of the Machine Tools Business Group)</div> <div>LiabilitiesKRW 6,578.4 billion (year-on-year decrease of KRW 1,701.8 billion, attributable to reduced net borrowings)</div> <div>EquityKRW 3,448.4 billion</div> <div>P. 08-10</div>	<div>Production optimization through the advanced Incheon Excavator Plant: Optimize the number of processes, standard work hours, and travel distance of logistics needed for product manufacturing</div> <div>P. 10</div>	<div>Domestic and overseas intellectual property right: 3,193 applications and 1,936 registrations</div> <div>P. 10</div>	<div>Completed the establishment of the business-related functional competency development system for office staff and operate the Duty Academy</div> <div>Overhauled the job skill-based HR development system for technical staff, and changed the names of positions for technical staff to foster highly competitiveness technical experts with professional skills</div> <div>P. 78-79</div>	<div>1,169 employees at 30 worksites in 11 countries participated in the ‘Doosan Day of Community Service,’ a local community-sharing activity</div> <div>P. 85</div>	<div>Carry out energy reduction projects to achieve reduction effects of KRW 540 million and curtail energy costs of KRW 1.04 billion by reducing standby energy during non-operational hours</div> <div>Greenhouse gas emissions: 87,413 tCO₂, which is around 65.2% of the volume allocated by the Korean government</div> <div>P. 66-67</div>

PERFORMANCE REVIEW 2016

Financial Performance

In 2016, the global mid- to large-sized construction equipment market grew at a rate slightly lower than that of the previous year. While the Chinese, Indian, and the Southeast Asian markets grew due to government’s investments in the construction and infrastructure sectors respectively, the Middle Eastern, Latin America, and other emerging markets as well as North American markets diminished due to remained low oil prices. The compact construction equipment market was marked by a mixed trend. The North American skid-steer loader (SSL) segment remained stagnant while the compact track loader (CTL) sector grew. Overall, the market slightly grew year-over-year in the North American and European regions. In the engine market, despite earlier expectations of gradual growth, competition among engine manufacturers around the world became fiercer. Chinese companies made advances against the backdrop of a deteriorating external environment including a global economic downturn brought on by a protraction of low oil prices, stagnant U.S. and European gas engine markets, and a continuing instability in the Middle East. To proactively deal with these conditions growing in complexity and difficulty, Doosan Infracore carried out an intensive corporate restructuring in 2015, thereby establishing a foundation for maximum revenue generation and higher profitability. In 2016, the company completed construction of its advanced Incheon Excavator Plant and implemented the Doosan Production System (DPS) as part of and efforts to enhance production efficiencies and product quality. The company also pursued structural improvement and competitiveness enhancement by developing new products to meet customer needs, further expanding the DoosanCARE service, bolstering its line-up of engines that satisfy market demands and industry regulations, including the Euro 6 emissions standards, and increasing smart solution services through the launch of the Telematics 2.0 device and DoosanCONNECT™ service. As a result, Doosan Infracore turned the profit in both operating income and net income, further improving financial soundness.

1. Sales Records

In 2016, Doosan Infracore posted KRW 5,729.6 billion in sales. Operating income moved into the black, recording KRW 490.8 billion, which amounts to a year-over-year jump of KRW 585.9 billion. It is attributable to improvements made in the cost structure, sales from

China, and the profitability of Doosan Bobcat. Net income also moved into the black, recording KRW 116 billion. This year-over-year rise of KRW 975.5 billion is due to the increase in operating income and a reduction in interest costs following to the sale of Machine Tools Business Group (BG).

Sales Records (Unit: KRW million; based on consolidated financial statements)			
	2014	2015	2016
Sales	6,366,107	5,964,894	5,729,550
Cost of sales	5,028,179	4,747,331	4,404,459
Gross profit	1,337,928	1,217,564	1,325,091
Selling and administrative expenses	1,085,514	1,312,651	834,273
Operating income (loss)	252,414	(95,087)	490,818
Other non-operating income	38,320	51,657	56,181
Other non-operating expenses	104,032	346,186	213,312
Net income (loss) before income tax expense (benefit)	(272,791)	(781,054)	82,050
Income tax expense (benefit)	(150,891)	161,078	162,640
Net income (loss)	23,972	(859,505)	115,985
* The business transfer of Machine Tools BG was completed by the end of the term. Relevant profits and losses are categorized into profits and losses from discontinued operations.			

2. Financial Status

In 2016, total assets decreased KRW 1,356.4 billion from the previous year to 10,026.8 billion, reflecting the transfer of Machine Tools BG and other factors. Total liabilities went down KRW 1,701.8 billion to KRW 6,578.4 billion, attributable to a reduction in net borrowings. Total equity rose KRW 345.4 billion year-over-year to KRW 3,448.4 billion.

Financial Status (Unit: KRW million; based on consolidated financial statements)			
	2014	2015	2016
Current assets	4,019,500	3,876,021	3,049,571
Non-current assets	7,937,927	7,507,152	6,977,238
Total assets	11,957,427	11,383,173	10,026,809
Current liabilities	3,294,510	3,961,155	3,653,194
Non-current liabilities	5,374,629	4,319,061	2,925,238
Total liabilities	8,669,139	8,280,217	6,578,432
Total equity	3,288,288	3,102,956	3,448,377

2-1. Sale of the Machine Tools Business Group

To improve its financial structure, Doosan Infracore transferred its possession of Machine Tools BG on April 29, 2016 and sold its management rights, thus secured a liquidity of more than KRW 1 trillion. With the sale of the tools unit, the company reorganized its operations into two sectors – construction equipment and engines. The reorganization has expedited preemptive improvements in the financial structure and resulted in a foundation for more stable business operations.

2-2. Listing of Doosan Bobcat on the Korea Exchange

Doosan Infracore conducted a pre-IPO placement offering limited shares of Doosan Bobcat in 2015. In February 2016, the decision was made to list Doosan Bobcat on the Korea Exchange (KRX), followed by an offering of shares for public subscription. Doosan Bobcat was successfully listed on the KRX on November 18, 2016, thanks in part to outstanding market assessments. The assessments were based on business structure and brand power growth, stability, and value due to the solid growth of the North American housing market—one of its major markets. The increasing proportion of high value-added product sales also impacted the market assessments. Through its successful listing, Doosan Bobcat has laid a platform from which to solidify its position as a global leader.

3. Performance by Business

In 2016, Doosan Infracore's Construction Equipment BG generated a positive operating income, on the strengths of improvements made in the cost structure and a recovering Chinese market. The Engine BG achieved a substantial increase in operating income thanks to a reduction in fixed costs and a rise in-house sales despite the stagnation of its established operations, including engines for power generators. Doosan Bobcat recorded a slight year-over-year decrease in sales owing to temporary economic uncertainties, including the US presidential election. However, an increase in operating income was achieved as sales of high value-added products in North America grew and the cost structure of European business improved.

3-1. Construction Equipment

Construction Equipment BG is laying a foundation for maximum revenue creation and profitability enhancement by making intensive efforts of improving the business structure and bolstering competitiveness amid the continuing low-growth trend of the global construction equipment market. On the domestic front, the BG reinforced its leading market share dominance by releasing new models in compliance with the Tier 4 Final emissions requirements, upgrading its sales network, and strengthening service capabilities. In China, the BG enhanced the competitiveness of its products by launching a next-generation product exclusive for the Chinese market prior to enforcement of the Tier 3 emissions regulations. It also enhanced the competitiveness of distribution channels by reorganizing its dealer network with a priority given to top-performing dealers, thus increasing its market share. In emerging markets with growth expectations, such as African, Asian, and Latin American countries, Construction Equipment BG strengthened its presence by securing new dealers while continuing to develop and manage the performance of existing dealers. In the U.S., E.U., and other advanced markets, the BG continued its efforts to increase heavy equipment market share. Activities included the successful launches of excavators and wheel loaders in compliance with the Tier 4 Final emissions requirements, continuous expansions of channel coverage, and focus on key customers. Moreover, investments

were made in activities aimed at enhancing the quality of customer service, such as the expansion of DoosanCare, the bolstering of dealers’ service capabilities, and the launch of DoosanCONNECT™, an upgraded version of a remote equipment management service.

In 2016, the Construction Equipment BG posted sales of KRW 1,351.7 billion, a year-over-year decrease of KRW 43.5 billion. Operating income turned positive to reach KRW 18 billion, a year-over-year rise of KRW 504.1 billion. Low oil prices and the stagnant raw materials market resulted in stagnation in the Middle Eastern and emerging construction equipment markets, leading to reduced sales. However, operating income grew substantially as an outcome of restructuring in the previous year.

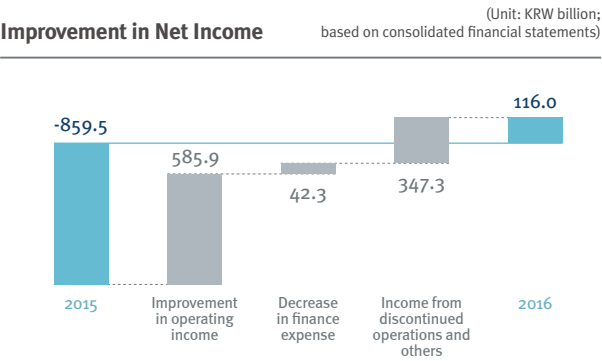
Construction Equipment (Unit: KRW million)			
	2014	2015	2016
Sales	1,966,861	1,395,250	1,351,718
Operating income	(99,568)	(486,023)	18,031

3-2. Engine

The global engine market remained low in growth rate throughout 2016 due mainly to sluggish upstream industries, thereby fueling an intensive competition among engine makers. The power generator engine market, in particular, suffered from a protracting stagnation as low oil prices and instability in the Middle East continued to debilitate the oil and gas markets. Facing such challenges, Doosan Infracore’s Engine BG focused on efficient resource management based on the principle of select and concentrate, developing Euro 6 engines which deliver improved performances while meeting toughened emissions regulations, and laying the groundwork for mid- to long-term sales expansion strategies. Also, following a successful market entry of Doosan Bobcat equipment powered by G2 compact engines, the BG is gaining new customers outside the company. Meanwhile, having pursued new business opportunities on a mid- to long-term basis, the BG is anticipating tangible results, such as entry into the vehicle engine markets in countries that are latecomers in emissions regulations.

In 2016, the Engine BG posted KRW 498.7 billion in sales, a year-over-year decline of KRW 79.5 billion. Operating income rose KRW 56.4 billion to KRW 58.8 billion. The decline in sales reflects the North American gas engine market suffering from the consequences of low oil prices. Operating income, however, rose as a result of a reduction made in fixed costs in the previous year.

Engine (Unit: KRW million)			
	2014	2015	2016
Sales	660,534	578,193	498,699
Operating income	31,687	2,361	58,781



3-3. Doosan Bobcat

Doosan Bobcat's sales performance has been stable backed by its solid leadership in the North American market. 2016 was slightly down, due to conservative inventory practices of dealers in response to growing market uncertainties surrounding the US presidential election. To deal with a temporary setback in sales growth as well as to maximize profitability, the company not only continues the strategy of improving the competitiveness of its product sales channels, but also seeks to diversify revenue sources, upgrade business structure, and maintain its leadership in the compact construction equipment industry. It is also striving to expand its mid- to large-sized construction equipment business. In addition, to further bolster its core competitiveness, the company continues to upgrade products, technology, quality, services, and other key sources of competitiveness. The company also continues its active search of new business opportunities in order to maintain its robust growth in the construction equipment industry.

As a result of such diverse efforts, sales of high-margin products increased, including the CTLs and MEXs, and operating income also rose on a reduction of costs following the restructuring of European operations and resultant improvements in production efficiencies. In 2016, Doosan Bobcat's sales totaled KRW 3,879.1 billion, a year-over-year decline of KRW 112.3 billion, while operating income came to KRW 414 billion, up KRW 25.4 billion from the year before.

Doosan Bobcat		(Unit: KRW million)	
	2014	2015	2016
Sales	3,738,712	3,991,451	3,879,133
Operating income	320,295	388,575	414,006

* Based on consolidated financial statements of Doosan Infracore

4. Cash Flow & Solvency

In 2016, cash flows from operating activities reached KRW 513 billion, a year-over-year rise of KRW 276.3 billion. As of the end of 2016, cash and cash equivalents totaled KRW 538.6 billion, inclusive of

Cash Flow		(Unit: KRW million; based on consolidated financial statements)	
	2014	2015	2016
Cash flows			
Cash flows from operating activities	231,296	236,685	512,993
Cash flows from investing activities	(428,522)	(96,938)	909,634
Cash flows from financing activities	281,367	82,007	(1,454,380)
Cash and cash equivalents			
Cash and cash equivalents, beginning of the year	287,838	362,953	560,003
Cash and cash equivalents, end of the year	362,953	560,003	538,578

foreign exchange effects. Doosan Infracore draws up quarterly and annual financial balance plans to minimize the influence of business, investment, and other financial activities on its monetary balance. Through financial balance planning, the company calculates, secures, and maintains liquidity, in preparation for possible liquidity risks.

5. Production Assets

Doosan Infracore's production facilities and equipment include land, buildings, structures, machines, and assets under construction. Based on consolidated financial statements, the book value of production facilities and equipment came to KRW 1,823.1 billion as of the end of 2016, indicating a year-over-year drop of KRW 431 billion. Cumulative new acquisitions and capital expenditures in 2016 were KRW 173.9 billion, and depreciation cost totaled KRW 147.5 billion.

6. Intellectual Assets

Doosan Infracore continues R&D investment to enhance product competitiveness and build up a foundation for long-term growth. The company's R&D consists of heavy product development, which conducts research on excavators and wheel loaders; engine product development, in charge of meeting emissions and fuel efficiency regulations; product design and high-stiffness materials development; and technology center, in charge of virtual verification and analysis for achieving robustness. Its R&D goals are to develop a distinctive technological advantage and establish an advanced engineering process. Based on its 2016 separate financial statements, Doosan Infracore's R&D expenses totaled KRW 97.6 billion, 4.4% of total sales. As of the end of 2016, the number of intellectual property rights applications made at home and abroad combined reached 3,193, and the number registered totaled 1,936. The 2016 R&D expenses does not include that of Machine Tools BG since the sale of the BG was completed on April 29, 2016.

Non-Financial Performance

In its efforts to grow into a truly leading global company, Doosan Infracore fully honors the importance of corporate social responsibility (CSR) as well as financial performance, and regularly executes CSR activities. To conduct CSR activities in a systematic manner, the company convenes a quarterly session of the CSR Committee, chaired by the CEO. The CSR Committee reviews CSR risks and opportunities, formulates strategies, defines strategic CSR tasks, and examines the outcome of tasks implemented. Strategic CSR tasks—consisting of those considered important to Doosan Infracore's sustainable growth with respect to related materiality analysis and external reviews of CSR results—are executed and monitored by respective subcommittees. Doosan Infracore's seven strategic CSR tasks in 2016 were: Define eco-friendly products and establish relevant standards, set up a human rights risk management system, establish a worksite energy efficiency management system, establish a chemicals management system,

improve the CSR management system of the supplier network, build carbon partnerships with suppliers, and establish global CSR governance. In recognition of its superior CSR execution capabilities and achievements, Doosan Infracore has been included in the Dow Jones Sustainability Indices (DJSI) Korea¹⁾ in the machine and electric equipment categories for the past seven consecutive years including 2016. It also has been rated Class A in the ESG Evaluation by the Corporate Governance Service, Korea²⁾ for six years in a row.

1. Social Performance

1.1 Customers

Doosan Infracore seeks to increase customer satisfaction by developing products and innovating technology with customers in mind and bolstering fundamental competitiveness. In 2016, the company introduced Euro 6 engines in response to global environmental regulations, and developed and released a wide array of products that reflect customer needs, such as amphibious excavators and forestry equipment. To expand the supply of eco-friendly products, Doosan Infracore developed a unique process of defining and managing eco-friendly products and technologies, and established it as an integral part of the product development process. To enhance customer safety, the company equipped its products with Around View Monitor (AVM) and rear warning systems that eliminate blind spots, more easily allow for omnidirectional visibility and enable an easier detection of dangerous situations. In addition, the company helps its customers better manage their work by providing them with information of the location, operational status, and engine status of their equipment through its Telematics 2.0 device and DoosanCONNECT™ service. Doosan Infracore is also actively expanding the DoosanCARE service through which experts visit customers and provide them more customized services at customers' convenience.

1.2 Employees

To create a happy workplace where employees' human rights are fully respected, in 2016 we adopted a human rights risk management system as a strategic CSR task and engaged in diverse activities, including the distribution of a Human Rights Risk Prevention Manual to all employees. This manual provides information on internal regulations and guidelines related to human rights, types of human rights violation and details, as well as internal and external reporting and report-receiving channels, and the counseling process. The company also provided human rights training to executives and all office workers. To develop highly professional and competent human resources, the company overhauled a Functional Competency (FC) development system together with field leaders, redefining required competencies. Based on this, Doosan Infracore will provide education and training programs necessary for supporting its staff's growth.

1.3 Suppliers

Doosan Infracore has various support programs in place to enhance suppliers' competitiveness, including those on technology development and quality improvement as well as financial support. Through the Doosan Supplier Excellence Program (DSEP), the company is implementing a Leading Supplier project, which aims to help key suppliers grow stronger. In particular, the company has actively pushed forward a multilateral benefits sharing system, through which it cooperates with suppliers in achieving joint goals with respect to productivity, cost reduction, and other related factors and share resultant benefits. The system was chosen as the best system at the 2016 Second Benefits Sharing System Expansion Council organized by the Korean Ministry of Trade, Industry and Energy and the Foundation for Cooperation between Large Companies and SMEs. Also, to prevent industrial accidents by supporting suppliers' efforts in improving their safety and health management capabilities and building cooperative relations, Doosan Infracore implemented a program of building symbiotic ties in the areas of health and safety, providing suppliers with technical and training support for their safety risk assessment and hazard management. As a result, the Gunsan Plant received Korean Minister of Employment and Labor Award in the manufacturing business category at the Awards Ceremony for Outstanding Cases of the Symbiotic Cooperation Program in Safety and Health, organized by the Korean Ministry of Employment and Labor. To enhance suppliers' ability to cope with climate change, the company took part in the government initiative of building a supplier carbon partnership system and supported suppliers in their energy diagnosis and greenhouse gas reduction activities.

¹⁾ Dow Jones Sustainability Indexes (DJSI): The DJSIs are a sustainability benchmark co-developed by Dow Jones of the US and RobecoSAM of Switzerland. They evaluate the sustainability performance of major companies on the basis of an analysis of corporate economic, environmental, and social performance. Korean companies that have passed the institutes' industrial thresholds are included in the DJSI Korea, DJSI Asia Pacific, or DJSI World depending on their corporate size and the stock markets they are listed on.

²⁾ ESG Evaluation by the Corporate Governance Service, Korea: ESG stands for Environment, Social, and Governance. The Corporate Governance Service of Korea has developed its own ESG evaluation model and offered an evaluation service to boost listed local companies' CSR activities and investors' socially responsible investment. Each year, it discloses its evaluation results at seven levels rated from S to D. Companies with B+ (moderate) or above are limited to around 20% of the total assessments.

1.4 Local Communities

Doosan Infracore is striving to grow together with local communities as a global corporate citizen. Every year, on the Doosan Day of Community Service, the company conducts social activities aimed at promoting the growth of local communities through its worksites across the globe. It is also engaged in social contribution activities that involve the use of its business, such as supplying construction equipment to areas hit by earthquake or other natural disasters. In addition, it operates the Dream School, a program aimed at helping youths define their dreams. The company helps youths, who are experiencing difficulty in finding career paths, give shape to their dreams by offering a change to explore future paths, experience jobs and meet with professional mentors. In 2016, 17 youths who had taken part in the Dream School program as the first group all graduated from high school and completed the program. To promote the importance of safety in local community, the company has signed an agreement with the Korean Ministry of Public Safety and Security to promote safety, culture, and use its safety and health facilities to provide firefighting and emergency treatment education as well as medical support to residents near its Incheon Plant.

2. Environmental Performance

To better manage hazardous chemicals, Doosan Infracore inspected all its facilities that handled hazardous chemicals and created a map of leakage risks to keep track of the status of and risks associated with each hazardous material. In addition, 11 hazardous chemical materials that had been used to make certain products were either replaced with safer materials or removed and the content of the products was double-checked. The strategic CSR task of establishing a worksite energy efficiency management system has been executed since 2015, and the company has been operating an energy management system (EMS), using LED lights and other energy-efficient devices, optimizing utility supply, running a central control system for air-conditioning and heating and conducting energy-conservation PR and campaigns. As a result of these energy saving efforts and reducing the use of compressed air, the company was able to cut energy expenses by KRW 1.04 billion. Greenhouse gas emissions in 2016 were 87,413 tCO₂.

Outlook 2017

1. Financial Outlook

1.1 Construction Equipment

In 2017, the construction equipment market is forecasted to grow at a rate slightly higher than in 2016 although the North American, Middle East, and other select emerging markets are expected to remain at current levels. The optimistic forecast is based on various Chinese government-led infrastructure projects, the steady depletion of the used cars as well as the stable growth in Europe. Construction Equipment BG continues to release market- and customer-tailored

products and diversify products and sales regions. In addition, it plans to increase aftermarket sales as well as stable income sources by expanding parts supplies and diversifying its aftermarket business. In addition, the BG will continually bolster its core competitiveness, including products, technology, quality, channels, and services.

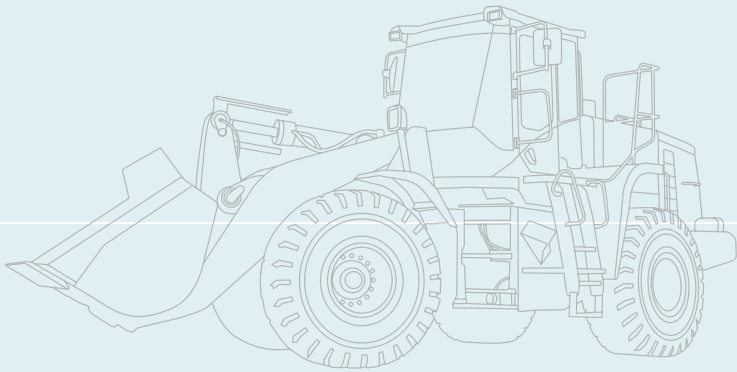
1.2 Engine

The oil and gas market is forecast to be stagnant due to a limited rise of oil prices. Instability in international politics is also expected to continue in 2017. However, in the mid- to long-term, growth momentum is expected to rise with the emerging market of high-performance power generator engines, an increasing demand for engines in Southeast Asian markets, and growing sales of compact diesel engines. Doosan Infracore therefore will increase the supply of eco-friendly, highly-efficient G2 compact engines, which satisfy the Tier 4 Final emissions regulations to domestic and overseas agricultural machinery and forklift companies. The company is also strengthening the power generator engine sales network starting with the release of Euro 6 diesel automobile engines and accelerating the sale of OEM-made compact engines in the advanced markets. Through these measures, it aims to grow sales at a rate higher than that of market growth. Also, the company will increase sales, enhance customer satisfaction and establish a mid- to long-term virtuous cycle through quality and service improvement, operation optimization, and other intensive operational excellence activities. As the company is actively forming strategic alliances with overseas automobile and engine manufacturers, expanding vehicle engine sales in Asia, and developing new growth models, tangible results are expected in 2017.

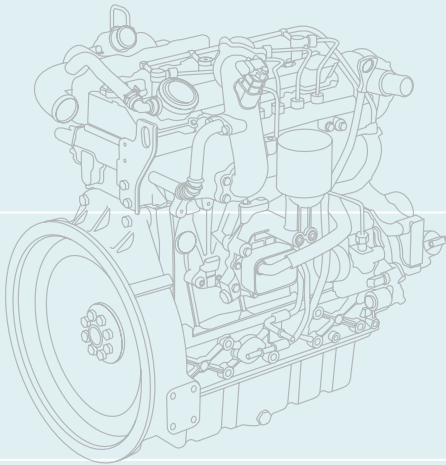
2. Non-Financial Outlook

The eight strategic CSR tasks for 2017 are to support overseas business sites' disclosure of information of their CSR activities, develop the REACH-IT system, build a worksite efficiency management system, establish a mid- to long-term roadmap on carbon trade scheme strategy, strengthen the monitoring for human rights violation, as well as two tasks related to advanced emissions regulations and one task related to smart solutions. These eight tasks have been reviewed and finalized by Doosan Infracore's CSR Committee based on the outcomes of materiality analysis and external evaluations, Group CSR assessments, and opinions of relevant teams. The company will discuss each task in detail through quarterly CSR Committee meetings, thus reviewing progress and achieve practical outcomes. It will also review and discuss how to systematically implement the Sustainable Development Goals (SDGs) which were adopted by the UN in 2015, following the Millennium Development Goals (MDGs) which were implemented in 2000. To establish and execute measures for implementing the SDGs, the company will communicate and cooperate with various stakeholders, thereby generating synergy, and also discover future business opportunities to further boost corporate competitiveness.

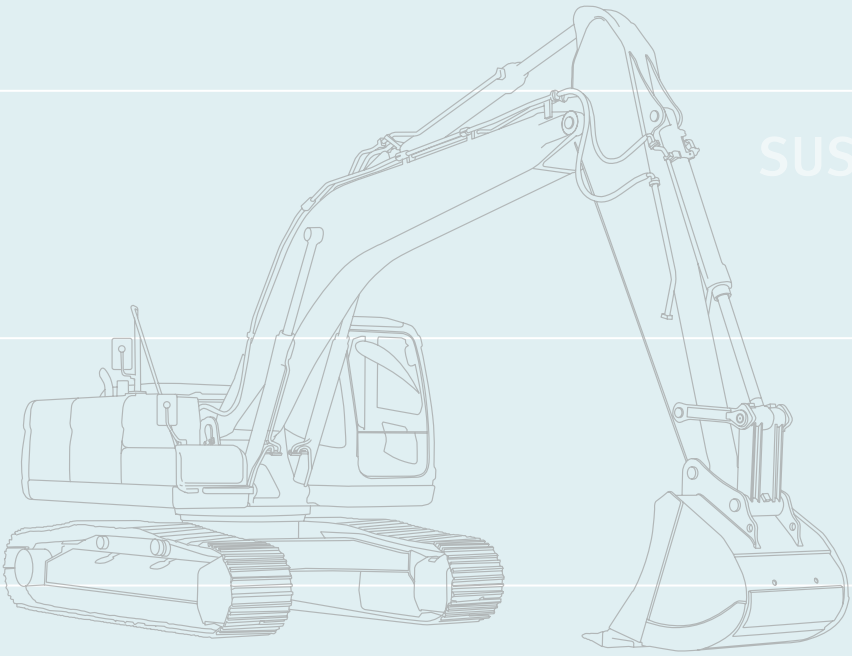
OUR STRATEGY



CUSTOMER VALUE 1

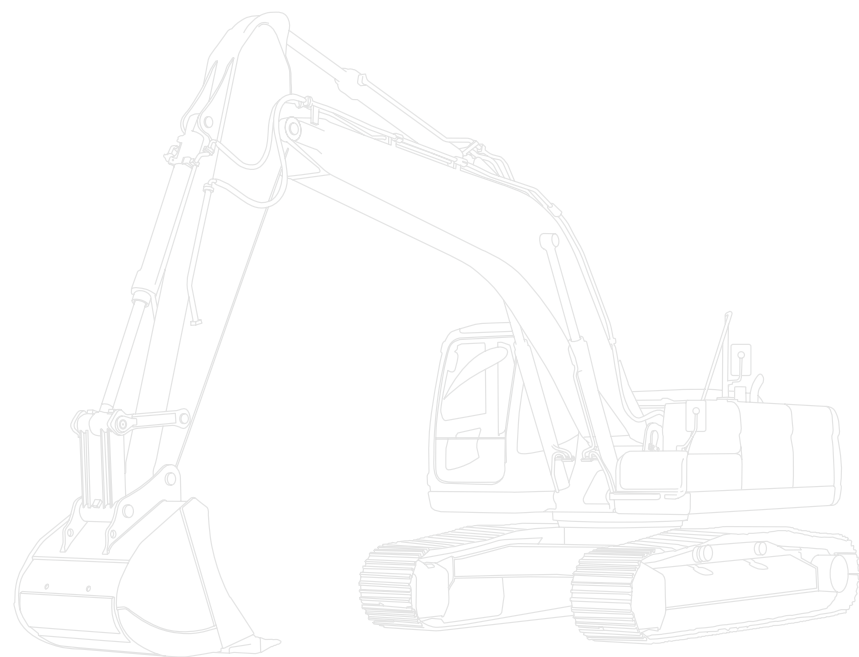
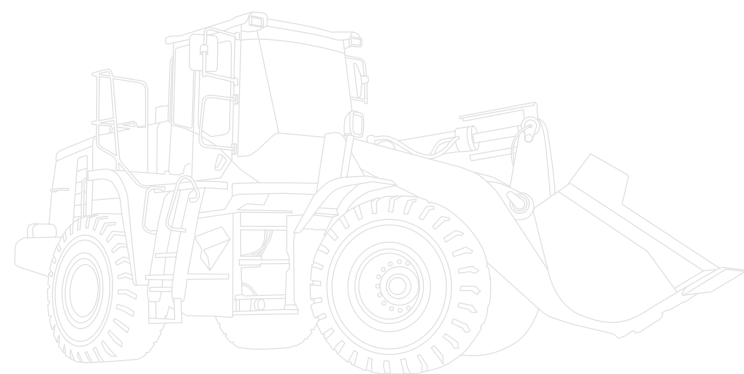
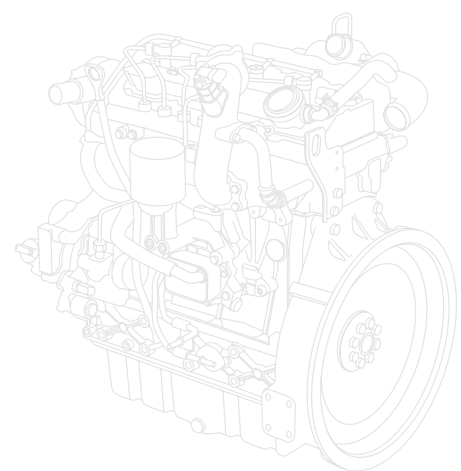


SUSTAINABLE GROWTH 2



SMART SOLUTION 3

OUR STRATEGY



CUSTOMER VALUE ¹

SUSTAINABLE GROWTH ²

SMART SOLUTION ³



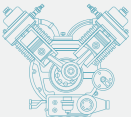
STRATEGY OVERVIEW

In 2017, the global construction market is expected to recover mainly on the strength of emerging markets, such as China and Asian countries, while the current low-growth trend is to continue worldwide. Anticipating these market developments, competitors of Doosan Infracore are enhancing production and operational efficiencies with the help of information and communication technologies (ICT); and, in product development, are focused on providing solutions that address such customer interests as increased convenience and unmanned technologies.

In line with these trends in the construction equipment market, Doosan Infracore strives to bolster corporate competitiveness, and offer customers with better services and integrated solutions. For example, the company is strengthening customer services such as DoosanCARE, maximizing profitability through the parts business, offering telematics-connected equipment management and services in the area of ICT, such as DoosanCONNECT™, mainly in advanced markets, and actively developing unmanned/automation technologies.

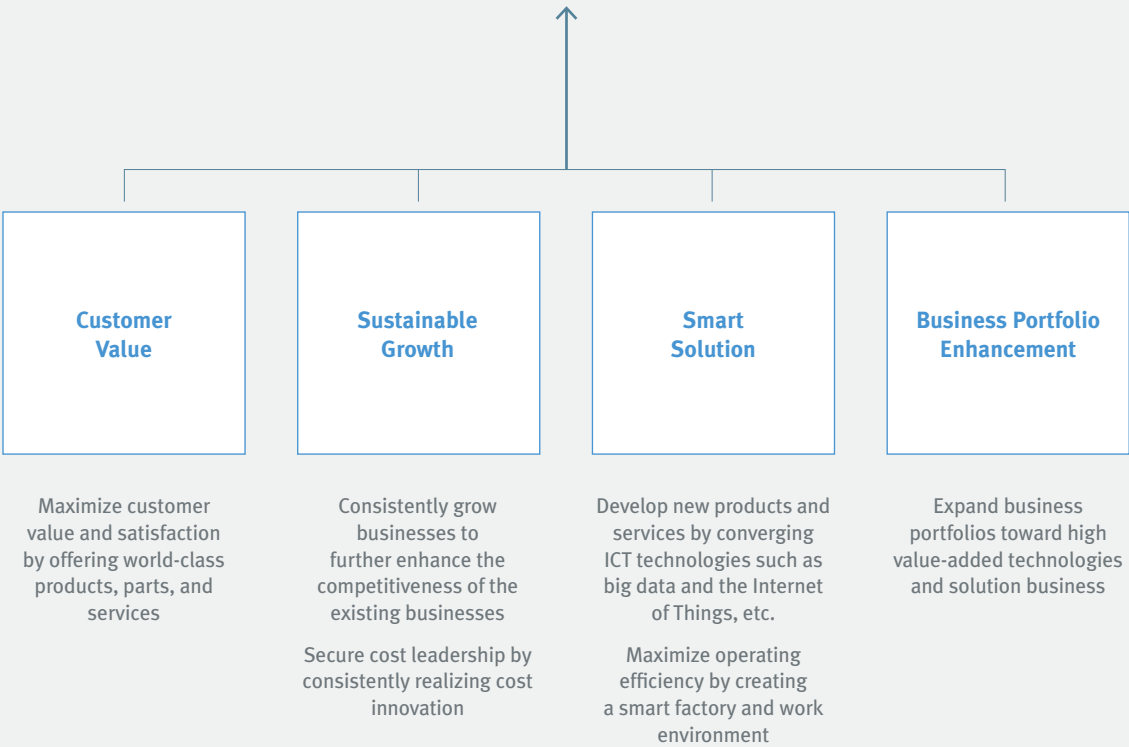
All employees of Doosan Infracore will make concerted efforts to expand the company's finished product-oriented business to cover infrastructure solutions that provide customer value and convenience. In addition to achieving quantitative and financial growth, the company will grow into a leading company in qualitative aspects such as financial soundness and social responsibility, thus become a truly global leader possessive of fundamental competitiveness.

The company will also grow into a truly global leader with fundamental competitiveness, also in qualitative aspects such as financial soundness and social responsibility, in addition to achieving external and financial growth. In 2017, the company will implement four strategic tasks toward its new vision as the point of destination, based on powerful field-centered execution capabilities and an honesty- and transparency-based organizational culture of trust.

GLOBAL TRENDS	INDUSTRY TRENDS	
		
Enter a long-term low-growth era	Construction Equipment Industry	Engine Industry
Low oil prices	Strengthening of emissions regulations	Strengthening of emissions regulations
Foreign exchange fluctuation	Recovery trend of the construction business in China and emerging markets	Fiercer product and price competition among engine manufacturers as a result of market saturation
	Steady demand in the compact equipment market	
	Realization of smart solution technologies, including ICT and unmanned/automation technology	

Global Leader in Infrastructure Solutions

We aim to continue expanding our businesses to become a global leader in the Infrastructure Support Business, offering not just the best quality products but also total solutions that offer better value to our customers.



CUSTOMER VALUE

01

**Increasing Customer
Satisfaction by Bolstering
Service Competitiveness**

02

**Developing Products
and Solutions to Satisfy
Customer Needs**

03

**Strengthening
Accountability over
Product Quality**



Increasing Customer Satisfaction by Bolstering Service Competitiveness

01

Customer Service-improving Programs

To strengthen relations with customers and grow together with them in the mid- to long-term, Doosan Infracore offers DoosanCARE, a customer care program. Experts of the company make visits to customers irrespective of equipment or warranty issues, and provide services tailored to individual customers, such as equipment management consulting and equipment maintenance training. By listening to various customer opinions on its products, the company identifies inconvenient customers experience in using them and promptly takes corrective measures of increasing equipment management efficiencies. DoosanCARE goes beyond fixing product issues and thus resolving customer complaints. The service ultimately aims to strengthen the fundamental competitiveness of Doosan Infracore through a virtuous cycle of improving and developing products and services, and achieving customer satisfaction. The content and programs of DoosanCARE are expanding every year. Plans have been made to expand the DoosanCARE services in 2017 by increasing the number of target countries and customers in emerging markets and China.

On the domestic front, starting in 2017, the company will further improve customer value by developing a training program that educates actual equipment users on equipment features and performance as well as major maintenance points and thus helps prevent equipment breakdowns.

Doosan Partners Academy (DPA)



Enhancing Dealers' Service Capabilities

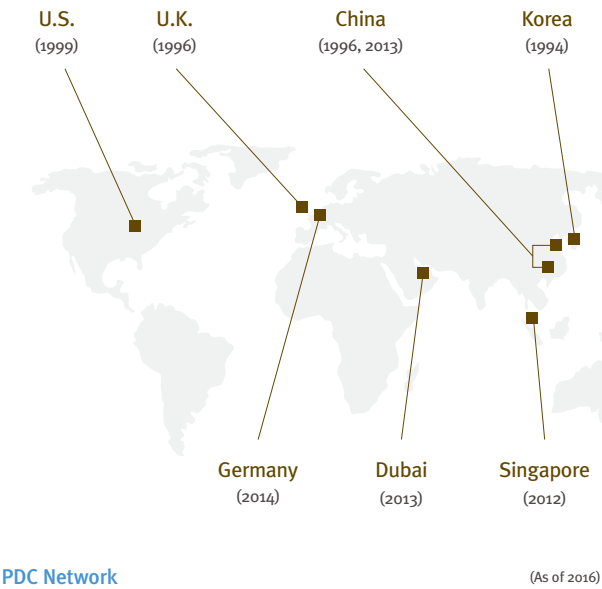
To improve dealers' service capabilities, the company offers a training program through the Doosan Partners Academy (DPA), and is increasing field-centered Hands-on Training. The company's flagship online training program for dealers, the DPA offers courses on how to maintain and repair products of Doosan Infracore as well as their major features using videos, animations, and photos. The courses are available in English, Spanish, Portuguese, Russian, French, and Arabic. In 2016, the company evaluated service capabilities of its dealers, and based on the evaluation outcome, set up an action plan together with dealers to encourage them to voluntarily improve their capabilities and support their management of any changes, with an aim to standardize the quality of dealer service. In addition, experts at headquarters provided Hands-on Training to dealer service personnel and strengthened their service capabilities. During this training, the experts used actual equipment on the field to provide training on the causes of frequent claims and how to respond to them. In 2017, the company plans to establish a local training center in Latin America and other regions and begin with training dealer maintenance specialists. Through such training and change management support, Doosan Infracore continues to enhance dealers' service capabilities and contributes to improving customer satisfaction. Dealers' service capabilities are becoming part of Doosan Infracore's competitiveness in providing greater value to customers.

(Top) 9C model, customized for the Chinese market
(Bottom) An equipment expert from HQ providing 'Hands-on Training' to a local dealer



Optimizing the PDC Network to Increase Service Competitiveness

Resolving customers' equipment repair requests with right parts in a timely manner is crucial to enhancing customer satisfaction. Doosan Infracore therefore seeks to minimize parts supply time by expanding its Parts Distribution Center (PDC) network and strengthening interactions among PDCs. To better manage parts supply time, it operates nine PDCs in major markets and supplies around 300 thousand parts world-wide. In 2017, the company will open an additional PDC in the U.S. Doosan Infracore will continue to improve the PDCs' operational efficiencies and fill rate to provide customers with quicker and smoother services as well as to increase the equipment operation rate, thereby enhancing customer satisfaction.



Developing Products and Solutions to Satisfy Customer Needs

02

Developing Products Tailored to Customer Needs

Based on preemptive customer needs analysis, Doosan Infracore develops and introduces customer-tailored new products, thus creates opportunities to enter new markets. The company's first amphibious excavator, DX140AM, made its debut at the PHILCONSTRUCT 2015, the largest international construction exhibition in the Philippines, which was held in October 2015. Designed to stay afloat, amphibious excavators can perform jobs in such environments as lakes and streams, where regular excavators would be bogged down by the wet or muddy grounds. Leveraging this advantage, the company has been promoting the DX140AM in Southeast Asia, South America, and other high rainfall regions.

In the forestry equipment sector, the company offers an array of machines tailored to the different characteristics of various regions around the world, including North America which requires particularly powerful equipment due to the ruggedness of its wilderness, and Asia where traction is a critical factor due to its abundance of marshland and rainforest areas. In 2016, Doosan Infracore successfully entered the forestry equipment market of Malaysia, led by the strengths of its products ideal to the characteristics of the nation's tropical rainforest regions.

For the North American market, the company developed a new log loader tailored to the characteristics of the continent's forest regions in 2016. Doosan Infracore's log loader consists of a high and wide substructure, strong track links, full-length track guidance protection devices, and special cleanout bracket-equipped top rollers.

In addition, the company has been responding to customer needs with various products of diverse purposes. These include super-long-reach excavators with a long boom designed for river dredging, demolition excavators that accommodates the European law banning the use of high explosives in the demolition of buildings, and material handlers. Through such an array of special construction equipment, the company provides customized solutions reflecting customers' diverse work environments and makes active efforts to diversify target markets.

A log loader customized for forest regions in North America



Developing the C Model to Chinese Market Demands

In 2016, Doosan Infracore released new products and mini/compact equipment in line with China's enforcement of Tier 3 emissions regulations, and completed the rollout of the DX-9C series, which was introduced in 2014. The DX-9C series reduces fuel consumption by more than 15% compared to previous models (fuel efficient equipment brings about additional improvement effects). A noticeable improvement was made in durability as well, which has given the company enough confidence in product performance and quality to extend the warranties on the series. To satisfy more detailed customer needs, the company launched medium-sized products, which are popular in China, in the three categories of economy, mileage, and performance.

Package Programs to Improve Customer Value

Doosan Infracore develops and offers a wide array of programs, such as financing, warranty extension, preventive maintenance and fuel efficiency guarantee, in order to meet diverse customer needs that arise during an equipment lifecycle of equipment purchase, maintenance, parts purchase, and services. The company will continue to develop and provide package programs that consider various customer circumstances and equipment life expectancies in connection with DoosanCONNECT™.

Developing Engines to Market Demands and Emissions Regulations

Doosan Infracore develops products that perform better and also satisfies different emissions regulations of different countries. Engine BG is continually improving its mid- to long-term product roadmap, and developing new products to meet new emissions standards and expanding its engine line-up. It successfully developed a Euro 6-adapted engine to bolster the competitiveness of its vehicle engine business, and a bus equipped with the company's Euro 6 diesel engine was first introduced in November 2016. Doosan Infracore's Euro 6 diesel engines burn fuels 10 to 19% less than not only its Euro 5 engines but also other companies' Euro 6 engines. The new engine produces higher power for its lack of an exhaust gas recirculation (EGR) device and burns less lubricating oil. Based on its Euro 6 engine development knowhow, the company is taking steps toward the continuity of developing Euro 7 engines and expansion of the commercial car business sector.

In addition, the company developed its first compact G2 Stage V engine in January 2017 based on its G2 compact engine technologies, in order to satisfy the EU's Stage V emissions standards. This engine features ultra low fuel-consumption combustion (ULFC) technology, an upgrade from the combustion technology of G2 compact engines. In addition to improving fuel efficiencies, compact G2 Stage V engines feature the excellence in power, torque, durability, and reliability. Currently installed on construction equipment, agricultural equipment, and forklifts, the new engines are to be supplied to



10-19%

- Fuel efficiency: 10 to 19% better compared with competitors' EURO 6 engines
- No EGR system applied: improved power, outstanding fuel efficiency and engine durability, and reduced maintenance
- OCV¹⁾ type, no filter-type ventilation system: complete solution to CCV/filter-type quality issues, lower maintenance costs as no need to replace filters
- Air heater removed: no more air heater-related quality issues, lower maintenance
- Engine idle shutdown eliminated: engine does not stop even during long-hours operations
- Lowered engine speed for PTO²⁾ entry: PTO can be used starting from an engine speed of 700 rpm
- Improved head gasket specifications: complete solution to oil and water leak issues

Euro 6 Engine

¹⁾ OCV: Open Crankcase Ventilation
²⁾ PTO: Power Take Off

Europe's most renowned forklift company, which will be a boon to the company's efforts of market expansion. In addition to the compact G2 Stage V engine, the company also began to respond to the Stage V standards for its mid-sized engines.

In March 2017, Doosan Infracore signed a memorandum of understanding (MOU) with the Korea Gas Corporation and a relevant Korean company on mutual cooperation for developing an LNG engine for small vessels. As the problems associated with fine dust, sulfur oxides (SO₂) and other pollutants are on the rise, so are demands for replacing diesel-powered domestic small vessels with more eco-friendly LNG-fueled vessels. Through the MOU, the three organizations seek to combine their efforts and thus generate synergy for successful engine development. By developing an LNG engine for small vessels, Doosan Infracore will transform the domestic small vessel engine market into an eco-friendly market, and contribute to the growth of the shipbuilding industry in Korea.

Strengthening Accountability over Product Quality

03

Ensuring Manufacturing Quality

Doosan Infracore adapted the Fool Proof¹⁾ production system to its production processes, in order to ensure consistent quality even under flexible production systems after completing the construction of its advanced Incheon Excavator Plant. The company also established management guidelines on Statistical Process Control (SPC)/Statistical Quality Control (SQC). To secure uniform manufacturing quality, the company is strengthening the system of verifying first production run parts that have gone through design changes as well as suppliers' quality. To deal with chronic quality issues, all sectors, including design, production, quality and suppliers, took part in concerted efforts at preempting the issues as well as preventing similar issues.

Enhancing Production Quality through DPS

In 2016, the company began a field adoption of 'Doosan Production System (DPS)', a standard it has developed for operating construction equipment production systems, to ensure production of high-quality products consistently across all plants around the world in a most efficient way. The DPS is a unique production system of Doosan Infracore, which pursues establishment of a synchronized production system, standardization of manufacturing processes, and continued plant innovation, based on the 'Lean' program the company has diligently carried out since 2005. The DPS is composed of six tasks – secure quality, improve constantly, produce timely, operate stably, support management, and Team Doosan – and 22 related modules. To implement the DPS, the company assessed the current conditions of its Incheon and Gunsan Plants in 2016 and, based on the findings, established improvement goals and action plans. The company also held regular process review meetings and examined progress to keep DPS activities going well. Plans for 2017 include connecting each module's KPI indicators with the company's performance indicators, standardizing the activity of outstanding cases and disseminating resultant standards, changing the operation organization, and conducting regular assessments, as well as implementing the DPS in its Chinese plants.



Doosan Production System

¹⁾ 5S: Sort, Set in order, Shine, Standardize, Sustain
²⁾ TPM: Total Productive Maintenance

Verifying Equipment Durability

Doosan Infracore believes that customer satisfaction begins and ends with products of flawless quality, and accordingly seeks to enhance its global competitiveness with high-quality products. In 1996, when the concept of reliability was yet to be introduced to the local industry, the company established a Reliability Evaluation Center at its Incheon Plant. Reliability Evaluation Center conducts diverse tests, including durability, environmental resistance, and structural safety, as well as reliability evaluations on excavators, engines, and other products so as to ensure the company's products perform to their full specifications in any environment and to maximize their life expectancies. In addition, the Global R&D Center in Korea, the Acceleration Center in Bismarck, U.S., and the Innovation Center in Dobris, Czech Republic, conduct a variety of tests ranging from product design to performance verification. The Acceleration Center conducts tests whenever needed regardless of weather conditions, for it has an indoor testing arena.

Equipment performance test in extremely cold weather



Doosan Infracore also performs diverse equipment performance tests in extreme conditions in consideration of its business of producing construction equipment, most of which are used in deserts, plateaus, wetlands, and other harsh environments. In January 2014, the company became the first in the domestic construction industry to conduct a cold-weather test in an actual work environment. It did so to overcome the limitations of previous low-temperature tests conducted in the cold chamber of the Reliability Evaluation Center. In January 2016, the company performed extremely cold-weather tests on its construction equipment in Cheorwon, Gangwon Province, one of the coldest regions in Korea, where temperatures dropped to minus 20 degrees often with blizzards. Its goal is to verify equipment performance in an environment where customers actually work. From June through August, it carried out high-altitude tests in Tibet, China, ahead of launching a new product in China. The tests were conducted at 5,000 meters above sea level, followed by hot-weather tests at the Durability Lab in Gunsan, Korea and DICC/DISD in China in August. By conducting equipment performance and durability tests throughout the year, the company has been identifying potential issues and making necessary improvements.

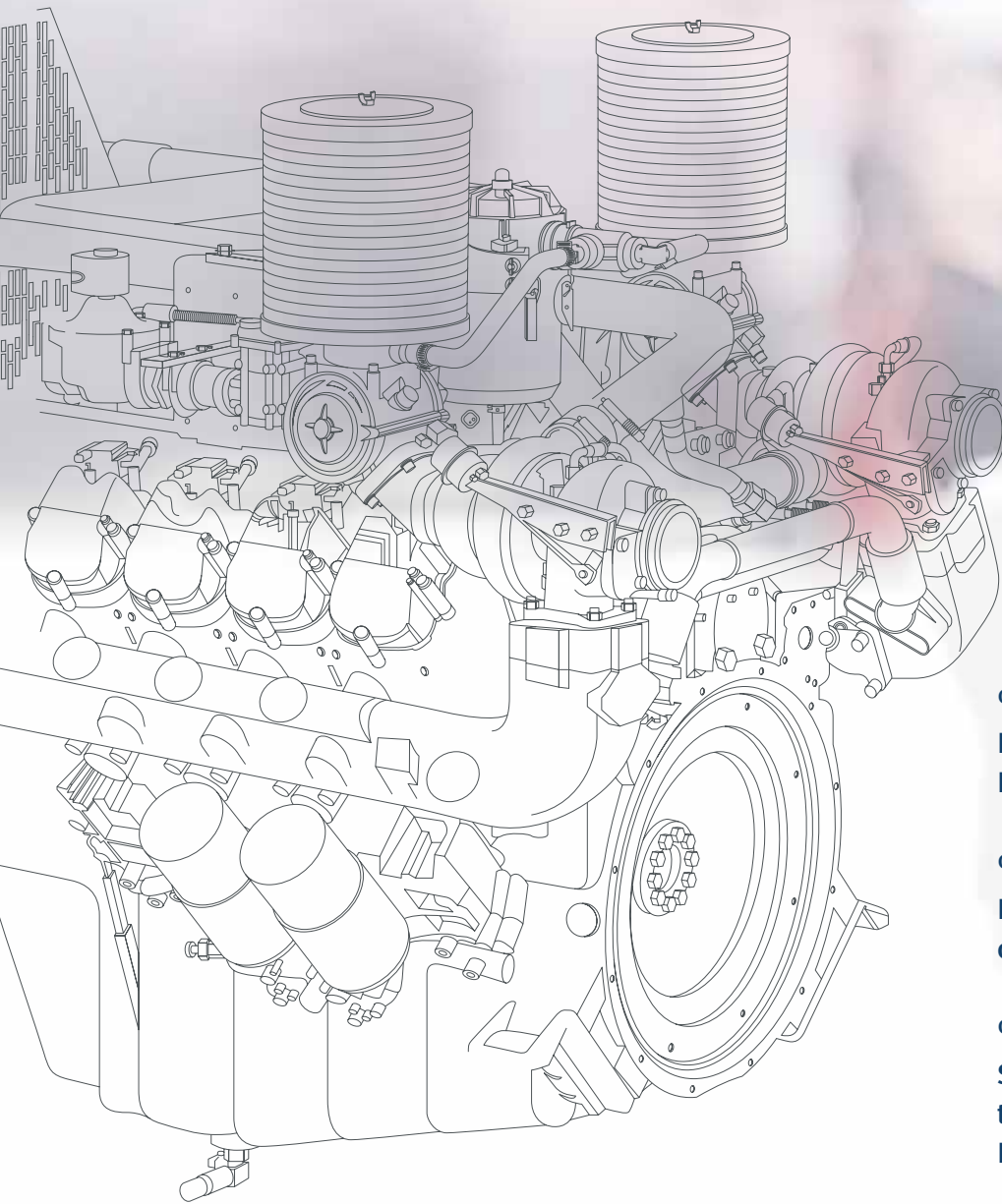
Extending Warranties on Key Parts

With great confidence in and keen responsibility for the quality of products, Doosan Infracore has been extending the warranty on its products. Previously, its equipment parts warranty was 1 year or 2,500 hours. The warranty on five key parts of the mid- to large-sized equipment over 15 tons produced in China after 2014 is now up to 3 years/6,000 hours. The warranty on key parts of equipment produced in Korea after 2016 was also extended for domestic sales up to 3 years/6,000 hours, and the warranty on key parts sold in emerging markets was extended to 2 years/4,000 hours, as part of the company's effort to increase customer value.

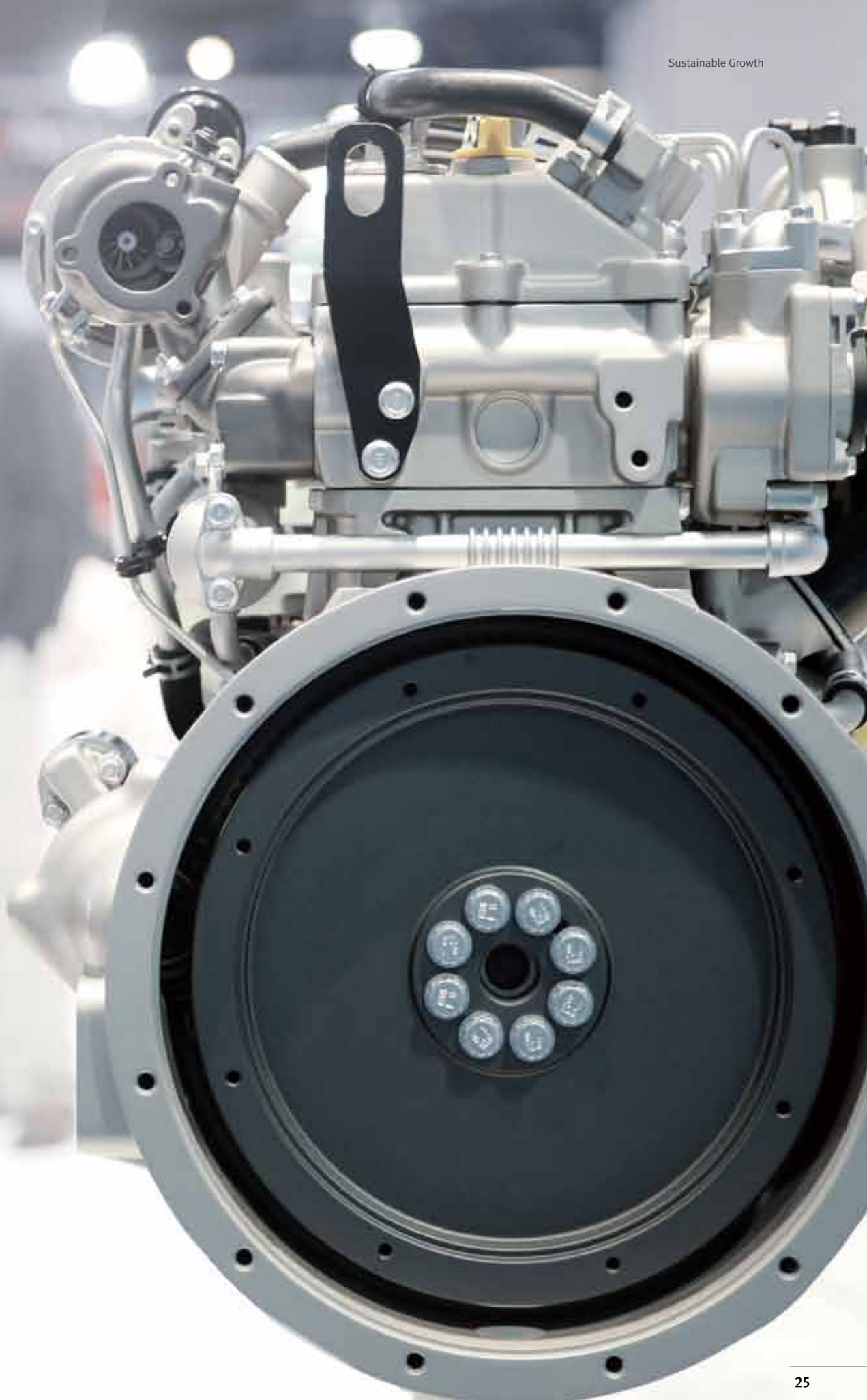
¹⁾ Fool Proof: A device designed to prevent human errors



SUSTAINABLE GROWTH



- 01
Diversifying Sales by
Region and Product
- 02
Increasing Engine Sales
outside the Company
- 03
Securing Cost Leadership
through Manufacturing
Innovation



Diversifying Sales by Region and Product

01

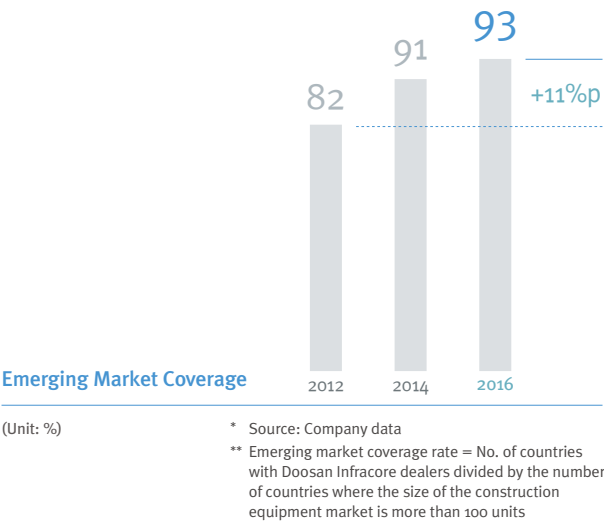
Strengthening Channel Capabilities and Increasing Sales in China

The construction equipment market in China continued to contract from 2011 through 2015, but grew slightly in 2016 due to an increase in infrastructure and construction projects, including rural development, road and railroad construction, as well as urban maintenance and repair. Doosan Infracore reorganized its channel network, giving a priority to top-performing dealers, and increased channel coverage by adding new channels in such regions as Beijing. Also, the company has been bolstering channel competitiveness through management and support measures tailored to individual dealers. In addition, product differentiation was carried out to accommodate more customer needs, and marketing was customized to the characteristics of mini/compact equipment, for which demand is on the rise mainly in farming areas and for inner city maintenance work. Through these various efforts, the company has been strengthening its presence in the changing Chinese market.

More concrete results of these efforts of strengthening sales channel capabilities and improving other structural aspects are steadily rising product sales and market share.

Increasing Sales in Emerging Markets

Doosan Infracore focuses on increasing its market share in emerging markets with high growth potential such as Asia, Africa, and Latin America. To bolster its channel competitiveness in emerging markets, the company focuses on signing up new dealers and has continually increased dealer coverage. It also supports the prompt stabilization of new dealers and improves training programs designed to enhance the capabilities of dealers' sales personnel as part of the effort to increase qualitative channel capabilities.



DL450-5K with Tier 4 Final installed



In addition to continually bolstering channel competitiveness in emerging markets, the company has been developing customized products to customers' work environment and characteristics, and working to provide diverse package programs in connection with DoosanCARE. As a result, the company won one large deal after another in emerging markets, including Singapore, Morocco, Thailand, Myanmar, and Qatar, in 2016.

The company is also working to increase wheel loader sales in emerging markets. DISD wheel loaders are manufactured in China, but produced entirely with the technologies of Doosan Infracore, which is why they are superior to comparable products of the competition in energy efficiency and productivity. In addition, they have access to a fast parts service under the parts supply networks of both Doosan Infracore and DISD, an arrangement highly appreciated by current and would-be customers in many emerging countries.

Increasing Aftermarket Sales

Doosan Infracore strives to increase parts sales by bolstering price competitiveness, developing new parts business, developing attachments that have market competitiveness, and leveraging its service capabilities.

To bolster parts price competitiveness and develop new parts business, it sells economical parts, with a focus on hydraulic parts, such as hydraulic pumps and traveling motors, while pursuing engine remanufacturing business.

The company has been continuously expanding the portfolio of attachments to cover economical breakers and grapples for special equipment, as part of its efforts to satisfy diverse market and customer needs. It also plans to increase the development of new attachments by operating an attachment council involving relevant departments, including R&D and quality.

To increase parts sales in connection with services, the company fosters experts who can take charge of services and parts at dealers, while expanding regular preventive activities for equipment. It also develops and sells engine overhaul kits each consisting of major engine parts, such as filters, pistons, bearings and valves, with a priority on dealers that have engine service capabilities. Doosan Infracore provides genuine parts to customers and offers various methods to improve product performance and extend product life expectancy in an affordable way, which all contribute to higher aftermarket sales.

Hands on Training to enhance dealer service capabilities



DISD wheel loader for emerging markets



Increasing Engine Sales outside the Company

02

Expanding the Vehicle Engine Business

Doosan Infracore develops and produces engines in accordance with the different emissions regulations of different countries, and installs them on commercial vehicles around the world, including buses, trucks, and special vehicles. In particular, the company has succeeded in developing an engine that satisfies the Euro 6 standards. In November 2016, the first bus equipped with a Euro 6 diesel engine of Doosan Infracore was introduced, and the company has continued to bolster the competitiveness of its vehicle engine business. The successful rollout of vehicles powered by Euro 6 diesel engines has once again attested to the excellence of Doosan Infracore engines. Plans for 2017 include expanding the PR promotion of Euro 6 diesel engines, increasing market trust in vehicle engines through continuous quality improvement, and expanding the sales base through addition of models in response to Euro 6. The company will also make inroads into the vehicle engine market of Asian countries relatively behind in emissions regulation and thus increase sales of vehicle engines.

Expanding Sales of G2 Compact Engines outside the Company

Doosan Infracore developed the G2 compact engine by applying ‘Ultra Low PM Combustion (ULPC)’, the company’s unique new combustion technology, and ‘Non-DPF’, a new technical standard. It is a highly-efficient, eco-friendly engine that consumes less fuel and engine oil, but generates high output, thereby delivering best value in performance as well as durability. For it requires no costly DPFs, the G2 compact engine is very competitive in price and offers big savings in maintenance cost and time. Developed for various industrial machines, power generators, and agricultural machinery requiring 1,800 to 3,400 cc engines, the G2 engine can be found in many small-sized machinery at home and abroad, made not only by Doosan Bobcat but also by other companies, including Daedong Industrial, Korea’s No. 1 agricultural machinery company. Its market demand is steadily rising, as the engine is to power forklifts which enjoy the reputation as the second best in the world. As a result, cumulative production reached 100 thousand units in June 2016, approximately 44 months after the completion of the G2 compact engine plant and launch of mass production in 2012. In addition to ensuring a stable supply of the engine for existing orders, the company is working to fully launch sales of the engine in the advanced markets through development of big OEMs, expanding



Euro 6 engine for vehicles



G2 compact diesel engine

customer support through stabilization of customer support center operations, and developing engines that would meet Stage V and other next-generation emissions regulations.

Expanding Power Generator Engine Portfolio and Bolstering Sales Network

Doosan Infracore presented a line-up of nine power generator engines at the Middle East Electricity Exhibition (MEE) held in March 2016, solidifying its stature as a comprehensive engine brand. The engines include the medium- to large-size diesel engine DP series (6L-22L), the compact power generator diesel engine G2 series (1.8L-3.4L), and the new compact mechanical type engine (1L-4.8L).

The power generator engine market continues to suffer from a stagnation reflecting oil and gas markets reeling from low oil prices as well as instability in the Middle East. Against this backdrop, the company plans to increase sales by expanding its power generator engine portfolio through displacement of low-performing products and improvement of sales network and customer support.

2017 Middle East Electricity Exhibition in Dubai



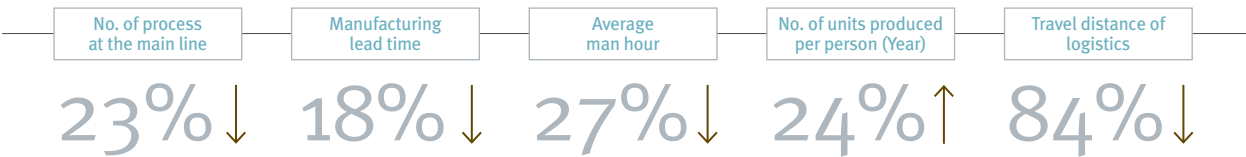
G2 Engine (D24) at 2017 CONEXPO



Securing Cost Leadership through Manufacturing Innovation

03

Effects Anticipated from Excavator Plant Advancement



Process map showing processes from production to sales of heavy products (Heavy Show-room)



Maximizing Production Efficiency through Excavator Plant Advancement

In 2016, Doosan Infracore optimized facility efficiencies by consolidating two production plants in Incheon and adopted advanced operation systems, such as modularization and production line efficiency enhancement. As a result, the company has cut the number of processes and work hours by over 20% through a process redesign reflecting modularization designs. In addition, all production processes, including welding, assembly, painting, and shipment, are now all handled at a single plant, leading to a sharp reduction of more than 80% in the travel distance of logistics required for product manufacturing. In addition, the company applied the ‘Fool Proof’ system to major processes for zero-defect production, and adopted the Andon system, which is designed to stop the entire production line as soon as an issue is discovered, such as a defect on the production line, and enable a prompt resolution of issues. The company also implemented a pull-based material supply system, which supplies an amount of materials just enough for production of one unit of equipment in accordance with the production progress, thereby eliminating waste factors. Plans have been set for 2017 to strengthen quality control in consideration of changes made in the production process, while continuing to improve productivity.

Bolstering Cost Advantage through Design Optimization

The diversification of products and increasing operating costs have given rise to the need for a new method of planning, designing, and producing products that can help improve cost competitiveness. Doosan Infracore therefore implements Value Analysis (VA)/Value Engineering (VE) to secure stable performance and quality levels and reduce costs. All relevant departments at Doosan Infracore, including design, purchasing, production, and quality, are engaged in a seamless collaboration pursuing the right direction that will lead to viable solutions in a short time. To ensure that these activities are fully reflected in the new product development process, the company is also working on their internalization.

Building a Smart Factory

Doosan Infracore has been turning its G2 engine factory in Incheon into a smart factory by integrating the factory’s systems and data and applying RFID-based automation, AI and virtual engineering. Through such smart factory implementation, the company aims to have information on manufacturing and demand supplied on a real time basis to production and purchasing so as to flexibly respond to market changes, improve quality and productivity, and curtail costs.

Explanations on the heavy product line-up at the Heavy Show-room



Advanced Incheon Excavator Plant

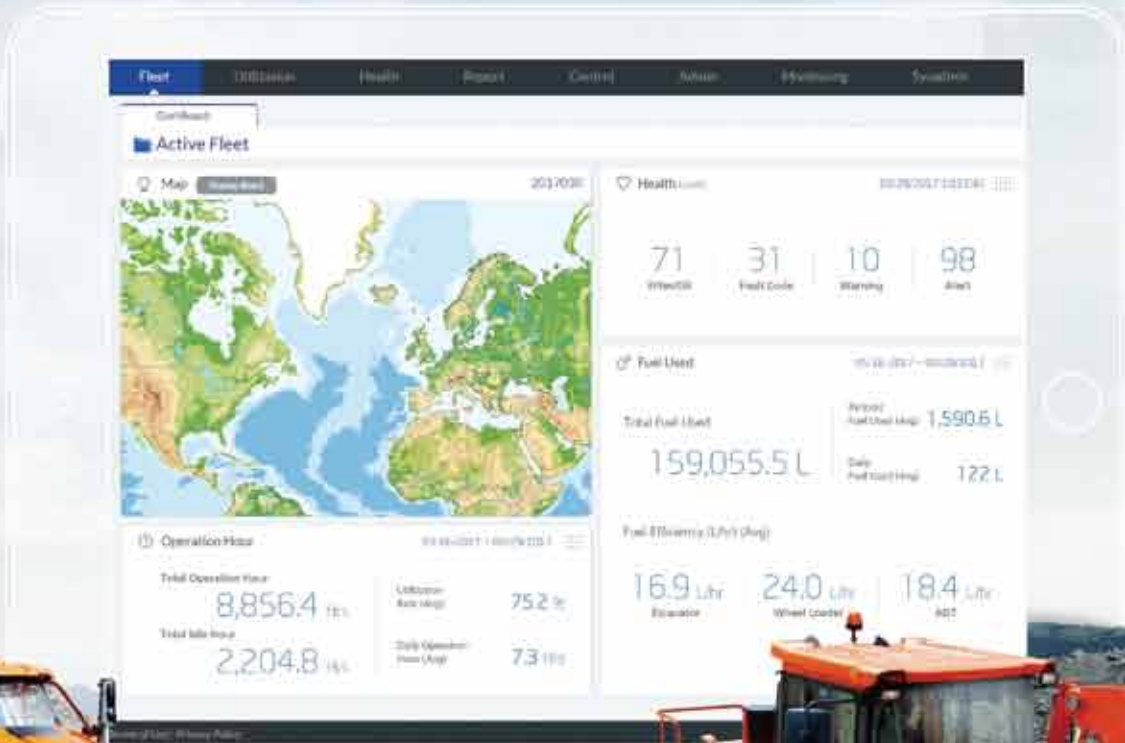


Video of Doosan Infracore’s advanced Excavator Plant in construction



SMART SOLUTION

- 01
Telematics Systems
- 02
Unmanned/Automation



Telematics Systems

01

Telematics Service in the Construction Equipment Market

Telematics systems incorporate information and communication technologies (ICT) to construction equipment. Operators can gain access to real-time information on the location of telematics-equipped excavators, their operational status, and the status of major systems including the engine and hydraulic systems through the telematics device installed on construction equipment. The collected data can be processed and transferred to other locations via mobile devices, such as smartphones and tablet PCs. Likewise, the equipment can be remotely managed from a distance through mobile devices. Telematics service allows owners and operators of construction equipment, which are used in diverse industrial sites, to remotely monitor and efficiently manage the operation of their equipment without being present at the worksite.

Doosan Infracore was one of the forerunners to recognize the importance and growth potential of telematics. Starting from China in 2005, and gradually increasing scope to other countries in Europe and North America, Doosan Infracore has been offering relevant services in accordance with individual needs. Based on the system operation experience and data accumulated over the last decade, the company has been developing and providing distinctive product services, while improving and advancing its operation processes,

including product development, demand forecast, and inventory management. In response to the spread of telematics services across the industry, the company has been continuously improving its telematics devices and the user interface (UI) to further sharpen its competitive edge and offer more advanced product services. By doing so, Doosan Infracore strives to provide smart solutions beyond construction equipment production and sales.

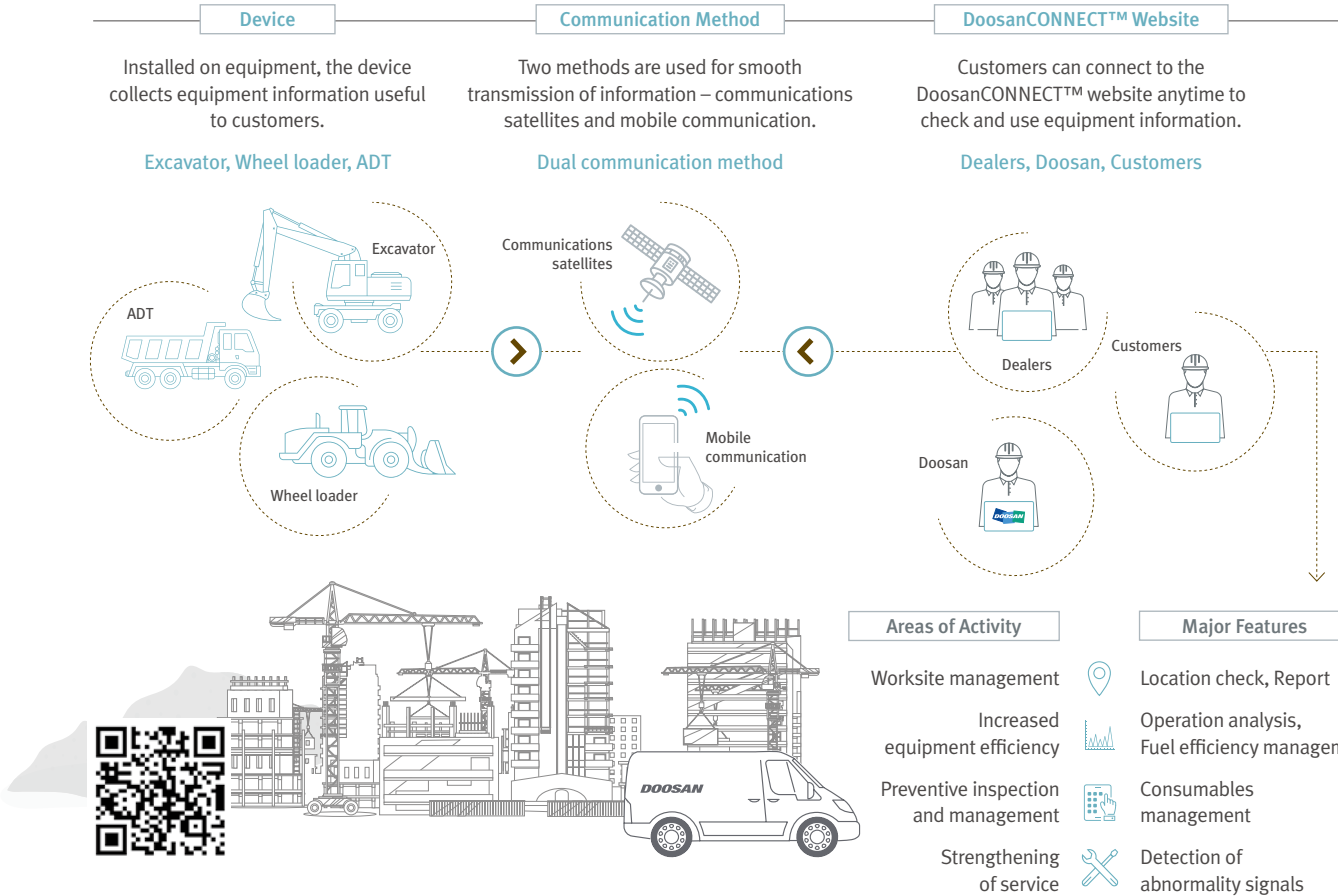
DoosanCONNECT™

DoosanCONNECT™ is the brand name for all telematics services provided by Doosan Infracore. The company has completed the integration of all of its telematics-equipped products and the UI of DoosanCONNECT™ – DoosanCONNECT™ website (www.doosanconnect.com) and a mobile app – so that the equipment can be monitored through one integrated UI. Thanks to the UI developed with in-house technologies, the company has established a basis that allows for a quicker system reflection of various customer needs as well as provision of the same service at the same time to all users around the world. This year the company plans to reflect the telematics-related ISO/TS 15143-3 standard and continue upgrading the AEMP protocol-based DoosanCONNECT™, so that telematics data of construction equipment made by other makers can be registered and managed on DoosanCONNECT™ website.

Doosan Infracore strives to provide distinctive services through its DoosanCONNECT™ service. By providing basic information such as equipment location, operation and updates on parts replacement cycles, the company helps customers manage their equipment more efficiently. In addition, the data collected through the telematics on the status of diverse equipment and operations are used for basic materials to improve equipment quality and performance. Also, linked with DoosanCARE, another distinctive service of Doosan Infracore, DoosanCONNECT™ can contribute to increase customer convenience in the use of equipment and to minimize downtimes.

In addition to making efforts to continually improve product performance and quality, Doosan Infracore will actively fuse new technologies, such as ITC, with its products and services to offer distinctive solutions that maximize customer satisfaction.

DX530LC equipped with the DoosanCONNECT™



Unmanned/Automation

02

Smart Solution Trend in the Construction Equipment Market

ICT and artificial intelligence (AI) are emerging fast as the forerunners of future technology, signaling a new, unprecedented revolution. Using big data to solve problems is being introduced while automation and unmanned operations are coming into our lives due to development of robotic technologies. By the 2020s, it is expected the number of skilled equipment operators will have been declined with a worsening aging population issue. The development of unmanned/automatic technologies will enable simple work even if there is a reduction in the number of skilled operators. With the continuous advancement in unmanned/automatic technologies, it will be far easier to work at hard-to-reach and risky places such as where natural disasters occur or are contaminated by radioactive. Doosan Infracore therefore strives to incorporate future technologies into its construction equipment, with an aim to meet customers' rapidly changing needs while seeking new opportunities to create added value.

Realizing Smart Solution Technologies of Doosan Infracore

Doosan Infracore has been steadily preparing unmanned/automatic technologies since 2014. As part of this effort, in 2016 the company released excavators equipped with Around View Monitor (AVM) and rear warning systems for the first time in the domestic construction equipment industry, helping excavator operators work in a safer environment. It is currently working on the development of unmanned excavators and self-driving technology. Installed on the six models of Doosan Infracore's DX-5 series, AVM is a cutting-edge technology that enables the operator to monitor the visual images taken by a total of four cameras. The images are processed by an on-board computer, and the operator can watch them on a monitor in the cabin in real time and secure a 360-degree visibility around the equipment. For such an advanced technology, the DX-5 series excavator received the Special Award at the Red Dot Award 2016, and Doosan Infracore became the first among construction equipment companies around the world to receive the Red Dot Award for both the concept and mass-produced products, receiving recognition for its value once again.

The DX series excavator that received the Red Dot Award 2016



Based on the continuous efforts the company has made, Doosan Infracore has been working together with Trimble Inc., a leading company in unmanned/automation solutions, and released a product with an optimized auto-grading system of Trimble in March 2017. The company focuses on making internal R&D investments and actively cooperating with other companies with outstanding technological prowess. In doing so, Doosan Infracore invests in the development of various element technologies to secure distinctive competitiveness in unmanned/automation technologies.

The incorporation of smart solutions in construction equipment will bring substantial changes to worksites and the industry structure. Doosan Infracore will therefore incorporate cutting-edge technologies in the construction industry, which is regarded as a labor-intensive industry, to raise construction efficiencies. Furthermore, the company will become a global leader that leads the transformation of the construction industry and relevant equipment industries into higher value-added industries.

DOOSAN BOBCAT

- 01 Improving Fundamental Competitiveness
- 02 Diversifying the Product and Business Structure
- 03 Becoming a Global Company



edge engineering and R&D facilities, and top-end technology. The company also opened the Innovation Center at its worksite in Dobris, Czech Republic in order to create synergy between R&D activities for products for Europe and emerging markets. The Acceleration Center is able to carry out the entire range of R&D activities, including presenting new ideas, computer simulation, creating prototypes, and product testing. This enables the company to develop products within a much shorter period of time. In order to improve the work environment and operational capabilities of the Gwinner, North Dakota Plant, which has been open since the 1960s, Doosan Bobcat undertook an extension and engineering facility repair project worth USD 12 million as part of its Innovation Accelerated strategy, and completed the project in April 2016. In production facilities, Doosan Bobcat has extended its line of MEXs, which have recently seen considerable growth, and has also redesigned its factory assembly line to increase production speed. Improvements were made to the paint line, including a new cutting-edge spraying system called ColorMax Booth, which has improved product quality and the durability of the company's products.

Doosan Bobcat has expedited the New Product Development (NPD) process through product and process innovation by implementing Innovation Accelerated, using techniques such as crowdsourcing, and cross-functional collaboration between relevant departments. Crowdsourcing, a compound word consisting of 'crowd' and 'outsourcing', is defined as bringing together opinions and ideas from various stakeholders, including employees, dealers, and customers. These ideas are then collected through our GroundBREAKER crowdsourcing website, and applied to prototypes. This NPD process innovation can shorten the product development process, dramatically. In order to respond effectively to ever-diversifying customer requirements and stricter product regulations, Doosan Bobcat will apply Innovation Accelerated to its development process for key products, in its efforts to go beyond being the leader in the North American SSL, CTL, and MEX markets, and become No. 1 globally.

Doosan Bobcat's SSL (S750) clears away snow



Improving Fundamental Competitiveness

01

Strengthening Leadership in the Compact Market through Innovation

Doosan Bobcat is a leading company in the design, manufacturing, marketing, distribution, and product support services of diverse compact equipment and attachments used in various fields, including construction, agriculture, landscaping, ground maintenance, industry, and mining. Its flagship products are the skid-steer loader (SSL), compact track loader (CTL), and mini excavator (MEX). Thanks to these products, Doosan Bobcat leads the global compact equipment market. Doosan Bobcat strives to improve existing products, release new products and expand its service network so that it can offer products and services that guarantee efficiency and top performance in any type of working environment.

Doosan Bobcat has a long-term strategy of investing in people, facilities, and products. Over the last three years, it has made progress at worksites and innovative R&D investments. In 2014, it established the Acceleration Center, at the Bismarck, North Dakota worksite in the U.S. The Acceleration Center is equipped with all the systems needed for product development, including cutting-

Unveiled for the first time at the 2017 CONEXPO, the Revolution (R) Series excavator is the outcome of combining product innovation from both Doosan Bobcat and Doosan Infracore. The two companies have worked closely together since 2007 to develop innovative products that optimize the product knowledge and R&D capabilities of the two companies in compact excavators. Engineers with a wide range of experience participated in the product development, which ensures that all customer requirements are met. The Doosan Bobcat R Series excavator was developed through this global R&D project, and was built with 'Crawler' technology to reduce the vibration. Other features include increased operator room and comfort increased lifting strength as well as many other performance improvements. One unique characteristic is the larger cockpit and windows, which make obstacles easier to spot while working. Doosan Bobcat plans to develop more products that satisfy world-wide customer requirements through global collaboration.

Widening the Dealer Channels and Expanding Marketing Activities

Doosan Bobcat has a large dealer network that consists of approximately 600 dealers in North America and about 1,000 dealers in approximately 100 countries world-wide. Doosan Bobcat has long been the leader in the compact construction equipment market thanks to the outstanding abilities of its dealers and their extensive knowledge of Doosan Bobcat products, along with the company's active customer satisfaction policies and programs. To ensure a quality dealer channel, new dealers are recruited every year based on a market coverage roadmap. The company offers a dealer incentive program, various marketing activities, and support measures to help increase market share. There are also various programs in place to increase dealers' understanding of Doosan Bobcat products and businesses. These include the Dealer Training Center, 'Boot Camp' training, Bobcat University, and the Dealer Transformation Program (DTP). Furthermore, the company has set individual dealer support programs in place, including a data analysis tool and a dashboard that offer information on the construction equipment industry based on big data. This continuous investment in support for dealers has resulted in building partnerships with the dealers in North America for more than 29 years on average.

SSL with a sweeper attachment



Doosan Bobcat has created various marketing materials that offer easy-to-understand product information for dealers and customers. It can be difficult for customers to judge a product’s real-life performance simply by reading the manufacturer’s specifications. Doosan Bobcat therefore operates the Bobcat Advantage® program, which compares performance test results for about 20 products from

Doosan Bobcat and major competitors and discloses the information on the company website, Youtube channel, and social media. This enables customers to more easily understand the products’ actual performance. There are approximately 30 product performance test result videos on the Bobcat Advantage® page on the company website.

Doosan Bobcat in Numbers

1st



As a pioneer in the compact equipment industry, Doosan Bobcat created the world’s very first original SSL.

The company has continued to innovate over the past half century, which has enabled it to remain as the solid market leader. Doosan Bobcat sets industry standards and leads the market through innovative products and technologies such as the Bob-Tach™¹⁾.

¹⁾ Bob-Tach™: Thanks to this technology, developed by Doosan Bobcat in the 1970s, the attachment on the arm can be easily and precisely installed in just a couple of minutes, which is much appreciated by customers. Other manufacturers developed in-house replacement systems for around a decade, but when the company’s patent expired in the 1980s, they used Doosan Bobcat’s method. The Bob-Tach™ technology is now a global ISO standard.

In 2014, Doosan Bobcat became the first company to produce 1 million units of a compact loader in the industry.

The company produced 500,000 units in 2001, 750,000 units in 2008 and 1 million units in six years. This is more than the sum of all sales of compact loaders by other companies, proving undisputed leadership of Doosan Bobcat

1 million



Earthforce Doosan Bobcat’s low- to mid-priced brand for emerging markets

Diversifying the Product and Business Structure

02

Expanding in Emerging Markets

Doosan Bobcat sought to expand its business, which had been mostly focused on North America and Europe in the past, to include China and other emerging markets. The company therefore acquired Doosan Infracore’s Suzhou Plant and turned it into a compact construction equipment production base. Doosan Bobcat is now moving beyond its previous marketing policy in China of focusing on mid- to large-sized construction equipment and rather dedicates to creating separate marketing strategies on compact equipment. Doosan Bobcat is preparing to release the products tailored to local markets, including new SSL models and MEX models, in order to create new demand and increase market share in China and emerging markets. The new SSL model will be launched as part of Doosan Bobcat’s low- to mid-priced brand, Earthforce and will be distinct from Doosan Bobcat brands targeted at advanced economies. The new model has similar specifications to Doosan Bobcat’s major products, but cost competitiveness was improved by producing parts locally as much as possible. It will be launched first in China in 2017 and will then be released in major emerging markets over the mid- to long-term.

Diversifying the Product Portfolio

Even in the midst of difficulties, Doosan Bobcat continuously invested in building new products and thus released the M-Series, the Backhoe Loader (BHL), and a mini electric excavator, which led to maintaining its market leadership at a time when other construction equipment companies were delaying launching of the new products. The M-Series, a new loader/MEX, is equipped with new extendable medium/large-sized platforms and features improved performance. For instance, it provides an operator with wider field of vision by relocating the cabin, cuts noise levels by over 60%, while its hydraulic power has increased by more than 15% and its traction power has improved by 15 to 20%.

In 2016, Doosan Bobcat launched new BHL on its official YouTube channel. The BHL is a multi-purpose compact product, equipped with a loader in the front and an excavator in the rear. Since a single unit can handle various different tasks, the BHL is ideal for farms and construction sites. It is therefore expected to generate good sales in emerging markets, including the Middle East, Russia, and Africa. In fact, Doosan Bobcat became one of the top three compact equipment manufacturers in the Middle East only nine months after the launch of the BHL. The BHL has completed Doosan Bobcat’s comprehensive product portfolio in compact construction equipment, to go alongside the Telehandler (TLS) launched in 2000 and the multi-purpose compact Utility Vehicle (UTV) released in 2003. Both the TLS and the UTV are established products in their respective markets. Both products contribute to the success of the company and satisfying diverse customer requirements.

The E10 Electric prototype is a mini electric excavator that was unveiled at the 2016 Bauma exhibition. This excavator is so small that it can pass through a door, and it uses a rechargeable battery or electric plug instead of diesel. Its size, its minimal vibrations and noise, and the fact that it does not emit exhaust fumes, make it easy to operate indoors. Of particular note, the Zero Tail Swing (ZTS) technology minimizes the work radius of the E10, enabling it to be used even in a small area without damaging walls. It can therefore work efficiently in an indoor remodeling site or a below-ground site that larger equipment could not access. The mini electric excavator E10 is a next-generation product for Doosan Bobcat, and it is expected to be a leader in the market for electric equipment, which will be a vital part of the future electric equipment market.

Outstanding Financial Performance

Doosan Bobcat launched the compact construction industry by introducing the first SSL in 1958. Since then, it has played a leading role in the world's compact construction equipment market, with an emphasis on the North American market. In 2007, Doosan Infracore acquired Bobcat Company. Doosan Bobcat's business performance suffered during its initial years, in large part because of the global financial crisis. However, the company has recorded positive operating profits since 2011 by continuously making bold investments. In 2016, the company maintained its growth pace, recording KRW 3,879.1 billion in sales and KRW 414 billion in operating income. The improvement in operating income resulted from restructuring the European business and cost reductions arising from improved production efficiency. Better business fundamentals, including a higher percentage of total sales from high-yield products such as CTL and MEX were also contributing factors. Doosan Bobcat has been well received by the market thanks to its financial performance, stable business structure, and strong brands. Based on the positive feedbacks, the company was successfully listed on the Korean stock market on November 18, 2016, thus laying the foundation to further solidify its position as a global leader.

Doosan Bobcat will continue to implement strategies that improve its channel competitiveness in an effort to increase sales. It will actively diversify its sources of revenue to maximize profitability, maintain the optimal business structure, and continue to maintain its leadership in compact construction equipment business while also establishing a solid position in heavy construction equipment. The company is also targeting increased aftermarket sales by improving parts supply, diversifying its aftermarket business, and improving the marketing of its services, so that the aftermarket business can become a stable source of revenue. Doosan Bobcat will continuously improve its fundamental business competitiveness in its products, technologies, quality, channels, and services, and will also actively seek out new opportunities for growth in the construction equipment industry.



Acceleration Center, a R&D center of Doosan Bobcat

Becoming a Global Company

03

World's Number 1 in Compact Construction Equipment

Doosan Bobcat is striving to expand its market share in heavy equipment and portable power products. In May 2016, in order to establish a common culture, values, and goals across the various Doosan Bobcat brands, the company set out its vision to be the Global Leader in Compact & Portable Power and held ceremonies at its worksites around the world. Based on this new vision, Doosan Bobcat will pursue sustainable growth, diversify its product and local business portfolios and continue to innovate in products and services in order to boost its fundamental competitiveness.

Doosan Bobcat is forecasting strong growth for 2017. Although markets in Latin America and the Middle East are recovering slowly, stronger growth in advanced economies, including North America and Europe, and a strong recovery in China are forecast to result in continued overall market growth. In emerging markets, demand for compact equipment will grow as a result of increasing brown field construction, which requires more compact equipment than green field construction. In North America and Europe, demand is forecast to increase for equipment for small-scale construction projects such as housing and downtown infrastructure repair. Emerging markets are showing a similar pattern, with a low demand for the mid- to large-sized equipment used in major infrastructure construction and mining, but with a high demand for compact equipment, mainly in farming villages or for maintenance work.

The multi-purpose 3400 utility vehicle



Telehandler equipped with a trencher attachment



Doosan Bobcat Key CSR Activity



Establishing the CSR Committee

In 2016, Doosan Bobcat's US subsidiary established a CSR Committee, led by the CEO, and undertook 19 strategic CSR tasks. The CSR Committee will continue to ensure that corporate social responsibility is considered in all aspects of company management.



Enacting the Supplier Code of Conduct

In 2016, Doosan Bobcat's US subsidiary enacted a Supplier Code of Conduct, identifying conduct relating to labor, human rights, health and safety, the environment, and ethics that must be observed by suppliers doing business with Doosan Bobcat. The Code of Conduct has now been shared with all suppliers.



Supporting STEM Activities

Doosan Bobcat opened a Science, Technology, Engineering & Mathematics (STEM) building at North Dakota State University in 2015, to help foster creative talent. The company also invited local students to the Acceleration Center in Bismarck to support talented local people and create STEM experts.



Certification of the Gwinner Plant's EHS Management System

Doosan Bobcat has established a systematic environmental health and safety (EHS) system, in order to minimize the environmental and safety risks that can arise at worksites. In 2016, the Gwinner Plant in the U.S. was recertified for international EHS management standards, Environmental Management System (ISO 14001), and Safety and Health Management System (ISO 18001).

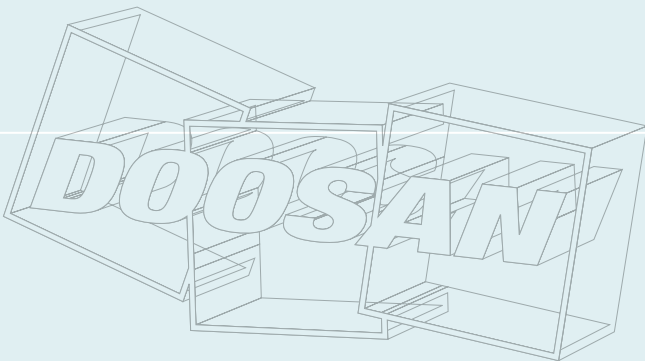
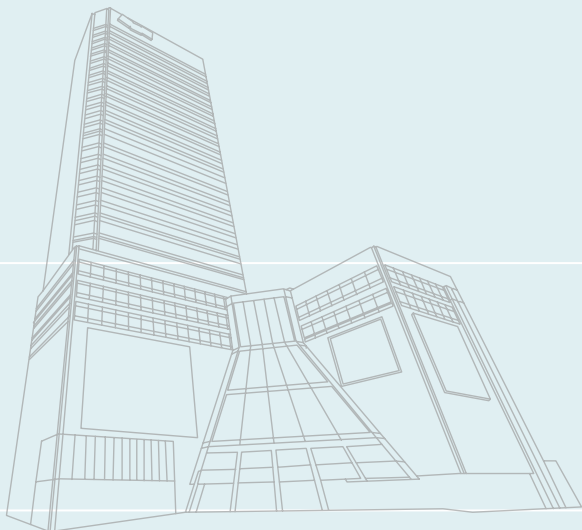


Participating in the Doosan Day of Community Service

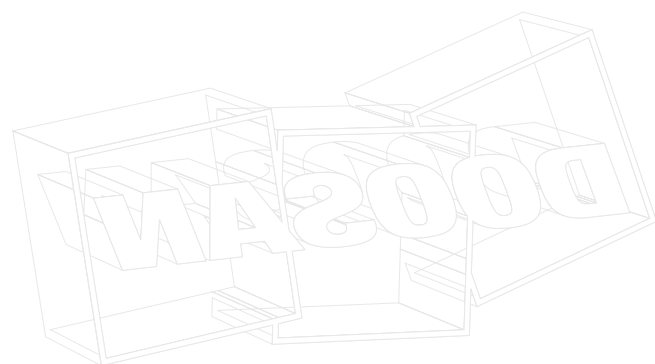
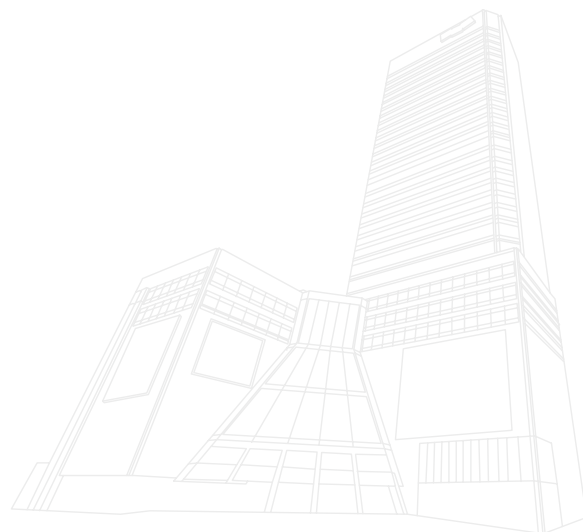
Doosan Bobcat staff across the globe volunteer for the annual Doosan Day of Community Service, undertaking social contribution activities for local residents. Doosan Bobcat's US subsidiary uses a performance management system so that its social contribution activities can be efficiently supported by the company.



OUR RESPONSIBILITY



OUR RESPONSIBILITY



46 CSR Structure

52 Transparent and Ethical Management

58 Customer Satisfaction and Quality Management

63 Integrated EHS System

71 Shared Growth with Our Suppliers

76 Employee Value Proposition

83 Supporting Development of Local Communities

CSR Management System

CSR Promotion System

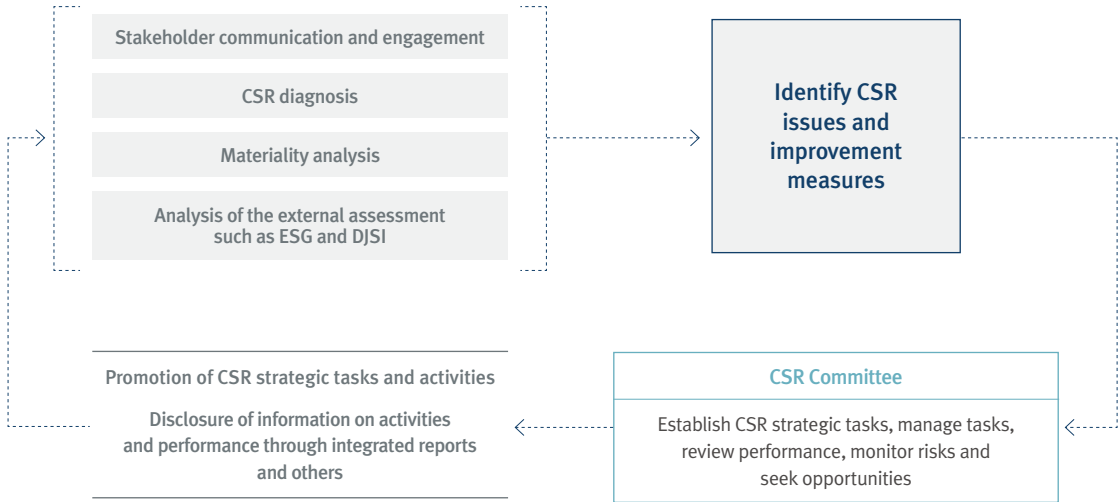
Doosan Infracore promotes corporate social responsibilities (CSR) through cooperation among the relevant departments, mainly the CSR part at its head office and persons in charge of its overseas business sites. The company convenes meetings of the CSR Committee (Chairperson: CEO), the top decision-making body, on a quarterly basis, and the Committee sets up CSR strategic tasks and approves related operations and processes based on materiality issues and external assessment such Environmental, Social, and Governance (ESG) Evaluation and Dow Jones Sustainability Indexes (DJSI). When major decisions are made by the Committee, the CSR Working Group, which is composed of working-level staff, draws up specific implementation plans and discusses implementation tasks. The CSR part, which is the organization responsible for coordinating the company's overall CSR strategies, is responsible for comprehensive CSR-related tasks such as establishing CSR strategies, identifying stakeholder issues and needs, diagnosing CSR levels at domestic and overseas sites, presenting CSR tasks, monitoring performance and publishing integrated reports.

CSR Committee

The CSR committee, which is composed of the CEO, the heads of BGs, and other key executives, is the company's highest decision-making body regarding CSR. Its major responsibilities include establishing company-wide CSR strategies and policies, drawing up CSR strategic tasks, reviewing operational performance, and determining the business risks and opportunities arising from changes in the CSR environment. The Committee is composed of five subcommittees dedicated to human rights/labor practices, environment, fair operations, customer values, and local communities. The subcommittees conduct in-depth discussions with the focus on related CSR strategic tasks on a quarterly basis. To boost the efficiency of their decision-making process, the subcommittees are flexible in deciding which organizations will participate in their activities depending on the nature of the tasks to be carried out.

The CSR strategic tasks are reflected in the management by objectives (MBO) of relevant executive officers. Some of them are linked to the annual business plans to enhance their implementation capabilities and will also be linked to mid- to long-term management strategies. Doosan Infracore will continue to seek new CSR strategies and effective implementation strategies with the aim of enhancing its corporate and social values in the long term, thus achieve tangible results.

CSR Operating System

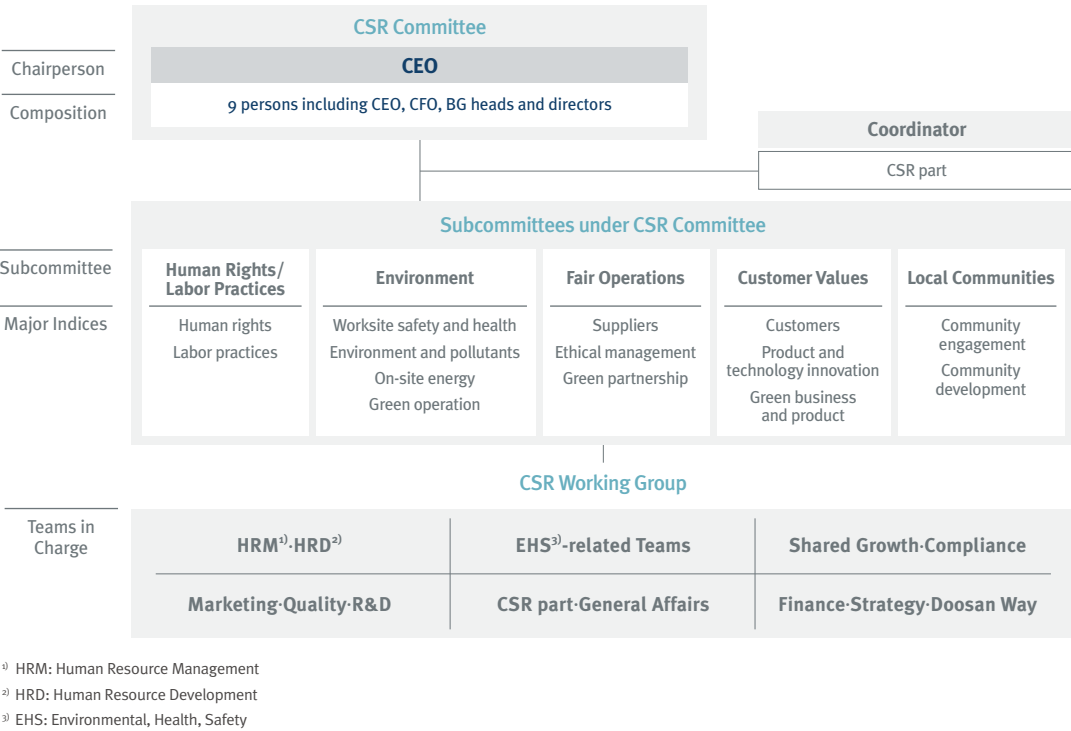


In 2016, Doosan Infracore established the global CSR management system, one of its CSR strategic tasks. The Chinese subsidiary and Doosan Bobcat North America formed their own CSR Committees to monitor the progress of their respective CSR tasks.

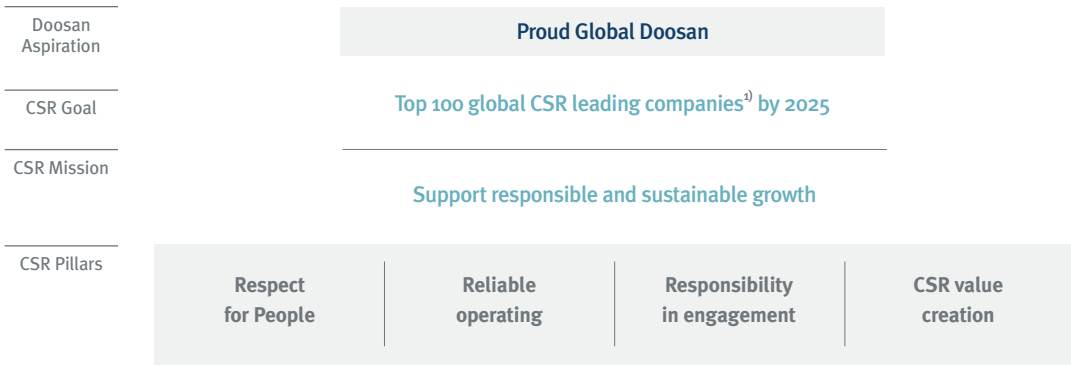
Doosan Group CSR Strategies

In 2016, Doosan Group reestablished its CSR strategies based on existing CSR strategies that reflected the results of analysis of global trends and its internal capacity.

CSR Organization



CSR Organization



¹⁾ Based on the announcement of the World Economic Forum (Davos Forum)

CSR Strategic Tasks

In 2015, Doosan Infracore created and promoted six CSR strategic tasks in consideration of the results from its company-wide CSR diagnosis, materiality assessments, and external evaluation such as ESG and DJSI. In 2016, the company continued to implement the 2015 CSR strategic tasks and added the global CSR governance task laying the groundwork for CSR promotion at all its overseas business sites. As of 2017, it has so far selected eight CSR strategic tasks by upgrading the existing tasks and expanding its product-related tasks in order to enhance customer values.

	2015	2016	2017
CSR Governance		Establish the global CSR governance	Help overseas worksites disclose their CSR information
Customer Value	Define eco-friendly products and set up standards	Define eco-friendly products and set up standards	Develop the REACH-IT system Two tasks related to the advanced emissions regulations Heavy: One task related to smart solutions
Environment	Establish a management system for worksite energy efficiency Establish a management system for chemical substances	Establish a management system for worksite energy efficiency Establish a management system for chemical substances	Establish a management system for worksite energy efficiency Establish a mid- to long-term roadmap on how to deal with the carbon trade scheme
Fair Operations	Strengthen CSR management system of supply chain Build carbon partnership with suppliers	Strengthen CSR management system of supply chain Build carbon partnership with suppliers	
Human Rights/Labor Practices	Establish a management system for human rights risk: Assess current status and overhaul grievance handling channels	Establish a management system for human rights risk: Publish a human rights risk prevention manual and provide education on human rights to office staff	Strengthen the monitoring for human rights violation

Existing or advanced Newly implemented in 2016 Newly implemented in 2017

Stakeholder Engagement

Definition of Stakeholders

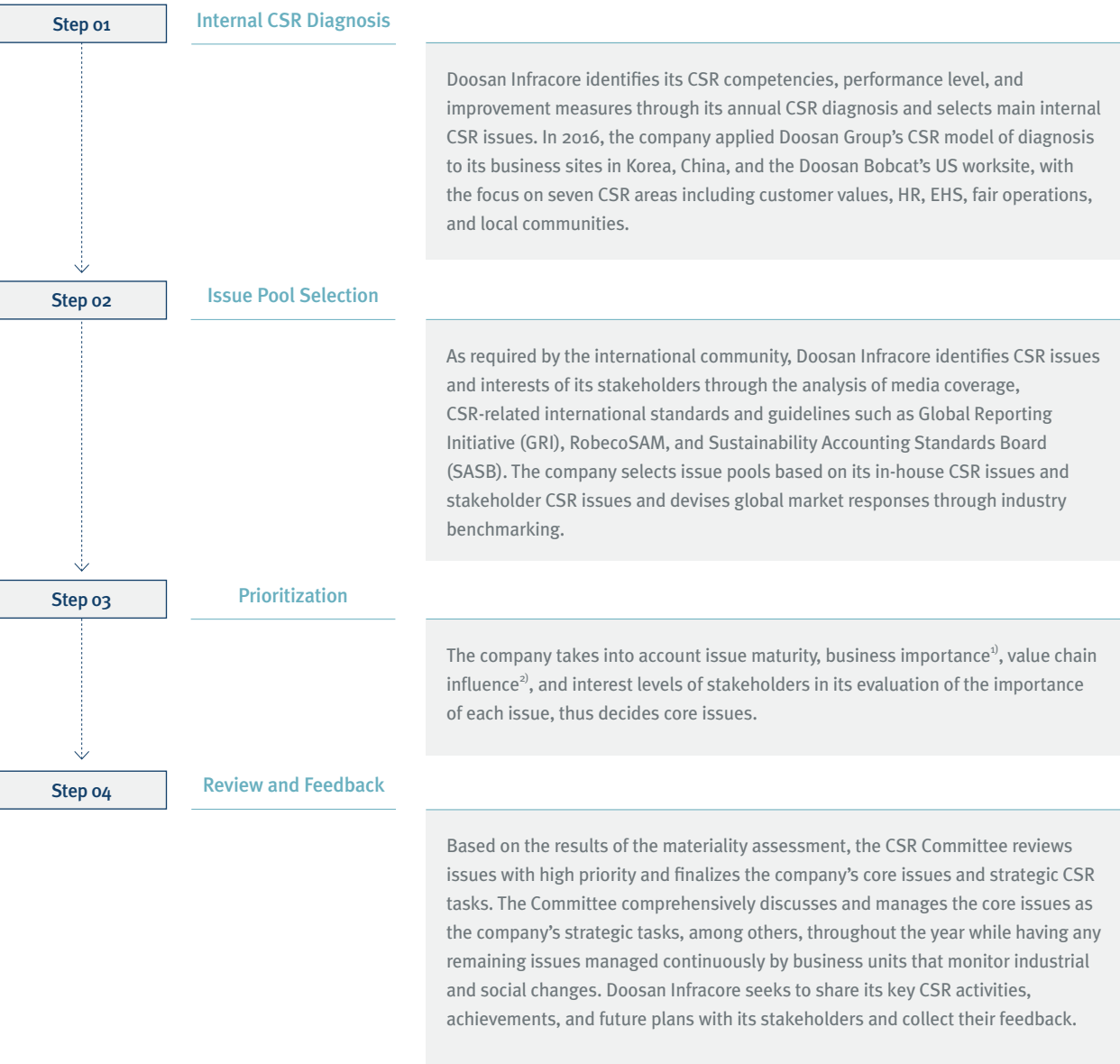
Doosan Infracore focuses on communicating with its internal and external stakeholders, as well as promoting their engagement and cooperation in CSR activities. The company identifies expectations and needs of its stakeholders, including customers and suppliers, through communication channels operated by each functional department on a regular basis, and reflects them in its management activities. Through these communication channels, the company also discloses its CSR activities and achievements transparently and enhances its stakeholders’ trust.

Communication Channels for Stakeholders

	Communication Channels	Major Issues	Responses
Shareholders/ Investors	Annual general meeting (AGM), disclosure materials, investor relations (IR) information on the company website, conferences, IR meetings	Improve profitability and a high dividend policy; strengthen disclosures; sound corporate governance; and business opportunity and risk management	· Share the company's mid- to long-term business directions · Make earnings announcements and providing IR data · Hold analyst meetings
Customers	Field surveys, Voice of Customers (VOCs), call centers, joint workshops, integrated customer management systems	Prompt customer complaint handling and feedback; product quality improvement, performance, safety, and convenience; thorough customer information protection; R&D investment and technological development intensification; differentiated customer service; and develop eco-friendly, high efficiency products	· Product presentation through exhibitions and dealer meetings · Tasks aiming for eco-friendly products · Incorporate VOCs into products through the New Product Development) processes · Enhance customer accessibility by providing dealers with web-based information and strengthen dealer management · Boost customer responsiveness through the Happy Call and dealer service training
Employees	Labor-Management Council, grievance handling system, Intranet, Doosan Way surveys, dialogue with management	Fair evaluation and compensation; education and competence development; work-life balance; win-win labor-management relations; and active communication within the company	· The Doosan Way · Human resources development based on the Functional Competency (FC) system · The Women's Council · Publish a human rights risk prevention manual and provide education on human rights
Suppliers	Supplier Council, supplier education, consulting, and technical support for suppliers	Share more information with suppliers; expand support to boost suppliers' capabilities through financial, technology, education, environment, and ethical management support; and strengthen fair trade	· Foster leading suppliers · Financial support for suppliers · The Supplier Hotline · Share CSR guidelines with suppliers
Local Communities (the environment, NGOs, etc.)	Meetings, social contribution activities, sisterhood relationship, working-level meetings with community leaders	Eco-friendly products and production processes; improve workplaces and surrounding environment; prevent pollution; establish environmental management system; communicate with local communities; and help local communities' economic development	· Operate the Dream School Plus · The Doosan Day of Community Service · Social contribution projects tailored to local business sites
Central/Local Governments	Participate in national projects, operate joint programs	Compliance with laws and regulations; and public-private partnership	· Regulatory monitoring and internal compliance · Suggest improvement measures through participation in related organizations' activities · Participate in the government's public policy projects
Media	Press releases, press conferences, regular meetings, business site visits (field trips)	Prompt and accurate information sharing	· Issue press releases in a timely manner · Support press reporters' news coverage · Find feature items and provide them to the media

Materiality Analysis

Materiality Analysis Process



¹⁾ Business importance: The company assesses the importance of each issue in terms of 'profit, cost, reputation, and compliance' in the course of business conduct by reviewing the related mid- to long-term strategies and business plans and major industry trends among other factors.

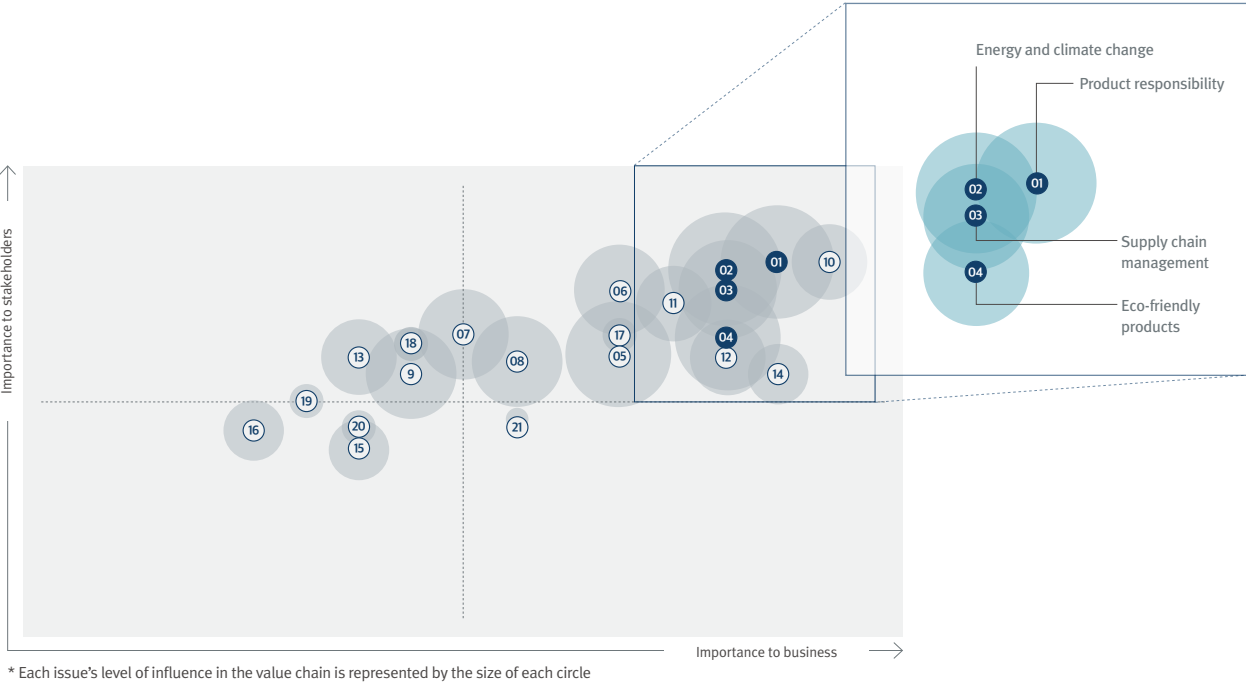
²⁾ Value chain influence: The company assesses the socio-economic/environmental impact and relative importance of each issue in the value chain.

Materiality Matrix

Core Issues		Contents	Page
01	Product responsibility	Our Strategy	P. 14-36
02	Energy and climate change		
03	Supply chain management		
04	Eco-friendly products		
05	Innovative management	Our Responsibility	
06	Worksite health and safety		
07	Impact assessment of sustainable development (economic, social, environmental)		
08	Sustainable use of resources		
09	Community engagement and development	CSR Structure	P. 46-48
10	Human rights and labor practices	Transparent and Ethical Management	P. 52-55
11	Worksite eco-efficiency		
12	Strategies for emerging markets	Customer Satisfaction and Quality Management	P. 22-23 P. 58-62
13	Cooperation with global stakeholders		
14	Management strategies and economic performance	Integrated EHS System	P. 63-70
15	Water resources management		
16	Waste management	Shared Growth with Our Suppliers	P. 71-75
17	Ethical management and compliance		
18	Corporate governance	Employee Value Proposition	P. 76-82
19	Impacts on biodiversity		
20	Soil preservation	Supporting Development of Local Communities	P. 83-86
21	Human resources development		

Results of Materiality Assessment

Doosan Infracore selected product responsibility, energy and climate change, supply chain management, and eco-friendly products, as its core issues out of the 21 CSR issues identified, based on stakeholder interest and business impact as well as value chain impact. As the importance and necessity of supply chain management have increased greatly around the world, three major issues – management of dealer partnership, win-win business management with suppliers, and management of suppliers' CSR – have been upgraded to be supply chain management. In line with the United Nations' adoption of Sustainable Development Goals (SDGs) following the expiration of Millennium Development Goals (MDGs) in 2015, companies are encouraged to participate more in global sustainable development and to achieve relevant results. Doosan Infracore therefore has added assessment of impacts on sustainable development which addresses the economic, environmental, and social impacts of its products and services. Through the 2016 Integrated Report, the company has disclosed its major activities, achievements, and plans concerning 21 CSR issues. In Our Strategy section, the company presents key information on its business strategies and products, and provides information on different CSR areas, including activities and achievements related with its strategic tasks, in Our Responsibility and CSR Facts & Figures.



Transparent and Ethical Management



OUR APPROACH

At the heart of Doosan Infracore’s sustainability lies transparent and ethical management for its stakeholders.

Doosan Infracore implements transparent management through independent governance and prompt information disclosures. Beyond compliance management, the company strives to ensure that ethical management serves as the foundation of all its decisions.

It secures the stability of its management environment by implementing transparent management and strengthening preemptive risk management through strict internal control system.

Corporate Governance

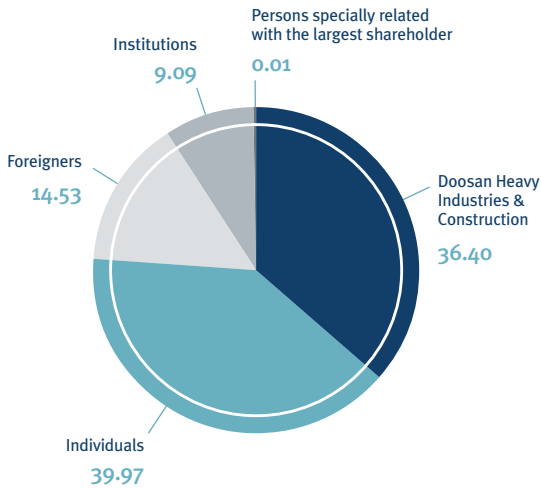
01

Composition of Shareholders and Equity

Doosan Infracore is a subsidiary of Doosan Group and operates more than 40 financially consolidated or subsidiary companies (based on annual reports) around the world. As of the end of 2016, the number of its shares issued stood at 207,455,314, of which the largest shareholder, Doosan Heavy Industries & Construction, owned a 36.40% stake. Its equity capital stood at KRW 1,037.3 billion.

Ownership Structure

(Unit: %)



(As of December 31, 2016)

Shareholder and Investor Communication

Communication Channels The management of Doosan Infracore actively seeks out the expectations and demands of its stakeholders, including shareholders, investors and customers, when making key decisions and investments. The company strives to attract investments in the global market by earning recognition for its genuine values in terms of growth potential and technological competitiveness. It has therefore established an investor-friendly investor relations (IR) strategy and carries out shareholder-friendly communication. In 2016 alone, the company held four company briefings in Korea and held securities investment conferences and company briefings in major overseas countries. The company also invites institutional investors to its worksites as part of efforts to offer them diverse and reliable information.

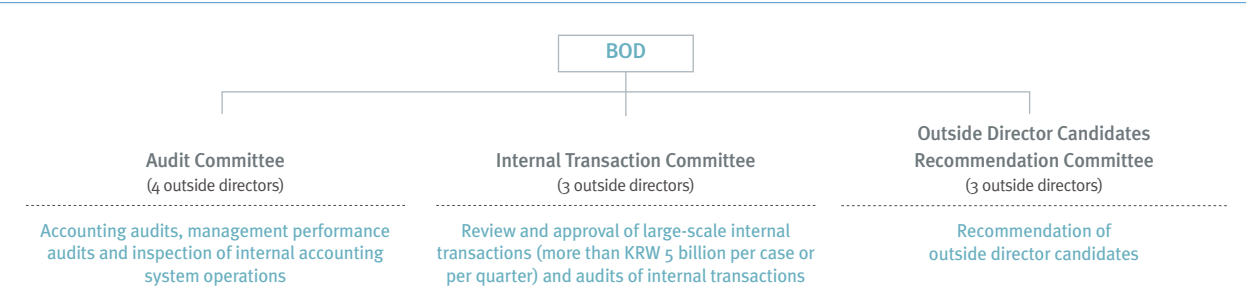
Protection of Minority Shareholders Doosan Infracore operates a paper ballot, an electronic voting system, and an electronic proxy solicitation system to protect the voting rights of its minority shareholders. When sending out notices of its annual general meeting (AGM), the company encloses paper ballots so that shareholders can exercise their voting rights if absent. Their votes are valid under the condition that they arrive at the company one day prior to the date of an AGM.

Disclosure of Corporate Information Doosan Infracore complies with all applicable legal disclosure requirements. It also strives to disclose information in a balanced manner, concerning its financial and non-financial activities through the voluntary disclosure of the compliance program (CP) status and CSR activities.

Status of Disclosure Activities

<ul style="list-style-type: none">Financial: Disclosure of provisional statistics on sales performance Quarterly and biannual reports and statements of affairs Disclosures relevant to AGM and special shareholders' meetings Disclosure of changes in the shareholding structure Disclosure on the Online Provision of Enterprises Information (OPNI) system operated by the Korea Fair Trade Commission, etc.	<ul style="list-style-type: none">Non-financial: Status of CP operations Disclosure of CSR activities including integrated reports Disclosure of information through company presentations
--	--

Intra-organizational Decision-making System



Composition of BOD

(As of March 31, 2017)

	Name	Current Position / Role in the BOD	2016 Attendance	Changes
Internal Directors	Park Yong-maan	Director of Doosan Infracore / Chairman of the BOD	100%	Appointed on Mar. 25, 2016
	Sohn Dong-youn	President and CEO of Doosan Infracore	100%	Appointed on Mar. 27, 2015
	Choi Hyoung-hee	Representative Director (Executive Vice President) of Doosan Infracore, Corporate Finance Center	100%	Appointed on Nov. 20, 2015
Outside Directors	Han Seung-soo	Special Envoy of the UN Secretary-General for Disaster Risk Reduction and Water / Member of the Internal Transaction Committee, Member of the Outside Director Candidates Committee	70%	Appointed on Mar. 27, 2015
	Yoon Jeung-hyun	President of Yoon Economic Research Institute / Member of the Internal Transaction Committee, Member of the Audit Committee	90%	Appointed on Mar. 27, 2015
	Bahk Byong-Won	Chairman of Korea Employers Federation / Chair of the Outside Director Candidates Recommendation Committee / Member of the Audit Committee	90%	Appointed on Mar. 27, 2015
	Kim Dae-ki	Outside Director of Doosan Infracore / Chair of the Internal Transaction Committee, Member of the Outside Director Candidates Recommendation Committee, Member of the Audit Committee	80%	Appointed on Mar. 27, 2015
	Jung Byung Moon	Attorney at Kim & Chang / Member of the Audit Committee	-	Appointed on Mar. 31, 2017

* Park Yong-maan was newly appointed as an internal director on Mar. 25, 2016.
Jung Byung Moon was appointed a new outside director and a member of the Audit Committee at the 17th AGM held on March 31, 2017.
The BOD consists of 8 members (3 internal and 5 outside directors) as of March 31, 2017.

The BOD deliberates and makes resolutions on matters specified under the relevant national laws and company bylaws, matters entrusted by the AGM, key management policies and important matters concerning business execution. It incorporates opinions and suggestions of shareholders, executives and employees collected through AGMs and IR activities into its decision-making process. It maintains its independence from major shareholders and executives, and checks and balances corporate decisions to ensure the company's transparent management.

There are three committees under the BOD – the Audit Committee, which is responsible for guaranteeing the transparency and independence of audit procedures; the Internal Transaction Committee, which is designed to boost the transparency of corporate management through the establishment of CP; and the Outside Director Candidates Recommendation Committee, which has the authority to recommend outside directors. All three committees are entirely composed of outside directors.

BOD Activities in 2016

All directors are allowed to participate in the BOD's deliberations via telecommunication devices capable of transmitting audio and video data simultaneously, thereby confirming their attendance at a meeting. Directors may not delegate their authority to a proxy. Directors with a vested interest in a particular agenda item are prohibited from voting on it so as to maintain transparency in decision-making process. In 2016, the BOD held 10 meetings during which deliberations and resolutions were made on 31 agenda items, including reports on management performance and a partial sale of the Doosan Bobcat stake. The attendance rate of the outside directors was 82.5%.

BOD Evaluation and Remuneration

The remuneration of internal and outside directors is determined within the limits approved at the AGM. The company also implements a performance salary system that links executive compensation with business performance. Directors are therefore given a salary corresponding to their pay grade as well as a performance bonus based on the organization's management results. To secure their independence from the management and majority shareholders, members of the Audit Committee receive remuneration only as directors and are prohibited from receiving any other types of compensation. The total amount of approved pay for directors in 2016 was KRW 15 billion, of which KRW 3,839 million was actually paid. The payment includes the pay for three registered directors excluding outside directors and members of the Audit Committee, one outside director excluding members of the Audit Committee, and three members of the Audit Committee, based on the number of persons paid from January to December 2016.

Ethical Management

02

Ethical Management Policies

Doosan Infracore applies the Code of Conduct of Doosan Group to all of its business sites at home and abroad. The company also connects the Code to its company-wide operation system, such as ERP, e-procurement, internal control and evaluation, and fair trade compliance systems, thus improves the transparency and efficiency of its business activities. There is the Audit Committee under the BOD, and the Legal Compliance Team is tasked with promoting, evaluating, and auditing ethical management practices.

Communicating and Promoting Ethical Management

Doosan Infracore has expanded the application of the Code of Conduct, which was established in 2014, to its overseas subsidiaries. Also, the company posts the Code of Conduct on its website along with information on how to report irregularities to ensure that both its internal and external stakeholders can access such information easily. Prior to all major Korean holidays, the CEO issues a letter requesting strict compliance with the Code of Conduct to all of its suppliers. The company publishes a white book that quantifies as much as possible the root causes of and remedies for the problems discovered by the Cyber Reporting Center and distributes to its stakeholders. In addition, to maintain a transparent ethical management system, Doosan Infracore urges new employees to sign a written oath pledging their compliance with the Code of Conduct. It also requires new suppliers to submit a written oath pledging not to engage in unethical business practices. The company requires each of its team leaders or higher level managers, as well as its executives, to write and submit a statement of interests form on an annual basis, with an aim to remind them of the strict compliance standards. In 2016, all those required to submit the statement complied with the obligation.

Education on the Code of Conduct Training on the Code of Conduct is designed to raise employees' awareness of ethical business practices and control the ethical risks involved in their business transactions in advance. As well as providing the training to all its employees, Doosan Infracore notifies them of major ethical management issues and posts the details on the bulletin board of each business site. In 2016, the company conducted online education on the Code of Conduct for its office staff, and plans are made to provide employees in its Chinese subsidiary with online training on the Code of Conduct starting in 2017.

Enhanced Fair Trade Voluntary Compliance Program The fair trade voluntary compliance program (CP) is related to the company's internal compliance control activities designed to prevent violations of the law through the company's presentation of the Code of Conduct to its employees, as part of its efforts to comply voluntarily with fair trade related regulations. Doosan Infracore has continued to enhance its fair trade voluntary CP by expanding preventive and follow-up monitoring activities, updating a CP handbook regularly, and cultivating CP experts in each business group. It also encourages its suppliers to introduce and implement the CP in order to take the lead in establishing fair trade practices throughout the industry. To help suppliers with their CP implementation, the company provides them with education on fair trade and export/import regulations as well as CP monitoring services. The company has reported the progress of its fair trade voluntary CP to the BOD biannually since 2012, including education on fair trade and the results of monitoring for violations of rules and regulations, and it also discloses the results to the public.

Compliance with the Anti-graft Law In Korea, the Improper Solicitation and Graft Act, also known as the anti-graft law or the Kim Young-ran Act, went into effect on September 28, 2016. Intended to prevent public officials' corruption, the Act applies to employees and their spouses of all public institutions including constitutional agencies, central administrative agencies and local governments, schools, and media outlets. The Act forbids improper solicitations to public officials and other relevant persons and prohibits them from accepting financial or other advantages. In 2016, Doosan Infracore carried out various activities to raise awareness among employees, such as providing education on the prohibition of solicitation to all its employees in Korea and expatriates in China, sending out CEO messages and collecting voluntary compliance pledges signed by the employees. It also carried out continuous monitoring through an organization dedicated to the task.

Completion rate of ethical management training (Korea)

95.3%

* Reasons for absence: Long-term overseas business trips, leave of absence due to illness, childbirth, etc., and restructuring

Completion rate of the Anti-graft Law training (Staff in Korea and expatriates in China)

94.7%

* Reasons for absence: Long-term overseas business trips, leave of absence due to illness, childbirth, etc., and restructuring

Internal Controls

03

Audit and Monitoring

In line with the growth of its overseas business and the adoption of the International Financial Reporting Standards (IFRS), Doosan Infracore has maintained independent audit teams in North America and China for audit and monitoring since 2012. The Legal Compliance Team at its headquarters in Korea respects the subsidiaries' responsible business management while striving to assess the actual state of their business and secure transparency in their accounting practices.

Internal Controls Evaluation System

Since 2006, Doosan Infracore has operated the Doosan Internal Control Assessment System (DICAS), an internal controls evaluation system, for its entire business areas, ranging from finance to sales, purchasing and production. The results of the evaluations are reported to the Audit Committee and board meetings following the reports to CFO and CEO in accordance with the Act on the External Auditing of Corporations. In 2014, the company began applying the same internal controls evaluation system to its subsidiaries in China, and conducted biannual on-site internal controls assessments in 2016.

Internal and External Reporting Systems

Doosan Infracore operates various internal and external reporting systems to facilitate immediate reporting of any unethical acts such as bribery, unfair business transactions, corruption, as well as violations of the Doosan Way, its Code of Conduct and regulations and relevant laws. The reporting channel include website, Cyber Reporting Center, mail, telephone calls, fax messages, and personal visits. The Cyber Reporting Center operates in three languages of Korean, English, and Chinese and is open to anyone including employees and external stakeholders. Reports are acted on promptly according to the applicable procedures. The reporter's identity remains confidential. Any irregularities are strictly sanctioned. The company's actions, including correctives, are notified to the reporter and disclosed company-wide, thereby further raising ethical awareness among staff.

Risk Management

04

Doosan Infracore has established risk management processes which are designed to enable its executives and working-level employees to recognize various strategic, operational, financial, and non-financial risks that could reduce its corporate value and incur economic losses, detect any problematic symptoms early on and take prompt remedial actions. The risk management processes ensure effective risk controls through various elements such as identification of risk factors, evaluation of the potential impacts of risks on the company, establishment of countermeasures, monitoring changes in risk levels, and constant reporting based on a coherent reporting system.

Financial Risk Management

Market Risk Foreign exchange risks occur as a result of changes in currency exchange rates, which may affect the forecasting of future deals, perceived assets and liabilities, and net investment in overseas operations. Doosan Infracore has set basic strategies with an aim to reduce fluctuations in profits and losses due to

changes in foreign exchange rates, and carries out hedge trading through exports and imports. Interest rate risks are related largely to adjustable rate deposits and loans. To preemptively deal with such risks, the company minimizes external loans through its reserve funds, reduces high interest rate loans, improves the borrowing structure, and monitors changes in interest rates. Since its financial instruments are exposed to the risk of changes in market prices that may negatively affect the fair value of the financial instruments and the company's cash flow, the management of the company measures risks arising from changes in prices regularly and manages key investment assets separately.

Credit Risk Credit risk arises from ordinary transactions or investment activities when customers or business partners do not follow the conditions of the relevant business agreements. It may also arise from cash, cashable assets, derivatives, and deposits in banks and other financial institutions. Doosan Infracore manages its credit risks with the purpose of minimizing losses under its credit policies. For credits in which default is anticipated at the end of the fiscal year, the company carefully assesses the risks involved and addresses the results in its consolidated financial sheets.

Liquidity Risk Liquidity risk largely arises from a shortage of liquidity. It materializes when a corporation fails to fulfill its obligations to pay off financial debts or to finance its normal operations. To prevent such situations, the company establishes quarterly and annual financial balance plans which allow it to

minimize the influence of business, investments and financial activities on the monetary balance. The forecasts help the company secure and maintain sufficient liquidity in preparation for possible liquidity risks in the future.

Capital Risk Capital risk management involves the maintenance of an optimum capital structure to protect the company's capabilities and thereby enabling it to provide its shareholders and other stakeholders with corporate profits while reducing capital expenditure. Doosan Infracore maintains its capital in alignment with its debt ratio. Specifically, it adjusts its dividend payouts to shareholders and repays capital reserves to maintain or modify the capital structure, while issuing new shares and selling assets to reduce debts.

Non-financial Risk Management

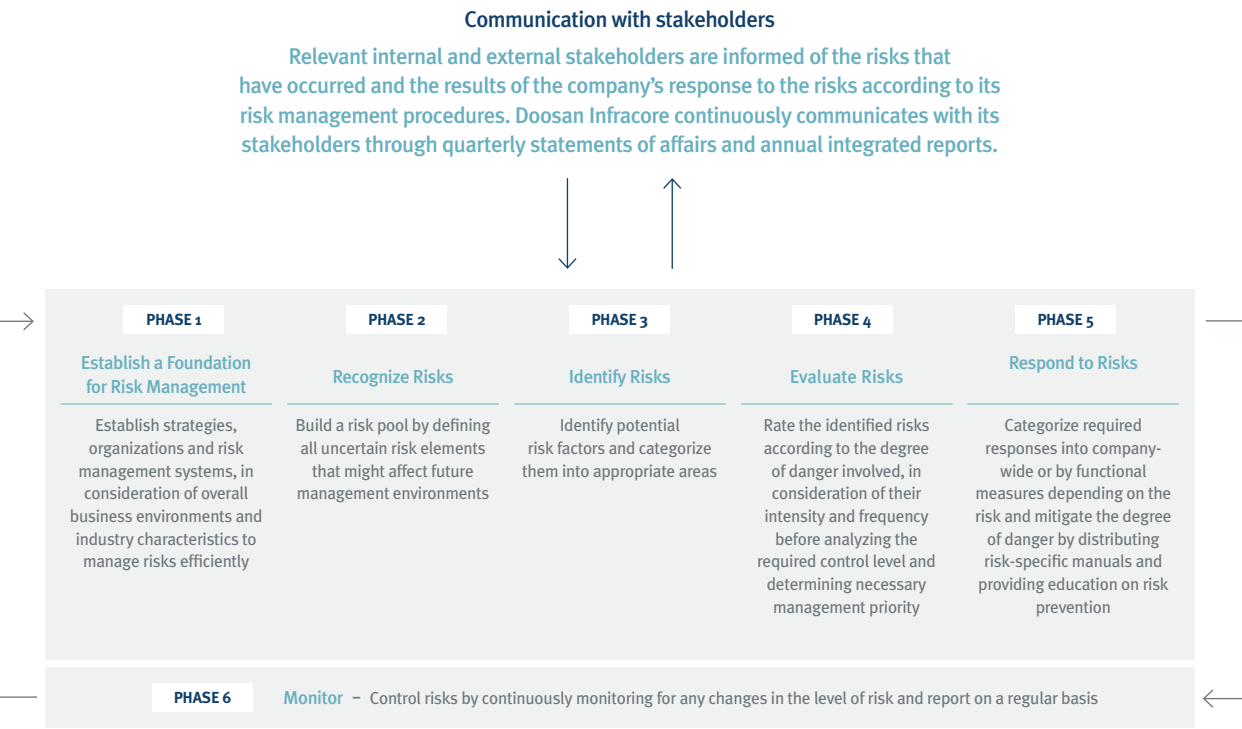
The company has categorized its non-financial risks into three – environmental, safety, and disaster risks – and built a preemptive risk response system. For full details of the company's responses to its environmental and safety risks, please refer to the Integrated EHS System section on page 63.

Environmental Risk In order to minimize possible environmental risks such as climate change and environmental pollution, Doosan Infracore promotes diverse environmental management activities, including efficiency improvement of its resource use, reduction of emissions through facilities to reduce environmental impacts, and the enhancement of environmental accident prevention and response systems, based on its EHS management system. The company discloses details of its activities and outcomes to outside stakeholders such as local residents.

Safety Risk Doosan Infracore takes diverse preventive measures to minimize potential risks, and strives to raise health and safety awareness. The company has expanded the scope of its health and safety management to include outsourced projects and external suppliers, while enhancing monitoring aimed at preventing occupational accidents. It also requires worksite visitors to watch a safety video before entry. Furthermore, the company engages in comprehensive public-private joint disaster response drills and encourages its staff to be fully aware of them.

Disaster Risk Doosan Group has established its own Business Continuity Management (BCM), a risk management framework, at the group level. It has published a BCM manual that is categorized into 20 mandatory infrastructure items. It has developed an emergency notification system that can reach all its employees rapidly in the event of a crisis, so that leaders of business units can check on the safety of their members quickly, and the members can respond systematically according to its emergency response procedures. In 2012, it contracted with International SOS, a medical and travel security services company, and has since provided comprehensive overseas safety management services to its employees based or traveling overseas. All Doosan people across the world have access to emergency medical relief from war, natural disaster or accident, and information on travel security overseas.

Risk Management Process



Key Risks and Relevant Responses

	Key Risks	Responsive Measures
Strategic risks	Global economic slowdown	Maximize profitability and strengthen core competitiveness
	Stricter environmental regulations on products	Develop and apply eco-friendlier technologies
Financial risks	Market risks	Manage exchange rate fluctuations, interest rates, and price risks
	Credit risks	Manage credit risks and minimize losses through safeguard measures in bonds
	Liquidity risks	Establish quarterly and annual financial balance plans
	Capital risks	Reduce capital costs and manage liabilities
Operational risks	Quality risks	Establish a quality management system
	Ethical management and compliance risks	Audit unethical irregularities, provide employees with ethical training
	Risks related to personal information protection and data security	Establish personal information protection guidelines, build an information management system, and provide employees with information security training
Non-financial risks	Environment: Climate change risks, environmental pollution, and grievance risks	Build a climate change response system, manage environmental pollution materials, and disclose information
	Safety: Worksite fire and occupational accidents	Engage in risk factor management activities, enhance fire safety management (operation of the Disaster Prevention Center), and boost safety management for outsourced work
	Disaster: Natural disasters, man-made hazards	Build BCM and practice its applications

* Responses to strategic risks are reflected in all of the company's business processes and thus they are not mentioned separately

Customer Satisfaction and Quality Management



OUR APPROACH

Doosan Infracore provides world-class products, parts and services, with an aim to maximize customer value.

Doosan Infracore strives to create better customer value through product development that takes into account not just product performance but also customer safety and environmental impact. In addition, the company focuses on improving product quality with a commitment to producing products of perfect quality and promotes responsible customer services and active communication with customers, in order to become a company trusted by customers.

CSR STRATEGIC TASKS FOR 2016

Defining eco-friendly products and setting up standards

Such factors as meeting stricter emission regulations to cope with climate change and air pollution and improving fuel efficiency to boost resource efficiency are expected to drive competitive advantages in the machinery industry. The development of eco-friendly products was selected as a core issue through the materiality assessment of Doosan Infracore and in the process of laying the foundations for the green management of Doosan Group. The company discussed on this matter at the company level through the CSR Committee, and as a result, defining eco-friendly products and setting up standards was chosen as one of its CSR strategic tasks. Accordingly, Doosan Infracore will expand the development and commercial launch of products that are more eco-friendly in terms of emission regulations and fuel efficiency based on its unique technological prowess.

ACTIVITIES AND ACHIEVEMENTS IN 2016	Reflected the eco-friendly product management process into the New Product Development (NPD) process; overhauled standards for eco-friendly products; and calculated eco-friendly product ratio
FUTURE PLANS	Manage eco-friendly product ratio

Customer-centered Product Development

01

Strengthening Product Responsibility

Doosan Infracore concentrates its efforts on securing customer safety and minimizing environmental impact throughout its entire process ranging from product development to production and sales. From the development stage, the company strives to ensure that customers will be satisfied with the high performance and operational efficiency of Doosan Infracore products while being able to use them more safely and conveniently. In order to minimize the environmental impact of product manufacturing and use, it focuses on expanding the development and sales of eco-friendly products. It also intends to contribute to the improvement of human rights and the environment in areas that produce conflict minerals by continuously monitoring the use of conflict minerals in its products.

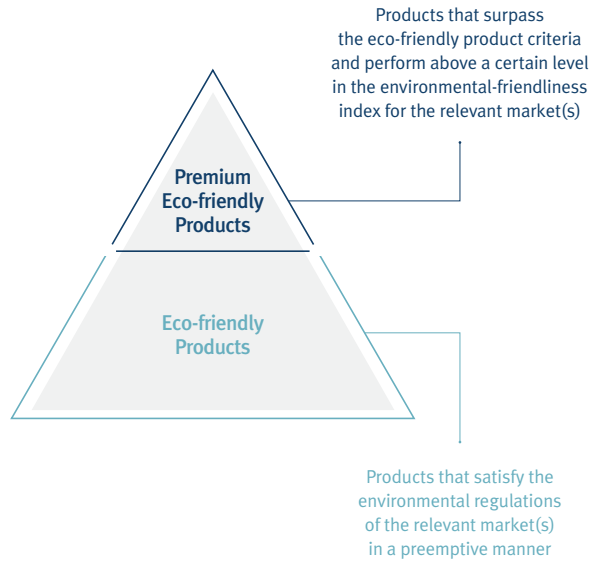
Compliance with International Safety Standards At the planning stage, the company sets up new product development and design verification plans by reviewing various countries' technical regulations and international standards on safety, including exhaust gas emissions, fire, explosion, noise, operator's visual field, rollover, electromagnetic compatibility, and toxic chemicals. It also reflects the guidelines set forth in the world's major technical regulations when setting up its product development objectives, such as the Rules on Construction Machinery Safety Standards of Korea, the Machinery Directive of Europe, the Occupational Safety and Health Administration (OSHA) and the Mine Safety and Health Administration (MSHA) of the U.S., and the Guobiao (GB) Standard of China. The company ensures that products developed in Korea and China meet the regulations of the markets to which they will be exported. Doosan Infracore runs the Global Product Compliance Council through which it shares information on the latest trends in global safety regulations and standards and discusses preemptive responses to any changes.

Conflict Mineral Management The conflict minerals refer to four minerals – tin, tantalum, tungsten and gold, that are mined in 10 war-torn countries including the Democratic Republic of the Congo, Sudan, Rwanda, Burundi, Uganda, Congo, Zambia, Angola, Tanzania, and Central Africa. These countries are believed to still be caught up in conflict as both rebels and government troops are securing funds by monopolizing the mining and distribution of the minerals. In addition to the damage caused by long-standing disputes, the mining also causes serious social problems such as forced labor for local residents, human rights problems related to child labor, and pollution caused by over-mining. As the problems with the minerals

mined in these disputed areas have created a global issue, the U.S. Congress has mandated listed companies to disclose information annually about whether they use any of the four types of conflict minerals and whether their minerals are produced in the disputed areas, which affects not only listed companies of the U.S. but also others that supply products to them. Doosan Infracore responds to the conflict minerals issue through the collaboration of various teams that work closely according to the guidelines presented by the Conflict Minerals Regulatory Response Center of the Korea International Trade Association. It will establish standards and procedures designed to identify the use of conflict minerals and their origin with the purpose of preventing the use of conflict minerals in the first place.

Increasing Eco-friendly Products Doosan Infracore is conducting its business based on its corporate philosophy which defines minimizing its environmental footprint as a socially responsible measure through which the company can create value. In 2015, the company established definition and management standards for eco-friendly products. In 2016, the new product development process reflected the eco-friendly standards upgrading its environmental friendliness index. The company classifies products by considering their impacts on users and the environment in five areas – fuel efficiency, durability, noise control, safety, and emissions control. Products that preemptively meet mandatory environmental regulations of each market are defined as eco-friendly products. Those that surpass the mandatory level are premium eco-friendly products. In 2016, Doosan Infracore's eco-friendly products and premium eco-friendly products accounted for 74% of its total products. The company will find a way to disclose information on its eco-friendly products, in order to provide related information to its stakeholders including customers and investors, in a more active manner.

Classification of Eco-Friendly Products



Responsible Customer Service

02

Preemptive Response for Customers

Doosan Infracore has been solidifying its relationship with customers based on trust by acting ahead of customers’ requests. The company provides information on products for customer safety and convenience and carries out ‘voluntary advance defect correction’ measures and recall processes.

Providing Information for Customer Safety Doosan Infracore complies with regulations related to customer safety, including Safety Standards and the Product Liability Act, and takes all the necessary actions to prevent occupational accidents. To ensure the safe operation and maintenance of its products, the company provides customers with safety labels of three levels – danger, warning, and caution – according to the severity of the safety risks involved. It also mentions and emphasizes matters that are critical to customer safety at the beginning of a product manual. In 2015, the company produced a safety educational video and has been distributing to its customers who own or use Doosan Bobcat equipment. It complies with ISO9244 with respect to the safety labels attached to its construction equipment and publishes operator manuals for its machinery in accordance with ISO6750.

Voluntary Advance Defect Correction Measures A recall is made by a manufacturer to fulfill its responsibility for a product even after it is shipped out. Doosan Infracore takes a step further and carries out ‘voluntary advance defect correction measures’ as part of its efforts to enhance its product responsibility. In 2015, forklifts were designated by law as a subject to a recall in Korea. In September 2015, the fuel gauge installed on the fuel tank of the company’s forklifts became subject to a recall due to risks of oil leakage. To resolve this problem, the company replaced the gauge window with a fill-up alarm system as finally determined by the Ministry of Land, Infrastructure and Transport, sent out a recall notice to all the relevant customers, and thoroughly completed the improvement measures. To further improve customers’ convenience, the company has accepted the Ministry’s additional recommendation and has been carrying out extra recalls using the original parts.

The ‘voluntary advance defect correction measures’ have some similarities with recalls, but differ in that the measures make improvements in advance, voluntarily, without any outside pressure.

In addition, the company carries out the ‘rework’ process before it is delivered to a dealer or a customer even after the product has been shipped out if a particular product is determined to be subject to the voluntary advance defect correction measures. In order to resolve related issues, the company not only hires people locally but also dispatches its experts from the head office to any location in the world. Construction equipment must be able to withstand rough work environments. The company therefore repeatedly checks the whole range of equipment features, from performance of the specialty parts to simple malfunction, and makes corrections so that the product can be delivered to customers in the best possible state.

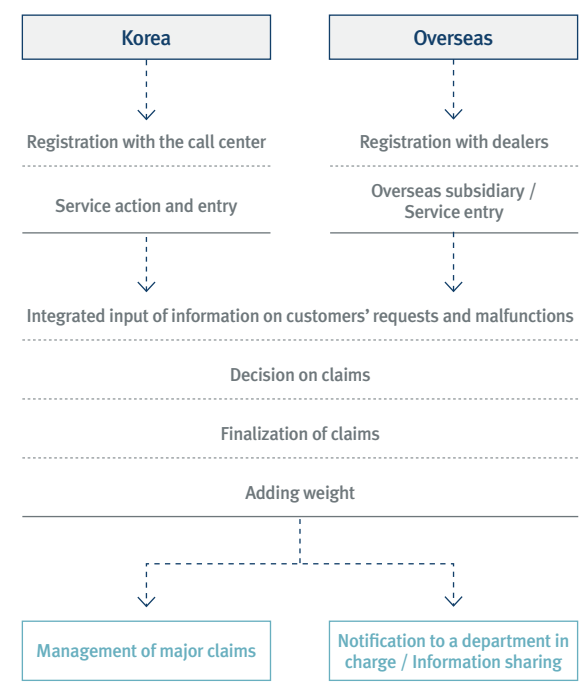
Process to Reflect Customer Feedback

Collecting and Responding to Customer Feedback Doosan Infracore collects and promptly handles customer feedback and requests through its dealers and direct visits to major customers. It also regularly holds Voice of Customer (VOC) sharing meetings where major suppliers participate in and uses them as opportunities to analyze market opinions and make improvements.

In Korea, the Customer Support Center receives customer requests, checks the situation, and assigns personnel who are in a position to quickly visit customers through the Global Positioning System (GPS). This is followed by the ‘Happy Call’ with customers three days after in order to check final progress. In addition, the company has built a one-stop service system for after-sales service from sales to final disposal. It continues to enhance its dealer service training to provide customers with the best service possible. It also carries out trainings for office and field staff of the Customer Service Center on a quarterly basis. Through such efforts, the company has achieved 97.2% of claim settlement ratio within the timeline set by customers, thus its customer services have been well received by customers. In 2017, the company will develop training programs customized for machinery operators and offer such information as major characteristics and checking points of their machines as a way to further expand its customer value by preventing machinery malfunctions.

In China, dealers receive customer feedback and requests through the Service Call Center and aim to handle them within 24 hours, completing their services within seven days. VOC is reflected in product design and quality improvement. Doosan Infracore provides various online and offline training courses to enhance the technical capabilities of its dealers’ service personnel. Approximately 20 emergency service engineers make three month training visits to more than 30 dealers throughout China to provide training on mechanical repairs and maintenance while also helping to solve technical issues of the company’s C (Chinese) models. As a result of these efforts, in 2016 the company achieved 78.7% and 80.7% in claims processing rates for all its models and C models respectively. It also achieved 90% in making design improvements by successfully working on 36 cases out of 40 design-related VOCs.

Customer Feedback Collection and Handling Process



Standardizing Product Post-sale Management Services Doosan Infracore offers its customers the 4-One Service – One Hour Contact, One Day Repair, One Touch Repair, One Plus Service – to deal with product malfunctions and provide technical assistance. The company strives to provide One Touch Repair on the day that service requests are made. It therefore continues to make improvements in its technical capabilities and service procedures while building a comprehensive customer support system that leaves no blind spot unaddressed and supplies parts in a timely manner.

Management of Customer Satisfaction In Korea and China, Doosan Infracore conducts surveys on customer satisfaction through Happy Calls and strives to keep the satisfaction level above 4.5 points on a scale of 1-5 points. In 2016, the level of satisfaction in Korea stood at 4.62 points. The company has been standardizing its customer services and providing specialized technical training and customer-oriented mindset education to all service personnel with an aim to improve customer service quality.

NPD Process Doosan Infracore operates the New Product Development (NPD) process with the participation of various departments, including R&D, Advance Quality, Sales Strategy, and Marketing to reflect VOC into the new product development. The company’s business sites in Korea, the U.S., China, and Europe operate customer feedback collection channels from diverse perspectives. They have also built the NPD 4.0, with improved perspectives in terms of laws, safety, and quality to ensure that quality innovation starts at the product development stage.

Building Customer Trust in Marketing and Sales Stages

Responsible Marketing Policies Doosan Infracore provides the latest product information via its website and social media. It sets proactive and responsible customer service policies with the aim of building customer trust and enhancing its product values. To ensure responsible marketing, the company has set up brand guidelines to serve as the yardstick for marketing and communication activities and complies with legislation related to sales, marketing, and information security. In 2016, it was not subject to any sanctions for falsehood or exaggeration including exaggerated advertising practices.

Protection of Consumer Information Doosan Infracore has established and implemented its own customer information protection system. It encrypts personal information database for information security and conducts integrated monitoring of access to its information system including any activities suspected of abuse or leakage. The company has prepared guidelines on the management of information security for its employees and carries out education on information security for all its employees every year. Doosan Infracore has not been subject to any sanctions for leakages of its customers’ personal information or violations of relevant laws in the past three years.

Promotion of Digital Marketing In order to promote direct communication with customers, the company operates digital marketing channels by country. In 2016, WeChat, the largest messenger service in China, was used to provide customers with information on new equipment, regular equipment maintenance, and nation-wide promotional activities of dealers. In January 2017, the Doosan Infracore KakaoTalk Plus Friend advertising platform was launched in Korea, which provides information twice a month on construction machinery, such as equipment maintenance in winter, important notes on equipment operations, and details of various part.

Quality Stabilization and Standardization

03

The Foundation of Quality Management

Company-wide Integrated Quality Conference Doosan Infracore has been holding the Integrated Quality Conference every month since 2010 with the purpose of attaining the highest quality from the customers’ perspective. With the CEO’s participation, the conference agenda reflects results of the monthly VOC analysis and shares improvement points and responses.

Management of the Quality Improvement Index Doosan Infracore places top priority on making innovations in the quality and durability of its products to manufacture products to meet customer needs. Initial quality and warranty quality data is monitored and challenging improvement goals are set. The company strives to boost customer satisfaction through constant attention to quality.

Operation of the PTS The Project Tracking System (PTS) is Doosan Infracore’s unique system for managing quality-related projects. It provides real-time information on market quality, process quality, progress status of the projects related to advanced quality, response to VOC, and improvement goals to help the company make continuous improvements to product quality.

Intensive Improvement of Fundamental Quality

Doosan Infracore focuses on improving quality in order to enhance the value of its customers’ equipment. Of particular note, it will continue to improve the basic level of quality by more than 30% compared to the current level by continually deriving important tasks for rapid improvements. The company will strive to minimize problems that customers may encounter while using their equipment by gradually improving its quality through various preventive quality management endeavors. These activities include establishing a work environment that respects and complies with fundamentals and standards, and managing the company’s and suppliers’ quality fluctuation factors. Initiatives enhancing the pre-shipment inspection process through the re-examination of pre-shipment inspection times and items have also been implemented. The company will continue to improve its prevention capabilities in order to improve the quality of parts, production and final inspection to prevent possible quality problems before equipment is delivered to customers.

Quality Enhancement at the Parts Production Stage

In order to minimize the number of defects at the production stage, the company has continued to improve parts quality through partnership with its suppliers. As a result of continuous efforts, the company has achieved more than 40% improvement in both initial quality and warranty quality, which are used as indices of the parts quality for construction equipment in both Korea and China over the past three years. In order to prevent fluctuations in quality, suppliers are required to report any significant change that could affect their product quality, such as personnel changes, reductions in purchasing prices, process improvements, and others. It also enhances its preventive quality management endeavors through pre-inspection.

Doosan Infracore has established the Supplier Support Team to support its suppliers’ intensive improvement efforts through such initiatives as 3 P’s (Proper Items, Proper Quantity, Proper Place), 6 S’s (Safety, Sort, Straighten, Shine, Standardize, Sustain), the Management Doctor system and the Benefit Sharing system. For further details, please refer to pages 72-74. In order to enhance the quality consciousness of its suppliers, the company holds biweekly meetings with suppliers struggling with quality issues to urge them to implement quality-first management policies In 2017, the company will carry out quality inspection audits customized to suppliers’ quality levels and types of quality issues. It will periodically check suppliers’ quality systems, processes and products, and urge them to place priority on preventing quality problems, while ensuring the consistency in their quality management. In the event of changes in the suppliers’ contractual status, design modifications or process changes, the company will make sure that no quality issues arise through the diagnosis and inspection of quality risks beforehand.

Management of Major Quality Improvement Tasks

In 2016, 109 major quality improvement tasks were identified and executed by the company to enhance customer value through rapid improvements of quality issues. In the event of a potential quality issue, the company carried out repairs beforehand and dealt with defects in a preemptive manner, thus minimized the occurrence of product quality problems.

Integrated EHS System



OUR APPROACH

At Doosan Infracore, environmental values and safety culture are non-negotiable principles to achieve sustainable growth.

Environmental protection and safety culture are essential prerequisites for sustainable future. Stakeholders therefore are raising their voices to call on businesses to behave more responsibly in terms of the environment, health and safety. Based on its company-wide integrated Environment, Health and Safety (EHS) management system, Doosan Infracore is striving to use limited resources more efficiently and to minimize its environmental footprint while participating in response to climate change by making continuous improvements to energy efficiency and managing greenhouse gas (GHG) emissions. The company also has been establishing a safer work environment by raising the safety awareness of all its employees and rigorously managing risk factors at all worksites.

CSR STRATEGIC TASKS FOR 2016

Establishing a management system for worksite energy efficiency

Social concerns and business impacts on reducing energy consumption and GHG emissions have been increasing. Worksite energy efficiency management requires businesses to make continuous investments in facility upgrades and energy conversion. Doosan Infracore therefore promotes the establishment of a worksite energy efficiency management system as one of its major strategic tasks, while focusing on enhancing energy efficiency at its worksites and coping with rapidly changing global energy markets in a stable manner.

ACTIVITIES AND ACHIEVEMENTS IN 2016	Identified tasks to reduce energy consumption; connected production and energy information; established standards for energy intensity and analyzed; and operated energy efficiency management system
FUTURE PLANS	Continue energy saving activities; and operate worksite energy efficiency management indices

Establishing a management system for chemical substances

The world is witnessing increasingly stricter regulations on hazardous chemicals, including the EU’s REACH¹) in Europe, and ‘The Act on the Registration and Evaluation, etc. of Chemical Substances’ and ‘The Chemicals Control Act’ in Korea. Businesses are now required to manage their chemical substances systematically. Doosan Infracore does not use many hazardous chemicals given the nature of the industry in which it is engaged. The company however defines the chemicals it uses in production processes and continues to improve the management of hazardous chemicals with an aim to reduce potential harmful effects, in consideration of the impact on its stakeholders.

ACTIVITIES AND ACHIEVEMENTS IN 2016	Reviewed and identified new chemical substances subject to registration under ‘The Act on the Registration and Evaluation, etc. of Chemical Substances’; analyzed the possible substitution of hazardous chemical products; replaced or removed 11 substances subject to management under ‘The Chemicals Control Act’; and created a risk map for leakage accidents and expanded investment in the prevention of pollutant leakage to strengthen the leakage response system
FUTURE PLANS	Monitor new chemical substances through a chemicals IT system; and establish a process to manage chemical substances change

CSR STRATEGIC TASKS FOR 2017

Establish a mid- to long-term roadmap on how to approach carbon trading

Doosan Infracore has been monitoring its GHG emissions since 2015 when the emissions trading scheme took effect. In line with the increasingly stricter regulations on GHG emissions both at home and abroad, the company has set the mid- to long-term roadmap to respond to the emissions trading scheme for more systematic management of GHG emissions. It may also provide business opportunities in the area of carbon emissions based on the roadmap.

PLANS FOR 2017 Calculate estimated GHG emissions; establish a decision-making process for GHG emissions trading; and identify potential amount of GHG reduction and establish a relevant roadmap

Developing the REACH (RoHS) IT System

Chemicals regulations at home and abroad have been strengthened, and compliance risks, such as sales prohibitions and penalties, are also increasing as related issues have been occurring. This in turn requires companies to upgrade their chemical substance management systems. Doosan Infracore therefore plans to develop the REACH (RoHS)²⁾ IT system as a CSR strategic task at the company level, led by top management and the executives of its major business groups. With the establishment of the REACH response process and the IT system, the company will enhance the pre-monitoring of the hazardous chemicals that are used in its production processes or contained in products, thereby minimizing the risks posed by hazardous chemicals.

PLANS FOR 2017 Establish regulated substance management policies; develop internal management standards and procedures; establish supplier management processes and provide education to persons in charge; and establish and stabilize an IT system

¹⁾ Registration, Evaluation, Authorization and Restriction of Chemicals (REACH): Chemical substance management system of the E.U. that governs the registration, evaluation, approval and restriction of chemical substances according to their quantity and harmful effects

²⁾ Restriction of Hazardous Substances in EEE (RoHS): The EU directive that restricts the use of hazardous substances, including lead, cadmium, mercury, chromium, and flame retardants such as PBBs and PBDEs, in the production of electrical and electronic products

Integrated EHS Management

01

EHS Management System

Having established its EHS Management Policy in 1995, Doosan Infracore implements integrated EHS management together with its overseas worksites and suppliers. The policy consists of five specific principles, including operation of the environment and safety management system, with an aim to create a world of abundance and affluence for all human beings while preserving the natural environment. Based on this policy, the company encourages the participation of its employees and other stakeholders in EHS management. It has also established its EHS management vision and strategies to become ‘Global Leading Green Company’ and is committed to achieving sustainable growth.

Global worksites of Doosan Infracore have earned the ISO 14001 Environmental Management Certification and the Occupational Health and Safety Management System (OHSAS 18001 / KOSHA 18001) certifications and established an EHS management system based on international standards. The company conducts internal and external inspections on the operation of EHS management system and compliance with related laws and regulations on an annual basis. It continues to make improvements in areas that turn out to be less than satisfactory. In addition, the company implements global EHS audits based on the Doosan EHS Rating System (DSRS) to help its major overseas worksites improve EHS process and enhance their fundamental constitution. In order to promote more systematic EHS management, it has established an EHS IT system and managed EHS-related information in real time and carried out comprehensive analysis of various information, followed by reinforcement and improvement if needed. Based on

ISO 14001 Certified Worksites

ISO 14001



Korea

Incheon, Gunsan, Ansan



China

Yantai

clear EHS standards and the systems linked to its value chain, such as purchasing and production, the company enhances its required capabilities and increases its implementation capacity by connecting EHS management to the entire range of its business operations.

EHS Policies Doosan Infracore has established the following policies in order to ensure that all of its employees respect the dignity of all human beings, practice environmental conservation throughout all business activities, and help create a prosperous lives for humankind and enhance the future value of the planet.

- Operation of the EHS System** We establish, operate and continue to develop a system designed to improve EHS impacts of our products, activities, and services.
- Compliance with EHS Regulations** We adhere to national and international EHS regulations and agreements, establish strict internal management standards, and faithfully implement them.
- Development of Eco-friendly Technology to Boost Customer Safety** We develop eco-friendly technologies that place top priority on our customers’ health and safety, and then preserve resources and energy to actively contribute to sustainable environmental conservation and fight against global warming.
- Realization of Zero Occupational Accident** We create a pleasant and safe people-centered work environment, improve the health and quality of the lives of all our employees and suppliers, and aim for zero accident at work.
- Communication with Stakeholders** We increase communication with our stakeholders and disclose EHS performance transparently in order to continue to grow as a trusted and respected company that fulfills its social responsibilities.

EHS Organization

EHS is a core focus directly managed by the CEO. Doosan Infracore therefore implements EHS management at all its worksites around the world under the supervision of the EHS Team at the head office and an EHS unit at each worksite. In 2017, the company plans to extend communications among staff about its EHS philosophy and standards and also to strengthen EHS supports and management for its overseas worksites. In order to ensure all of its overseas worksites adhere to same level of high EHS standards, regardless of the country or region, the company will establish ‘Global EHS Governance’. This will also help overseas worksites improve their EHS performance.

Self-evaluation of Global EHS

To upgrade its EHS management to the level of a global leading company, Doosan Infracore conducts its own EHS evaluation on workplaces around the world according to the evaluation criteria of the Doosan EHS Rating System (DSRS)¹⁾. Developed on the basis of global standards and in consideration of the characteristics of each worksite, the DSRS plays its role as the basis to build an advanced EHS system and create an EHS culture shared by staff. In 2016, the company improved the existing DSRS system, established the performance evaluation criteria and conducted pilot evaluations at the Incheon Plant. Based on the analysis of evaluation results, it made improvements to the system including the evaluation criteria and processes. In 2017, the company will use the improved system to carry out evaluations at its domestic and overseas worksites.

Key Directions for EHS in 2017

Regulations on the environmental and safety liabilities of companies have been strengthened in line with increasing damage to their suppliers due to the leakage of environmental pollutants and other forms of major industrial accidents. Doosan Infracore therefore has set plans to improve its workplace environment while focusing on smart data management of environmental pollutants and establishment of the infrastructure in order to respond to spill incidents. The company will also strive to reduce the risk of occupational accidents at its suppliers’ worksites by carrying out field-oriented safety promotion activities and ensuring thorough management of outsourced projects.

¹⁾ Doosan EHS Rating System (DSRS): The EHS evaluation system developed by Doosan Group to evaluate the EHS level of its worksites quantitatively and to encourage them to make improvements; Doosan Group has made adjustments to the ISRS applied by global leading companies to suit its own circumstances

Energy Management and Responses to Climate Change

02

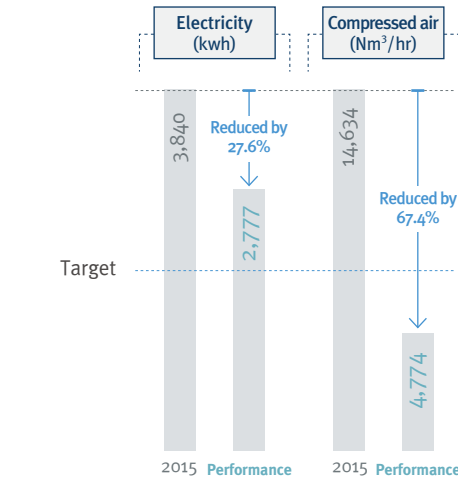
Doosan Infracore is fully aware of the importance and necessity of responses to climate change, and has devised countermeasures in consideration of both the mitigation and adaptation aspects and promoted company-wide efforts while exploring new business opportunities. Due to the characteristics of the company’s manufacturing processes, its consumption of indirect energy sources is much higher than that of direct energy sources. Nevertheless, the company has measured the GHG emissions of each worksite in Korea and obtained external independent assurance of its efforts since 2004. It has also established GHG emissions measurement systems for its plants in China and the U.S. The company also carries out energy conservations efforts including the ‘Energy Diet’ plan in which staff around the world participate.

Improving Energy Efficiency
Establishment of the Worksite Energy Efficiency Management System The company selected ‘the establishment of a management system for worksite energy efficiency’ as one of its key CSR tasks in 2015, and has since implemented it at its worksites in Korea.

The company drew up a distribution diagram of the key energy such sources as electricity and compressed air that are used in production processes and identified any factors that were affecting its energy consumption from fixed load before carrying out a linear regression analysis. Based on the information obtained, the company implemented 25 short-term reduction tasks including separation of the supply diagram. From January 2016 to April 2017, the company completed nine tasks including improving the work environment of the paint shop at the Incheon Plant and managing the peak value through participation in the electricity market, resulting in savings of KRW 540 million. In 2016, it focused on saving standby energy during non-operating hours, resulting in decrease in power consumption during non-operating hours by 27.6% per hour, and compressed air consumption by 67.4%, compared to 2015, equivalent to KRW 1,040 million in energy costs. In addition, the company analyzed the energy intensity of its Engine Business Group by connecting its production results to power consumption data, in order to build the energy efficiency management system. It also upgraded the energy monitoring system at the Incheon Plant. In 2017, the company plans to further improve energy efficiency by establishing energy intensity criteria based on the analysis of the production volume of the Construction Equipment Business Group and its energy consumption.

In China, Doosan Infracore obtained the Cleaner Production System Certificate from the Chinese government in 2015 for the energy efficiency of all its operations including raw materials procurement from its suppliers, production processes, and production facility operations.

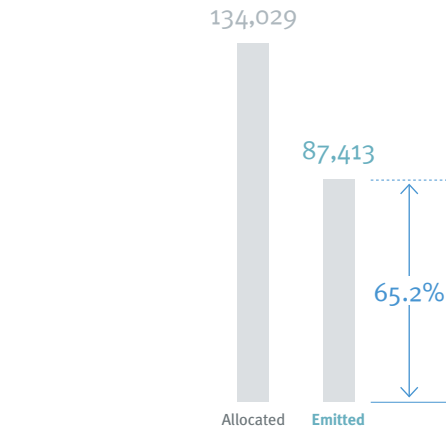
Reduced Electricity and Compressed Air Consumption during Non-operating Hours



* Based on figures at the Engine Business Group of the Incheon Plant, internal suppliers at the Incheon Plant, and the Construction Equipment Business Group of the Gunsan Plant

GHG Emissions in 2016 (Korea)

(Unit: tCO₂)



Responsible Responses to Climate Change
GHG Emissions Management In Korea, Doosan Infracore manages GHG emissions according to the ‘Rules on GHG and Energy Management’. Energy consumption, including the use of electricity and LNG, is measured by gauges at each plant and production line, and the results are converted and analyzed automatically and sent to the GHG monitoring system of the company’s integrated EHS IT system. Owing to the characteristics of its assembly processes, indirect emissions from electricity purchases account for about 72% of total GHG emissions of the company, followed by those of LNG consumption for heating and painting purposes and those of diesel and gasoline consumption used in product trials and vehicles. Doosan Infracore only emitted approximately 65.2% (87,413 tCO₂) of the quota allocated (134,029 tCO₂) to the company by the government in 2016 due to production reduction and energy efficiency management at worksites.

Response to Emissions Trading
Doosan Infracore has been subject to the Korean government’s GHG & Energy Target Management System since 2010 when the Incheon Plant was designated, followed by the Gunsan Plant in 2011. All worksites in Korea have been designated and are fulfilling their legal obligations. With the emissions trading scheme entering into force in 2015, the company was assigned a total of 421,091 tCO₂^{*)} as its emissions quota for the first phase – three years from 2015 to 2017. The company continues to manage its GHG emissions through a variety of energy conservation efforts and emits GHGs within the allocated quantities. In order to respond more systematically to the GHG emissions trading system, it plans to establish strategies to respond to the requirements of the 2017 emissions trading scheme and a mid-to-long-term roadmap.

Responses to Climate Change at Global Worksites
In China, the company measures the fossil fuel consumption at its production worksites and implements GHG emission reduction measures according to the government’s reduction plan. In 2017, the company plans to help its worksites in China set up strategies to build a GHG inventory, implement a responsive action, and nurture professional personnel to preemptively respond to the Chinese emissions trading scheme.

*) The allocated emissions quota for the first phase has changed from the figure reported in the 2015 Integrated Report due to the exclusion of the Changwon Plant and the Suji Technology Center after the sale of the Machine Tools Business Group and the government’s adjustment following the company’s early achievement of its target.

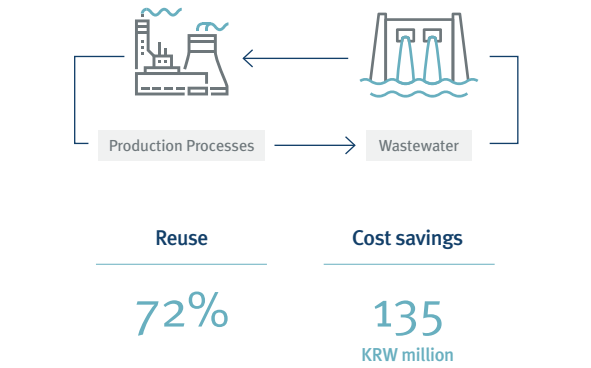
Improving Resource Efficiency and Reducing Environmental Impact

03

Doosan Infracore explores better ways of using limited resources more efficiently while striving to minimize the impact of its business activities on the environment and local communities in particular. To that end, the company has adopted various ways of promoting the eco-friendly use of resources and reducing generation of pollutants. Doosan Infracore controls its emissions of pollutants more strictly than required by laws in all relevant areas. The company’s performance in emissions and resource utilization over the past three years is found in the ‘CSR Facts & Figures’ section of this report.

Improving Efficiency in the Use of Resources
Water Reuse As climate changes, such as drought and heavy rainfall become more frequent, the importance of water resources and the necessity of effective management are increasing. The Incheon Plant has been operating a wastewater recycling system since 2014, designed to recycle the effluent discharged from its wastewater treatment facility and reuse it in production processes. In 2016, the plant recycled 72% of its wastewater into production processes, thereby reducing water consumption and saving costs by KRW 135 million per year. It also established a wastewater reclamation and reuse system that enabled it to reuse 3,926 tons of water. In addition, the plant built a rainwater-harvesting system and reused 69 tons of rainwater for landscaping purposes. During the construction of the advanced Incheon Excavator Plant in 2016, it replaced the paint shop’s wet-type air-conditioning facilities with dry-type, which is expected to reduce water use and wastewater generation by 350 tons a year, equivalent to cost savings of KRW 6.5 million.

Wastewater Reuse (Incheon Plant)



Efficient Use of Resources To ensure the efficient use of limited resources, Doosan Infracore pursues design optimization, thoroughly checks its plant facilities and maintains them in the optimal operational state, thus strives to conserve resources in its daily operations. In Korea, the company recycles 100% of its waste foundry sand, which accounts for the majority of waste, as a result of the implementation of its resource recycling policy. It reused 92% of its waste in 2016 and plans to further increase recycling rate in 2017 by sorting waste by type and diversifying its recycling methods, as well as by making improvements to its existing waste disposal methods and developing new ones.

Management of Environmental Pollutants

Management of Hazardous Chemicals As part of a drive to effectively cope with EU REACH/RoHS internationally and the Act on the Registration and Evaluation etc. of Chemical Substances and the Chemicals Control Act domestically, the company established a complete inventory of its chemical substances in 2015, after conducting a survey of 1,034 chemicals that were using throughout manufacturing processes with a focus on hazardous chemicals subject to legal control. In 2016, it conducted a study on the possibility of replacing its hazardous chemicals and removed 11 types of chemicals subject to management under the Chemicals Control Act. The company plans to continuously monitor new chemicals while considering the possibility of replacing hazardous chemicals, in order to replace the relevant processes with eco-friendly ones. Furthermore, with an aim to prevent the use of hazardous chemical substances in its parts, the company continues to provide its suppliers with intensive training, counseling, and guidance services, so that they can recognize the importance of the issue and improve their relevant capabilities. In 2016, it offered 38 training sessions to 260 suppliers. In 2017, the company plans to complete its development of the REACH (RoHS) IT system and minimize the use of hazardous chemicals in its production processes and products, including raw materials and parts, through pre-control of the substances. It aims to achieve ‘zero penalties’ by preventing violations against domestic and international regulations as well as ‘zero use’ of substances of very high concern (SVHC).

Management of Odors and Air Pollutants In Korea, the company implements rigorous environmental management from the initial stages of production through continuous investments in environmental facilities. In 2012, the company adjusted the odor reduction technology, used in advanced industrial plants in Germany and Japan to fit its own operational environments, and thus successfully adopted it to the casting factory at the Incheon Plant. In 2014, it further improved the efficiency of odor treatment and fugitive dust management through the introduction of a fugitive dust containment system. In addition, the plant has been carrying out a three-year plan from 2014 to improve its work environment through the renovation of casting factory with the aim of reducing odors and

fugitive dust. In 2017, it will conduct a survey on surrounding areas for more systematic odor control.

Management of Soil Contamination In 2010, the company conducted a voluntary soil contamination survey of the areas where facilities that cause soil contamination were operating, and completed soil remediation in those areas over the following three years. In 2013, it carried out soil contamination surveys of the areas surrounding all its worksites. The company has undertaken additional voluntary soil remediation work since 2014, which will be completed by 2018.

Strengthening Environmental Disaster Response System

Doosan Infracore has reinforced its spill prevention and response system and developed a worksite spill risk map, in order to minimize the possibility and impact of environmental accidents during its business operations. In 2017, it will increase the number of floodgates from four to six to minimize pollutant leakage through rainwater; establish a sensor to detect pollutants such as oil and pH, automatic water gate shutdown system, and replace old wastewater piping, as a part of its efforts to build a spill accident response infrastructure. In addition, the company will create environmental disaster response scenarios and conduct drills customized for processes or situations, thus build a system that is more responsive to emergency situations.

Reducing Environmental Impact on Local Communities

Doosan Infracore has intensified its efforts to minimize environmental impacts of its worksite operations on local communities and is making ongoing improvements to create a clean living environment. In 2015, the company set up a digital signboard to display information on air pollution in the Incheon area in cooperation with three other companies based in the area. The company fulfills its obligations as a corporate citizen by taking prompt action with regard to probable causes of complaints from residents, such as foul odors, as well as making continuous investments in local communities, including the Hwasu wharf improvement project near the Incheon Plant.

Enhancing Worksite Safety Risk Management

04

Worksite Safety Management with a Focus on Prevention

Worksite Hazard Management Doosan Infracore identified a total of 4,877 risk factors in 2016 through a discussion-based risk factor identification process involving the participation of employees, and made improvements to 100% of them. The company holds a monthly meeting of the Musculoskeletal Disorder Improvement Working Council, which is composed of labor union officials, worksite managers, and employees in charge of EHS and production to discuss physical load risks and identify ways of making improvements. The company also arranges for medical professionals to visit its worksites regularly as part of its efforts to improve employees’ health and boost their morale.

Acquisition of Safety Zone Certification The certification of all the company’s domestic worksites was completed with the Incheon and Gunsan plants’ acquisition of the Safety Zone Certification in December 2014 and November 2015, respectively. Awarded by Safety Zone-CERTI® and supervised by the National Emergency Management Agency (NEMA), the Safety Zone Certification is the country’s only certificate in the field of disaster prevention and entails a comprehensive evaluation of building design, construction and maintenance. The company will further raise awareness of the importance of fire and disaster prevention based on the certification, which systematically and efficiently manage all its safety related facilities.

Expansion of Safety Management Culture

Building a Culture of Safety The company continues to promote compliance with the EHS 3-3-3 Basic Rules and make diverse improvements in the field of safety to achieve zero accident. Each month, the heads of business groups provide safety reports to their

employees. The company has designated April as ‘Health and Safety Month’ during which it strives to improve safety and raise safety awareness through education sessions, promotional campaigns, and inspections. It also holds the ‘Comprehensive EHS Reward and Safety Day’ to further promote the prevention of EHS accidents. Visitors to its worksites are required to watch a video on safety precautions first to raise their safety awareness. The reduction of accident rates through preventive measures is considered a key performance indicator for executives, which the company expects to facilitate the development of its corporate safety culture.

Support for Suppliers’ Safety Management Capabilities Doosan Infracore implements ‘Symbiotic Cooperation Programs’ to help its suppliers boost their safety management capabilities, in accordance with one of its EHS principles – ‘We aim to create a pleasant and safe people-oriented working environment, improve the health and quality of life of all employees, including those of our suppliers, prevent losses, thus ultimately realize a zero-accident workplace’. The Symbiotic Cooperation Program launched by the Ministry of Employment and Labor in 2011 is designed to urge conglomerates to improve their suppliers’ health and safety capabilities and to prevent industrial accidents through continuous cooperation. Doosan Infracore joined the program in 2012 and has helped its suppliers raise their safety management awareness, improve risk assessment levels, and set up safety management processes. It also aims to help its suppliers improve their health and safety management levels, build a cooperative system for shared growth, raise their safety awareness to the level of Doosan Infracore, and equip them with their own safety management capabilities. In 2016, the company formed a Symbiotic Cooperation Council with 22 internal and external suppliers at the Incheon Plant and 9 suppliers at the Gunsan Plant, and held meetings on a monthly basis. Based on the results of a risk evaluation, the company helped them manage their risk factors and make the necessary improvements through inspections, guidance, and education. Thanks to these efforts, the Gunsan Plant won the Minister of Employment and Labor Award, the grand prize in the manufacturing category at the Best Practice Presentation Contest for the Safety and Health Symbiotic Cooperation Program hosted by the Ministry of Employment and Labor and the Korea Occupational Safety & Health Agency in July 2016.

EHS 3-3-3 Basic Rules

Safety	Environment	Firefighting
1. Wear designated personal protective equipment at worksites	1. Emit pollutants only when the prevention facilities are in operation	1. Never smoke on the premises
2. Conduct machinery and facility maintenance after operation has stopped	2. Never dispose of environmentally hazardous materials such as chemicals or waste oil arbitrarily	2. Obtain permission before engaging in any work that may generate flames
3. Do not release safety devices arbitrarily	3. Separate trash according to the rules before disposal	3. Do not leave any object in front of the firefighting facilities

Safety Management for Outsourced Projects In recent years, conglomerates have suffered from an increasing number of accidents caused by their suppliers, and social demands for safety management responsibilities of conglomerates have increased along with stricter sanctions on their failures. In 2016, the company had additional outsourced projects due to the construction of the advanced Incheon Excavator Plant. It therefore further strengthened its safety management to protect its suppliers from accidents. The company enhanced on-site patrol operations to check on-site safety status once a day and have the results reported to management. It also implemented the ‘Safety Walk’ every month, in which executives, production managers, and EHS officers carried out a safety patrol, identified potential safety risks and came up with improvements. Furthermore, the company improved the management process of outsourced construction work and enhanced the EHS capacity of project managers in its efforts to strengthen the safety management of outsourced work and thus achieved zero accidents in outsourced projects.

Social Contribution Activities for Safety Culture In 2016, Doosan Infracore signed a memorandum of understanding on ‘Social Contribution Activities for Safety Culture’ with the Korean Ministry of Public Safety and Security and promoted safety culture in local communities, including its suppliers by leveraging its expertise. The Social Contribution Activities for Safety Culture constitute a new CSR activity model under which the Korean government and the public and private sectors join forces to utilize corporate expertise in their efforts to establish a strong safety culture in local communities. In 2016, the company focused its efforts on health and safety activities for its adjacent areas, preventing children’s safety and health accidents, providing technical EHS support for suppliers that have joined the Symbiotic Cooperation Program, and offering education on safety activities for external suppliers. In recognition of such efforts, the company was awarded a plaque of appreciation by the Korean Ministry in December. In 2017, Doosan Infracore will continue its existing activities while starting workplace safety culture activities.

Accident Rate (Korea) (2016)

0.37%

Enhancing Employee Health Management

05

Improving Employee Health Management

To help its employees manage their health, Doosan Infracore designated its Korean worksites as smoke-free zones in January 2015. It also runs various health promotion programs including the installation of automated external defibrillators (AED) and the preparation of a low sodium diet in its canteens. Whenever a healthcare issue such as the spread of an infectious disease arises, the company operates the Emergency Situation Room and promptly offers the relevant information on preventive measures to its employees. The company pays for mandatory vaccinations for six diseases – yellow fever, cholera, malaria, typhoid, hepatitis A, and tetanus – designated internally for employees who go on business trips to countries with limited healthcare. In 2017, it plans to expand activities designed to prevent occupational diseases, such as musculoskeletal diseases and noise-induced hearing loss by expanding the provision of medical checkups, running health management programs and making improvements to hazardous processes.

Certified as Excellent Worksite in Employee Health Promotion

The Incheon Plant was re-certified in September 2016 for its excellence in promoting employees’ health, following its initial certification in August 2013. The Gunsan Plant was certified in November 2015, thus all of the company’s domestic worksites have obtained certification in that area. Designated worksites are awarded the benefit of being exempted from supervision by the Korean Ministry of Employment and Labor for the next three years. The company will continue employee health promotions as part of its efforts to create a better workplace.

Programs to Manage Job Stress

Doosan Infracore conducts surveys on job stress and implements specialized occupational stress management programs for the benefit of employees’ mental health, particularly for high-risk groups of employees. In Korea, the company expanded its mental healthcare program, which was launched in 2007 to include the launch of ‘DooHug’, an in-house psychological counseling center, in 2014. In China, the company provides its employees with stress management services through the Employees Assistance Program (EAP).

Shared Growth with Our Suppliers



OUR APPROACH

We seek ways to grow together with our suppliers to realize the value of win-win management.

Doosan Infracore considers shared growth with suppliers as a primary source of its competitiveness. It shares its technology, quality, and management systems with its suppliers to strengthen their competencies and establish a culture of horizontal transactions with the ultimate goal of building a virtuous circle of partnerships. In order to contribute to expanding corporate social responsibilities, the company runs various evaluation and support programs to help its suppliers improve their CSR capabilities.

CSR STRATEGIC TASKS FOR 2016

Strengthening CSR management system of supply chain

The occurrence of CSR issues, such as human rights, environment, and safety of suppliers, has been on the rise. The supply chain CSR management has been also gaining importance around the world. Doosan Infracore, therefore, focuses on strengthening its supply chain CSR management as one of its strategic CSR tasks to enhance suppliers’ CSR capabilities. It will continue to run practical assistance programs including trainings and will continuously monitor supplier CSR progress through diagnosis and evaluation.

ACTIVITIES AND ACHIEVEMENTS IN 2016	Offered customized CSR training with a focus on EHS including chemical substances and environmental regulations; supported suppliers’ improvements to EHS; and implemented the roll-out of Chinese work-sites and delivered the ‘Supplier CSR Guidelines’ and the CSR evaluation system
PLANS FOR 2017	Provide suppliers with CSR trainings; and continue to help suppliers improve EHS

Building carbon partnership with suppliers

The need to respond to climate change has been recognized as a global issue, and businesses are now required to take proactive measures. However, suppliers are experiencing difficulties in directly responding to the global trend due to their business management circumstances. Doosan Infracore therefore supports the establishment of carbon partnership with suppliers through the creation of a foundation for energy resource circulation project by the Korean Ministry of Trade, Industry and Energy. Building carbon partnerships with suppliers is expected to enable Doosan Infracore to manage the carbon emissions from its product manufacturing processes efficiently, which will in turn enhance climate change response capabilities of the company and its suppliers. In doing so, Doosan Infracore will strengthen win-win partnership with suppliers and expand the scope of its corporate social responsibilities.

ACTIVITIES AND ACHIEVEMENTS IN 2016	Fostered experts for 10 suppliers; established worksite GHG management systems; carried out energy diagnosis and provided direction for improvement activities; built GHG management systems by product; and provided support for carbon information disclosure and utilization
-------------------------------------	---

Strengthening Suppliers’ Competitiveness

01

Doosan Infracore focuses on raising its overall competitiveness in the areas of purchase and production by helping its suppliers boost their competitiveness. To that end, the company runs a variety of support programs including technological development, product improvements, and financial assistance. In addition, based on the Doosan Supplier Excellence Program (DSEP), a system to foster suppliers, the company carries out the ‘Leading Supplier’ project in order to help major suppliers. The company has actively promoted the multi-party benefit sharing system, which is designed to expand its supplier development programs to second-tier suppliers, achieved common goals including cost reductions through mutual cooperation and shared the outcomes. The system was chosen as the best multi-party benefit sharing system at the 2nd Benefit Sharing System Expansion Council Meeting in 2016 hosted by the Korean Ministry of Trade, Industry and Energy, and the Big & Small Enterprise Cooperation Foundation. In addition, the company was rated as ‘excellent’ by the Korea Commission for Corporate Partnerships in the 2015 Shared Growth Index Evaluation and became eligible for diverse government incentives including exemption from ex officio investigations of its subcontract transactions for one year.

Fostering Leading Suppliers

Doosan Infracore makes continuous efforts to foster leading suppliers equipped with capabilities to supply quality products at competitive prices on time. This is accomplished by making innovative improvements in the areas of factory operations, quality assurance and manufacturing technologies and competencies worth being benchmarked by other suppliers. In other words, the company helps suppliers strengthen their fundamentals to improve their capabilities rather than providing short-term solutions to quality or delivery issues. With the goal of fostering 41 leading suppliers by 2020, the company selected and supported five suppliers in 2014, seven in 2015, and four in 2016. The company's supplier development programs include 1) diagnosis (identification of capabilities that need to be improved by diagnosing factory operations, quality assurance and, manufacturing technologies); 2) planning (drawing up of plans by Doosan Infracore's experts and supplier staff to address the identified capabilities); 3) development (carrying out improvement activities according to the DSEP for one year and offering supplier staff training and 4) meetings with suppliers (sharing improvements at the suppliers conference held every October). As a result of these efforts, the company has made improvements to quality and delivery.

Some suppliers also achieved tangible results such as increased sales through the development of new products and opportunities to export overseas. In 2017, Doosan Infracore will select six suppliers and help them grow into leading suppliers through various support measures.

Promoting Participation in the Benefit Sharing System

The benefit sharing system is an agreement made between conglomerates and small and medium-sized enterprises (SMEs) to engage in joint efforts with suppliers for common goals such as cost savings and share the benefits according to a prior agreement. It is a good example of an implementation model to create a cooperation-based corporate ecology. The multi-party benefit sharing system has advanced one step beyond the ordinary benefit sharing system to include second-tier suppliers. Through its benefit sharing system, Doosan Infracore collects first- and second-tier suppliers' suggestions regarding quality improvements or design changes. When suggestions are reflected into its products, the company shares the benefits evenly with suppliers, leading the benefit sharing plan in the industry. Of particular note, it actively implements the suggestions by connecting the benefit sharing system to the 'Idea Bank System' of the Korean Corporate Technology Division and motivates more suppliers to join the benefit sharing system through the relevant training and incentive systems. In 2016, the company completed the implementation of nine suggestions from its suppliers through the benefit sharing system and executed two ideas about the multi-party benefit sharing system. As a result of taking the lead in the multi-party benefit sharing system, the company's initiative was selected as the best case of multi-party benefit sharing at the 2nd Benefit Sharing System Expansion Council Meeting in 2016 hosted by the Korean Ministry of Trade, Industry and Energy, and the Big & Small Enterprise Cooperation Foundation. Doosan Infracore now plans to expand its cost reduction activities through the benefit sharing system to include its first- and second-tier suppliers in a bid to stabilize fair trade in subcontracting transactions within the industry.

Strengthening CSR Competencies of Suppliers

Doosan Infracore helps its suppliers to implement key CSR elements including ethical management, fair trade, human rights, and environmental protection and will continue to share its core values with them so that they will carry out CSR activities of their own accord.

Strengthening CSR Management System of the Supply Chain In 2015, the company published CSR guidelines for its suppliers and distributed them in the form of a newsletter and a booklet. The guidelines contain the key rules with which all of its suppliers must comply, including 27 rules organized under 10 categories such as labor, human rights, health and safety, the environment, ethics, and fair trade. The contents of the CSR guidelines are reflected in its purchasing policy to ensure that the company applies a consistent philosophy to diagnosis, evaluate, and purchase while inducing its suppliers to engage in practical CSR efforts. In 2016, the company conducted training focused on EHS, including chemicals

management and environmental regulations, with the purpose of raising suppliers' CSR awareness.

Reflecting CSR Elements into Supplier Evaluation At all worksites in Korea and China, Doosan Infracore reflects CSR elements, such as employee training, labor-management relations, environmental management, and regulatory compliance into its evaluation of candidate suppliers. In the area of EHS in particular, the company evaluates potential suppliers' performance in both their systematic preparations for and actual implementation of EHS in a variety of areas such as leadership, compliance with the laws, establishment of the relevant systems, and improvements to risk management. The company has conducted on-site EHS inspections of new suppliers prior to their registration since 2015. In China, the company established the supplier EHS evaluation criteria, distributed them to its local suppliers, and helped them conduct a rigorous self-analysis. In 2017, it plans to visit the suppliers and provide them with on-site EHS guidance and support.

Establishing Carbon Partnership Doosan Infracore has had an established carbon partnership since 2015 based on the Project for the Creation of a Foundation for Energy Resource Circulation, a national task by the Korean Ministry of Trade, Industry and Energy, to help suppliers' carbon and energy data management awareness and competency. The project, which involves laying foundations for carbon reduction as a response to climate change, is designed to boost suppliers' carbon management competency and help them improve their fundamental competitiveness through energy savings. In 2015, the company established the first-year carbon partnership with 11 suppliers, fostered carbon management experts, and carried out modular activities including the diagnosis of worksite GHG management practices. As a result, it produced 18 carbon management experts and carried out various activities customized to its suppliers' characteristics, including the establishment of an SME-type GHG management system. In 2016, the company implemented the second-year tasks with an additional 10 suppliers based on the experience it gained during the previous year. Furthermore, it will provide other suppliers with carbon management training and share outstanding cases on energy savings for the purpose of building a carbon management system to pursue green growth in partnership with all its suppliers.

Outcomes of Carbon Partnership

Programs	2015	2016
Foster carbon management experts	18 people from 11 suppliers	10 people from 10 suppliers
Establish a carbon management system	11 suppliers	10 suppliers
Build a worksite GHG management system	11 suppliers	10 suppliers
Offer guidance on energy diagnosis and improvement activities	5 suppliers	9 suppliers
Develop reduction technologies and evaluate reduction potential	5 suppliers	5 suppliers
Build a GHG management system per product	5 suppliers	3 suppliers
Support carbon information disclosure and utilization: Publish carbon information disclosure reports	1 supplier	3 suppliers

Diverse Supplier Support Programs

02

Competitiveness Enhancement Programs

Competitiveness Enhancement Support Center An exclusive team composed of more than 50 in-house experts and technical engineers visits suppliers and helps them to innovate. In 2016, 179 experts helped suppliers with their innovation efforts for more than five consecutive days, providing key technical support for welding, materials manufacturing and non-destructive inspection. They also provided support for innovation in the fields of 3 P's 6 S's¹⁾, Lean²⁾, DTC³⁾, Single PPM⁴⁾, quality guidance and problem solving, localization and product development.

Management Doctor System Doosan Infracore is an active participant in the Management Doctor System that is currently being promoted by the SME Support Center of the Federation of Korean Industries (FKI). Suppliers recommended by businesses are selected through a review process, whereupon experts from three parties – large corporations, suppliers, and the FKI's own management consulting team – help to improve management environment and solve problems.

Competency Building Training for Suppliers Staff The company conducts annual surveys to determine what kinds of trainings are required by its suppliers and provides customized 'Supplier Academy' trainings to help them secure greater competitiveness. In 2016, 163 employees from 49 suppliers benefitted from the Supplier Academy in eight areas including quality control and advanced tools, methods of reducing manufacturing costs and productivity improvement techniques. In 2016, a total of 204 employees from 17 suppliers participated in the company's Supplier Academy courses and other supplier education programs. In 2017, the company aims to offer the Supplier Academy to 50 suppliers in quality improvement, cost reduction, and productivity enhancement.

¹⁾ 3 P's 6 S's: 3 P's (Proper Items, Proper Quantity, Proper Place), 6 S's (Safety, Sort, Straighten, Shine, Standardize, Sustain)
²⁾ Lean: Activities designed to minimize inventories and innovate work processes, thus reducing costs and enhancing productivity
³⁾ DTC: Design to Cost innovation
⁴⁾ Single Parts Per Million (PPM): A quality innovation campaign designed to achieve the quality management goal of reducing the ratio of faulty products to under 10:1,000,000 products

Financial Support

In Korea, Doosan Infracore helps its suppliers enhance their financial soundness by providing them with four types of financial support – direct support, indirect support, mixed support, and special support.

Financial Support for Suppliers in 2016 (Korea)

Classification	Programs	Details	Support Amount
Direct Support	Facility Investment Fund	Provided suppliers with interest-free facility investment funds	KRW 2.5 billion
	Financial Support for Shaping Fixtures	Provided financial support for shaping fixtures to enhance product competitiveness	KRW 14.5 billion
Indirect Support	Network Loans	Recommended loans for suppliers via arrangements with financial institutions	KRW 291.8 billion
	Family Corporate Loans		KRW 30 billion (promised)
Mixed Support	Shared Growth Special Fund	Helped suppliers receive loans to fund operations with low interest rate based on deposits	KRW 103 billion (raised)
			KRW 55,870 million (loaned)
Special Support	Industrial Innovation Campaign 4.o, Special Contribution (Machinery Industry Shared Growth Promotion Foundation)	Made contributions to shared growth programs for second- and third-tier suppliers	KRW 300 million
	Contribution to Win-win Supporters		KRW 100 million

Establishing a Culture of Shared Growth

03

Building Win-Win Partnerships

Doosan Infracore has established mutually beneficial partnerships for shared growth with its suppliers and continues to expand them. The company’s shared growth efforts are led by the Shared Growth Team and the Supplier Development Team, which focus on improving the suppliers’ job competencies and financial soundness, and the Integrated Cooperation Council, which helps promote communication between the company and its suppliers.

Establishment of Fair Trade Practices Doosan Infracore adopted the Compliance Program (CP) in 2002 to carry out its business activities in a sound and transparent manner while pursuing fair competition. It has established the code of conduct that meet global standards based on which the company has been striving to grow into a truly global company. To build a culture of fair trade and realize horizontal transactions, Doosan Infracore has set itself four major goals – responsible contracts for win-win cooperation between a conglomerate and SMEs, fair selection and management of suppliers, establishment and operation of the Internal Review Council, and desirable paperwork and its retention in subcontracting transactions – and discloses progress on the company website.

The company uses the standard subcontract for the machinery industry published by the Korea Fair Trade Commission, and all matters related to the selection of suppliers and contract execution are managed through the ERP system. It has also established the Internal Review Council and holds meetings more than three times each month to review contract execution with suppliers and the pricing decision processes. It also connects the CP operating system to the Internal Review Council to block unfair subcontract transactions. The Council also re-evaluates the justification for executed subcontracts on a quarterly basis. In order to promote fair trade and shared growth, Doosan Infracore grants incentives not only to primary suppliers that have adopted CP, but also to primary and second-tier suppliers that have signed a CP agreement. In 2016, the company did not violate any law related to fair trade and subcontract transactions. In 2017, it plans to collect CP newsletters to publish a handbook in order to further promote CP.

Motivating Shared Growth The company reflects the shared growth performance of the relevant executives into the evaluation of their Management by Objectives (MBO) in Korea and China. In 2017, the company plans to reflect the findings of the benefit sharing system into the MBO of executives in charge of purchasing, thus further promote the benefit sharing system. Furthermore, to encourage suppliers to participate in shared growth activities, the company reflects their involvement in shared growth and relevant performance in the comprehensive supplier evaluation.

Strengthening Communication with Suppliers

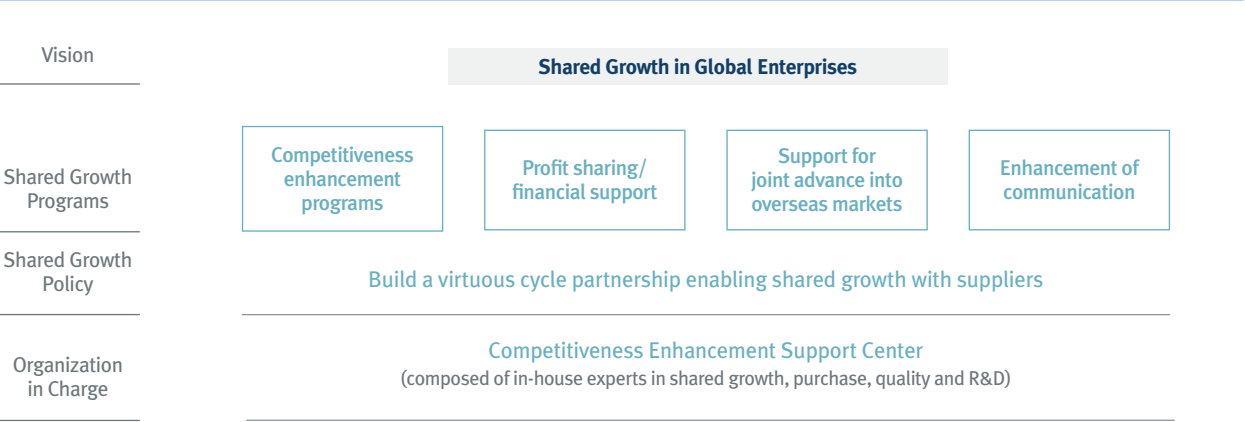
To enhance communication with its suppliers, the company has expanded the ‘Supplier Hotline’ and set up various other communication channels, including pledge ceremonies and meetings. The CEO visits the company’s second- and lower-tier suppliers twice a year to listen to their concerns and find solutions to their problems. In China, the company’s executives hold meetings with suppliers twice a year, communicate the purposes of shared growth and encourage their commitment to realizing shared growth.

Launch of the Integrated Cooperation Council For active and effective communication with suppliers, Doosan Infracore launched the Integrated Cooperation Council in 2015. The Council meets twice a year to share the company’s business plans, align the strategies of the company with its suppliers, and boost mutual exchanges.

On-site Supplier Survey In 2016, Doosan Infracore launched the ‘On-site Supplier Survey’ in order to identify and improve customer needs through feedback, invigorate two-way communication and enhance shared growth partnership. The company visited 19 primary suppliers, listened to their opinions on their overall management and product delivery status and developed solutions to their key pending issues. Plans are made for 2017 to share the solutions with suppliers while visiting more than 50 additional suppliers.

Grievance Handling Channel for Suppliers In order to strengthen communication with suppliers, Doosan Infracore has established the Supplier Hotline on its company website in the Shared Growth section through which people express their overall opinions or grievances about the company’s shared growth activities, request shared growth programs, or make inquiries. The Supplier Hotline is also accessible by telephone, e-mail, facsimile or mail and the company has notified suppliers of the hotline. All communication made through the Supplier Hotline is kept strictly confidential. For those wishing to preserve their anonymity, the can be used anonymously. The company makes sure that no one faces retaliation for submitting information to the hotline, and critical information is reported to the CEO and relevant executives.

Shared Growth System



Employee Value Proposition



OUR APPROACH

We nurture leaders with expertise and a pioneering spirit to drive growth into a global leading company.

Based on a corporate culture where employees are considerate of others and diversity is respected, Doosan Infracore helps its employees achieve personal growth at their own pace according to the Functional Competency (FC) system while applying reasonable standards and principles and providing fair opportunities. The company has been building a mutually beneficial cycle in which people grow, and growth of people leads to growth of business. Based on the Doosan Way, the company has been enhancing its strong organizational culture and win-win labor-management relations with the aim of being a proud Doosan.

CSR STRATEGIC TASKS FOR 2016

Establishing a management system for human rights risk

The issue of human rights violations within and outside companies has serious consequences. Diverse groups of people are impacted by such violations including the perpetrators and the victims. Stakeholders therefore regard corporate human rights awareness and a culture of mutual respect as highly important assets. Doosan Infracore aims to prevent risks of human rights violations and build a culture of respect and consideration based on the establishment of a management system for human rights risk. The company intends to fulfill its responsibility for human rights and create a sound corporate culture as a global corporation.

ACTIVITIES AND ACHIEVEMENTS IN 2016	Established response processes to human rights violation and distributed the 'Human Rights Risk Prevention Manual'; operated the Human Rights Protection Center; and provided human rights training to all office staff
PLANS FOR 2017	Strengthen the monitoring for human rights violation upgraded from the existing tasks; operate the Women's Council to encourage female employees' career development and build a culture of gender equality; and provide human rights education to all technical staff

Human Rights and Diversity

01

Respect for Human Rights

As a participant in the United Nations Global Compact, Doosan Infracore supports the Compact's Ten Principles and respects human rights. The company has implemented preventive measures against any violations of human rights at work. The company refuses to tolerate any type of verbal abuse, violence, sexual harassment, or other improper acts which are against the spirit of 'Inhwa', meaning 'harmony between people' not only in interactions inside the company but also relations with its suppliers. Preventive actions are taken through various organizations such as the Human Rights Protection Center, Internal Reporting Center, and Personnel Committee, all of which participate in the company's reporting process. In the event of a violation, the company takes prompt actions according to the relevant regulations while ensuring that the same violation is never repeated through education.

Human Rights Risk Management System Based on the spirit of 'Inhwa' advocated by the Doosan Way, the company has defined the concept of human rights and specified various types of violations. It has conducted focus group interviews among its worksite employees, as well as a survey on the state of human rights reflected in its grievance reporting channels, established human rights violation response processes, and published a human rights risk prevent manual. The manual, which consists of two parts – one for human rights officers and the other for other employees – deals with situations that might transpire among not only the company's employees but also among external stakeholders including its suppliers. In 2016, the company conducted education on gender equality and human rights based on the manual for all office staff. In 2017, it will extend the human rights education to its technical staff.

Grievance Channels and Handling Processes Doosan Infracore has been operating the Gender Equality Center since 2011 to prepare for or respond promptly to cases of sexual harassment and verbal or physical violence at work. It also provides education on sexual

harassment to all of its employees. In March 2016, the company upgraded the Gender Equality Center to the Human Rights Protection Center to ensure a broader response to human rights issues. The company identifies employees' grievances through diverse channels, such as the Human Rights Protection Center, the Internal Reporting Center, and the Cyber Reporting Center on the company website, and strives to handle them immediately. Its overseas worksites operate NAVEX, a special hotline dedicated to dealing with various grievances including human rights issues. Training is conducted to boost the anonymity of whistleblowers and the independence of the hotline. The company guarantees protection of the identity of reporters who file grievances with the Human Rights Protection Center or the Cyber Reporting Center and protects the confidentiality of the contents of their reports, which are handled in accordance with the relevant company regulations and procedures. The company has completed the handling of all major grievance reports filed in 2016. In addition, the company has devised a grievance counseling program whereby employees learn to understand each other's standpoints in a variety of situations and find amicable solutions to the issues raised.

Respect for Diversity

Protection of Employee Diversity As of December 31, 2016, there were 3,919 employees at Doosan Infracore worksites world-wide, including 2,550 personnel in Korea but excluding Doosan Bobcat after its public listing. Given the characteristics of the machine manufacturing industry, it is not easy to recruit female employees. The company however strives to eliminate bias by having its female engineers take part in the interviews of female applicants. The rate of females among new recruits has been on the rise, and it is expected that the proportion of female managers will also steadily increase. To foster the personal growth of female staff, the company does not discriminate against its female staff in their job assignments, nor does it place any restrictions on the assignments.

Women's Council The company plans to expand the Women's Council, previously operated by the Corporate Technology Division, to the company level in 2017. Through the launch of the company-wide Women's Council, it will collect female employees' feedback on their personal growth and the company's current career and professional development systems to further enhance its gender equality performance.

Fair Opportunities As specified in the Doosan Way and the company's Code of Conduct, Doosan people are respected for their individual characteristics. They are not discriminated against with regard to their employment, evaluation, and compensation on the grounds of gender, religion, disability, age, social status, country of origin, nationality, ethnic background, race, skin color, physical condition, marital status, pregnancy, childbearing, family type or status, ideology, political opinions, sexual orientation, educational background, or military service. Nor they are treated unfairly depending on their personal relationship with the company's officials based on their academic or geographical background.

Types and Details of Human Rights Violations

Type	Details	Type	Details
Discrimination	Gender	Verbal/Physical abuse	Verbal abuse, violence
	Age, position, employment type		Sexual harassment
	Country of origin, race		Alienation, bullying
	Marriage, birth		Invasion of privacy

Human Resources Development

02

Doosan Infracore has set the direction of its personnel development as ‘global leaders who can lead the way in organizational changes and innovations’. The company has established diverse management system and provided educational programs in order to share values and culture of Doosan, and thus to foster global experts with leadership.

Building the Global HR Information System

Doosan Infracore launched a new HR system called ‘MY HR’ in March 2017 to standardize and simplify various HR systems, processes, standards, and data from the viewpoint of the Doosan Way and to integrate more than 50 HR systems that were previously used by different subsidiaries in various countries around the world. MY HR is a globally integrated HR system designed to handle various HR tasks such as Doosan Competency Model (DCM), Management by Objectives (MBO), and Development Plan (DP), as well as training applications. MY HR is also available on mobile devices so that it can be accessed anywhere anytime. Employees have the rights to create or view personnel information for themselves and their team members (if they are managers) through MY HR. In order to protect personnel information, the company handles and processes the information in accordance with its principles. All employees are required to sign the Pledge of Personnel Information Protection, which states that any violation of its contents on their part will be subject to disciplinary action according to the company’s regulations and the relevant laws.

Enhancing Functional Competency

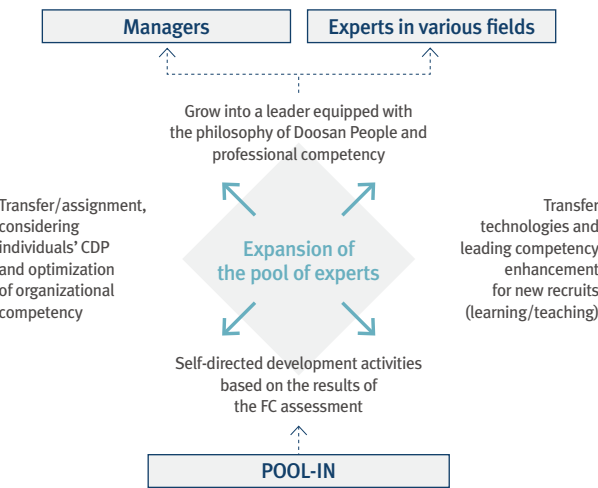
Doosan Infracore has built a sophisticated Functional Competency (FC) development system, mainly for its head office, in consideration of individual employees’ unique skill set and capabilities. It also encourages its employees to devise their own education plans to boost their FC according to the result of their FC assessment, and helps them grow into global experts in their respective fields.

Building the FC Development System The company has established an FC development system through which it enables its employees to equip themselves with competences required to carry out their tasks successfully and set their own roadmap for personal growth based on their identified strengths and weaknesses. Doosan Infracore operates an FC-based HR education and development system to help its employees grow into global talents. In 2015, it published the FC Development Directory which shows the list of courses

customized for different competency levels, along with information on various curricula designed to boost competency in the areas of R&D, manufacturing, and sales and marketing. In 2016, the company completed the FC development system for R&D, production and market-driven areas such as sales. It restructured various courses at its Job Academy, including 33 R&D courses, 11 innovation courses and three sales and marketing courses. The company also expanded the FC system overseas and built the FC diagnosis and training system in China in 2016. In 2017, it plans to complete the establishment of its FC system for office staff and connect it to the new MY HR to register and handle the diagnosis and development activities.

In order to grow into a global machinery company, the company needs to nurture technical staff equipped with professional competencies and a high degree of competitiveness. Doosan Infracore therefore plans to establish an FC system devoted to its technical staff, identify their needs for job competence improvements as well as their strengths and weaknesses and help them set up their own specific visions for personal growth. The establishment of the FC system for the company’s technical staff started with the preparation of a draft proposal in 2014. In 2016, the company has customized competencies required for each job on-site and established the job training system. In 2017, it will carry out FC diagnosis to implement talent development system and offer professional trainings linked to the FC system.

FC Development System



Competency Development Trainings Doosan Infracore has set a self-directed learning system in place so that employees study voluntarily under their own control. Launched in 2013, the Learning Credit System is a unique academic credit system of Doosan Group that allows its employees to devise their own study plans and follow them at their own pace to acquire credits assigned to their respective positions. Employees can access various courses offered by the company’s self-directed learning system on their computers or mobile devices anytime, anywhere through ‘MY HR’, an integrated HR system of the Group.

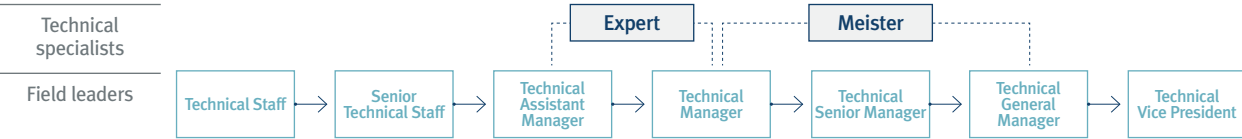
To improve the technical expertise of its technical staff and support their efforts to grow into technical experts, the company conducts job training based on its FC system and supports 33 study circles (255 participants) and their efforts to acquire technical certifications through its restructured technical training system. The company has restructured the training system in sync with its directions for the development of employees’ job competencies based on VOC and the feedback of its production executives. It plans to prioritize a total of 270 training courses and offer them gradually after further developing them prior to their introduction.

The company has also built up a network with all the Human Resource Development-related departments in its overseas subsidiaries in order to share its core educational programs and ultimately to encourage talent development at all of its worksites. Following the launch of MY HR in March 2017, the company will integrate the operation of education systems that were individually managed by each overseas subsidiary.

Fostering Global Talent

Leadership Enhancement Doosan Infracore is aware that the future of an organization depends on the commitment of its leaders. The company therefore has developed leadership training programs at every level in the organizational hierarchy. It has defined the core leadership competencies required for the employees at different levels and created education programs customized to their different needs. In 2016, it offered Conflict Management courses to general managers for office staff, Coaching courses to deputy general managers, and Followership courses to assistant managers. The company has also prepared an education plan to boost its organizational vitality and nurture YBs¹⁾, the company’s future leaders in technological advances and offered them a leadership training program called the Vision Camp. To educate its employees on the performance of their duties as Doosan people, it offers Strategic Thinking Enhancement through Problem Solving (STEPS) courses to team managers and STEPS-Junior courses to assistant managers. In 2017, based on the Doosan Way and its technical expertise, the company plans to reorganize its technical leadership development system in order to nurture field leaders who are ready and able to lead sustained growth of the company. To establish its own technical leadership models, the company will conduct a workshop participated by the representatives of all major positions. It will also introduce a group coaching program for leaders (team leaders) designed to enable them to practice solving the kinds of issues they are likely to face at sites with the assistance of professional coaches so that they can develop their leadership and acquire the coaching skills they need in their daily operations.

Career Development Path of Technical Staff



Education on the Global Work Environment In 2015, the company launched a collaboration website called Global Mobility Support (GMS) to provide employees assigned to overseas posts with information on its various regulations and welfare benefits, and tips intended to help them enjoy a pleasant life overseas. In addition to the online and offline language programs designed for its employees, the company also runs an online language program for its employees’ family members.

Reorganization of Technical Staff Personnel Management System

To motivate its technical staff to pursue self-development and to present them with a vision, Doosan Infracore has been creating a talent development system in line with the Doosan Way, which includes rules on job assignment and promotion, competency evaluation, technical expert training courses, and FC promotion. The company introduced the position and promotion system in 2012, presented its technical staff with a vision for personal growth, and nurtured its technical personnel’s pride in their individual ability and status. With the introduction of the competency recognition system, the company has enabled leaders to nurture their members’ competencies while helping the members to recognize the strengths they require for personal growth and the need to work harder to develop them. The company has also opened technical specialist courses designed to help its technical staff acquire national qualifications for technicians, industrial engineers, master craftsmen, and master technicians. In 2016, the company upgraded its FC-based HR development system along with its field leaders and changed the titles of its technical staff, which has had some positive effects on raising the status of technical staff in the organization. In January 2017, it introduced two new growth pathways for its technical staff – the launch of the technical managing director system and the enhancement of the meister development system – so that they can work toward becoming either field leaders or technical experts. Technical managing directors are those who are equipped with leadership and practical skills to play the role of production team leaders in the company’s production units, presenting a vision for growth to technicians. Meisters serve as the company’s field leaders equipped with professional skills and high competitiveness and present the vision to grow into technical experts. In January 2017, Doosan Infracore appointed a technical managing director for the first time in its 80-year corporate history. The company will appoint its first meister at the end of 2017.

¹⁾ Young Boy (YB): Technical staff hired in 2004 or after

Invigorating Organizational Culture

03

Implementation of the Doosan Way

Since the promulgation of the Doosan Way in 2012, the employees of Doosan Infracore have been required to internalize the Doosan Way, the unique philosophy of Doosan and the basis for its decision-making. They have also implemented the Doosan Way through the cultivation of Doosan people, the introduction of advanced and scientific work processes and the enhancement of fundamental competitiveness in their work. In 2016, in order to overcome obstacles amidst a difficult economic environment, the company promoted decision-making based on the Doosan Way, the acquisition of core competitiveness and the adoption of advanced scientific methods of working. In 2017, the company will focus on powerful performance, the recovery of self-esteem and the goal of building a ‘Winning Team’ by generating achievements on the basis of its powerful performance ability and will continue to promote changes in the way it operates.

Leaders’ Initiatives Doosan Infracore emphasizes the need for its leaders to initiate changes and set a strong example for others to follow. In this context, it implements window leadership sessions, in which all its executives participate and discuss innovations and the Leader’s Action Plan (LAP) under which leaders pledge to pursue changes. It improves work inefficiency and leads changes in the way it works through open communication and on-site management. As a result of the 2016 LAP improvement, the company’s employees are positive about change efforts. In order to continuously improve the way it operates, the company has established a new LAP under the theme of changing the way we work starting with our leaders’ for domestic executives and applied it to its operations. The company has also striven voluntarily to eliminate inefficiencies and irrationalities in its operations.

Communication and Consideration

The company has built diverse communication channels in order to boost employees’ satisfaction at work through communication. It has also created a mobile version of its grievance mechanism previously only available online and offline, in addition to such communication channels as the Human Rights Protection Center, company website and internal portal. In 2016, it launched the ‘D-Briefing’, which delivers major news, information and issues to its employees. In China, the subsidiary heads held meetings with regional directors. Each department had a monthly ‘Doosan Way Time’ session under the leadership of Core Agents (CA) and team leaders. In 2017, the

company plans to enhance communication on new businesses and new growth engines, share its vision through regularly scheduled CEO Talks and expand communication on the subject of pride in one’s life at work.

Work-Life Balance

Doosan Infracore complies fully with the labor regulations of the countries in which it operates. To further improve its employees’ quality of life, it offers a wide range of welfare benefits that match each country’s unique situation. Of particular note, it proactively supports the pursuit of a sound work-life balance through family-friendly management practices, including the operation of childcare centers and the granting of parental leave, reduced working hours, and family care leave. In 2017, the company plans to promote childcare leave and flextime, support customized organizational cultural activities and implement the team leaders’ caring program, all in efforts to create a positive workplace.

Adjustment of Work Schedules The company implements the work schedule adjustment system to allow those employees who cannot work on a typical work schedule to continue working for the company while maintaining their work-life balance. In Korea, the company runs a flexible work time system (a part-time system) for contract employees.

Support for Building a Stable Life In Korea, the company helps employees at its worksites to alleviate their financial difficulties through a variety of supportive measures, such as the supply of housing including dorm rooms for those who are transferred to new locations, loans for their children’s tuition fees, and mortgage loans. The company also helps protect its staff from medical emergencies by providing industrial accident insurance, support for medical costs, and regular medical checkups. It has also built safety nets designed to help employees who are affected by unexpected illnesses or accidents.

EAP Operations Doosan Infracore provides its employees with the Employee Assistance Program (EAP) that offers counseling and education on health, laws, and finance among other areas of interest. In Korea, the company has run DooHug, its in-house psychological counseling center since 2014. In China, the company offered its employees 32 sessions of sand play therapy in 2016 and five sessions of psychological counseling about radical changes in working and housing environments for Korean employees who had been assigned to posts in China, and their family members.

Recharging Opportunities

In Korea, employees can take a total of two weeks’ vacation, a one-week vacation plus an additional one-week vacation before or after the first week of August when its domestic plants halt their operations. The company also pays them a summer vacation bonus. The company implements the Overseas Advanced Culture Exploration Support System for its regular staff (office or technical

staff who joined the company before January 1st of the previous year) to help them experience foreign culture on the occasion of their annual vacation periods. It offers them round-trip air tickets and Eurail passes so that they can take the opportunity to recharge themselves, experience a different perspective, and boost their pride in the company.

Family-friendly Management The company allows its employees to choose childcare leave and family care leave or reduced working hours depending on their situation. It also runs flextime and leave of absence systems according to the circumstances of the relevant countries. It implements the Mom’s Caring Program at the company level, which provides diverse supportive measures for pregnant employees. It has published the Guide on Pregnancy, Childbearing, and Childcare which gives a great detail on the various support

measures available inside and outside the company concerning pregnancy, childbearing and childcare. For pregnant employees, the company grants reduced working hours and prenatal checkup leave. Upon childbirth, the company offers leave to both mother and father. It also provides those who have had an abortion or suffered a miscarriage with a recovery period equivalent to that required for childbearing. During childrearing, both parents are eligible for childcare leave or reduced working hours. The company runs daycare centers at three locations in Incheon, Gunsan, and Seoul in Korea. The company also allows its employees to use a leave of absence to take care of family members in need, promote their personal development or focus on infertility treatment. In China, the company offers a leave of absence or a shorter workday to female employees who have just given birth to a child.

Support System for Family-friendly Management (Korea) Violations

System		Details	Eligibility and Period
Pregnancy	Pregnant employee caring program	Parking tickets for pregnant employees	Pregnant female employees
		Guidebook on pregnancy, childbearing, and childcare	
		Pregnant employee badges, stickers, and parking tickets	
		Use of affiliated hospitals, in-house lounges, internal, and external psychological counseling centers, if needed	
	Basic support during pregnancy	Compliance with 8-hour workday and prohibition of holiday work	Pregnant female employees (the entire pregnancy period)
		Support for medical bills during pregnancy and childbearing	Pregnant female employees (from pregnancy to childbearing)
Childbearing	Shortened working hours during pregnancy	Shortened working hours for the health of pregnant employees and their babies	Pregnant female employees (reduction of up to 2 hours per day until the 12th week and after the 26th week of pregnancy)
	Leave for prenatal checkup	Parental checkup leaves	Pregnant female employees (once every two months until the 7th month of pregnancy; once per month from the 8th to the 9th month; and once every two weeks during the 10th month of pregnancy)
	Leave before or after childbearing	Childbearing leave	Female employees who give birth to a child (90 days / 120 days for twins)
		Miscarriage/abortion leave	Male employees whose wives give birth (5 days)
	Childbirth cash gift	Cash gift in celebration of childbirth	Female employees who have a miscarriage or abortion (Leave duration varies depending on pregnancy period, with a ceiling of 90 days for pregnancy of more than 28 weeks)
			Employees who have childbirth
Childcare	Leave for childcare	Childcare leave	Employees with children aged less than 8 years or second graders in elementary school (once per child for mother and father, respectively, and reduced working hours for childcare for a total of one year for parents)
	Reduced working hours for childcare	Reduction of working hours for child care (15-30 hours per week)	
	In-house daycare center	Daycare centers in Incheon, Gunsan, and Seoul	Employees with children aged 3-5 years (selected through transparent procedures at a fixed time)
Family	Special leave of absence	Leave of absence to take care of family members suffering from illness or recovering from accidents	Employees (90 days per year)
		Leave of absence intended for family members in need of special care, personal development, and treatment of infertility	employees (6 months + additional 6 months)

Win-win Labor-management Relations

04

Compliance with Labor Policies

Doosan Infracore complies with the labor standards of the International Labor Organization (ILO)¹⁾. Each year, the company conducts investigations to detect any child labor or forced labor practices within the company through the annual CSR assessment of all its domestic and major overseas worksites. According to the results of the 2016 scrutiny, none of its worksites world-wide has resorted to child labor or forced labor of any kind. Doosan Infracore has signed the Guidelines on the Protection of the Working Conditions of In-house Subcontractors' Workers with the Korean Ministry of Employment and Labor. It ensures that all the relevant regulations are complied with through its regular monitoring activities. It also ensures that proper in-house subcontracting practices are implemented through voluntary compliance with the government's guidelines on fair transactions.

Labor-management Relations

Since the launch of the Win-Win Labor Union in 2011, the company has maintained and developed labor-management relations based on mutual trust and respect. Despite the adverse business situation, the company has successfully concluded collective bargaining with its union without a single labor strike for six consecutive years. Labor and management continue to communicate through diverse channels, including the Labor-Management Council and the Welfare Subcommittee, and share major issues through the quarterly Business Information Session. In 2016, the company carried out diverse labor-management joint events such as 'New Start Day', a pep rally held at the level of each business group, and 'Bacchus Day', which is held on the last Wednesday of each month to boost the morale of technical staff at the company's worksites. The company also launched the Labor-Management One Family Children's Day Event along with the One-Mind Hiking Event and the Labor-Management Joint CCI campaigns. In China, the company runs a special council, an organization that represents DI employees, according to the Council Law, which is equivalent to the Labor Law in Korea. The four representatives of the council are elected by vote every four years. The council and management hold a council meeting on a monthly basis to discuss major developments and share opinions on various worksite issues. Wage discussions are conducted annually.

Joint Customer Support of Labor-Management

In order to overcome the market downturn in 2016, the labor union and management visited the company's customers across the country on six occasions and collected their opinions while engaging in various customer service activities. The event was held to allow the labor union to figure out customer requirements and relay the VOCs directly to the company's production sites. In 2017, the company plans to expand the labor-management joint customer support activities.

¹⁾ Compliance with the ILO labor standards: Doosan Infracore ensures that the labor standards of the ILO are complied with at all its global worksites. It prohibits all forms of discrimination, child labor and forced labor while promoting freedom of association.

Supporting Development of Local Communities



OUR APPROACH

We leverage our capabilities to create a better society through investing in our communities.

Based on its pursuit of sincere corporate community involvement (CCI), Doosan Infracore has established a global CCI system and guidelines that reflect its corporate capabilities and social demands, and has been carrying out CCI activities world-wide on the basis of shared values. Doosan Infracore employees across the world strive to implement CCI programs that are instrumental to the development of local communities.

CCI Strategies and Directions

01

CCI System

Doosan Infracore fulfills its corporate social responsibility (CSR), a core value of the Doosan Way, by communicating with its stakeholders and participating in diverse CCI programs. The company has developed the Global CCI guidelines in 2014 and applied them to all CCI activities carried out at its worksites around the world since 2015. Doosan Infracore's CCI refers to every kind of activity that it undertakes by exploiting its major competencies in finance, products, human resources, and technologies for the purpose of promoting the wellbeing of future generations and improving the competencies of the communities to which the company and its employees belong. The company's CCI activities are led by the CSR part at the head office and work together with staff in charge at the company's overseas worksites who plan and execute CCI activities that are unique to their own communities.

CCI Strategies

Goal	Top 100 global CSR leading companies ¹⁾ by 2025 ¹⁾		
Mission	To boost local communities' future competitiveness and the company's corporate values through strategic CCI activities		
Value	To promote the shared growth of the company and society through CCI activities (The Doosan Way)		
3 Strategies	Support for the next generation	Support for local communities	Support based on the company's core competencies

¹⁾ Based on the announcement of the World Economic Forum (Davos Forum)

Support for the Next Generation

Operation of the Dream School Launched in 2012, the Dream School program is part of the 'Youth Dream Search' project through which Doosan Infracore helps the youth acquire a positive perspective about their career choices and future. Participants engage in various activities together with Doosan Infracore personnel for five years from the second grade of junior high to the third grade of high school. The results of a study carried out in 2014 on the effects of the Dream

School indicate that both the students and their mentors achieved positive progress. In 2015, the company launched Dream School Plus with an aim to help the students of Dream School 1-3 who were selected through interviews to continue pursuing their personal growth. In 2016, 107 students (21 middle school and 86 high school students) participated in Dream School Plus, receiving counseling from professional coaches on their career paths and taking part in programs designed for their personal growth, summer camps, and a Homecoming Day which brought together all the mentors and mentees of Dream School. The year 2017 is particularly meaningful in that 17 students who have enrolled in the Dream School 1 in 2012 graduated from the Dream School in February for the first time in the program’s history.

Construction Support for Hope Elementary Schools in China Under the slogan of ‘We will build a beautiful China together’, Doosan Infracore China Corporation (DICC) has been participating in the ‘Project Hope’, a public service project involving the provision of educational support for Chinese youth and improvement of the educational environment in underprivileged regions of China. Since 2001, the company has built 37 Hope Elementary Schools in impoverished areas of the country, bringing hope to children. DICC also has run the Doosan Hope Travel Summer Camp every summer and implemented an ‘honorary school principal system’ since 2007. Teachers and students of Doosan Hope Elementary Schools from all around the country join the summer camp, which enables students to enjoy cultural experiences while having fun. Under the honorary principal system, the CEOs of Doosan Infracore dealerships are appointed as principals with the aim of encouraging participation of dealers and ensuring continued support for the schools. In February 2017, DICC was awarded the 2016 Project Hope Contribution Award by the China Youth Development Foundation for its contribution to the Project Hope.

Support for Local Communities

Doosan Infracore carries out a diverse set of CCI activities in consideration of characteristics and needs of local communities, with an aim to grow together with them. The company holds at least two workshops each year with CCI experts at its worksites. It also partners with reputable non-profit organizations in local communities to promote various CCI activities that address the needs of the communities.

Local Hope CCI Activities Doosan Infracore undertakes its Local Hope CCI activities with funds raised through employee contributions and its own matching funds. In May 2016, 25 employees from the Incheon Plant participated in home improvement work at Hwasu village, and 127 employees participated in the Kimchi Making with Love event in December 2016. The company also donated ‘Rice of Love’ to local communities in Dong-gu, Incheon on the occasion of the Chuseok and Lunar New Year holidays.

Support Based on the Company's Core Competencies

Doosan Infracore utilizes its business resources to promote its CCI activities, including expertise in mechanical engineering and product development.

Support for Construction Equipment Operation Courses To assist youth who are eligible to leave child welfare institutions, the company offers them training on the operation of construction equipment and helps them obtain a professional license through its Construction Equipment Education Center in Ansan. As a trial operation, the company ran a three-month course on the operation of construction equipment including excavators and forklifts in 2014 and has offered support for training courses on construction equipment operation and maintenance since 2015. Through these courses, the company helps the trainees to obtain operator’s licenses for excavators and forklifts and provides those who complete the course with congratulatory money and training allowances to help them take their first steps to becoming adult members of society.

Support for Natural Disaster Relief In the event of a massive disaster such as an earthquake or a typhoon, Doosan Infracore promptly provides construction equipment and funds for relief efforts, thus provides supports based on the company’s core competencies, one of its three CCI strategies. In April 2015, the company provided USD 300,000 worth of construction equipment to assist the relief effort after the devastating earthquake in Nepal. Given the chaotic situation including the collapse of buildings and roads, the company dispatched Doosan Bobcat compact construction equipment, which performs superbly in small spaces, as well as excavators and wheel loaders. The company also made sure that the equipment was equipped with sufficient spare parts in preparation for the protracted relief and recovery operations. Doosan Infracore has also provided construction equipment and donations for rapid relief and recovery from devastating natural disasters around the world over the years, such as Hurricane Katrina in the U.S. in 2005, the Sichuan earthquake in China in 2008, the earthquake in Haiti in 2010, the Tohoku earthquake in Japan in 2011, and Typhoon Haiyan in the Philippines in 2013.

Donation of Equipment and Model Doosan Infracore donates excavators, parts and engines produced in the course of product development stage for tests to the relevant departments of universities and vocational high schools as educational materials.

The Junior Engineering Class Launched in 2008, the Junior Engineering Class is a talent donation circle consisting of Doosan Infracore researchers with science and engineering backgrounds. The volunteers teach children about key scientific principles in fun and easy ways through the assembly of science kits.

Employee Engagement

02

In addition to its various CCI programs, Doosan Infracore supports voluntary service clubs run by its employees. It has also set various CCI support programs in place, including the CSR Awards, which are designed to encourage its employees to participate in CCI activities.

Employee Donation

Approximately 80% of the entire Doosan Infracore staff in Korea participates in Collection of Small Change from Employees Salaries and Opening Donation Account in order to raise CCI funds. Each worksite also has voluntary groups whose members regularly volunteer to impact their communities. Employees’ donations are sent to the Community Chest and are used for employee CCI activities. The details of fund execution are disclosed through the company’s CCI Information System and in-house portal news service.

Building Infrastructure for Employee Engagement

The company has established the CCI Information System on its Intranet to increase employees’ awareness of the company’s voluntary services while keeping track of their participation.

Participation Rate in the Employee Fund in 2016



80%

Doosan Day of Community Service

Doosan Infracore employees make small but meaningful changes by participating in the Doosan Day of Community Service.

Doosan Group holds the annual ‘Doosan Day of Community Service’ in the first half of the year for its employees around the world and shares its resources with the members of local communities on the same day. In addition, it holds a photo/video contest in which heartwarming moments of the event can be shared, and thus makes the Doosan Day of Community Service evolve into a festival of sharing. In April 2016, a total of 1,169 Doosan Infracore employees at 30 worksites in 11 countries participated in the Doosan Day of Community Service.

Records of Doosan Day of Community Service



Doosan Day of Community Service

Employees in Seoul participated in the home improvement project for a shanty town in Dongdaemun, Seoul (2017)



Employees in Incheon built a tile-painting (2016)



Volunteers helped maintain playgrounds with a Bobcat S570 SSL & MT 85 mini track



Employees in Japan cleaned up the neighborhood



APPENDIX

87

Performance Summary

88

Consolidated Financial Statements

92

CSR Facts & Figures

97

Independent Auditors' Report

98

Independent Assurance Report

100

Global Network

PERFORMANCE SUMMARY

<div><div>KRW 5,729.6 billion</div><div>Sales</div></div>	<div><div>KRW 490.8 billion</div><div>Operating Income</div></div>	<div><div>KRW 116.0 billion</div><div>Net Income</div></div>
<div><div><div>7 consecutive years</div><div>Listed in DJSI Korea the machine and electric equipment categories</div></div></div>	<div><div><div>6 consecutive years</div><div>Rated Class A in the ESG Evaluation by the Corporate Governance Service, Korea</div></div></div>	<div><div><div>74%</div><div>Percentage of premium eco-friendly or eco-friendly products</div></div></div>
<div><div><div>87,413 tCO₂</div><div>Greenhous gas emissions</div></div></div>	<div><div><div>Class A</div><div>Rated Class A at the Symbiotic Cooperation Program in Safety and Health for 5 year in a row</div></div></div>	<div><div><div>Benefit sharing system</div><div>Expanded to include second-tier suppliers</div></div></div>
<div><div><div>Supplier carbon partnership system</div><div>Participated in the Creation of a Foundation for Energy Resource Circulation Project of the Ministry of Trade, Industry and Energy</div></div></div>	<div><div><div>Published a Human Rights Risk Prevention Manual and provided education on human rights</div></div></div>	<div><div><div>6 consecutive years</div><div>Agreed on collective bargaining agreements without dispute</div></div></div>

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

DOOSAN INFRACORE CO., LTD. AND SUBSIDIARIES

As of december 31, 2016 and 2015		(In Korean won)	
	December 31, 2016	December 31, 2015	
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	₩ 538,577,771,079	₩ 560,002,522,384	
Short-term financial instruments	148,025,668,394	381,899,640,621	
Short-term investment securities	3,030,992,836	440,994,129	
Trade and other receivables, less allowance for doubtful accounts	1,030,593,672,444	1,231,866,238,328	
Derivative assets	6,219,743,447	8,330,967,001	
Inventories	1,177,009,110,959	1,555,734,717,186	
Other current assets	146,113,591,597	137,746,050,506	
Total Current Assets	3,049,570,550,756	3,876,021,130,155	
NON-CURRENT ASSETS:			
Long-term financial instruments	2,011,500,000	57,352,345,687	
Long-term investment securities	148,120,965,082	97,862,349,930	
Long-term trade and other non-current receivables, less allowance for doubtful accounts	7,015,864,222	2,637,222,111	
Non-current derivative assets	-	158,889,290	
Investments in joint ventures and associates	29,030,018,221	1,253,566,504	
Property, plant and equipment, net	1,823,100,285,900	2,254,064,431,753	
Intangible assets, net	4,440,698,436,635	4,423,689,090,861	
Investment property, net	51,375,818,001	30,274,383,748	
Deferred income tax assets	365,928,831,884	512,528,822,533	
Other non-current assets	109,956,369,825	127,330,583,318	
Total Non-current Assets	6,977,238,089,770	7,507,151,685,735	
TOTAL ASSETS	10,026,808,640,526	11,383,172,815,890	
LIABILITIES AND EQUITY			
CURRENT LIABILITIES:			
Trade and other payables	1,041,875,892,086	1,063,584,860,464	
Short-term borrowings	952,163,757,440	1,256,764,551,718	
Current portion of bonds	764,734,004,459	809,000,378,306	
Current portion of long-term borrowings	540,098,382,122	319,795,461,873	
Income taxes payable	13,098,873,730	29,363,333,520	
Derivative liabilities	1,542,154,578	25,487,152,056	
Provisions	147,784,958,483	141,116,152,593	
Other current liabilities	191,895,701,579	316,043,588,801	
Total Current Liabilities	3,653,193,724,477	3,961,155,479,331	
NON-CURRENT LIABILITIES:			
Other non-current payables	1,253,774,857	5,829,000,498	
Bonds	714,649,461,884	1,115,328,426,402	
Long-term borrowings	1,451,538,091,287	2,520,852,010,753	
Retirement benefit obligation	510,101,486,646	554,544,988,746	
Deferred income tax liabilities	78,243,717,573	4,709,378,917	
Non-current provisions	25,167,184,042	20,141,775,364	
Other non-current liabilities	144,284,457,632	97,655,447,499	
Total Non-current Liabilities	2,925,238,173,921	4,319,061,028,179	
Total Liabilities	6,578,431,898,398	8,280,216,507,510	
EQUITY:			
Capital stock	1,037,276,570,000	1,037,276,570,000	
Capital surplus	249,488,144,851	245,301,050,451	
Capital securities	508,259,603,649	508,259,603,649	
Other equity items	(42,440,546,020)	(37,401,620,359)	
Accumulated other comprehensive loss	(270,371,100,895)	(207,670,131,707)	
Retained earnings	578,245,971,895	475,597,665,117	
Equity attributable to owners of the Parent	2,060,458,643,480	2,021,363,137,151	
Non-controlling interests	1,387,918,098,648	1,081,593,171,229	
Total Equity	3,448,376,742,128	3,102,956,308,380	
TOTAL LIABILITIES AND EQUITY	₩ 10,026,808,640,526	₩ 11,383,172,815,890	

CONSOLIDATED STATEMENTS OF INCOME

DOOSAN INFRACORE CO., LTD. AND SUBSIDIARIES

For the years ended december 31, 2016 and 2015		(In Korean won)	
	2016	2015	
SALES	₩ 5,729,550,204,080	₩ 5,964,894,252,082	
COST OF SALES	(4,404,458,833,345)	(4,747,330,597,428)	
GROSS PROFIT	1,325,091,370,735	1,217,563,654,654	
Selling and administrative expenses	(834,273,183,329)	(1,312,650,811,241)	
OPERATING INCOME (LOSS)	490,818,187,406	(95,087,156,587)	
Finance income	176,163,146,947	228,063,028,905	
Finance expense	(427,649,808,272)	(581,523,642,412)	
Other non-operating income	56,182,312,441	51,656,942,990	
Other non-operating expense	(213,312,054,726)	(346,186,010,646)	
Share of loss on joint ventures and associates	(151,702,916)	(37,976,950,860)	
LOSS BEFORE INCOME TAX EXPENSE (BENEFIT)	82,050,080,880	(781,053,788,610)	
INCOME TAX EXPENSE	(162,639,901,346)	(161,078,346,983)	
INCOME FROM CONTINUING OPERATIONS	(80,589,820,466)	(942,132,135,593)	
INCOME FROM DISCONTINUED OPERATIONS	196,574,676,248	82,626,934,146	
NET INCOME (LOSS)	₩ 115,984,855,782	₩ (859,505,201,447)	
Attributable to:			
Owners of the Parent	₩ 63,180,866,208	₩ (819,103,157,094)	
Non-controlling interests	₩ 52,803,989,574	₩ (40,402,044,353)	
EARNINGS (LOSS) PER SHARE:			
From continuing and discontinued operations			
Basic	₩ 214	₩ (4,037)	
Diluted	₩ 214	₩ (4,037)	
From continuing operations			
Basic	₩ (734)	₩ (4,435)	
Diluted	₩ (734)	₩ (4,435)	

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

DOOSAN INFRACORE CO., LTD. AND SUBSIDIARIES

For the years ended december 31, 2016 and 2015		(In Korean won)	
	2016	2015	
NET INCOME (LOSS)	₩ 115,984,855,782	₩ (859,505,201,447)	
OTHER COMPREHENSIVE INCOME (LOSS):			
Items not reclassified subsequently to profit or loss:			
Remeasurements of net defined benefit liabilities	1,076,069,895	24,546,108,446	
Revaluation of property, plant and equipment	(29,875,400,000)	64,093,137,674	
Items reclassified subsequently to profit or loss:			
Gain (loss) on valuation of available-for-sale financial assets	7,509,623,052	(64,590,463)	
Decrease in equity of associates	-	(1,357,603,433)	
Change in retained earnings of equity method investment securities	(54,238,168)	-	
Gain (loss) on foreign operations translation	28,106,613,754	(65,721,554,954)	
Gain (loss) on valuation of cash flow hedge derivatives	18,149,753,211	(4,836,294,196)	
Total other comprehensive incomes	24,912,421,744	16,659,203,074	
TOTAL COMPREHENSIVE INCOME (LOSS)	₩ 140,897,277,526	₩ (842,845,998,373)	
Owners of the Parent	₩ 46,187,327,828	₩ (758,289,528,030)	
Non-controlling interests	₩ 94,709,949,698	₩ (84,556,470,343)	

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

DOOSAN INFRACORE CO., LTD. AND SUBSIDIARIES

As of december 31, 2016 and 2015 (In Korean won)

	Capital stock	Capital surplus	Capital securities	Other equity items	Accumulated other comprehensive income (loss)	Retained earnings	Non-controlling interests	Total
Balance at January 1, 2015	₩ 1,037,276,570,000	₩ 240,200,109,681	₩ 508,259,603,649	₩ (31,315,390,978)	₩ (251,078,990,355)	₩ 1,295,796,676,795	₩ 489,149,680,389	₩ 3,288,288,259,181
Total comprehensive loss:								
Net loss	-	-	-	-	-	(819,103,157,094)	(40,402,044,353)	(859,505,201,447)
Remeasurements of net defined benefit liabilities	-	-	-	-	-	17,263,551,594	7,282,556,852	24,546,108,446
Revaluation and disposal of property, plant and equipment	-	-	-	-	62,942,852,084	141,218,822	1,009,066,768	64,093,137,674
Loss on valuation of available-for-sale financial assets	-	-	-	-	(64,590,463)	-	-	(64,590,463)
Increase in equity of associates	-	-	-	-	(1,357,603,433)	-	-	(1,357,603,433)
Loss on translation of foreign operations	-	-	-	-	(12,835,398,096)	-	(52,886,156,858)	(65,721,554,954)
Gain (loss) on valuation of derivatives	-	-	-	-	(5,276,401,444)	-	440,107,248	(4,836,294,196)
Subtotal	-	-	-	-	43,408,858,648	(801,698,386,678)	(84,556,470,343)	(842,845,998,373)
Capital transactions with shareholders:								
Extinguishment of share options	-	5,100,940,770	-	(5,100,940,770)	-	-	-	-
Share-based payment	-	-	-	427,603,345	-	-	-	427,603,345
Capital increase with consideration in subsidiaries	-	-	-	(635,082,842)	-	-	692,687,749,766	692,052,666,924
Dividends	-	-	-	-	-	(18,500,625,000)	-	(18,500,625,000)
Consideration in subsidiaries' dividends	-	-	-	-	-	-	(16,465,597,697)	(16,465,597,697)
Business transfer among consolidated entities	-	-	-	(777,809,114)	-	-	777,809,114	-
Subtotal	-	5,100,940,770	-	(6,086,229,381)	-	(18,500,625,000)	676,999,961,183	657,514,047,572
Balance at December 31, 2015	₩ 1,037,276,570,000	₩ 245,301,050,451	₩ 508,259,603,649	₩ (37,401,620,359)	₩ (207,670,131,707)	₩ 475,597,665,117	₩ 1,081,593,171,229	₩ 3,102,956,308,380
Balance at January 1, 2016	₩ 1,037,276,570,000	₩ 245,301,050,451	₩ 508,259,603,649	₩ (37,401,620,359)	₩ (207,670,131,707)	₩ 475,597,665,117	₩ 1,081,593,171,229	₩ 3,102,956,308,380
Total comprehensive loss:								
Net income	-	-	-	-	-	63,180,866,208	52,803,989,574	115,984,855,782
Remeasurements of net defined benefit liabilities	-	-	-	-	-	(344,604,900)	1,420,674,795	1,076,069,895
Revaluation and disposal of property, plant and equipment	-	-	-	-	(88,030,246,138)	58,154,846,138	-	(29,875,400,000)
Gain on valuation of available-for-sale financial assets	-	-	-	-	7,509,623,052	-	-	7,509,623,052
Change in retained earnings of equity method investment securities	-	-	-	-	-	(54,238,168)	-	(54,238,168)
Gain(loss) on translation of foreign operations	-	-	-	-	(11,646,759,548)	-	39,753,373,302	28,106,613,754
Gain on valuation of derivatives	-	-	-	-	17,417,841,184	-	731,912,027	18,149,753,211
Subtotal	-	-	-	-	(74,749,541,450)	120,936,869,278	94,709,949,698	140,897,277,526
Capital transactions with shareholders:								
Acquisition of treasury stock	-	-	-	(2,030,605)	-	-	-	(2,030,605)
Extinguishment of share options	-	4,187,094,400	-	(4,187,094,400)	-	-	-	-
Share-based payment	-	-	-	134,592,399	-	-	-	134,592,399
Dividends	-	-	-	-	-	(18,288,562,500)	-	(18,288,562,500)
Capital increase with consideration of subsidiaries	-	-	-	22,118,381,131	-	-	(23,277,026,187)	(1,158,645,056)
Acquisition of investment in subsidiaries	-	-	-	(4,521,363,632)	-	-	(120,501,975,875)	(125,023,339,507)
Disposal of investment in subsidiaries	-	-	-	(18,581,410,554)	12,048,572,262	-	355,393,979,783	348,861,141,491
Subtotal	-	4,187,094,400	-	(5,038,925,661)	12,048,572,262	(18,288,562,500)	211,614,977,721	204,523,156,222
Balance at December 31, 2016	₩ 1,037,276,570,000	₩ 249,488,144,851	₩ 508,259,603,649	₩ (42,440,546,020)	₩ (270,371,100,895)	₩ 578,245,971,895	₩ 1,387,918,098,648	₩ 3,448,376,742,128

CONSOLIDATED STATEMENT OF CASH FLOWS

DOOSAN INFRACORE CO., LTD. AND SUBSIDIARIES

For the years ended december 31, 2016 and 2015 (In Korean won)

	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES:		
Cash generated from operations:	₩ 789,358,064,082	₩ 537,606,913,703
Net income (loss)	115,984,855,782	(859,505,201,447)
Adjustments	653,349,944,296	1,196,995,297,739
Changes in operating assets and liabilities	20,023,264,004	200,116,817,411
Interest received	13,406,879,435	24,239,583,149
Interest paid	(227,942,883,719)	(284,772,938,769)
Dividends received	5,400,000	2,116,931,945
Income tax paid	(61,834,959,484)	(42,505,652,567)
Net Cash Provided by Operating Activities	512,992,500,314	236,684,837,461
CASH FLOWS FROM INVESTING ACTIVITIES:		
Cash inflows from investing activities		
Disposal of short-term financial instruments	179,351,302,468	157,047,303,659
Disposal of short-term investment securities	-	52,600,000,000
Decrease in loans	-	3,434,710,010
Disposal of long-term financial instruments	55,340,845,687	10,000,000
Disposal of property, plant and equipment	50,396,713,962	8,692,770,840
Disposal of intangible assets	1,305,963,518	-
Disposal of investment properties	-	-
Disposal of investment in joint ventures and associates	-	3,269,774,270
Disposal of interests in subsidiaries	-	126,667,468,493
Proceeds from transfer of operations	929,419,723,186	-
Subtotal	1,215,814,548,821	351,722,027,272
Cash outflows for investing activities:		
Acquisition of short-term investment securities	-	45,600,000,000
Increase in long-term financial assets	-	55,340,845,687
Acquisition of long-term investment securities	40,066,219,698	3,364,805,929
Acquisition of investment in joint ventures	27,936,825,000	1,108,000,000
Acquisition of property, plant and equipment	173,943,691,398	214,829,568,249
Acquisition of intangible assets	64,233,909,078	69,816,975,379
Acquisition of investment properties	-	3,659,709,610
Net cash flows in business combinations	-	54,940,467,860
Subtotal	(306,180,645,174)	(448,660,372,714)
Net Cash Provided by (Used in) Investing Activities	909,633,903,647	(96,938,345,442)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Cash inflows from financing activities:		
Increase in borrowings	-	206,066,008,395
Issuance of bonds	467,186,644,080	-
Capital increase by issuing new shares of subsidiaries	-	692,052,666,924
Change in equity of subsidiaries	242,528,119,780	-
Subtotal	709,714,763,860	898,118,675,319
Cash outflows for financing activities:		
Repayment of borrowings	1,096,762,547,569	706,064,126,138
Repayment of bonds	922,859,192,122	75,081,604,560
Dividends	18,288,562,500	18,500,625,000
Consideration in subsidiaries' dividends	-	16,465,597,697
Increase of subsidiary	1,158,645,055	-
Acquisition of subsidiary equity	125,023,339,507	-
Acquisition of treasury stock	2,030,605	-
Subtotal	(2,164,094,317,358)	(816,111,953,395)
Net Cash Provided by (Used in) Financing Activities	(1,454,379,553,498)	82,006,721,924
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	10,328,398,232	(24,703,459,016)
NET INCREASE(DECREASE) IN CASH AND CASH EQUIVALENTS	(21,424,751,305)	197,049,754,927
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF YEAR	560,002,522,384	362,952,767,457
CASH AND CASH EQUIVALENTS AT THE END OF YEAR	₩ 538,577,771,079	₩ 560,002,522,384

CSR FACTS & FIGURES

Disclaimer Data on the worksites in China began being included in 2016, when the CSR rollout to overseas worksites was conducted.

Economic

Economic Growth: Sales Records					
Classification	Unit	2014	2015	2016	
Consolidated	Sales	KRW million	6,366,107	5,964,894	5,729,550
	Operating income	KRW million	252,414	(95,087)	490,818
	Net income (loss)	KRW million	23,972	(859,505)	115,985
Separate	Sales	KRW million	3,035,245	2,387,024	2,204,890
	Operating income	KRW million	(87,184)	(263,677)	45,924
	Net income (loss)	KRW million	47,005	(719,193)	(56,312)

* As the business transfer of Machine Tools Business Group (BG) was completed on April 29, 2016, relevant profits and losses are categorized into profits and losses from discontinued operations

Financial Soundness: Financial Status					
Classification	Unit	2014	2015	2016	
Consolidated	Total assets	KRW million	11,957,427	11,383,173	10,026,809
	Total liabilities	KRW million	8,669,139	8,280,217	6,578,432
	Total equity	KRW million	3,288,288	3,102,956	3,448,377
Separate	Total assets	KRW million	7,209,203	5,979,890	4,846,201
	Total liabilities	KRW million	4,643,677	4,092,486	3,042,101
	Total equity	KRW million	2,565,526	1,887,404	1,804,100

Research & Development					
Classification	Unit	2014	2015	2016	
R&D investment	KRW million	164,495	151,017	97,552	
R&D investment per sales	Korea %	4.9	4.3	4.4	

* Based on separate financial statements
** As the business transfer of Machine Tools BG was completed on April 29, 2016, R&D investment of the BG is excluded

Intellectual properties	Application	Global	Case	3,192	3,137	3,193
	Registration		Case	1,323	1,430	1,936

* Number of intellectual property rights applications and registration made at home and abroad

Transparent Management

Corporate Governance					
Classification	Unit	2014	2015	2016	
Participation rate of outside directors in BOD meetings	Korea %	85.0	86.8	82.5	

Ethical Management					
Classification	Unit	2014	2015	2016	
Ethical management trainings	Korea %	99.5	98.9	95.3	
	China %	-	-	100.0	

* Once a year per person

Collection rate of statement of interests form	%	100 .0	-	100.0	
--	---	--------	---	-------	--

* Not conducted in 2015
** No. of employees who submitted a signed copy of statement of interests form / No. of office worker who has a job title of part leader or higher from among employees in Korea and resident employees in China

Compliance					
Classification	Unit	2014	2015	2016	
Legal measures on unfair trade conduct	Case	0	0	0	
Fine levied due to a violation of laws or regulations	Korea Case	0	0	0	

Customers

Protection of Personal Information					
Classification	Unit	2014	2015	2016	
Violations of protection of customer's personal information	Korea Case	0	0	0	
	China Case	-	0	0	

Disclaimer With the completion of the business transfer of the Machine Tools BG in 2016, the Changwon Plant figures were excluded from the quantitative performance of 2014 to 2015, in order to ensure clear understanding of trends by year.

Environment

Environmental Expenses					
Classification	Unit	2014	2015	2016	
Environmental investments and operating costs	Korea KRW billion	8.7	27.5	8.6	

Environmental Management System					
Classification	Unit	2014	2015	2016	
Worksites with ISO 14001 (EMS) certification	Korea Site	3	3	3	
	China Site	-	-	1	

* There is a difference from the disclosed data in the 2015 Integrated Report because data of the Changwon Plant is not included

Energy Usage					
Classification	Unit	2014	2015	2016	
Energy usage volume (Including direct and indirect usage)	Total	TJ	1,169	1,007	812
	LNG	TJ	300	242	200
	Electricity	TJ	728	610	490
	Diesel	TJ	128	145	114
	Others (LPG, kerosene, etc.)	TJ	13	10	8
	LNG	m³	-	-	855,611
	Electricity	kWh	-	-	9,992,440
	Diesel	ton	-	-	683

Resources Usage					
Classification	Unit	2014	2015	2016	
Fuel usage volume	Steel plate	ton	14,451	9,280	8,001
	Steel plate intensity	ton/KRW million	0.005	0.004	0.004
	Scrap metal	ton	39,518	29,053	17,438
	Scrap metal intensity	ton/KRW million	0.013	0.012	0.008
	Sand (molding sand) ¹⁾	ton	29,080	15,329	22,586
	Sand intensity	ton/KRW million	0.010	0.006	0.010

* Intensity is calculated based on sales of separate financial statements of each year
¹⁾ Molding sands are 100% recycled

Water usage	Korea	Water usage volume	ton	861,707	662,755	631,849
		Water usage intensity ¹⁾	ton/KRW million	0.284	0.278	0.287
		Recycled or reused water ²⁾	ton	800	70,284	83,365
	China	Water usage volume	ton	-	-	64,735

¹⁾ Intensity is calculated based on sales of separate financial statements of each year
²⁾ Figure of the Incheon Plant

Air Emissions					
Classification	Unit	2014	2015	2016	
Emissions of greenhouse gas (Including direct and indirect emissions)	Total ¹⁾	tonCO ₂ eq	128,342	110,190	87,413
	Scope 1	tonCO ₂ eq	35,269	30,954	23,707
	Scope 2	tonCO ₂ eq	93,073	79,237	63,708
	Intensity	tonCO ₂ eq/KRW million	0.031	0.033	0.029
Incheon	Total	tonCO ₂ eq	106,537	91,074	71,082
	Scope 1	tonCO ₂ eq	23,910	20,456	15,085
	Scope 2	tonCO ₂ eq	82,626	70,618	55,997
	Total	tonCO ₂ eq	18,134	15,710	13,668
Gunsan	Scope 1	tonCO ₂ eq	9,572	8,998	7,533
	Scope 2	tonCO ₂ eq	8,562	6,712	6,135
Others ²⁾	Total	tonCO ₂ eq	3,671	3,406	2,666
	Scope 1	tonCO ₂ eq	1,787	1,500	1,089
	Scope 2	tonCO ₂ eq	1,884	1,907	1,577

* gas emissions for 2014 and 2015 were recalculated due to changes in the conversion factor (1kwh=860kcal) based on the Enforcement Regulations of the Energy Act
¹⁾ Greenhouse gas emissions that are truncated per worksite are summed at the company level. For this reason, there is a difference between the sum of greenhouse gas emissions per worksite and total greenhouse gas emissions of worksites in Korea.
²⁾ As the sell-off of the Suji Technical Institute was completed on March 11, emissions of other worksites in 2014 and 2015 were recalculated

Emissions of air pollutants	Incheon	NOx ¹⁾	ppm	3.9	0.4	0.8
		SOx ²⁾	ppm	7.3	0.0	0.0
		VOCs (Continuous type/Non-continuous type) ³⁾	ppm	15.1/14.2	18.8/12.0	15.0/5.7
		Dust (Electric arc furnace/others) ⁴⁾	mg/m³	4.2/3.8	3.2/3.5	3.2/3.2
	Gunsan	NOx ⁵⁾	ppm	0.04	0.11	0.1
		SOx ⁶⁾	ppm	0.20	0.15	0.2
		VOCs ⁷⁾	ppm	4.02	4.83	4.8
		Dust ⁸⁾	mg/m³	2.11	1.80	2.4
	China	VOCs	mg/m³	-	-	12.43
		Dust	mg/m³	-	-	14.22

¹⁾ Legal limit: 200ppm, company's internal limit: 80ppm
²⁾ Legal limit: 400ppm, company's internal limit: 160ppm
³⁾ Continuous type: Legal limit: 40ppm, company's internal limit: 32ppm / Non-continuous type: Legal limit: 200ppm, company's internal limit: 160ppm
⁴⁾ Electric arc furnace: Legal limit: 20mg/m³, company's internal limit: 8mg/m³ / Others: Legal limit: 50mg/m³, company's internal limit: 20mg/m³
⁵⁾ Legal limit: 200ppm, company's internal limit: 80ppm
⁶⁾ Legal limit: 400ppm, company's internal limit: 160ppm
⁷⁾ Legal limit: 40ppm, company's internal limit: 32ppm
⁸⁾ Legal limit: 50mg/m³, company's internal limit: 20mg/m³

Classification			Unit	2014	2015	2016 ¹⁾
Emissions of ozone-depleting substances	Incheon	CFC, HCFC, CH ₃ Br, R-22	ppm	0	0	0
	Gunsan	CFC, HCFC, CH ₃ Br, R-22	ppm	0	0	0

* Zero emissions of ozone-depleting substances
¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, emissions of ozone-depleting substances of the Changwon site is excluded

CSR FACTS & FIGURES

Effluents and Waste						
Classification		Unit	2014	2015	2016	
Emissions of effluents	Korea	ton	79,793	63,140	67,544	
	Incheon	ton	71,732	56,180	60,139	
	Gunsan	ton	8,061	6,960	7,405	
	China	ton	-	-	61,498	
Emissions of water pollutants	BOD ³⁾	mg/L	2.9	4.0	6.2	
	COD ²⁾	mg/L	13.9	20.8	14.8	
	Suspended solids ³⁾	mg/L	1.3	2.4	3.8	
	BOD ⁴⁾	mg/L	141	99	89.5	
	COD ⁵⁾	mg/L	132	102	104.6	
	Suspended solids ⁶⁾	mg/L	8	4	13.2	
	China	COD	mg/L	-	-	33

³⁾ Legal standard 120mg/L, company's internal standard 48mg/L
²⁾ Legal standard 130mg/L, company's internal standard 52mg/L
³⁾ Legal standard 120mg/L, company's internal standard 48mg/L
⁴⁾ Legal standard 400mg/L, company's internal standard 160mg/L
⁵⁾ Legal standard 400mg/L, company's internal standard 160mg/L
⁶⁾ Legal standard 200mg/L, company's internal standard 80mg/L

Waste discharge and recycle	Korea	Total weight of waste	ton	43,206	31,068	21,179
		Recycled volume	ton	40,685	29,479	19,571
		Recycling rate	%	94	95	92
	Incheon	General waste	ton	39,705	27,975	18,453
		Specified waste	ton	2,440	2,130	1,861
		Recycling rate	%	95	96	94
	Gunsan	General waste	ton	822	739	647
		Specified waste	ton	239	224	218
		Recycling rate	%	61	60	55
	China	Total weight of waste ¹⁾	ton	-	-	2,161.8
		Recycled volume ²⁾	ton	-	-	1,291.3
		Recycling rate	%	-	-	60

¹⁾ Hazardous and general waste
²⁾ Waste steel, waste wood

Safety

Occupational Safety and Health					
Classification		Unit	2014	2015	2016 ¹⁾
Occupational accident rate	Korea	%	0.56	0.22	0.37
	China	%	-	-	0.22

* Based on accidents requiring medical care covered by Industrial Accident Insurance
¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, occupational accident rate of the BG is excluded

Win-win Growth

Support for Suppliers						
Classification		Unit	2014	2015	2016 ¹⁾	
Financial support	Korea	Number of suppliers received financial support	Company	145	171	45
		Amount of financial support ²⁾	KRW 100 million	777.5	502.5	430.0
		Ratio of cash settlement cases	%	43.7	46.6	17.5
		Number of payments	Times	3 per month	1 per month	1 per month

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, financial support for suppliers of the BG is excluded
²⁾ Excluding indirect support

Technical development support	Korea	Support for developing technology	Case	59	66	59
		Support for protecting technology	Case	21	20	8

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, financial support for suppliers of the BG is excluded

Education support	Korea	Training courses	Course	29	49	17
		Staff at suppliers completed trainings	Person	722	1,380	204
	China	Training hours	Hour	-	-	18

* Fair Trade Commission standard 5 days=1 person (1 day=8 hours, Based on the application period of punctuality)
¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, Education support for suppliers of the BG is excluded

Competitiveness enhancement support	Korea	Number of operation days	man-day	124 persons	148 persons	179 persons
	China	Number of supports	man-day	-	-	156

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, competitiveness enhancement support for suppliers of the BG is excluded

Part development capacity enhancement support	Korea	Provision of casting molds to strengthen suppliers' capacity of developing parts	Company	488	122	104
			KRW billion	28.0	40.8	14.5

* Figures include multiple provision of casting molds to suppliers
¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, part development capacity enhancement support for suppliers of the BG is excluded

EHS support	Korea	Company	74	57	40
-------------	-------	---------	----	----	----

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, EHS support for suppliers of the BG is excluded

CP adoption support	Korea	Company	7	0	0
---------------------	-------	---------	---	---	---

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, CP adoption support for suppliers of the BG is excluded

Employees

Employment						
Classification		Unit	2014	2015	2016	
Number of employees	Korea	Person	5,740	4,191	2,550	
	China	Person	-	-	1,113	
	Global ²⁾	Person	14,518	11,086	3,919	
By job	Office	Person	3,407	2,312	1,388	
	Technical	Person	2,333	1,879	1,162	
By employment type	Non-regular ³⁾	Person	341	409	151	
	Ratio of non-regular ⁴⁾	%	5.7	9.8	5.9	
Diversity	Korea	Disabled ⁵⁾	Person	118	89	35
		National merit recipient ⁶⁾	Person	158	123	75
		Elderly ⁷⁾	Person	643	627	174
		Male	Person	5,266	3,963	2,394
		Female	Person	474	228	156
By job	Office	Person	-	-	570	
	Technical	Person	-	-	573	
By employment type	Non-regular	Person	-	-	17	
	China	Ratio of non-regular	%	-	-	1.53
Diversity		Disabled	Person	-	-	0
		Elderly	Person	-	-	4
		Male	Person	-	-	926
		Female	Person	-	-	170

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, number of employees of the BG is excluded
²⁾ Including current number of employees in Korea and China. Doosan Bobcat employees are excluded after the completion of the company's listing on the Korea Exchange on November 18, 2016
³⁾ Non-regular: consultants, advisory, and appointed outside personnel are excluded)
⁴⁾ Non-regular/Total staff*100
⁵⁾ Based on MY HR; national disabled classification (levels 1-6)
⁶⁾ Based on MY HR; national merit recipients (person with a merit no. or someone approved)
⁷⁾ Above the age of 55 (Based on total staff in Korea)

Classification		Unit	2014	2015	2016 ¹⁾
Annual employee turnover rate ²⁾	Korea	%	1.6	32.4	2.9
Turnover rate by age ³⁾	20s	%	2.2	21.0	1.7
	30s	%	2.7	25.0	5.0
	40s	%	0.9	27.6	1.9
	50 and above	%	0.4	57.0	0.0

* The calculation method was changed in 2016, and the previously reported figures were changed accordingly
¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, turnover rate of the BG is excluded
²⁾ Based on regular workers. Total number of turnovers in 2016 / Annual average number in Korea in 2016
³⁾ Based on regular workers. Total number of turnovers in 2016 by age / Annual average number in Korea in 2016 by age

Classification		Unit	2014	2015	2016 ¹⁾
Number of employees on parental leave	Male ²⁾	Person	197	225	94
	Female ³⁾	Person	37	18	10
Number of employees eligible for parental leave ⁴⁾	Male	Person	1,965	1,643	1,206
	Female	Person	154	63	43
Number of employees on childcare leave ⁵⁾	Male	Person	5	4	4
	Female	Person	25	23	12
Number of employees return to work after childcare leave ⁶⁾	Male	Person	3	6	3
	Female	Person	19	33	14
Continue to work rate for 12 months after childcare leave ⁷⁾	Male	%	-	100	33
	Female	%	89	63	21
Number of employees on parental leave	Male	Person	-	-	95
	Female	Person	-	-	20
Return to work rate after parental leave	China	%	-	-	100

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, figures of the BG is excluded
²⁾ Employees who started their paternity leave in 2016
³⁾ Employees who started their maternity leave in 2016
⁴⁾ Employees with children under the age of 8 years old or second graders in elementary school
⁵⁾ Number of employees who began childcare leave in the base year
⁶⁾ Number of employees who returned from childcare leave in the base year
⁷⁾ Calculation condition: Continue to work rate for 12 months after childcare leave (Korea) = (Number of current employees in Year N, 12 months after the return) / (Number of employees who returned in Year N-1) * 100

CSR FACTS & FIGURES

Labor Union					
Classification	Unit		2014	2015	2016 ¹⁾
Union membership rate	Korea	%	81.9	80.2	71.2

* Technical staff (734 with membership out of 1,031 in total as of 2016)
¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, union membership of the BG is excluded

Education					
Classification	Unit		2014	2015	2016 ¹⁾
Average annual training hours per person	Korea	Hour	105.5	99.5	59.2
Average training expenses per person		KRW 1,000	1,622	1,210	710.48
Average annual training hours per person	China	Hour	-	-	14
Average training expenses per person		RMB	-	-	1,280

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, training hours and expenses of the BG are excluded

Education to prevent sexual harassment	Korea	Person	5,370	5,000	2,264
--	-------	--------	-------	-------	-------

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, education to prevent sexual harassment of the BG are excluded

Social Contributions

Social Contribution Activities					
Classification	Unit		2014	2015	2016 ¹⁾
Number of employees participated in CSR activities	Korea ²⁾	Person	1,819	1,141	332
	China	Person	-	-	242

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, number of employees participated in CSR activities of the BG is excluded

²⁾ The calculation method changed in 2016, and the data for 2014 and 2015 were changed accordingly

Hours of CSR activities	Hour	17,534	9,752	2,527
-------------------------	------	--------	-------	-------

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, hours of CSR activities of the BG are excluded

CSR investment	Korea	CSR investment ¹⁾	KRW billion	11.9	12.5	2.6
		CSR Investment per sales ²⁾	%	0.39	0.52	0.12
	China	Investment in social contributions	KRW 1,000 ³⁾	-	-	13,563

¹⁾ Used amount of donation

²⁾ CSR investment/Sales of each year based on separate financial statements

³⁾ RMB 1 = KRW 172.82

Employee participation rate in the Salary Fraction Donation campaign ²⁾	%	86	91	80
--	---	----	----	----

Annual fund raised by the Salary Fraction Donation campaign	KRW 1,000	203,965	169,478	78,321
---	-----------	---------	---------	--------

¹⁾ As the business transfer of Machine Tools BG was completed on April 29, 2016, amount of collected through and number of employees participated in the Salary Fraction Donation campaign are excluded

²⁾ Excluding staff sent to overseas worksites

INDEPENDENT AUDITORS' REPORT

English Translation of Independent Auditors' Report Originally Issued in Korean on March 23, 2017.

To the Shareholders and the Board of Directors of Doosan Infracore Co., Ltd.:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Doosan Infracore Co., Ltd. and subsidiaries (the ‘Company’), which comprise the consolidated statements of financial position as of December 31, 2016 and 2015, respectively, and the related consolidated statements of income, consolidated statements of comprehensive income, consolidated statements of changes in shareholders’ equity and consolidated statements of cash flows, all expressed in Korean won, for the years ended December 31, 2016 and 2015, respectively, and a summary of significant accounting policies and other explanatory information.

Management’s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards (‘K-IFRS’) and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors’ Responsibility

Our responsibility is to express an audit opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing (‘KSAs’). Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2016 and 2015, respectively, and its financial performance and its cash flows for the years ended December 31, 2016 and 2015, respectively, in accordance with K-IFRS.

March 23, 2017

Deloitte Anjin LLC

Notice to Readers This report is effective as of March 23, 2017, the auditors’ report date. Certain subsequent events or circumstances may have occurred between the auditors’ report date and the time the auditors’ report is read. Such events or circumstances could significantly affect the accompanying consolidated financial statements and may result in modification to the auditors’ report.

INDEPENDENT ASSURANCE REPORT

We were engaged by Doosan Infracore to provide limited assurance on the ‘2016 Doosan Infracore Integrated Report’ for the year ended December 31, 2016 (further ‘the Report’).

Context and Scope

Our engagement was designed to provide limited assurance on whether the Report is presented fairly, in all material respects, in accordance with the Sustainability Reporting Guidelines (G4) of the Global Reporting Initiative. We do not provide any assurance on the achievability of the objectives, targets and expectations of Doosan Infracore.

The scope of our engagement conforms to the KPMG Sustainability Assurance Manual™ (KSAM™), including the aspect of “materiality”. With regards to financial data, our procedures were limited to verifying that they were correctly derived from audited financial statements. To obtain a thorough understanding of Doosan Infracore’s financial results and position, the audited financial statements produced on 23 March 2017 should be referred to.

Responsibilities

As stated in the ‘Reporting Principles and Standard,’ Doosan Infracore is responsible for all content within the Report in respect of the GRI Sustainability Reporting Guidelines (G4). It is the responsibility of Doosan Infracore’s management to establish and maintain appropriate performance management and internal control systems from which the reported sustainability information is derived. Our responsibility is to perform a limited assurance engagement and to express a conclusion based on the work performed.

Independence

In conducting our engagement, we have complied with the requirements of the International Federation of Accountants (IFAC) *Code of Ethics for Professional Accountants*, issued by the International Ethics Standards Board for Accountants. We do not engage in any and all activities that may influence our independence from Doosan Infracore. KPMG has systems and processes in place to monitor compliance with the Code, and to prevent conflicts regarding independence.

Assurance Standards

We conducted our engagement based on the International Standard on Assurance Engagements (ISAE) 3000 *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board, and also AA1000AS. The standards require that we comply with applicable ethical requirements, including independence requirements, and that we plan and perform the engagement to obtain limited assurance about whether the Report is free from material misstatement.

Limitations

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement, and consequently does not enable us to obtain assurance on all significant matters that we may become aware of in a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance conclusion.

This report has been prepared solely for Doosan Infracore in accordance with the terms of our engagement. We do not accept or assume responsibility to anyone other than Doosan Infracore for our work, or for the conclusions we have reached in the assurance report.

Main Assurance Procedures

Our engagement was designed to provide limited assurance on whether the Report is presented fairly, in all material respects, in accordance with the reporting criteria. Procedures performed to obtain a limited level of assurance on a sustainability report consists of making inquiries, primarily of persons responsible for the preparation of information presented in the integrated report, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included the following:

- Confirmation on whether the financial information presented in the Report was correctly derived from Doosan Infracore’s audited financial statements
- Inquiries to gain an understanding of Doosan Infracore’s processes for determining the material issues for key stakeholder groups

- Interviews with relevant staff at corporate and business unit levels responsible for providing the information in the Report
- Visit to Doosan Infracore’s offices in Doosan Tower
- Comparing the information presented in the Report to determine whether it is in line with our overall knowledge of, and experience with, Doosan Infracore’s performance on corporate social responsibility

Opinion

- **Stakeholder Inclusiveness**
 - Doosan Infracore operates communication channels with key stakeholders such as shareholders/investors, customers/dealers, employees, suppliers, local communities (environment/NGOs), local/central government and media.
 - We are not aware of any key stakeholder group that has been excluded from dialogue in the Report.
- **Sustainability Context**
 - Doosan Infracore has established a process to incorporate CSR in management’s decision-making and the business management plans of relevant teams, thereby securing continuity.
 - We confirmed that Doosan Infracore recognizes general business management and social responsibility management comprehensively and applies such understanding within the Report.
- **Materiality**
 - Doosan Infracore conducts a materiality test in determining material issues.
 - We are not aware of any material aspects concerning its sustainability performance which have been excluded from the Report.
- **Completeness**
 - Doosan Infracore applies reporting scope, boundary and temporal criteria.
 - In terms of criteria mentioned above, we confirm that the Report is suitable for stakeholders to assess social responsibility performance.

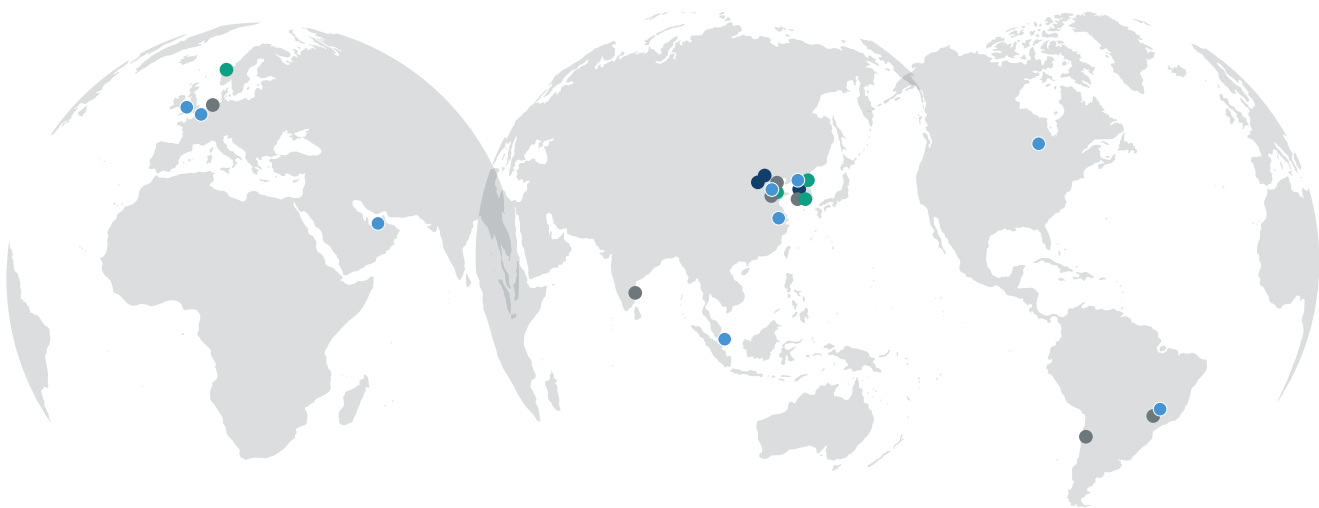
Based on the procedures performed, as described above, nothing has come to our attention to indicate that the Report is not presented fairly, in all material respects, in accordance with the reporting criteria.

June 2017
KPMG Samjong Accounting Corp.
CEO Kim, Kyo Tai



GLOBAL NETWORK

● Headquarters ● Production Subsidiaries ● Sales Subsidiaries ● Parts Distribution Center



Headquarters

Doosan Infracore Co., Ltd.
489, Injung-ro, Dong-gu, Incheon, Korea

Doosan Infracore (China)
Investment Co., Ltd.
19th Fl., Tower B., Gateway, No. 18,
Xiaguangli, North Road, East Third Ring,
Chaoyang District, Beijing 100027,
China

Doosan (China) Financial
Leasing Corp.
20th Fl., Tower B., Gateway, No. 18,
Xiaguangli, North Road, East Third Ring,
Chaoyang District, Beijing 100027,
China

Production Subsidiaries

Doosan Infracore Co., Ltd.
489, Injung-ro, Dong-gu, Incheon

Doosan Infracore Co., Ltd.
185, Dongjangsan-ro, Gunsan-si,
Jeollabuk-do

Doosan Infracore China Co., Ltd.
No. 28, Wuzhishan road, ECO & Tech.
Development Zone Yantai, Shandong,
China

Doosan Infracore Norway AS.
Varholvegen 149 N-6440 Elnesvågen,
Norway

Sales Subsidiaries

Seoul, Korea | Yantai, China |
Beijing, China | Chennai, India |
Americana, Brazil | Santiago, Chile |
Elnesvågen, Norway |
Groot-Ammers, Netherlands

Parts Distribution Center (PDC)

Ansan, Korea | Yantai, China |
Suzhou, China | Leipzig, Germany |
Dubai | Singapore | Americana, Brazil |
Chicago, U.S. | Cardiff, U.K.

UN Global Compact – 10 Principles

Human Rights
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2: make sure that they are not complicit in human rights abuses.

Labor Standards
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4: the elimination of all forms of forced and compulsory labour;
Principle 5: the effective abolition of child labour; and
Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment
Principle 7: Businesses should support a precautionary approach to environmental challenges;
Principle 8: undertake initiatives to promote greater environmental responsibility; and
Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Doosan Infracore supports UNGC – Ten Principles.



The paper used in printing the 2016 Doosan Infracore Integrated Report is certified as an environmental-friendly product by the Forest Stewardship Council®. In addition, the report was printed at a FSC-certified print shop using soy oil ink which drastically reduces the emissions of air pollutants.

Business Locations in Korea	
Seoul Office	Doosan Tower, 275, Jangchungdan-ro, Jung-gu, Seoul +82-2-3398-8114
Incheon Plant	489, Injung-ro, Dong-gu, Incheon +82-32-211-1114
Gunsan Plant	185, Dongjangsan-ro, Gunsan-si, Jeollabuk-do +82-63-447-3043
Ansan Parts Service Center	48, Yongdam-ro, Sangnok-gu, Ansan-si, Gyeonggi-do +82-31-400-2114
Date Published	June 2017
Publishing Team	CSR part, Communication, Doosan Infracore E-mail: csr.di@doosan.com
Planning and Design	Talantone Creative Group

