

Integrated Solutions for a Better Life



2015 Integrated Report of
Doosan Heavy Industries & Construction

About this Report

Characteristics of the Report

This report constitutes an integrated report (IR) prepared in accordance with the IR Framework of the International Integrated Reporting Council (IIRC). The report elaborates on Doosan Heavy Industries & Construction (hereinafter referred to as 'DHIC')'s management system that bases its business conduct and the process through which economic/social value is created from input resources in respective business areas. This report also provides an in-depth description of the key issues selected through the materiality analysis as a way to respond to stakeholder interest and requirements.

Reporting Standards

This report was created against the IR Framework and the Core Option of the GRI (Global Reporting Initiative) G4 Guidelines. The detailed application of the GRI G4 guidelines can be found in the GRI Index of the Appendix section.



2015 Integrated Report of DHIC

DHIC publishes its integrated report for the year 2015 to share information on its sustainable growth with stakeholders. We comply with the 10 principles of the UN Global Compact and the SGDs (Sustainable Development Goals) as well as other norms presented by the global community. Our commitment and endeavor to advance sustainable development is illustrated on the cover page through SDG icons and the images that represents DHIC.

Reporting Period and Scope

DHIC publishes its Integrated Report (IR) every year, and this report contains the Company's financial and non-financial performance from January 1st, 2015 to December 31st, 2015. This period is extended to the 1st half of 2016 for a portion of the report that may have grave impact on stakeholders' decision-making, and the reporting scope includes Changwon Plant, domestic and overseas project sites and overseas subsidiaries (DPS, DPSI, Doosan VINA). This report illustrates three-year quantitative data to help readers understand the trends of the Company's financial and non-financial performances, and any change in reporting scope, boundary and measurement methods from the previous reporting period is annotated.

Assurance

An external third-party assurance was performed of this report in accordance with the international assurance standard of ISAE 3000. The reliability of this report was further enhanced through the objective and independent third-party assurance engagement, and detailed assurance outcomes appear in the Assurance Statement of the Appendix section.

Additional Information

This report is published and distributed in Korean and English, and its PDF version is downloadable from DHIC's website (www.doosanheavy.com).



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CEO Message

Dear Esteemed Stakeholders,

I would like to thank you for the kind support and encouragement you have shown our company over the past year. It is always a great pleasure to greet you all through our annually issued Integrated Report. To achieve our goal of becoming the Global Leader in Power and Water, our company, DHIC, has constantly been undergoing change and innovation. We are also striving to faithfully fulfill our social responsibilities as a corporate citizen to ensure a sustainable livelihood for the future generation.

A continuous increase in order intake over the past three years has helped lay the foundation for another leap forward and achieve qualitative growth in CSR activities.

This past year has been a noteworthy year for DHIC as we were able to not only overcome the challenges of the global economic recession by successfully winning new large-scale projects in key markets such as India and Vietnam, but we were also able to venture into new markets like South Africa and Turkey. Furthermore, we also won some major contracts in the domestic Korean market, such as supplier contracts for key components of 1,000MW ultra-supercritical (USC) coal-fired power plants, including the Gangneung Anin USC Thermal Power Plant and Goseong Hai Thermal Power Plant, and were also able to successfully penetrate India's 1,000MW market. Such accomplishments ultimately helped us achieve an order intake of about 8.5 trillion won in 2015, marking 3 years of continuous growth for our company and laying a solid foundation for future success.

In addition, DHIC has been making great strides in demonstrating our commitment to corporate social responsibility. As a part of our CSR initiatives, which is now a main pillar in our company's business philosophy, we have been conducting employee training programs aimed at promoting human rights and have also set up a center to handle all reported grievances and started operating community platforms for minority groups. We also devised customized shared growth programs to help us build strong, virtuous relationships with our suppliers. Furthermore, a Business Ethics Bureau was set up as part of our efforts to establish a system that supports the voluntary practice of business ethics, and by reinforcing EHS (Environment, Health & Safety), our company was able to record the lowest accident rate among all Korean companies. We also established the Green Value Committee in order to effectively respond to the rapidly changing conditions of our environment, such as the new climate regime established through the Paris Climate Summit, and are seeking to take systematic action against climate change by through Green Business & Products, Green Operation and Green Partnership. In addition to the 'Doosan Day of Community Service' event, DHIC's flagship global CSR initiative, which sees participation from all DHIC employees, we have been pursuing a wide range of programs aimed at raising the future competitiveness of local communities. All such efforts were recognized following the inclusion of our company in the Dow Jones Sustainability Index (DJSI) for three consecutive years and selection of DHIC as one of the most respected companies among Korean corporations.

Our goal is to achieve sustainable business growth and become a CSR global leader for the good of the future society.

To keep the momentum going for greater order intake, DHIC plans to focus on strengthening our company's fundamental competitiveness and acquire new growth engines, while also refining our regional, market and product-based sales strategies. In addition, we will strive to increase order intake for each Business Group's strategic products, while also expanding our presence in key markets like Vietnam and India, as well as new markets such as Iran and the sub-Saharan African countries. With diverse energy sources, such as renewable energy, coming to the fore, we also plan to develop and expand into new markets, such as Energy Storage Systems (ESS) and Virtual Power Plants (VPP), as well as actively promote aftermarket business like Long Term Services (LTS), which will enable us to secure a stable foundation for new orders. With efforts for digital innovation picking up speed as part of our mid-to-long term plan, we are constantly exploring businesses where we can apply advanced information & communications technology, such as the Digital Factory and other applicable areas in the power and water sector. Given that we expect to see a growth in gas-fired power plants, we are also endeavoring to acquire new capabilities related to gas turbines and other relevant businesses.

Our company also plans to step up CSR efforts, to continue pushing beyond our past accomplishments. We plan to address, at a corporate-wide level, the various risks demanding global attention, such as climate change, and create a business ecosystem where growth can be shared with all our stakeholders, including the local communities and suppliers. Internally, we aim to cultivate a safe and clean work environment and by implementing the Smart Office initiative, we strive to cultivate our company into an ideal work place that supports the mutual growth of labor and management. Moreover, by carrying out CSR initiatives that reflect the regional characteristics and needs of our domestic/overseas construction sites and overseas subsidiaries, it is our goal to become a true global leader in the realm of CSR.

Through the Integrated Reports, we have sought to communicate to you our business accomplishments each year, and define what our goals are as we shape ourselves into a company that truly contributes to the society. I would like to assure you of our commitment to becoming 'the Global Leader in Power & Water,' as we move to continue with this practice of genuine communication, continuous innovation and sustainable growth.

We ask for your continuous support in helping us set a strong foundation for brighter future. Sincerely,

Chairman & CEO
Doosan Heavy Industries & Construction

Geewon Park

Introduction to Doosan Group

Group’s History and Vision

With its 120-year-old history, Doosan is recognized as the oldest company in Korea. Since its inception as the Korea’s 1st modern store named ‘Park Seung-Jik Store’ that opened in Baeogae (currently located in Jongno 4-ga, Seoul) back in 1896, Doosan has constantly sought change and growth. In 1946, the late CEO Park Doo-Byung renamed the store ‘Doosan Store’ and primarily offered beverages and alcohols. It was since the 1980’s that Doosan made remarkable strides on the basis of its capabilities built over the years.

Doosan tapped into overseas markets mainly in the beer, construction, electronics, machinery and trade sectors while broadening our presence in a range of related and new businesses, which resulted in a vertically/horizontally expanded business portfolio. Since 2000, we explored new growth engines to become a global leader and fully realigned our business: we actively struck M&A deals to maximize business synergies and shifted our focus from consumer goods to infrastructure support business (ISB). This was followed by the acquisition of large global companies that had a massive synergy potential - Babcock in the U.K., Skoda Power in the Czech Republic and Bobcat in the U.S. – as a way to strengthen our competitive edge and widen our global market presence. Today, we are recognized as a truly global company that operates in nearly 30 countries across the globe with more than 60% of our sales generated from overseas markets. We aim to become a ‘Proud Global Doosan’ based on our ‘trust in people’. We will always do our utmost for the betterment of the human kind to instill a sense of pride to everyone who takes this journey together with us at Doosan.

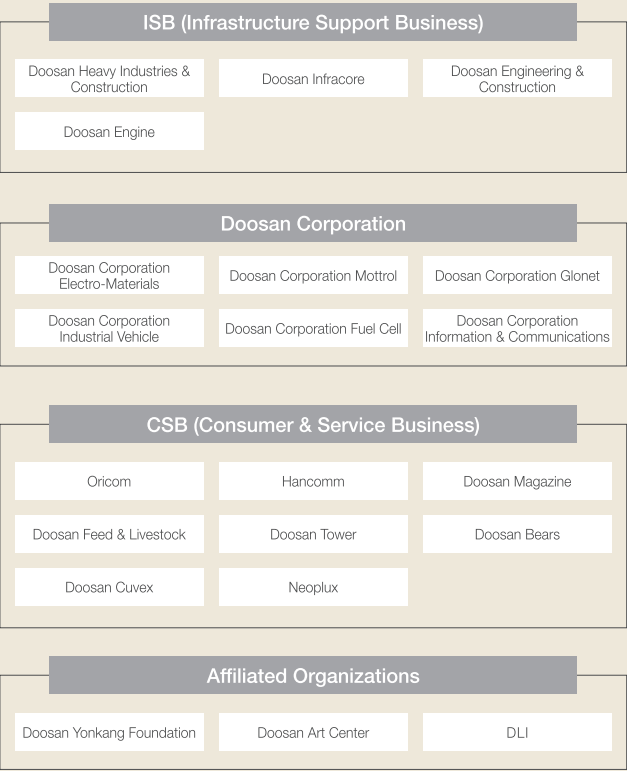
Doosan’s Vision

Our aim is to join the ranks of the global top 200 companies by 2020: to achieve this goal, we will value our talented individuals who are the very source of our global competitive edge while establishing business processes that comply with global standards.



Doosan’s Affiliates

We strive to bring a better life to people. Our presence is obvious in your everyday life—from infrastructure support that spans industrial facilities, machinery, equipment and construction to consumer goods.



Financial Achievements of Doosan Group in 2015

(Unit : KRW 100 million)



Doosan’s Philosophy

The Doosan Way represents our strong beliefs and philosophies to become a ‘Proud Global Doosan’.



Doosan Credo

The Doosan Credo is a set of stipulated principles representing Doosan’s business philosophies and unique way of doing business, which have served as the foundation of our success for the past century. The Doosan Credo contains nine core values that guide our decisions and the way we do business. Through the realization of these values, Doosan accomplishes its ultimate goal. The Doosan Credo consists of Doosan’s ‘Vision’ and ‘Core Values’.

Aspiration

Doosan’s ultimate goal is to create a ‘Proud Global Doosan’.

This means each of our employees and all of our stakeholders will benefit from, and be proud of their association with Doosan. In other words, employees will take great pride in being a member of Doosan and each customer will become a proud consumer of Doosan’s high-quality products and services. Every shareholder will become a proud shareholder of a company that generates high profits through fair and just business operations.

Core Values

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

It is practiced everywhere we operate our business 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.

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

Traits of Proud Doosan People



Limitless Aspiration



Cultivating People



Inhwa



Open Communication



Tenacity & Drive



Prioritization and Focus

Doosan Credo

Our Vision

We aspire to be a Proud Global Doosan - a leading innovator of products and services that improve the quality of life for people and communities around the world.

We will achieve this by living the Doosan Credo.

Guided by our Credo, we will drive our second 100 years of growth.

Core Values

Doosan's people are our greatest asset and the key to our future.

They are at the heart of all our achievements.

Our continued and distinguished success will only be possible through developing and cultivating our talent.

Our People possess great capacity, willingness and drive to contribute to the Company.

They are relentless in enhancing their skills and capabilities.

They embrace our Core Values and demonstrate these beliefs and principles in their daily behaviors.

Cultivating people is our highest priority and a shared responsibility.

Attracting and recruiting the right talent, who understand and embrace our values, will be the foundation for developing our people.

We believe people develop and grow through performance at work and we give them the authority and responsibility that best match their capabilities.

Through experience, people develop to their maximum potential.

Fair and immediate feedback and recognition are offered as we believe this is central to self-development.

Our People are given the opportunity to develop their strengths and address areas for improvement.

As a result, Doosan people are proud of who they are and respected as business professionals.

Integrity and transparency are fundamental Doosan strengths.

We make profit by creating value through fair and transparent activities.

We acknowledge our mistakes and keep our promises.

We never compromise our principles.

Inhwa best expresses who we are and provides us with a unique competitive edge.

We define Inhwa as teamwork in the truest sense of the word, grounded upon fairness and camaraderie.

By carefully following these virtues we have created One Doosan; a collective strength built on the contribution of a wide diversity of individuals.

Inhwa means we maximize our organizational strength and potential through true teamwork built on defined, transparent rules of fair play.

Selfish rivalries between individuals or departments have no place at Doosan and discrimination of any kind is not tolerated.

Inhwa means each individual contributes to the success of their colleagues and team, resulting in both excellent team and individual performances.

Inhwa also means we are open; Doosan welcomes proactive ideas and constructive criticism from everyone, regardless of seniority or position.

Our unique practice of Inhwa extends beyond the internal organization and embraces the entire Doosan community from our families to our shareholders, affiliates and partners.

Our customers are the reason Doosan exists.

The true measure of Doosan's success is our customers' satisfaction and respect.

Our goal is to always deliver superior value than our competitors.

We achieve this by understanding our customers' needs and meeting or exceeding their expectations.

Embracing world-class technology and innovation is vital to our survival.

Tomorrow drives today at Doosan; we always look to the future instead of the past.

We strive to understand, and stay ahead of, change.

We continuously seek to improve our business model, products, services and methods.

We celebrate and properly reward successful risk-taking, while also respecting valuable attempts that fail.

Doosan applauds the spirit of challenge over complacency.

Our future success will be driven by seeking breakthrough ideas, knowledge, technologies and resources regardless of their origin, either internal or external.

Profit measures our success and drives our growth.

Our profit must exceed our capital cost and be sufficient to fuel our continuous growth and investment.

Our People understand how the work they do contributes to Doosan's profit.

We recognize that long-term success is built by respecting the rights of our suppliers, distributors and partners to earn fair profits.

Creating a socially responsible enterprise is our duty to society.

We see business and society as a close partnership and an opportunity for mutual growth.

Doosan will be proactive in this partnership, contributing the time and resources required for success.

Our goal is to develop and grow alongside society, as a trusted and trustworthy partner.

Wherever we operate, we do so transparently and lawfully.

We aim to contribute to the development of talent in society.

Our community service activities promote both corporate and social development.

We provide clean and safe working environments.

Doosan maintains all our facilities to the highest possible standards.

This is the basis for superior productivity as well as being our responsibility to our people, their families, our customers and shareholders.

Environmental protection is our duty and obligation to every community where Doosan does business.

We know this ultimately results in greater value creation.

Performance and Planning of the Doosan Way

We at Doosan live by the Doosan Way that represents our corporate beliefs and philosophies so as to become a ‘Proud Global Doosan’. The Doosan Way drives our ambition to emerge as a company that brings an even more flourishing future. Through the Doosan Way, we enable our employees to discover the meaning of their life by themselves, focus on people in our business operations, and seek future-driven growth.



Highlights of the Doosan Way in 2015

First, we established Team Doosan as the way we do business

DHIC aims to incorporate the Team Doosan principle in the way we do business to strengthen our business competitive edge and to generate sustainable performances based on strong executorial capability. To this end, we promote teamwork-based collaboration, extend leaders' role and empower them, seek change from the process/system/organization (P/S/O) aspects for fundamental and sustained improvement, and continue to share best practices to embed this principle into our daily operations.

Going beyond the individual/organizational boundary towards team-based collaboration

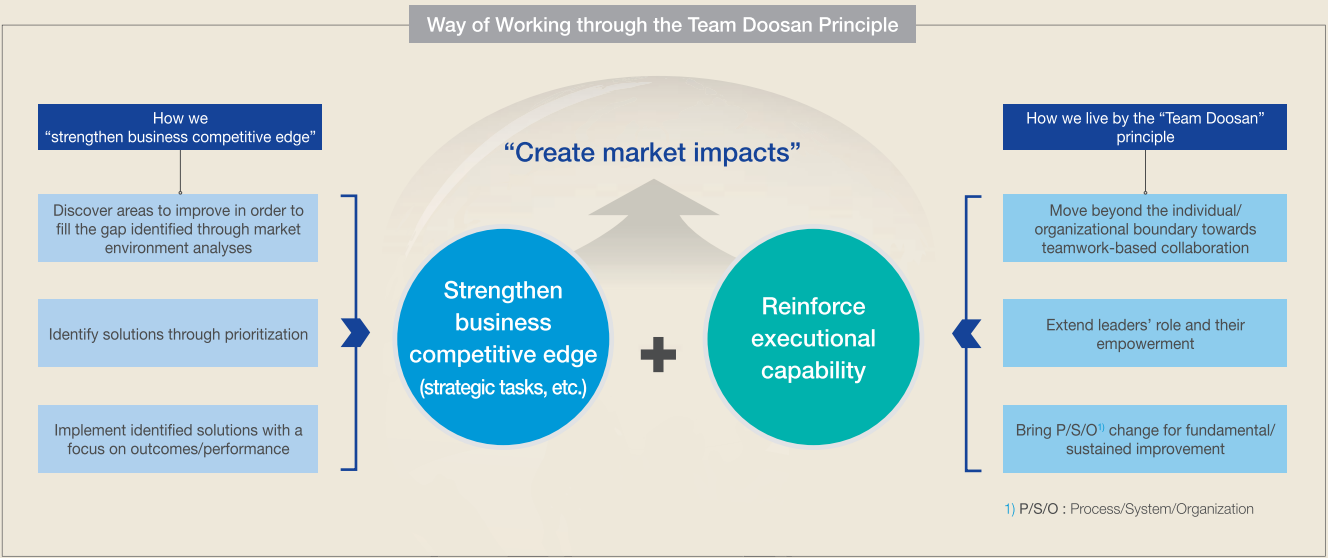
Since heavy industry operations usually involve large-scale projects, it is rather difficult to generate performances based on individual capability alone. The key to success of any project lies in operational collaboration or cooperation across teams, functions and business groups (BG). Thus, we prioritize operations that require cross-BG/functional collaboration so that BG leaders and executives take the leadership in selecting and executing relevant tasks.

Extending leaders’ role and their empowerment

Living by the Team Doosan principle requires that leaders assign clear goals and then encourage members to find their job and engage themselves in doing it on their own through consultation and communication. We continuously build a clearer awareness of leader roles so that our leaders adequately divide and distribute tasks and provide necessary resources while paying continued attention to removing any obstacles in the work process and offering appropriate feedback.

Changing from the P/S/O aspects for fundamental and sustained improvement

To continuously integrate Team Doosan outcomes into business conduct, we need to bring comprehensive and systemic changes to the way we work from the process/system/organization (P/S/O) aspects. Eliminating inefficiency and waste factors and reflecting such practice into the work process leads to improved operational efficiency, and this in turn lays the basis to effectively establish improvement initiatives through continuous change management.



Second, we conducted the Doosan Way survey on office workers

We conducted the Doosan Way survey on all our office workers in Korea and abroad for nearly two weeks from Jun. 1st to Jun. 12th of 2015. The response rate was 89%, with 8,284 employees out of the total 9,333 participating, and this demonstrated their keen interest in the survey. The aim of this survey was to gather direct feedback from employees on how much the Doosan Way is incorporated in their business conduct and reflect the outcomes in our future plans in practicing the Doosan Way. The survey results allowed us to identify initiatives in six areas that require company-wide solutions concerning core values whose positive response was relatively low, and our Doosan Way Council (DWC) was engaged in managing relevant process and outcomes. Regarding BG/divisions, we discovered nearly 40 initiatives by conducting root-cause analyses of survey results, and BG/division heads took ownership in independently undertaking these initiatives.

Third, we celebrated the the 3rd Doosan Way Day

On March 24th of 2015, we celebrated the 3rd Doosan Way Day with nearly 170 attendees including Doosan Group's top teams, the CEOs of respective affiliates/BG heads, and change agents(CA). They reviewed the change and accomplishments made over the past year, and discussed how they would practice the Doosan Way under the theme of Team Doosan. In the 1st part of the event, six teams nominated for the Doosan Way Awards shared their best practices, and the Grand Prize went to the best practice of 'entering the steam generator replacement business' from DHIC's Nuclear Power BG as a result of combining the outcomes of the spot poll and the preliminary vote conducted on the Doosan Way Week website. A total of six best practices were honored with Doosan Way awards. In the 2nd part of the event, Doosan Group's top teams, the CEOs of respective affiliates/BG heads and key leaders shared their awareness and understanding of the importance of Team Doosan and then engaged in group discussions on the role of leaders to advance the Team Doosan principle in a more advanced and scientific manner.



Doosan Way Leadership Sessions

2016 Doosan Way Implementation Plans

Our goal for 2016 is to improve the way we work and allow our employees to feel the change taking place at the workplace, promote communication to deepen employees' understanding/awareness on diverse corporate initiatives, and share and disseminate best practices across the board, in addition to integrating the Team Doosan principle in the way we do business.

Smart Office Initiative to Improve the Way of Work and Organizational Culture

We intend to launch more efficient work hour systems across the board including designated hours for concentrated work, the approval system for overtime work, and flexible work hours. To ensure that these new systems and policies are properly established in their initial introduction phase, we will strengthen company-wide communication on their purpose and intention while identifying and addressing obstacles to create a truly innovative Smart Office.

DHIC's Leadership Sessions

We will hold discussions to be attended by top teams and key executives to bring immediate solutions for any less advanced/scientific ways of working from the process/system/organization/culture aspects through executive-level decision-making. The prompt decisions made and implemented by the top management will allow us to undertake the Smart Office initiative and create an efficient workplace.

Doosan Way Awards for sharing and disseminating best practices

The best practice sharing events and awards previously hosted by respective divisions will be integrated into a larger company-wide event to deepen employees' understanding and awareness of a range of corporate initiatives and best practices. In doing so, we will disseminate these best practices to promote inter-organizational benchmarking and enhance awareness of corporate reward/recognition programs.

Doosan Way Awards

DHIC has been constantly living by the Doosan Way that embodies our corporate beliefs and philosophies to become a 'Proud Global Doosan'. As the core value behind each and every step that we take, the Doosan Way guides our endeavors to secure fundamental competitiveness and generate business performance through more advanced and scientific ways of working, which are in return invested into nurturing talented individuals. At the Doosan Way Awards hosted in May 2016 to recognize best practices of integrating Doosan Way values into business conduct, DHIC was honored with the Grand Prize in the core value and advancement/scientification sectors. We will further endeavor to disseminate our best practices in the upcoming years.



Doosan Way Awards Ceremony

Grand Prize In the core value sector



Overseas Legal Team, Management Division

Settled an insurance lawsuit on India's Kondapalli project

Recovering Insurance Benefits after 13 Years of Legal Battle

In June 1999, a barge was overturned while sailing inland waterways, taking down with it US\$ 16 million worth of equipment to be used for the Kondapalli project. The insurance company, however, refused to pay out, and we filed a lawsuit to receive insurance payout in an Indian district court in July 2002. Unfortunately, this legal journey was littered with numerous challenges and this only marked the beginning of a prolonged legal battle that lasted for a decade, including revising the complaint twice, change in the judge panel and court employees going on a strike.

We did not give up until the very end, however, sticking to our Doosan Credo of 'Doosan People' having the strong will to make anything possible. When our legal organization was restructured in 2013, our Overseas Legal Team put this insurance lawsuit as its top priority and took a more aggressive stance. As the statute of limitations expired and all the other issues emerged along the way to further complicate this already challenging lawsuit, we hired a local Indian lawyer and developed arguments persuasive in the Indian context. Soon, India become one of team members' most visited business trip destinations. They combed through exceptions and precedents that would work in favor of DHIC and even visited the project client in search of original documents.

As long time had passed since the project, it was never easy to find witnesses and evidence documents, but the team was able to collect documents after documents by talking to the employees who were directly involved in the project and by looking through a massive amount of information. The team conducted detailed analyses of precedents and compiled documents to finally get a clue to the solution.

Since the case was years old and the majority of the submitted documents were duplicates, this worked against the team in the initial negotiation phase. The team decided to contact Lanco, the client company that awarded the project order in the first place, and was able to obtain much-needed documents including the contract and the insurance policy while proactively responding to testimonies and hearings. In the midst of intense courtroom drama, the judging panel gradually leaned toward us.

Finally on December 31st last year, the insurance company agreed to pay us US\$ 13.5 million, or KRW 16 billion, putting an end to the 13-year insurance battle. This represents one of the most brilliant accomplishments achieved by Doosan: with entrepreneurship emphasized in "Profit" of the Doosan Credo, the team never gave up and explored all possible options to find the answer in pursuit of profits to be shared by all.

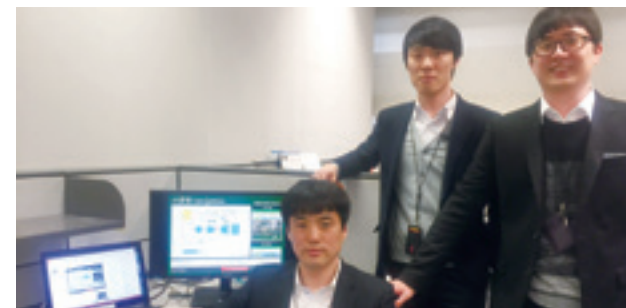


Grand Prize In the advancement/scientification sector

EPC BG



Reducing the overall commissioning time
through the development of commissioning navigation



Commissioning Navigation, the Innovator of Power Plant Commissioning

The Saemangeum power generation project was an unprecedented short-term delivery project (30 months) and a mere three-month time was allocated for its overall commissioning to complete the project in time. This presented the never-before-experienced challenge to our power plant's Commissioning Team. The solution the team found after much thought was to develop a commissioning navigation system. The team was confident that such guiding system that covers the overall commissioning process will reduce human errors and turn on-site experience into knowledge that could be then integrated into working-level employees' operations.

The three-month-long undertaking of the commissioning navigation task-force team was surely a massive, burdensome investment from the short-term perspective. The investment was inevitable, however, since a little delay in the process could cost much in late penalty and that overall commissioning had to be finished within the three-month timeframe. When completed, the navigation system rapidly enhanced the understanding and capability of our facility operators and dramatically reduced the average number of shutdowns from 64 to four, demonstrating the spirit of 'World-Class Technology and Innovation' of the Doosan Credo.

This enabled the Commissioning Team to complete overall commissioning within three months and bring the project to an end in time. In addition, our EPC BG set a new record in our corporate history by independently winning a commissioning project order. Winning this commissioning order for the Jeddah South project, which was being undertaken by our competitor, solidified our position in the global power plant market.

Faced with the daunting challenge of having to complete overall commissioning for the Saemangeum project within mere three months, our EPC BG and its team members made it work in the end through their commitment to ceaselessly build capacity so as to contribute to the organization as stipulated by 'People' of the Doosan Credo.

Excellence Prize In the advancement/scientification sector

Back Up Roll Processing Team, Forgings BG



Establishing an IPC-enabled facility
independence preservation system

Back Up Roll Processing Team Taking Charge of Autonomous Maintenance!

Since 2012, our Forging BG has striven to 'reduce cost to secure fundamental competitive edge' and to 'reduce loss time to zero' to cope with continuous price decreases and cost-to-sales ratio increases in backup rolls, one of its key products.

The team thoroughly examined nearly 2,000 improvement items and realized the importance of autonomous maintenance that involves shop floor workers in understanding and directly managing equipment. Through internal/external benchmarking, Back Up Roll Processing Team members defined the key components of autonomous maintenance and adopted them to the Industrial Personal Computer (IPC) widely used on the shop floor.

By truly living by what the Doosan Credo declares in 'Technology & Innovation' – Our scope of innovation is extensive: from products to services, work processes and even to our business models' -, the team created a new autonomous equipment maintenance system named 'Doosan Independence Preservation (D.I.P.)'.

First adopted on the shop floor of the Back Up Roll Processing Team in May 2015, D.I.P. was quickly expanded to the entire Casting & Forging BG. Its results were impressive.

D.I.P. helped reduce down time and low time by 52% and 25% respectively from 2014, and is receiving attention from the Nuclear BG, Turbine/Generator BG, and other BGs. If implemented company-wide, D.I.P. is expected to generate KRW 2 billion in annual cost savings.





Fujairah Power and Desalination Plant in UAE

1

Our Company

DHIC adopts an advanced management system to deliver products and services that enhance the value of planet earth so as to become a Proud Global Doosan trusted by its stakeholders.



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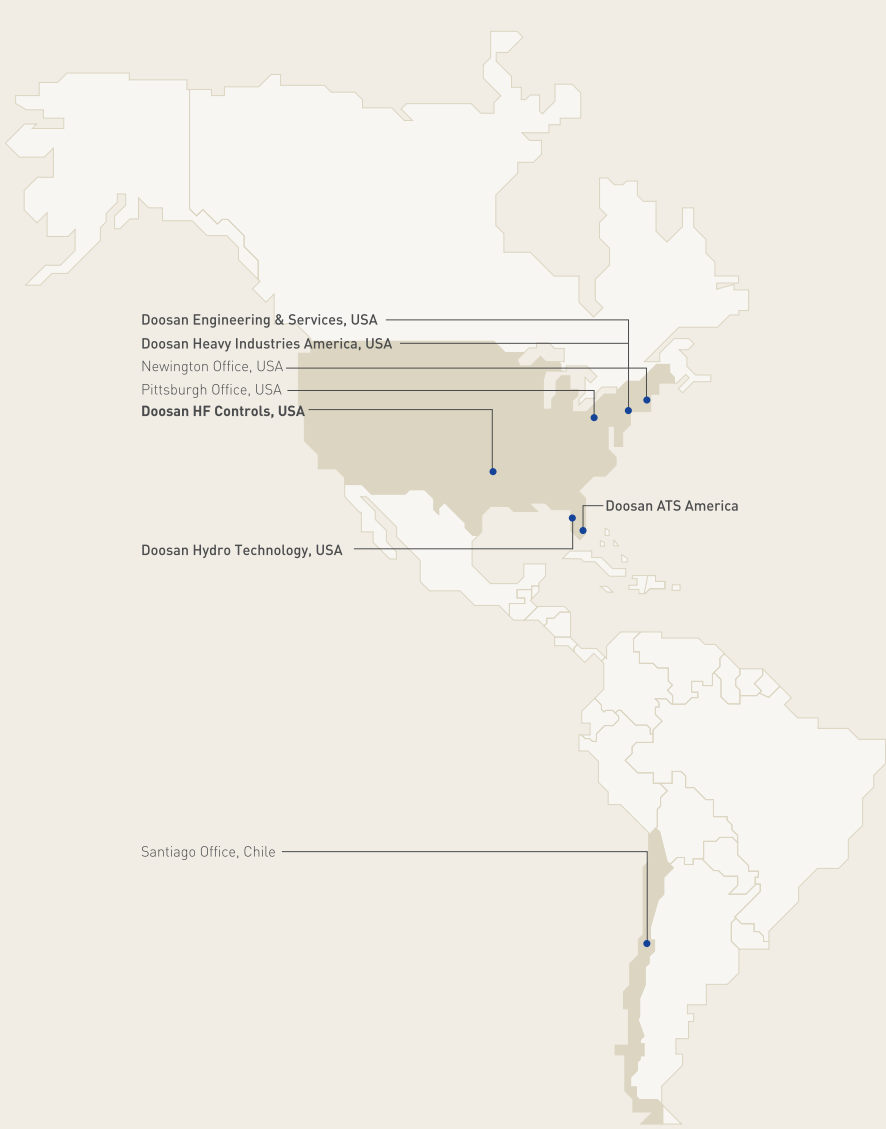
Company Profile

Corporate Introduction

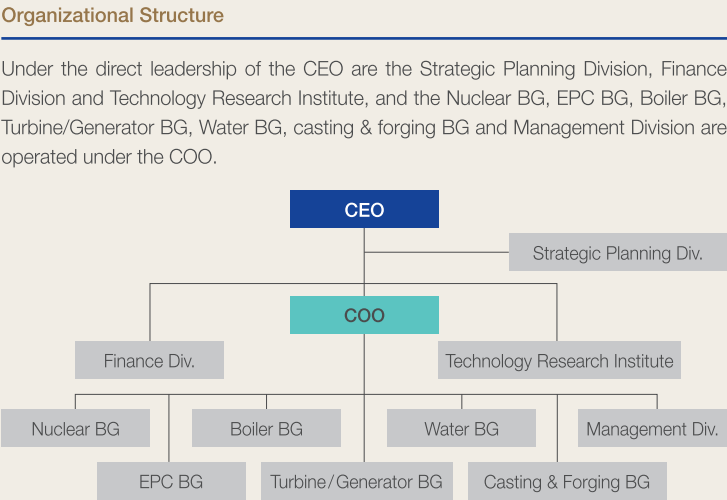
For the past five decades, DHIC has contributed to the national economy by developing domestic technology for generation, desalination, casting, forging and other industrial plants while exporting such technology. Building on the technological capability and knowledge accumulated over the years, we are making great strides in the overseas generation and desalination market with our top-notch capability to deliver turn-key solutions that cover the entire process from design to commissioning. We will emerge as a truly global company that enhances the value of planet earth on the basis of our unrivaled quality and technology.

Global Network

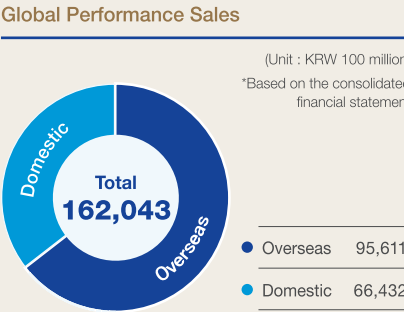
We are operating in Europe, Asia, the Americas, the Middle East, Africa and other regions of the world, and are continuously broadening our overseas network to become a 'Global Leader in Power & Water'. Our manufacturing, sales and R&D operations span 17 overseas subsidiaries and 26 branches & offices. We are currently building a global production network that covers Doosan VINA in Vietnam and DPSI in India.



Company Overview	
(As of December 31 st , 2015)	
Company Name	Doosan Heavy Industries & Construction
CEO	Geewon Park, Jitaik Chung
Data of Establishment	September 20 th , 1962
Type of Business	Other machinery and equipment manufacturing
Production Items	Power generation facility, desalination/ water treatment, industrial facility, etc.
Head Office	22 DoosanVolvo-ro, Seongsan-Gu, Changwon, Gyeongsangnamdo, Korea
Employees	7,909 persons



Under the direct leadership of the CEO are the Strategic Planning Division, Finance Division and Technology Research Institute, and the Nuclear BG, EPC BG, Boiler BG, Turbine/Generator BG, Water BG, casting & forging BG and Management Division are operated under the COO.



America	
Chile	Santiago Office
USA	Doosan Heavy Industries America
	Doosan Hydro Technology
	Doosan Engineering & Service
	Doosan HF Controls
	Pittsburgh Office
	Newington Office
	Doosan ATS America


Asia			
Korea	Head Office & Changwon Plant/Technology Research Institute		Taiwan
	Seoul Office		Taipei Office
			Shanghai Office
Vietnam	Doosan VINA		China
	Hanoi Office		Beijing Office
	DCS VINA		
India	Vietnam Operation Center		Indonesia
	Doosan Power Systems India		Jakarta Office
	New Delhi Office		Japan
	Mumbai Office		Doosan Heavy Industries Japan
	Kolkata Office		Philippines
Chennai Office/Shop		Manila Office	Thailand
		Bangkok Office	

Europe	
U.K.	Doosan Power Systems
	Doosan Babcock/Boiler R&D Center
	Doosan Enpure
Czech Republic	Doosan Skoda Power/Turbine R&D Center
Germany	Doosan Lentjes
	Frankfurt Office
Romania	Doosan IMGB


Middle East & Africa	
UAE	Dubai Office
	Water Dubai Office
	Abu Dhabi Office
	Middle East Operation Center
Saudi Arabia	Doosan Power Systems Arabia
	Water Riyadh Office
	Riyadh Office
Egypt	Dammam Water R&D Center
	Cairo Office
Kuwait	Water Kuwait Office
South Africa	Johannesburg Office

Business Model


Top 6 Assets




Financial
Cash (equity, liabilities) that can be used for product manufacturing




Manufactured
Tangible assets needed for product manufacturing (building, equipment, etc.)




Intellectual
Intangible assets including patents, know-how, etc.



Human
Employees' competency, experience, engagement, etc.



Social
Relationship with stakeholders, including local communities, etc.



Natural
Natural environment, resources, ecosystem, etc.

Value Chain




Business Model & Top 6 Assets

DHIC's outstanding portfolio of power plant and desalination equipment & plant technology and facility spans from design and component manufacturing to installation and maintenance. In addition to our business model, our planning, investment and support operations drive our commitment to sustainable management to increase economic, social and environmental value and fulfill our corporate social responsibility.

Management Approach and Performance on Top 6 Assets


Financial

To us, financial management (cash flow and others) is absolutely critical since the monetary value of respective projects is high and our industry demands a relatively longer period between order intake and delivery. Thus, we secure and operate financial assets via thorough risk management (market, credit and exchange rates).

 See page 17, 91-95, 114-122


Manufactured

Concerning tangible assets used for product manufacturing, management and improvement for productivity gains are essential in addition to new investments. We are constantly moving ahead of the global competition with our optimized production infrastructure.

 See page 49-55


Intellectual

Increasingly intensifying competition in this industry further highlights the importance of intellectual property. As such, we pay keen attention in managing our patents and licenses.

 See page 42-44, 51


Human

Talented employees form the greatest asset that we have to achieve our vision. DHIC has striven to develop human resources based on our talent-oriented corporate philosophy, and is committed to maximizing the value of human resources through the Doosan Way.

 See page 68-72


Social

Corporate social responsibility goes beyond merely having an indirect impact on society and further includes directly contributing to social development. We are extending the scope of our social responsibility by supporting the less-privileged and offering localized programs, in addition to nurturing talented individuals.

 See page 77-78, 79-83, 93

Natural

DHIC endeavors to more efficiently use limited resources to sustain human life, and minimize our environmental footprint in our manufacturing and business conduct process so as to enhance the value of planet earth.

 See page 59-65, 93

Introduction of Business

Power Plant

Thermal Power Plant

We offer turn-key solutions from design of the thermal power plants to manufacturing, construction, and test of such power equipment as boilers, turbines, and generators. In 2015, we continuously won orders to supply eco-friendly and highly efficient key equipment for 1,000MW thermal power plants in the domestic market, including the Anin plant in Gangneung and the Hai plant in Goseong. We also continuously won orders for such large-scale projects as the Song Hau 1 and Vinh Tan 4 extension projects while successfully completing the Rabigh 2 (Saudi Arabia), Mong Duong 2 (Vietnam) and Saemangeum industrial complex (Korea) projects, which demonstrated the top-notch quality of our thermal power plants.

Combined Cycle Power Plant

We provide gas turbines, steam turbines and other power generation equipment to be installed in combined cycle and cogeneration power plants. We own proprietary steam turbine technology, and are currently developing proprietary gas turbine technology on the basis of our independent manufacturing capability. Our recent business performances include: winning orders to supply key equipment for combined cycle combined cycle power plants in Seoul and Pocheon as well as cogeneration plants in Yangju and Sejong City, and conducting large-scale combined cycle power plant projects including the Jebel Ali M plant in Dubai and the Qurayyah plant in Saudi Arabia.

Nuclear Power Plant

Our strong capabilities have enabled us to supply Nuclear Steam Supply System (NSSS) and provide a whole range of services from the design to commissioning. We have successfully undertaken nuclear power plant projects in Korea and overseas to expand our market share in the global nuclear power plant market. In 2015, we shipped the 30th nuclear reactor and the 100th steam generator while successfully delivering our first nuclear instrumentation and control Man-Machine Interface System (MMIS), thus solidifying our position as a leading company in manufacturing core nuclear power plant equipment and delivering relevant services.

Renewable Energy

As a technology leader in renewable energy, we successfully developed WinDS3000™, Korea's 1st 3MW offshore wind power system and won orders for the 30MW Tamla offshore wind power project (Korea's 1st offshore wind power generation project), and the 24MW No. 2 wind power complex project in Yeongheung. In 2015, we were also chosen to supply equipment for the 60MW phase 1 wind power demonstration project in the Southwestern sea, which enabled us to post the largest-ever order intake in the domestic wind power generation industry with total capacity of 204MW. Our wind power generation business will further speed up the pace of advancement into Southeast Asia and other overseas markets, and will focus on the development and commercialization of CO₂ capture and storage technology in line with intensifying GHG emission and other environmental regulations.



Water Plant

As a world-leading water business company, we deliver solutions in the entire spectrum of the global water business from desalination to water treatment. Our cutting-edge technology and years of experience in providing desalination plants make us one of the few leaders that obtain proprietary technology in all of the three key desalination processes of Reverse Osmosis (RO), Multi-Effect Distillation (MED), and Multi-Stage Flash (MSF). Since our 1st undertaking of a turnkey project in 1989, we have successfully undertaken a series of the world's largest projects that required advanced technological capability within the shortest time period, which earned us a world-renowned reputation as a EPC (Engineering, Procurement & Construction) contractor in the desalination industry. In addition, we developed our own sophisticated treatment technology portfolio based on our engineering capacity and experience in the entire water treatment industry and are providing customized re-use facilities to cater to such diverse needs as river management, landscaping, agriculture and industrial water through our British subsidiary Doosan Enpure, that specializes in water/sewage treatment and sludge treatment and sludge-to-energy conversion, and our U.S. subsidiary Doosan Hydro Technology that possesses membrane filtration technology. Building on our proven track records and experiences in delivering numerous desalination and water treatment plants in Korea and abroad, we provide integrated water solutions in diverse business models from turnkey and private sector partnership to operation & maintenance.

Casting & Forging

Our globally-competitive casting & forging facilities and related manufacturing technology are the result of sustained new product development and quality improvement. Our integrated production system spans from the production of key materials to processing these materials for such key infrastructure industries as power plants, shipbuilding, wind power, chemicals and mining products. Our unmatched technology helps us export across the globe from China and Japan to Germany and the U.S. Furthermore, we are now capable of independently developing and supplying a wide range of casting & forging products which have been largely dependent on imports in the past. In doing so, we significantly assist related domestic industries by pursuing the localization of material manufacturing and enhancing their competitive edge in the export market.

Governance

Composition and Operation of the Board of Directors

Our Board of Directors (BOD) consists of six directors: two executive directors and four outside directors. The BOD is responsible for deliberating and deciding on such key issues as business plans, mid/long-term business plans, the disposal of or acquisition of major assets, and the issuance and subscription of bonds. In 2015, the BOD met nine times to discuss 22 agenda details, including the approval of mid-term business plans and the approval of signing an agreement for establishing the Doosan R&D Complex. Our BOD makes optimal decisions and responds to the rapidly-changing business environment based on its expertise in respective fields.

Composition of the BOD (As of December 31st, 2015)

Position	Name	Responsibility/Work Experience
Executive director	Geewon Park	(Present) CEO and Chairman of DHIC (Present) CEO (Chairman of the BOD)
	Jitaik Chung	(Present) Vice Chairman of DHIC (Present) COO
Outside director	Kyungsoon Song	(Present) Representative at Korea Expert Consulting Group
	Dongmin Cha	(Present) Lawyer at Kim & Chang Law Firm
	Bokhyeon Baik	(Present) Associate Professor of Business School at Seoul National University
	Dongsoo Kim	(Present) Chair professor at Korea University (Present) President of the Korea University Institute for Future Growth

Operation of the BOD

Category	Unit	2013	2014	2015
Number of meetings held	No. of meetings	13	10	9
Attendance of outside directors	%	94.2	100.0	92.6

BOD activities

BOD meeting	Agenda details
1 st	Approval of the 52 nd financial statement and business report and others
2 nd	Approval of convening a regular general shareholder meeting and other presented agenda details
3 rd	Approval of the 2015 and mid-term business plans and others
4 th	Reporting of the Q1 business performances for 2015
5 th	Appointment of executives
6 th	Approval of signing an agreement to establish the Doosan R&D Complex and others
7 th	Approval of the subcontract between DHI and Doosan VINA and others
8 th	Approval of the parent company's providing guarantee to India's DPSI and others
9 th	Approval of transactions between directors and the company and others

Future Operation of the BOD

In order to improve corporate governance, we are realigning the operation of our BOD in the five aspects of leadership, effectiveness, accountability, stakeholder relationships and compensation.



Leadership & Accountability

To facilitate mutual checks and balances between corporate executives and outside directors, we appoint four outside directors who account for 67% of the total BOD composition. Our outside directors are appointed through the following process: an advisory group recommends candidates (up to twice the number of outside directors to be appointed) to the Outside Director Recommendation Committee that consists of four outside directors, and the committee recommends candidates who are then finalized at the general shareholder meeting. In addition, directors who have special interest in specific agenda details are excluded from exercising their voting right to allow for balanced and objective decision-making.

Effectiveness

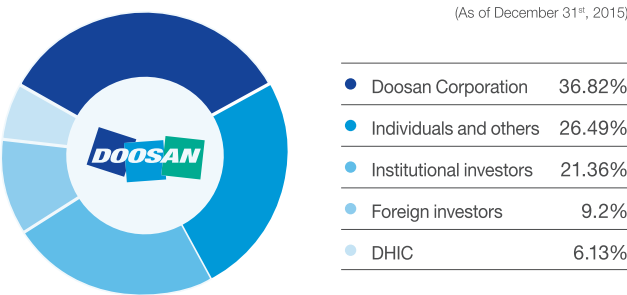
To ensure that our outside directors develop expertise in business conduct and understand our overall business operations, we provide corporate overview briefings, shop tours around the Head Office and Changwon Plant as well as field trips to our domestic or overseas sites when deemed necessary.

Remuneration

We disclose compensation data on individual executives including outside directors and the CEO through our business and audit reports. The scope of such disclosures is limited to outside directors, the CEO and other high-salaried executives whose compensation exceeds KRW 500 million.

Relationship with Shareholders

As of December 31st of 2015, DHIC issued a total of 119,361,796 shares (common shares: 106,158,256 shares, redeemable convertible preferred shares: 13,203,540 shares). Doosan Corporation as the majority shareholder owns about 37% of the total, and foreign investors and institutional investors have approximately 9% and 21% respectively.



Our minority shareholders account for nearly 26% of the total shares. We acknowledge their sole shareholder rights and minority shareholder rights as stipulated by the Korea Commercial Act and other relevant regulations as a way to protect their rights. Our annual general shareholder meetings serve to report our business operations, collect feedback from minority shareholders and protect the voting rights of these shareholders through the written ballot system. In addition, we provide a range of communication channels, including the corporate disclosure system and website, to disclose key information on our business conduct to guarantee our shareholders' right to know.

Rated A in Corporate Governance Evaluation for Four Consecutive Years

For the past four years in a row, DHIC has been rated A at the Environment, Society and Governance (ESG) evaluation annually performed by the Korea Corporate Governance Service (KCGS). We will continuously strive to build an even more transparent governance structure to enhance our reputation as a top performer in ESG evaluation.

BOD Committees

Audit Committee

Our Audit Committee is up and running in accordance with Article 542-11 of the Korean Commercial Act. It consists of three outside directors who are experts in legal affairs and business management. To ensure the independence of our Audit Committee, its members should not have any previous transaction records with the company nor any interests in relation to our majority shareholder. Audit Committee members may access necessary management information and request directors to report on business operations when deemed necessary.

Date of meeting	Agenda details
February 5 th , 2015	Report on settlement audit results for 2015
	Report on the operational status of the internal accounting management system and internal auditing for 2015
February 27 th , 2015	Preparation and signing of an operational status assessment report on the internal accounting management system for 2014 (52 nd -term)
	Preparation and signing of an opinion report on the operational status of the internal audit system for 2015 (52 nd -term)
	Preparation and signing of an audit report for 2014 (52 nd -term)
April 28 th , 2015	Report on Q1 settlement review outcomes for 2015
July 27 th , 2015	Report on the appointment of an accounting firm as a tax advisor
	Report on H1 settlement review outcomes for 2015
November 5 th , 2015	Report on Q3 settlement review outcomes for 2015

Internal Transaction Committee

Our Internal Transaction Committee is up and running in accordance with Article 11-2 of the Korea Fair Trade Act. The committee consists of four outside directors to ensure its independence, and is responsible for reviewing and approving large-scale internal transactions.

Date of meeting	Agenda details
February 5 th , 2015	Approval of making donations to the Chungang University Foundation

Outside Director Recommendation Committee

Our Outside Director Recommendation Committee aims to ensure fairness in nominating outside director candidates whose final appointment is made at the general shareholder meeting. The committee consists of four outside directors to ensure its independence from the management.

Date of meeting	Agenda details
February 27 th , 2015	Recommendation of outside director candidates

2015 Highlights



Laying the basis for a renewed take-off through increased order intake

In the face of the prolonged global economic downturn, our order intake made a positive turn-around and this helped us lay the basis for a renewed take-off. We were successfully awarded with a series of orders in the domestic core thermal power plant equipment market, including the 1,000MW Anin thermal power plant in Gangneung as well as the Song Hau 1 project in Vietnam, Shinkori unit 5 and 6 construction, and the construction of a collective energy facility in the Hwasung Dongtan 2 new city. Our proactive marketing initiatives to diversify target markets also paid off as demonstrated by the successful advancement into such new markets as Botswana and Turkey.

Generating Outcomes through Team Doosan

In 2015, our 'Team Doosan' spirit that translates individual strengths into a collective teamwork helped us perform even better. Our BGs, organizations and teams were engaged in regular exchanges and built a cooperation system, which disseminated our 'Team Doosan' culture across the board. Our aim is to build on this achievement to usher in a new chapter in our history to ensure the shared growth between individual employees and the company.



Accelerating Future Growth Engines

We were chosen as a main operator in the energy storate system (ESS) market which is recognized for its high growth potential, and initiated the commercialization of super-critical (SC) CO₂ waste heat recovery power generation through the signing of a technology agreement. We also recruited new hires for large-scale gas turbine development and established key infrastructure components in order to accelerate our endeavors to independently develop gas turbine technology while initiating the development of new turbine materials for hyper super critical (HSC) power plants that constitute the next-generation thermal power generation system. Furthermore, our success in undertaking the 'ICT Ready project' that aimed to build in-house ICT infrastructure helped us produce tangible outcomes and disseminate change across the company.



Becoming an undoubted leader in the domestic 1,000MW thermal power generation market

Following the successful commissioning of the Shinboryeong thermal power plant project whose order was awarded to us back in 2013, we won a series of orders in the domestic 1,000MW core thermal power plant equipment market including the Anin plant in Gangneung, Shinseocheon plant, and Hai plant in Goseong. Our domestic track records were further strengthened as we were selected as the preferred bidder in supplying key component to the Samcheok coal-fired thermal power plant, which also laid the basis for us to tap into Southeast Asia and other global market segments.

Reaffirming our reputation as a leading nuclear power plant company

Since our inception, we succeeded in manufacturing and delivering the 30th nuclear reactor, 100th steam generator, and the 1st nuclear instrumentation and control man-machine interface system (MMIS) that was developed through domestic technology. We also significantly contributed to the completion of Shinwolsong unit 1 and 2 built as last such facilities in Korea that complied with the revised Optimized Power Reactor1000 standard (OPR1000, Korea's own nuclear power plant standard). Furthermore, we signed a range of agreements to pre-emptively respond to the highly-profitable decommissioning market and the spend fuel transportation/storage market.



Building competitive edge in IGCC and wind power

The successful ignition of the Taeon IGCC demonstration plant enabled us to become Korea's 1st to secure coal gasification technology, and the technology agreement we signed with Korean Western Power will allow us to identify follow-up unit projects and swiftly respond to technology development needs through the advancement of IGCC-based technology. In addition, we were awarded with an order for the phase I, 60MW offshore wind power demonstration project in the Southwest-ern sea, and initiated the Sangmyeong project in Jeju Island and the Tamla offshore wind power project (Korea's 1st commercial offshore wind farm) to strengthen our position as a leader in the wind power generation sector.

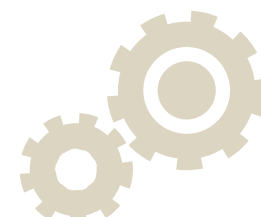
Solidifying our position in the water treatment market

Beginning with the waste wastewater facility supply agreement for the Karbala project in Iraq, we won a series of plant orders in Oman and the U.K. to extend our scope of business into the water treatment market. Specifically, our phase 1 desalination plant in Ras Al Khair, Saudi Arabia was honored with the Grand Prize in the desalination plant sector in 2015, which widely recognized our top-notch desalination plant construction capability.



Delivering customer value through the successful completion of overseas projects

In 2015, we successfully completed the construction of power plants across the globe to elevate our reputation as a global leader. Such accomplishments include the Mong Duong 2 project to build Vietnam's largest coal-fired thermal power plant, Raipur unit 1 in India, and Ain Sokhna unit 1 and 2 in Egypt. In addition to boasting our unrivaled technological capability in the world, we also successfully completed the network synchronization of Korea's Sae-mangeum collective energy facility unit 1 and 2.



Being a fast-mover in the super-large-scale casting & forging market

We seamlessly undertook the casting & forging project that aimed to independently manufacture the world's largest 17,000-ton free forging press and to expand our forging plant. We also delivered defect-free rotor quality to compete on an equal footing with advanced global competitors, and secured element technology to manufacture large highly-clean bearing steel used as high value-added materials. The successful production of the world's largest super critical crank shaft, that was 21 meters in length and 510 tons in weight, widely demonstrated our unrivaled technological capability.

Establishing a sustainability management system

In 2015, we established our sustainability management system for the upcoming years, and generated outcomes in diverse areas. We were listed on the 'Dow Jones Sustainability Index (DJSI)' for two years in a row, our overseas construction sites were free from any injury from the previous year, and our Korean construction sites were named top-performers in safety management for two consecutive years. We created the Green Value Committee in charge of green management as well as the Ethical Secretariat as a self-initiated ethics practice system. Company-wide human rights education was offered and the minority community was operated. Our labor and management concluded the dispute-free collective bargaining agreement for ten years in a row to solidify forward-looking labor relations, and our virtuous cycle partnership with suppliers was further reinforced. Most of all, 'Doosan Day of Community Service', a festival of warm-hearted sharing, was wholeheartedly welcomed by our local communities across the globe.





Phase 3 desalination plant in Shoaiba, Saudi Arabia

Our Vision & Materiality

2

We ensure a table supply of power and water that are much-needed daily essentials to improve the quality of life for people and achieve our vision of becoming a ‘Global Leader in Power & Water’.

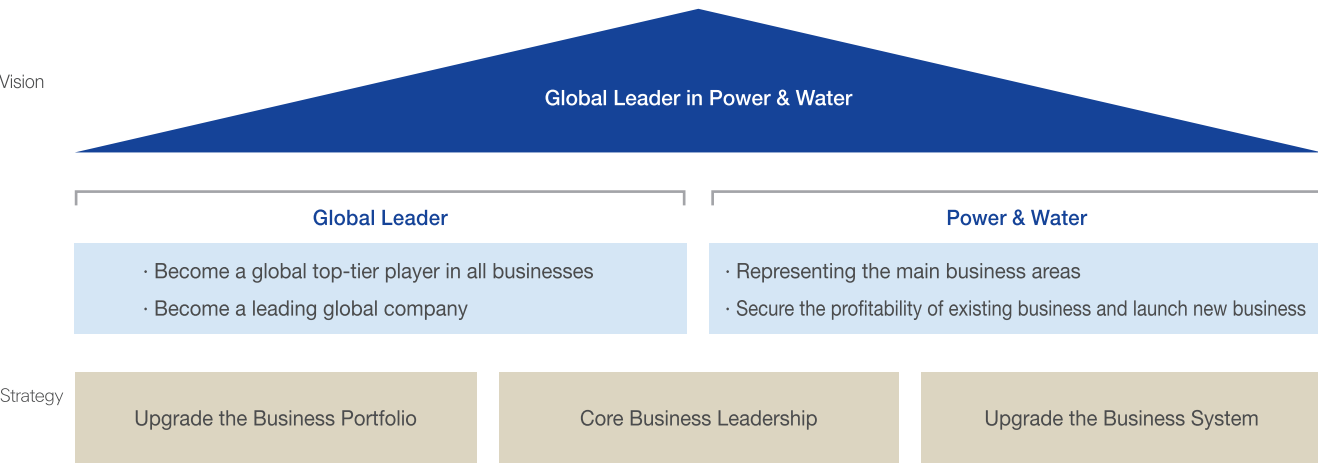


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Mission & Vision

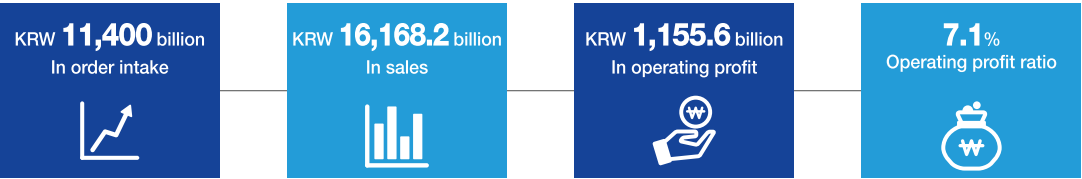
Vision and Management Strategy

Our vision to become a ‘Global Leader in Power & Water’ represents our commitment to leading the global power generation and desalination market. It is through the Doosan Way that values transparency, technology, talent and innovation that we build our status as a global leader in all possible aspects, from world-class technology, cost competitiveness and quality to sales and profitability, talent nurturing and corporate culture. Furthermore, we will serve as a trend setter in global technology, marketing and market change to emerge as an advanced global corporate citizen.



Management Goals and Strategic Tasks for 2016

While the prolonged low growth in the 3% range is expected to continue in the global economy by 2020, growth rate will differ by region with some emerging countries turning their economy around. Therefore, we will set up differentiated region/product-specific strategies to explore new markets and new growth engines.

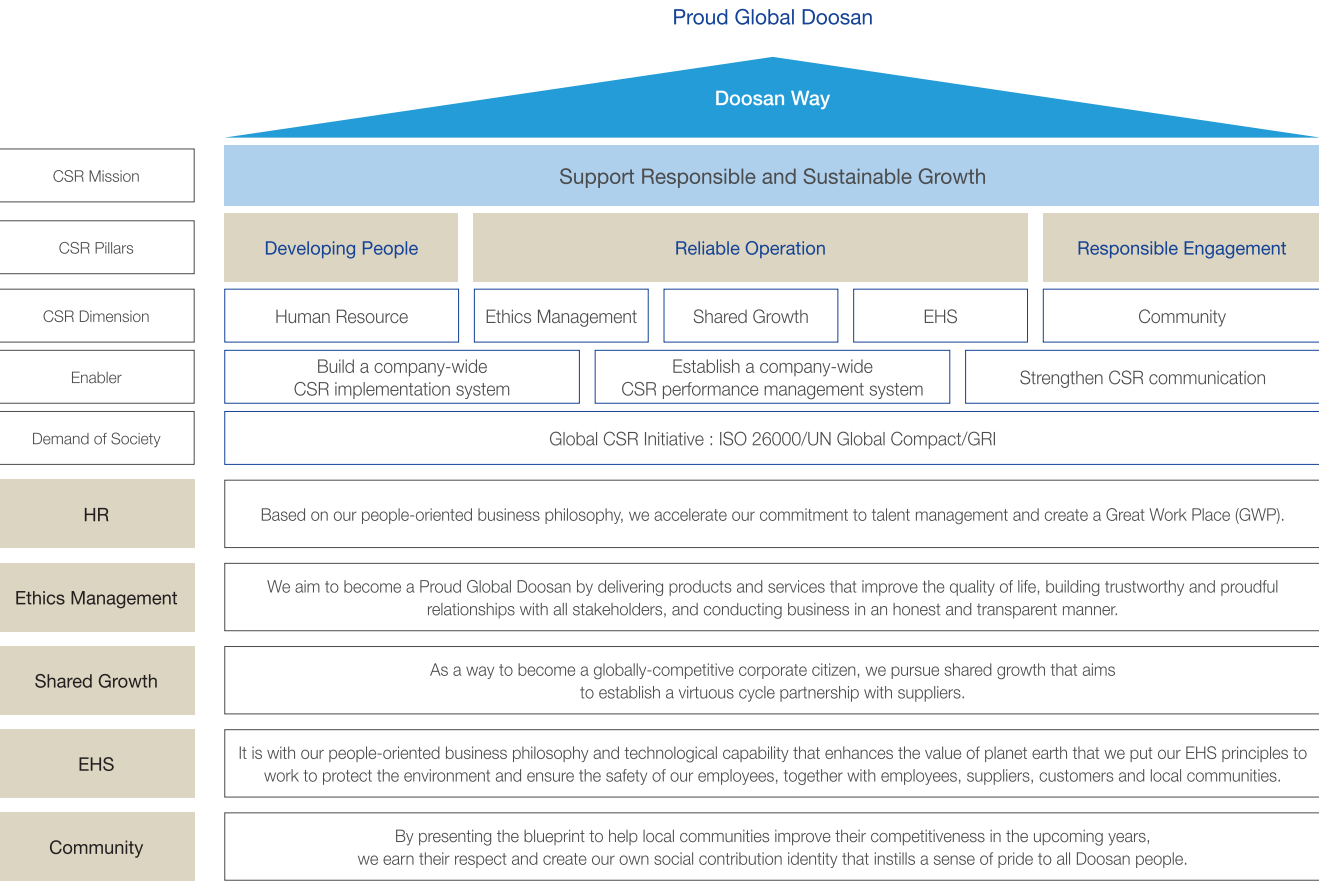


Global Leader in Power & Water

Exploring New Growth Engines	Expanding into New Markets/New Businesses	Strengthening Fundamental Competitiveness
<ul style="list-style-type: none">· Improve endeavor to build capacity in gas turbine and other related businesses· Built ESS/VPP capacity· Expanding the Market & Exploring new business areas (Energy Prosumer Opportunities)	<ul style="list-style-type: none">· Advance into new markets such as sub-Saharan African countries and Iran· Strengthen the power plant aftermarket business (R&M, Recurring LTS)· Expand BG specific new businesses	<ul style="list-style-type: none">· Expand the model line-ups, improve efficiency, and commercialize developed models· Set plans to build Digital Factory and implement phase by phase· Build an integrated design environment and Adopting PJT

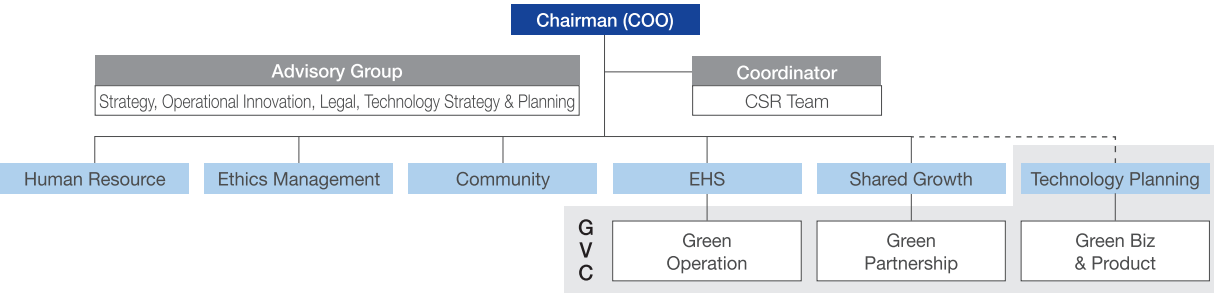
CSR Strategic Framework

In order to fulfill our social responsibility as highlighted by the Doosan Way, we defined key CSR areas – HR, ethics management, shared growth, Ethics Management, Shared Growth, EHS and Community – and built our CSR governance including the CSR Committee. In doing so, we align our CSR management with our business strategy.



CSR Committee

The CSR Committee is held to have in-depth discussions on social responsibility management and review company performance. With the COO as the chairperson, the committee is divided into five divisions that derive CSR tasks, which are proactively implemented by the related BGs and is aligned with the Green Value Committee (GVC) to pursue green management. Furthermore, the committee seeks advice from the Advisory Group and outside experts to improve its expertise and operational efficiency.



Business Analysis and Outlook

Power Plant

Thermal Power Plant

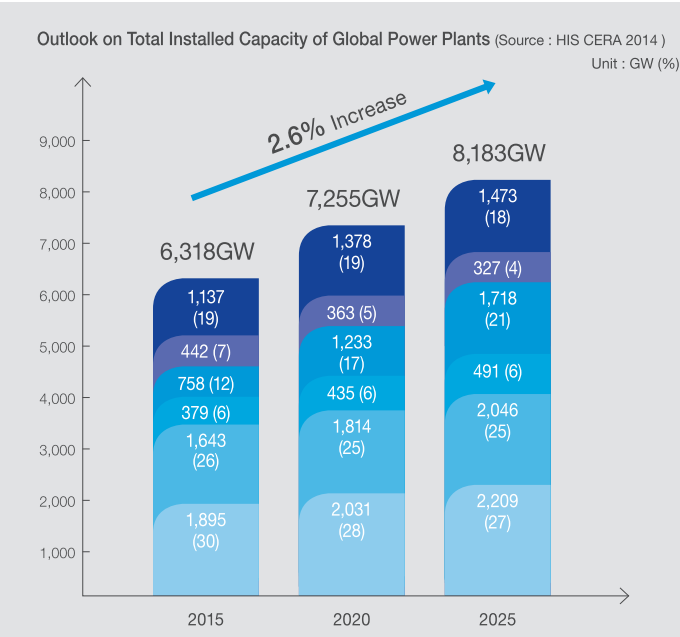
In 2015, the global power generation industry witnessed the sluggish growth of installed capacity due to the delayed recovery of the global economy. Particularly, China, that has led the growth of the global coal-fired thermal power generation market, saw the growth of its domestic coal-fired thermal power generation drop significantly due to intensifying environmental regulations and low economic growth rates. In addition, limitations on the export financing of coal-fired thermal power generation and other stricter regulations in OECD countries may lead to the market realignment towards high efficiency models. The signing of the Paris Agreement (COP 21) in December of 2015 is expected to further boost needs for eco-friendly and high-efficiency coal-fired power plants as a way to reduce CO₂ emissions and improve energy efficiency. Meanwhile, power demand is increasing rapidly in India and East Asia whose economies continue to grow, and this results in the continued new order placements for coal-fired power generation in these emerging regions. In response, we will differentiate our sales/marketing activities to build a stronger competitive edge in the coal-fired power generation market while solidifying our market dominance in the eco-friendly and high-efficiency coal-fired thermal power plant market. Building on our successful track records of project undertaking, we will identify additional/expansion projects of our existing customers and strengthen our competitive edge in order intake in India and East Asia through our proactive and strengthened sales network. Furthermore, we aim to increase our order intake for USC power generation from overseas IPPs, and continually develop related technology to cater to the needs for a greener and more efficient power generation.

Combined Cycle Power Plant

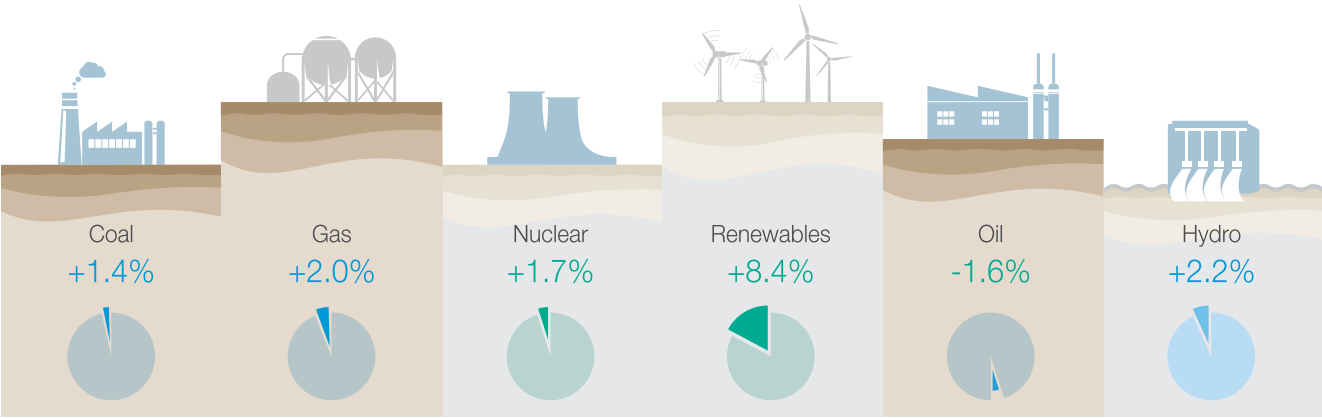
As GHG emission regulations and other global environmental regulations become more stringent, this helped maintain the growth of combined cycle power generation. In the U.S., decreases in gas price caused by the development of shale gas and falling oil prices as well as Environmental Protection Agency (EPA)'s stricter environmental regulations pushed the ratio of combined cycle power generation to exceed that of coal-fired thermal power generation for the 1st time in the nation's history. In 2015, new order placements for combined cycle power plants did not show marked growths as the utilization of existing plants rose. In the mid/long-term, however, their demand is expected to grow continuously, mainly in the U.S. and the Middle East. Increasing demand for CCPPs from China is also expected in the future along with stricter environmental regulations, gradually replacing coal-fired thermal power plants.

Renewable Energy

Investments in new and renewable energy has constantly been on the rise and reached its peak in 2015. In particular, unlike in the past where advanced countries led the new and renewable energy market, developing companies have made global efforts as well to invest in the new and renewable energy business. The Chinese policy to expand the distribution of cleaner energy sources to respond to environmental issues has resulted in the increased distribution rate of renewable energy, and renewable energy project orders have been awarded in India and the Middle East, including large-scale photovoltaic projects. In 2012, Korea introduced the Renewable Portfolio Standard (RPS) that made it mandatory for power generators with 500MW or above capacity to meet or exceed a pre-defined ratio of renewable energy in the total power generation. RPS stipulates that this mandatory ratio would be adjusted upwards on an annual basis and that renewable energy should account for more than 10% of the total power generation from 2022 onwards. When renewable energy is used to generate and supply power, the Renewable Energy Certificate (REC) is issued accordingly, and mandatory suppliers should fulfill their obligation through their own power generation, external procurement or the purchase of RECs. If mandatory suppliers fail to reach their predetermined target, the shortfalls are subject to penalties that are within the 150% limit of the average annual REC trading price, and such regulations are expected to spur the growth of the domestic renewable energy market. While uncertainties exist due to the continued oil price drops and change in renewable energy support policies, the signing of the Paris Climate Change Agreement (COP 21) gave rise to the strong momentum to drive stricter environmental regulations and eco-friendly policy initiatives, which may maintain the fastest growth of renewable energy among other power generation facility options. China's 13th five-year plan proposes ambitious goals for clean energy sources (200GW in wind power and 100GW in photovoltaics by 2020), and India plans to expand renewable energy to address power shortages caused by increasing power demand and to reduce CO₂ emissions. In some European countries, the PV market has reached the mature phase, and as technological development establishes the economic feasibility of these greener energy sources, renewable energy will continue to grow down the road.



Category	Increase/Decrease (GW)	CAGR(%)
Coal	+279	+1.4
Gas	+357	+2.0
Nuclear	+70	+1.7
Renewables	+927	+8.4
Oil	-61	-1.6
Hydro	+291	+2.2

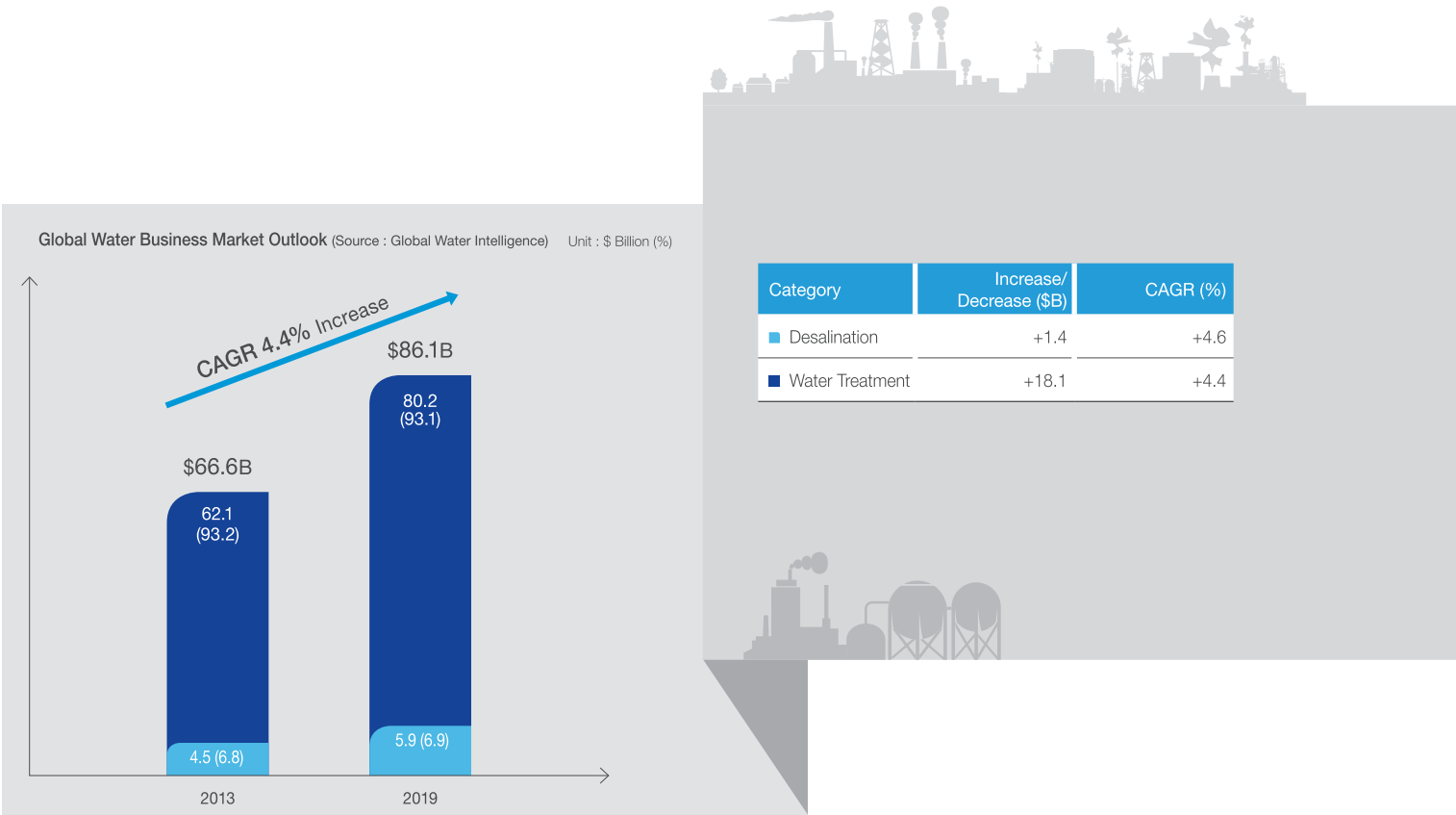


Water Plant

The increasing global population as well as rapid urbanization and industrialization is boosting demand for water, which inevitably leads to further depletion of water resources. Nowadays, East Asia and North Africa in addition to the Middle East that has traditionally suffered water shortages are increasing their investment in desalination capacity while stricter environmental regulations adopted by countries to protect their water resources lead to increasing demand for advanced water treatment technology and more economically-feasible treatment technology. As a result, the global water market is forecast to grow continuously mainly in the Middle East and other emerging countries, and this may result in numerous large-scale project order placements. Specifically, private projects are increasing due to the lack of governmental funds caused by the declining price of oil and other raw materials and the growing demand to mobilize private-sector efficiency, which will, in return, create more O&M (plant operation and maintenance) business opportunities.

Casting & Forging

Casting & forging business constitutes the infrastructure technology industry as it delivers core materials and components to almost all industries from power plant, shipbuilding and wind power to chemicals and mining. This business area is greatly affected by economic fluctuations, and today's stalling global economic recovery has led to a decrease in its demand. However, in China, Southeast Asia and other emerging countries, there exists continuous demand for key industrial infrastructure including power plants, and Korean companies' competitive edge in order intake has significantly improved in the fields of plant engineering and construction, which creates more business opportunities overseas. To cope with the prolonged global economic downturn, we will be fully committed to quality innovation initiatives to deliver the highest-possible customer satisfaction. Furthermore, we will broaden our global network and build stronger marketing capacity to increase our order intake volume and enhance profitability. In doing so, we will position ourselves as a leader in the casting & forging industry recognized for its technological competitiveness and sales competency.



Business Performance

In 2015, we successfully delivered large-scale projects in the power and water sector. Our total order intake in 2015 amounted to approximately KRW 8.5 trillion: Vietnam's Song Hau 1 (KRW 1 trillion) and Vinh Tan 4 extension (KRW 690 billion) in overseas regions, and equipment supplied to the Anin thermal power plant in Gangneung (KRW 660 billion) and core components supplied to the Hai thermal power plant in Goseong (KRW 700 billion). Despite the global economic downturn, we reinforced our fundamental competitiveness to raise our order intake, which enabled us to win numerous large-scale projects. In 2016, we forecast that our order intake will exceed KRW 10 trillion.



Aerial view of the Hai thermal power plant in Goseong

Business Performance in Domestic Market

Won Contract for 1,000MW Large-Scale Project

We have won a contract worth nearly KRW 700 billion to deliver boilers, turbines and other core equipment for the Hai thermal power plant unit 1 and 2 located in Goseong. This plant to be built in Hai-myeon, Goseong-gun, Gyeongnam Province, will be an ultra supercritical (USC) power plant that boasts high energy efficiency with total capacity of 2,000MW (1,000MW x 2 units), which comes close to that of nuclear power plants. Unit 1 and 2 are slated for completion by October 2020 and April 2021 respectively. We also signed a contract worth nearly KRW 100 billion with Korea Midland Power to supply turbines and generators to the Shinseocheon thermal power plant. This 1,000MW plant to be built in Mayang-ri, Seo-meyon, Seo-cheon-gun, Chungnam Province will be completed by September 2019.



Signing an agreement to supply turbine generators to the Shinseocheon thermal power plant

Won contract for Korea's 1st 100% Coal-to-Biomass Conversion Project

The purpose of this KRW 57 billion project was to fully convert the fuel of the 125MW Yeongdong thermal power plant unit 1 completed in 1973 from coal to biomass. Our plan is to replace boilers and other existing facilities to complete this conversion project by the end of March in 2017. Once completed, this conversion project is expected to allow Korea South-East Power to reduce 860,000 tons in annual CO₂ emissions and secure 1,27 million RECs while positioning the power plant as a key power supplier of eco-friendly renewable energy for the 2018 Pyeongchang Winter Olympic Games. The woody biomass fuels that will be used following the fuel conversion are more eco-friendly than fossil fuels (coal, LNG, etc.), and emit less air pollutants such as sulfur oxides and nitrogen oxides by more than 65-75% against coal. They also generate only around 10% of the ashes usually generated when coal is burned. While coal and biomass have been normally used together to fuel existing coal-fired thermal power plants in Korea, this represents the very first project to fully convert to biomass, which drives our take-off as a power generation facility supplier specialized in greener energy sources.

Business Performance in Overseas Market

Results of Implementing Localization Strategies in Vietnam

Won Contract for the Song Hau Coal-Fired Thermal Power Plant 1

In April 2015, we won a contract for the 1,200MW Song Hau coal-fired thermal power plant 1 in Vietnam. This plant will be constructed in Hau Giang, which is 200km southwest of Ho Chi Minh city, and once completed, is expected to address power shortages in the southern part of Vietnam. We will undertake this turnkey project by supplying key equipment such as boilers and turbines along with auxiliary equipment to complete the construction by October 2019. This accomplishment is attributed to our endeavors to build Doosan VINA, a large-scale production plant, in the Vietnamese Dung Quat region and to localize our operations through local investment and social contribution activities since 2009. As a result of winning this order, we will be able to strengthen our presence not only in the 30GW-capacity Vietnamese power market but also in India, Thailand, Malaysia and other Asian countries by 2020.

Won an Extension Plant Contract for the Vinh Tan 4 Coal-Fired Thermal Power Plant

We have been awarded with a KRW 690 billion contract by Electricity Vietnam (EVN) to construct an extension plant for the Vinh Tan 4 coal-fired thermal power plant. This project is to construct a 600MW power plant, the same unit size as the Vinh Tan 4 power plant built by Doosan back in 2013. The new plant will be located in Binh Thuan, 230km east of Ho Chi Minh City, and is expected to contribute to easing power shortages in southern Vietnam. As a turnkey project that spans the whole process from design to the manufacturing and construction of the entire generation facility including core and auxiliary equipment, this is scheduled for completion by November 2019.



Signed a contract for the Song Hau 1 coal-fired thermal power plant

Won a Series of Orders for Water Treatment Plants in Oman and the UK

We won the KRW 90 billion order to construct the phase 2 Al Ansab sewage water treatment plant from Oman's state-owned sewage water treatment company Haya Water. The project involves the construction of a sewage water treatment plant with 150,000 tons of daily capacity, and we aim to complete this turnkey project that includes the supply, construction and commissioning of equipment by 2017. Specifically, this plant will be built through the Membrane Bio-Reactor (MBR) technology. It was based on our top-notch technology and pricing strategy that we beat other world-renowned water treatment companies and finally won this contract. We believe that this will lay the foundation for us to increase our order intake for large-capacity MBR sewage water treatment plants in the upcoming years. Furthermore, our U.K. subsidiary Doosan Enpure won the KRW 86 billion order for the phase 3 sewage water treatment plant in Bellozanne, on the island of Jersey, U.K. Once completed by 2020 as planned, this plant will be able to process 71,000 tons of sewage water per day.

Continuous Orders Won in India, the World's Largest Power Generation Market

Since winning contracts for Kudgi and Lara thermal power plants in 2012, our Indian subsidiary DPSI is making great strides in the world's largest power generation market of India, including winning the contract to deliver key component to the Harduaganj and Pudimadaka thermal power plants. DPSI also won the KRW 350 billion contract to deliver EPC boilers for coal-fired thermal power plants from the Indian state-owned thermal power generator NTPC. We plan to complete the construction of three 660MW boilers at the Barh coal-fired thermal power plant located in Bihar in the northeastern part of India by October 2018.



Groundbreaking ceremony for the Vinh Tan 4 extension coal-fired thermal power plant








Materiality Analysis

Identification of Stakeholders

Stakeholders are defined as individuals or organizations that have interest in or impact on a company's business conduct, or individuals or organizations that are impacted by a company's business conduct. In identifying stakeholders, we use the following criteria of mutual influence between the company and stakeholders, proximity to our worksites, and direct/indirect responsibility in relation to our business conduct. Furthermore, each of our BGs communicates with their stakeholders to categorize them into distinctive groups. In line with these criteria, we classify our stakeholders into shareholders, customers, employees, suppliers, local communities, governments and competitors.

Stakeholder Communication

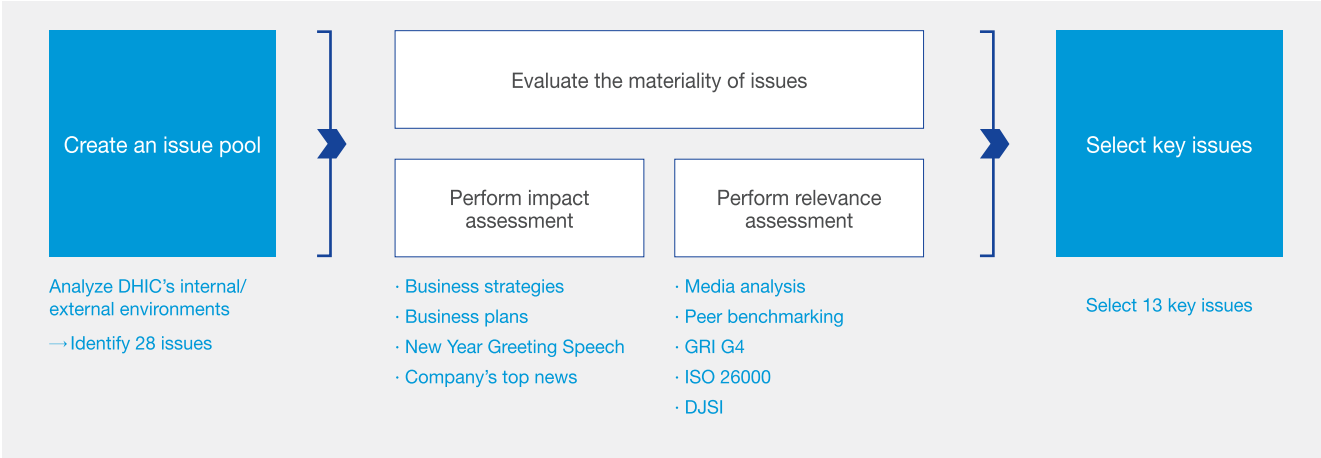
Stakeholder communication can be significantly helpful in advancing Corporate Social Responsibility (CSR). Wide-ranging stakeholder communication channels assist in identifying material issues and understanding how we as a company and our stakeholders influence each other concerning these issues. In addition, identifying our key stakeholders and sharing feedback on our CSR performance with them help us lay the basis to further upgrade our CSR practices.

Category	Details	Communication Channels
Shareholders	 <ul style="list-style-type: none">· Doosan Corporation· Foreign investors· Institutional investors· Minority shareholders	<ul style="list-style-type: none">· Investment relations (IR) events· Conferences· Overseas NDRs (Non-Deal Roadshow)
Customers	 <ul style="list-style-type: none">· Domestic public power generators· Domestic private power generators· Overseas clients	<ul style="list-style-type: none">· Roadshows· Technology briefings· VOC (Voice of Customer)
Employees	 <ul style="list-style-type: none">· Head office employees· Overseas branch offices' employees· Overseas subsidiaries' employees	<ul style="list-style-type: none">· Industrial Safety and Health Committee· Labor-Management Council· Operation of the Human Rights Committee for minorities· Training human rights through two-way communication
Suppliers	 <ul style="list-style-type: none">· Tier 1 suppliers (about 200 companies)· Tier 2 suppliers (about 50 companies)	<ul style="list-style-type: none">· Consultative groups· TOP (Total Operational Performance)· Win-Win Call Center· Shared growth conferences· Supplier group discussion meetings· Invitations to cultural events
Local Communities	 <ul style="list-style-type: none">· Local residents· Academia, research institutes· NGOs	<ul style="list-style-type: none">· Consultative groups· Youth Energy Project/Career Exploration Group for Youngsters· Programs affiliated with social welfare centers and community children's centers· Social volunteer groups· Doosan Day of Community Service
Governments	 <ul style="list-style-type: none">· Central/local governments· Related organizations	<ul style="list-style-type: none">· Overseas seminars· Exhibition participation
Competitors	 <ul style="list-style-type: none">· Power generation facility manufacturers· Desalination and water treatment plant companies	<ul style="list-style-type: none">· Quarterly IR presentations· Press releases· Company visits

Materiality Analysis Overview

We recognize our Integrated Report (IR) as the most important channel to communicate with stakeholders, and report on the issues identified through the materiality analysis and related business operations. The materiality analysis intends to understand the issues raised by stakeholders to the company as well as those issues that have the greatest impact on our corporate sustainability. At DHIC, we perform such analyses each year. Once identified, these material issues are reviewed in the entire spectrum of our business operations from business strategy to work process and product development, and this is followed by the development of response measures. In performing the materiality analysis, we took into consideration the principles of completeness, sustainability context, materiality and stakeholder inclusiveness as suggested by the Global Reporting Initiative (GRI).

Materiality Analysis Process



Creating an Issue Pool

Identifying issues that affect a company's sustainability is necessary in performing the materiality analysis. We conducted analyses of GRI guidelines, ISO 26000 and other external guidelines as well as media articles, and performed benchmarking and stakeholder interviews in addition to the review of such internal documents as management strategy, ethics principles, fair competition guidelines and environmental safety guidelines. This led us to identify 28 issues in total.

Performing Impact Assessment

To evaluate the size of impact on our corporate operation and stakeholders' decision-making, we reviewed our management strategy, business plans, and New Year's messages from Doosan Corporation and the company CEO.

Performing Relevance Assessment

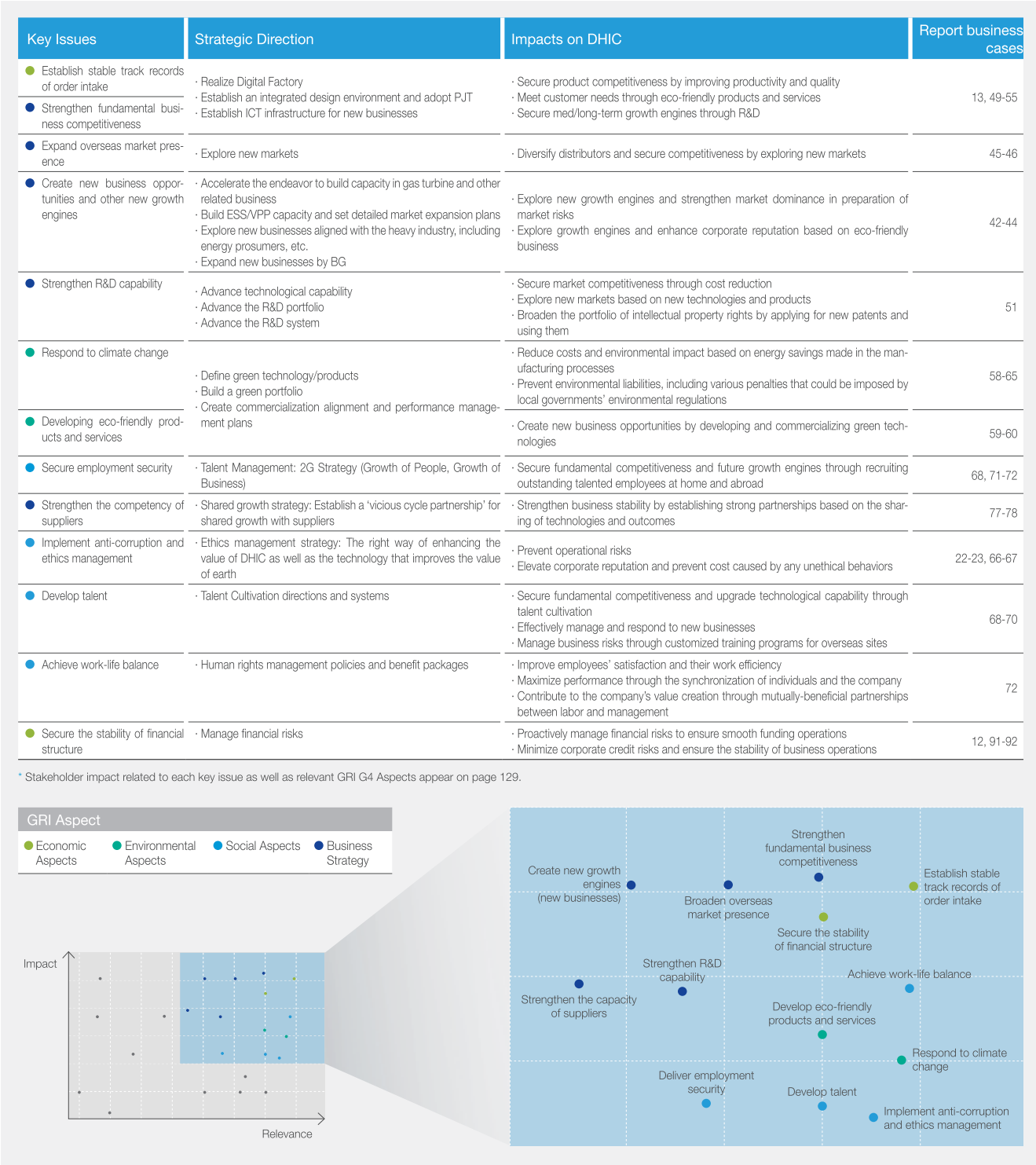
To evaluate stakeholders' interest and relevance to CSR aspects, we analyzed media reports, benchmarked industry peers and reviewed GRI, ISO 26000 and other international standards.

Selecting Key Issues

We evaluated 28 issues from both impact and relevance aspects. In generating final outcomes, we took into account the reliability of the assessments made and the importance of these issues within the company. As a result, we were able to determine the relative importance of respective issues. While all of the 28 issues included in the issue pool would be important in and of themselves, it was also critical that their relative importance would be assessed so as to focus on those issues located in the upper right section of the materiality analysis matrix. As such, materiality analysis outcomes were reflected in determining the level of reporting or reporting methods within this integrated report.

Materiality Analysis Outcomes

As a result of the materiality analysis, 13 key issues were identified, which were then categorized on the basis of the Aspects suggested in the GRI G4 guidelines. In total, eight material aspects were identified and these aspects were evenly distributed across all socially-responsible management areas: two in the economy, two in the environment and four in the society aspects.





Rabigh 2 thermal power plant in Saudi Arabia

Strategy & Performance

3

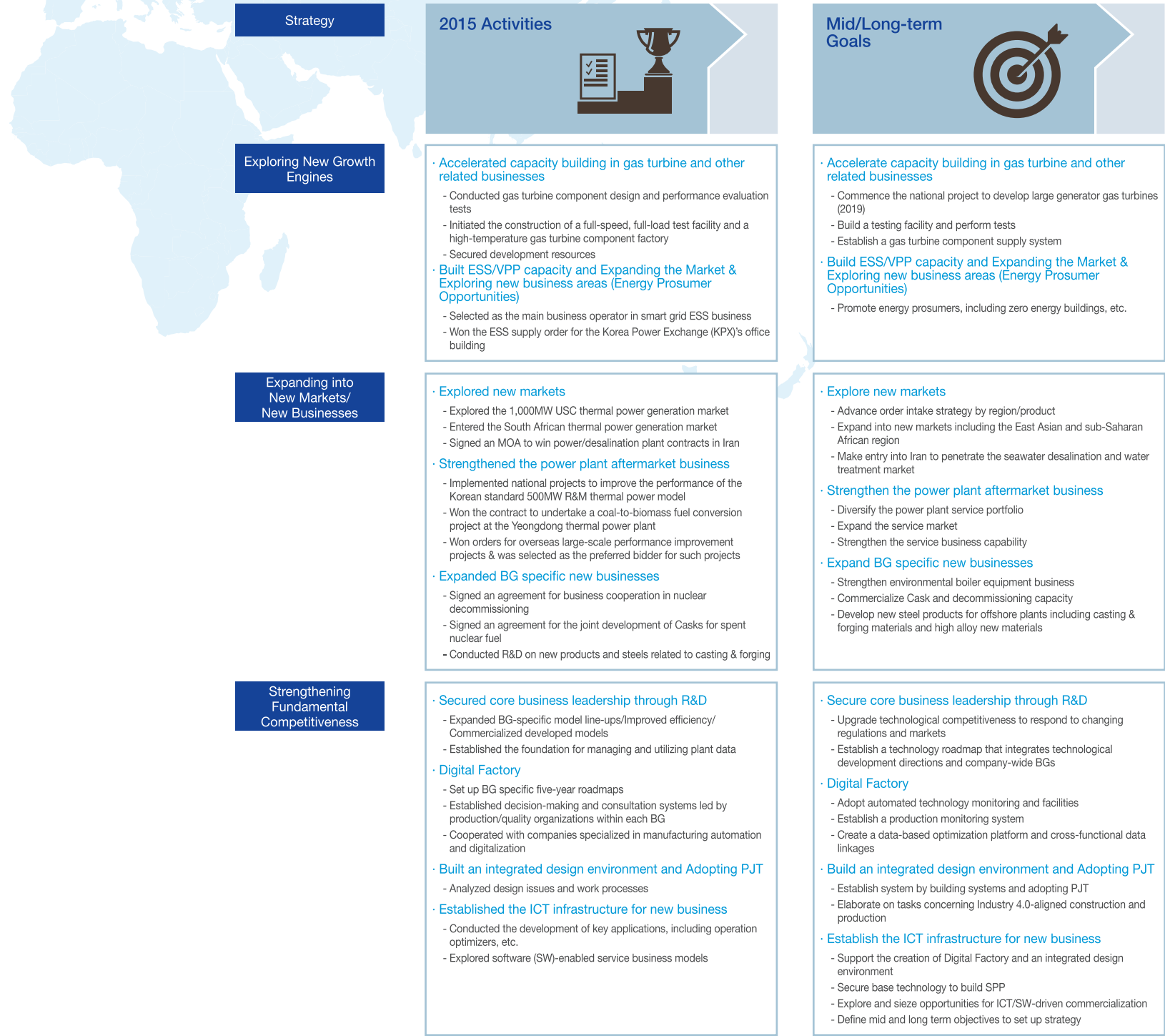
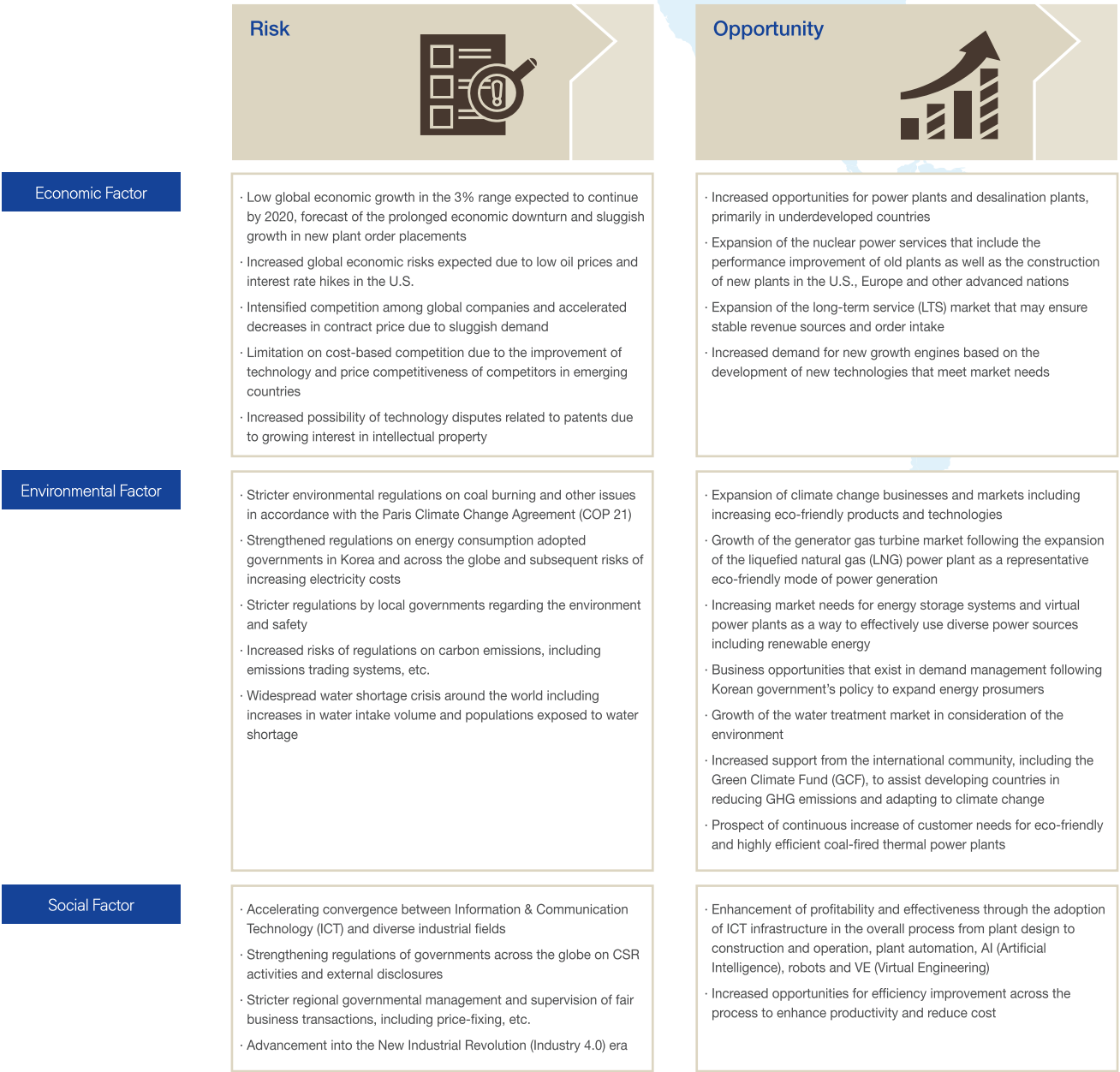
We have set our business strategy to discover new growth engines, expand BG specific new markets/businesses, and strengthen fundamental competitiveness in line with changing business conditions so as to become a globally-competitive company.



Risk & Opportunity	40
Exploring New Growth Engines	42
Expanding into New Markets/ New Businesses	45
Strengthening Fundamental Competitiveness	49

Risk & Opportunity

We identify the market conditions that we face through risk & opportunity analyses, and use their outcomes as basic data in setting our future strategy. By analyzing economic, environmental and social factors, we define our strategic directions to discover new growth engines, expand BG specific new markets/ businesses and strengthen fundamental competitiveness. These strategic directions are further developed through regular market condition analyses.



Exploring New Growth Engines

The continued low growth and low oil prices across the global economy and the sluggish Chinese economy force companies to compete even more intensely. This implies that a company should find new growth engines to become more proactive and preemptive in responding to any change, in addition to seeking the continued growth of existing business. Thus, we actively invest in R&D and technology development to lay a more solid foundation for growth. In 2015, we continuously led a national project to localize gas turbine technology while advancing into the ESS market. We will further build capacity in gas turbine development and other related businesses, set detailed plans to build ESS/VPP capacity and broaden our market presence in this sector, and explore new businesses aligned with the heavy industry (energy prosumers, etc.) so as to ensure that our new growth engines generate tangible profits. Furthermore, we will strive to create value for the upcoming sustainable society.

Performance Monitoring and Goal Setting



Accelerating Capacity-Building in Gas Turbine and other Related Businesses

Implementation Directions

The Future Energy Forum 2014 forecast that the global gas turbin market that posted 4.8% in average growth rate between 2007 and 2013 would grow by 5.5% by 2020 and that its demand would grow continuously. Specifically, the gas-fueled power generation market will expand further due to the development of shale gas and the slow growth of coal-fired power generation. This prompted us at DHIC to make huge facility investment and open a new R&D center in the U.S. to develop our own proprietary gas turbine technology while hiring talented individuals including engineers with previous work experience in global companies as well as those with M.D.s and PhDs. As the Korean government designated the R&D of domestic gas turbine technology as a government-led project, we are working with other project participants – SMEs and domestic/overseas expert organizations – as well as such prestigious domestic universities as Seoul National University and Pohang University of Science and Technology.

Progress of the Gas Turbine Localization Project

In line with the mid/long-term prospect of gas-based power generation, we are undertaking our own mid/long-term project to develop technology of gas turbines, one of the core gas power generation components. In 2015, we worked on the basic design of major gas turbine components and conducted performance evaluation tests on some of those components whose basic design was completed. Specifically, nozzle firing tests assisted us in determining the optimal nozzle shape to improve the efficiency of gas burners. Such tests were demonstrated with the presence of government officials, professors from Hanyang University and Pusan National University, and the CEOs of SMEs related to gas turbine technology, which served to prove our technological capability. In addition, we initiated the construction of a full-speed, full-load testing facility and a high-temperature components gas turbine factory to take the very 1st step in building gas turbine Original Equipment Manufacturing (OEM) infrastructure: the testing facility will enable us to perform final tests on the performance and stability of developed gas turbines, and the factory will produce key gas turbine components. To procure development resources, we conducted lab tours around do-

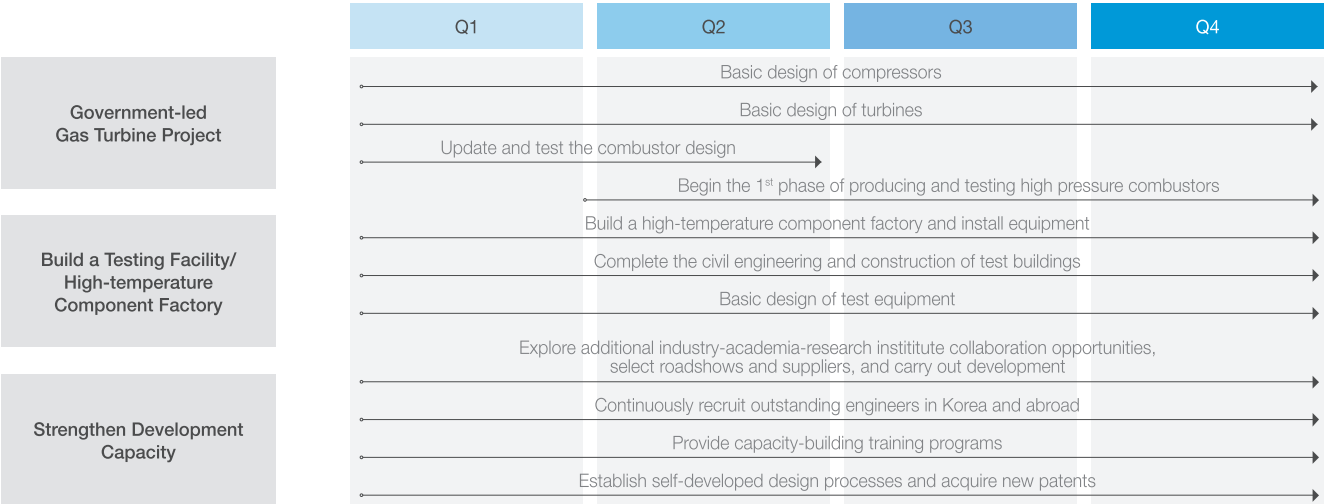
mestic and overseas universities, and hired engineers with abundant work experience in OEM companies as a way to expand our R&D workforce. In addition, we cooperate with Korean/overseas research institutes for respective gas turbine components and technologies. As a member of the government-led gas turbine development project, we work on the standardization of gas turbine development processes and the development of design procedures, which will enable us to build our own capacity to develop gas turbines. Such capacity-building, in return, will ultimately help us build an independent development capability, and we will do our utmost to lay the basis to develop next-generation gas turbine models in addition to the gas turbines currently under development.

Future Plans

In 2016, we aim to develop gas turbine components in accordance with the development schedule defined for each of these components and to complete their basic design. We will also complete the construction of a testing facility and a high-temperature component factory. Furthermore, we will continue to hire and nurture talented individuals who serve as the foundation for our R&D operation and to build our own independent development system. Last but not least, we will cooperate with domestic power generators to build a demonstration plant with an aim to expand our exports by demonstrating the commercial operation of developed gas turbines, and will extend the scope of such commercially-operated plants.

Current Projects	Details
Comply with the governmental project schedule	Complete the basic design of major gas turbine components including turbines, etc.
Build a testing facility and perform tests	Build a full-speed, full-load testing facility Conduct ambient pressure combustion tests
Gas turbine components Establish a supply system	Build a high-temperature component mass production factory Establish a key component supply line and procurement system

2016 Roadmap



Building ESS/VPP Capacity and Expanding the Market & Exploring new business areas (Energy Prosumer Opportunities)

Implementation Directions

In line with the rapid evolution of overseas energy industry trends, the ESS^{1)/VPP²⁾} market is garnering attention for its high growth potential, in addition to such conventional generation sectors as nuclear and thermal power generation. Presently, the global ESS/VPP market amounted to US 9 billion (nearly KRW 9 trillion) in 2015, and this is expected to increase to US 59 billion (KRW 59 trillion) by 2025. To broaden our existing business areas and to lay the solid basis for growth through proactive investment in technology development, we are undertaking the initiative to set detailed plans to build ESS/VPP capacity and to expand our market presence.

Mid/Long-term Implementation Strategy

We plan to tap the global ESS market to create business cases and seek growth in this rapidly-growing market. We were chosen as a main business operator in the ESS sector for the ‘2015 Smart Grid Implementation PJT’, and signed a contract with the Korea Power Exchange (KPX) to deliver components for large-capacity ESS in November 2015 in order to expand our ESS business. By laying the basis to grow our ESS business through established track records and encouraging the Korean government to initiate a national project to develop Korean VPP, we will tap into the overseas ESS/VPP market.

Our Achievements in ESS/VPP Business

Selected as the Main Business Operator in the Smart Grid ESS Sector

Our sustained endeavor to develop ESS technology earned us the position as the main operator of energy storage system (ESS) under the ‘Smart Grid Implementation Project 2015 undertaken by the Korea Smart Grid Institute under the Ministry of Trade, Industry and Energy. We will supply 1MW equipment to piping and bending companies by the end of this year, and provide turkey solutions that span from ESS design to final construction through the analyses of the power use patterns of companies.

Signing an Agreement to Supply Key ESS Component to KPX

We signed an agreement to supply key ESS components to the head office building of the Korea Power Exchange (KPX) located in Naju, South Jeolla Province, and will deliver 2.4MWh key ESS components designed for KPX including batteries and power conversion devices to Taekyung Electrical Industries Co., Ltd., the main business operator, by the end of this year. Once completed, this wil represent Korea's largest capacity ESS installed in any single building. We continue to make significant strides in the ESS market and this will ensure our sustained growth in this market.

Exploring VPP Business Opportunities

Virtual Power Plants (VPP) adopt a software-based power system to optimize power generation, demand and accumulated resources so as to deliver profits to related parties. Since we forecast that the emergence of a VPP that goes beyond the existing VPP business cope to deliver information/demand/supply management and other new business models may expand the VPP business, we completed our business feasibility review in 2015 and plan to explore business opportunities in this growing sector. We aim to align VPP with ESS in the mid/long-term to generate profits by creating a new growth driver in the energy sector and to pre-emptively respond to climate change.

Exploring New Businesses such as Seeking Prosumer Opportunities

The signing of the Paris Climate Change Convention (COP 21) is urging the global community to shift its energy industry paradigm. Specifically, this gives rise to the need to promote conversion into eco-friendly fuels, distributed power generation and energy efficiency so as to reduce GHG emissions in those large carbon-emitting energy sectors. Thus, the Korean government announced its ‘2030 New Energy Business Expansion Strategy’ and is eyeing the ‘new energy businesses’ as practical alternatives to GHG emissions reduction options. We will also proactively explore new energy sectors through our swift response to the governmental strategy to expand new energy businesses from energy prosumers to low-carbon policy and the promotion of eco-friendly processes.

1) ESS (Energy Storage System) : Store the electricity generated in batteries and other storage devices and supply such electricity when needed to improve power efficiency
2) VPP (Virtual Power Plant) : Serve as a virtualized power generation plant that combines a range of distributed power generation sources to operate and control them as a single plant unit

Expanding into New Markets/New Businesses

The blackout crisis of 2011 was followed by the expansion of large-scale power plants, and the domestic generation equipment market is expected to reach saturation accordingly. To overcome this market challenge, it is inevitable that we tap into the global market and find new business opportunities mainly in developing countries to ensure our sustainable growth as a company. This will not only help us strengthen our competitive edge but also assist the local communities where we operate and our entire supply chain in building their own competitive edge. In advancing into new markets and new businesses, our suppliers could enhance their capacity and develop knowledge, which will reinforce competitiveness across the supply chain. By broadening our global presence, will support local companies to improve their financial performance, and local communities to reap social benefits such as increasing power penetration ratios and job creation. As part of our strategic business projects undertaken in consideration of local characteristics, we explore new markets, strengthen the aftermarket business and develop BG specific new businesses.

Performance Monitoring and Goal Setting

	2015 Performance	2016 Plans
<div>01</div> <div>Exploring New Markets</div> <div>Continuous expansion of overseas market by tailored strategic item for each nation and region</div>	<ul style="list-style-type: none">· Tapped into the 1,000MW USC thermal power generation market· Advanced into the South African thermal power generation market· Signed an MOA to deliver power plant and desalination plant projects in Iran	<ul style="list-style-type: none">· Continuously seek new strategies by region/product to win more orders· Expand into East Asian and sub-Saharan African region· Initiate operations in the new sectors of desalination and water treatment in Iran, etc.
<div>02</div> <div>Strengthening the Power Plant Aftermarket Business</div> <div>Became a fast-mover in the power plant aftermarket business by strengthening maintenance and improvement service capability in addition to the construction of new power plants</div>	<ul style="list-style-type: none">· Participated in the national project to improve the performance of the Korean standard 500MW R&M thermal power model· Signed a contract for the coal-to-biomass conversion project at the Yeongdong thermal power plant· Won orders and was selected as the preferred bidder for large-scale overseas performance improvement projects	<ul style="list-style-type: none">· Diversify the power plant service portfolio· Expand the service market· Strengthen service management capabilities
<div>03</div> <div>Expand into BG Specific New Businesses</div> <div>Expand into new business areas by each BG by expanding the existing business scope, making R&D investment and aligning the organization</div>	<ul style="list-style-type: none">· Signed a business cooperation agreement for decommissioning operations· Signed an agreement for the joint development of ‘Cask’, storage for spent nuclear fuel· Conducted R&D on new products and steels related to casting & forging	<ul style="list-style-type: none">· Strengthen environmental boiler equipment business· Commercialize Cask (storage for spent nuclear fuel) and decommissioning capabilities· Develop new steel products including casting & forging materials for offshore plants & new high alloy materials

Exploring New Markets

Implementation Directions

Through our continued advancement into new overseas markets, we strategically select and focus on business areas and meet specific local needs, and forge strategic partnerships with renowned global industry peers to broaden our global presence. These endeavors allowed us to sign numerous large-scale project contracts in major power generation markets in Vietnam, India and other Asian regions in 2015 and to win orders and sign MOAs in South Africa, Iran and other countries that we had not any access to previously.

Laying the foundation to Facilitate Exchange with Iran

With Korea's advanced industrial technologies and Iran's abundant resources, the two countries are maximizing each other's comparative strengths through proactive mutual cooperation. This also prompted us at DHIC to launch our active marketing initiatives including the joint Doosan Roadshow hosted with DPS and others in February 2016. This resulted in signing a MOA with the Iranian company Mokran to deliver a 280MW cogeneration power plant project in the Chabahar free economic zone, along with a desalination facility with 40,000-ton daily capacity. We also signed an MOU with the National Water and Wastewater Engineering Company (NWWEC) of Iran to cooperate on desalination and water treatment projects and to pledged to strengthen wide-ranging cooperation in the country's water business. In doing so, we resumed our operations that had been discontinued since economic sanctions were imposed on the country, and this will pave the way for us to make great strides in the Iranian power and water markets recognized for their huge growth potential.



Signed an MOA with the Iranian company Mokran for power/desalination plants



Signed an MOU with Iran's National Water and Wastewater Engineering Company (NWWEC) to cooperate on desalination and water treatment projects

Advancing into South Africa's Power Generation Market

Signing the performance improvement contract for the Morupule A thermal power plant represents our ever first project undertaken in the South African power generation market. This contract worth KRW 240 billion awarded by Botswana Power Corporation intends to improve the 132MW Morupule A plant located 260km northeast of Gaborone, the capital of the Republic of Botswana, that initiated its operation back in 1986. We will perform improvements on this aging power plant for the next two years, including the replacement and maintenance of its turbines, boilers and other core components.

Entering into the 1,000MW Thermal Power Generation Market

In December 2015, we signed the India Pudimadaka Project, which marked our advancement into the Indian 1,000MW ultra supercritical (USC) thermal power generation market following the domestic market. In August 2015, we were chosen as the preferred bidder in the international competitive bidding for Pudimadaka thermal power plant's boiler EPC construction hosted by India's National Thermal Power Corporation (NTPC), and were selected to deliver the KRW 1.1 trillion project in December that year. The plant, to be built in Andhra Pradesh in the eastern part of India, represents the country's 1st 1,000MW USC thermal power plant with total capacity of 4,000MW (four 1,000MW units), and is slated for completion by 2021 through our turnkey solution that spans from design to construction. The Paris Climate Change Agreement is expected to spur the continuous growth of the 1,000MW USC thermal power plant market mainly in India and Southeast Asia for its eco-friendliness and high-efficiency that contributes to reducing CO₂ emissions. Building on our accomplishment in winning 1,000MW thermal power plant projects in Korea and overseas, we aim to accelerate our pace of advancement into Southeast Asia and other overseas markets.



Indian Pudimadaka Project

Strengthening the Power Plant Aftermarket Business

Implementation Directions

As the number of aging power plants is on the rise both in Korea and abroad, this boost needs to extend the lifespan of existing plants and to increase their generation capacity and performance through the replacement or improvement of boilers, turbines and other core components. Since it is forecast that the continuous growth potential of the power generation market lies in maintenance/improvement services for existing plants as well as the construction of new plants, we strive to establish our competitive edge in the power plant aftermarket business by diversifying our service portfolio, expanding our service market and strengthening our service business capability.

Mid/Long-term Strategic Directions

Diversify the portfolio	Diversify into performance improvement, fuel conversion and Long Term Services (LTS) from the existing business of component maintenance
Expand service markets	Expand new service markets in the Americas, Europe, Southeast Asia and Africa in addition to the existing markets of Korea, India and the Middle East
Strengthen project performance capabilities	Strengthen technology sales and related engineering capability

Major Achievements

Signing an MOU for the National Project on Performance Improvement of the Korean Standard Thermal Power Plant

In June 2015, we signed an MOU with Korea Midland Power to undertake a government-led project to 'develop core component efficiency improvement demonstration technology to improve the performance of the R&M services for the Korean standard 500MW thermal power plant'. This national project aims to develop a new pilot product that increases the generation efficiency of boilers, one of the key components of the Korean standard 500MW thermal power plant, by 3% (increasing the steam temperature from the existing 538℃ to 593℃) and to install and operate this product in the actual power plant setting. This 3% rise in power efficiency leads to KRW 20 billion in annual fuel cost savings per unit as well as more than 120,000 tons in CO₂ emissions reduced annually, thereby making significant contributions to improving the environment. We plan to develop such pilot products for core components (boilers and turbines) and auxiliary components and to install them at the Boryeong thermal power plant unit 3 in place of its existing component for demonstration purposes by the end of 2018.

Winning a Fuel Conversion Project Contract from the Yeongdong Thermal Power Plant

As the governmental policy to expand renewable energy drives the use of eco-friendly fuels such as biomass in addition to existing fossil fuels, this also increases needs for the improvement of aging power plants in Korea and abroad. Last year, we won the fuel conversion project contract awarded by Korea Midland Power for the Yeongdong thermal power plant unit 1. This project aimed to shift fuel from coal to biomass for the 125MW plant completed back in 1973, and represents Korea's 1st complete coal-to-biomass conversion project. We plan to replace boilers and other existing equipment at the plant to complete the project by early 2017.

Performance Restoration Projects at Overseas Power Plants

We will extend the scope of plant improvement and refurbishment business beyond Korea towards the overseas market. We are currently working on the Morupule A thermal power plant refurbishment project awarded by Botswana Power Corporation. We also won the balance work contract for the Barh power plant awarded by India's National Thermal Power Corporation (NTPC) and currently, undertaking a project to supply boilers and auxiliary components for its normal operation. These two projects are worth approximately KRW 600 billion, and include the repair/replacement/supply of the entire power generation equipment from boilers and turbines to eco-friendly equipment. We believe that these project undertakings will pave the way for us to broaden our presence in the overseas plant service market.

Upgrading the Performance of Aging Nuclear Power Plant Equipment

As Korea's sole supplier of major nuclear plant equipment, we are involved in replacing such core components of nuclear power plants as steam generators and reactor heads in order to upgrade the performance and safety of aging nuclear power plants currently operating in Korea. We supplied 22 units of replacement steam generators (RSG) and eight units of replacement reactor vessel heads (RRVH) to nuclear power plants in Korea and abroad by 2015, and plan to manufacture and deliver eight RSGs and two RRVHs. Furthermore, we replaced steam generators and other main components, that had been highly dependent on advanced global companies - with those developed domestically. At the same time, we developed special technology that uses Alloy690 materials for component repair to improve the safety of the 1st line of reactors, and successfully adopting this technology for the maintenance of reactors, steam generators and pressurizers. In particular, we are moving beyond the domestic nuclear power plant service market towards the Chinese market that holds huge market potential: in April 2016, we signed an agreement with China Nuclear Industry Maintenance Co., Ltd. (CNIMC), a company with previous track records in delivering maintenance service to nuclear power plants in China, to promote service business cooperation for nuclear power plants under operation in China. We will constantly endeavor to broaden our target overseas markets in addition to China.



Signed an MOU with China Nuclear Industry Maintenance Co., Ltd. for nuclear plant service business cooperation

Expanding into BG specific New Businesses

Boiler BG

Expanding Environmental Facilities

Pollutant-reducing facilities are installed from the rear of boiler to the stack to eliminate such air pollutants as sulfur dioxide, nitrogen oxides and dust contained in the flue gas emitted from thermal power plants or industrial facilities. These facilities Selective Catalytic Reduction (SCR) DeNOx system that removes nitrogen oxides through the contact between flue gas with catalysts, Electrostatic Precipitators (ESP) that use electrostatic force to remove dust, and Flue Gas Desulphurisation (FGD) that atomizes limestone slurry, seawater and other alkaline solutions to flue gas to eliminate sulfur dioxide. We boast our own proprietary technology to propose and deliver environmental facilities that cater to specific fuel/local needs, and we will build diverse track records and strengthen our OEM technological capability so as to actively respond to business opportunities in the environmental facility market that arise in line with stricter environmental regulations.



Yeongheung thermal power plant's Air Quality Control System (AQCS)

Nuclear Power BG

The safe disposal of spent nuclear fuel and the decommissioning of nuclear power plants that reached their end of life are emerging as both national challenge and new business opportunity. As such, we are developing core technology in relation to an independent spent fuel transport/storage Casks model and the decommissioning of highly-radioactive metal structures through technology partnerships with overseas companies and in-house R&D projects.

Entering into the Nuclear Decommissioning Business

With the belief that nuclear decommissioning business may reach KRW 440 trillion by 2050, we are providing company-wide support to the development of decommissioning technology. To develop decommissioning technology optimized for the Kori Nuclear Power Plant Unit 1 whose decommissioning is slated for 2017, we signed a partnership agreement with Siempelkamp, a German company specialized in nuclear decommissioning, for nuclear reactor dismantling in September 2015. In November that year, we also signed a business agreement with KEPCO Engineering & Construction Company to develop nuclear decommissioning technology and pursue mutual cooperation in tapping into the domestic and overseas nuclear decommissioning markets. In doing so, we serve as a front runner in securing nuclear decommissioning technology.



Signed a partnership agreement with KEPCO Engineering & Construction Company for cooperation in the nuclear decommissioning market

Developing Casks for the Storage of Spent Nuclear Fuel

We signed an agreement with NAC in the U.S. for the joint development of Casks used as storage container for spent nuclear fuel. Casks require sophisticated technology in their manufacturing as well as storage and transport: these special containers used for the transport and storage of spent nuclear fuel should undergo special treatment to continuously prevent the radiation and high heat emitted from nuclear fuel, and they weigh more than 100 tons per unit. This agreement is expected to positively affect our endeavor to develop Casks model that meets local Korean needs.

Casting & Forging BG

Developing Technology for New Products

Our Casting & Forging BG is conducting R&D on new products and steels related to casting & forging materials, and in doing so, it is building a stable business portfolio while maximizing its profitability from the high-profit products developed. Specifically, our Casting & Forging BG secured a stable order intake volume through its high-efficiency generation rotor supply basis, and is extending its scope of business by developing new steel products used as materials for offshore power plant equipment and by signing technology cooperation agreements with domestic shipbuilders. The Casting & Forging BG will continue with its R&D endeavor to cater to customer needs so as to build capacity to manufacture differentiated high-efficiency, high-specification casting & forging materials and to broaden its market presence in Asia including China and Southeast Asia as well as the U.S. and Europe. In doing so, it will identify new potential customers and increase its sales and profitability.



Strengthening Fundamental Competitiveness

Delivering cutting-edge products and services through sustained quality improvement and technology development is essential for any company to continue its business operations. To ensure our growth over the long haul, our existing business should grow rapidly, and thus we have set mid/long-term targets since 2011 to strengthen the fundamental business competitive edge of each of our products, followed by the development of detailed annual action plans to bring R&D innovation. We believe that strengthening technological competitiveness, creating Digital Factory, building an integrated design environment and adopting PJT, and laying the ICT foundation for new businesses will enable us to establish industry-leading technology and cost competitiveness so as to position ourselves as the true front-runner in the fields of generation facility, desalination & water treatment, and casting & forging.

Performance Monitoring and Goal Setting

	2015 Performance	2016 Plans
<div>01</div> <div>Securing Core Business Leadership through R&D</div> <div>Defined mid/long-term targets to streng-then the fundamental competitiveness of respective products, and set detailed action plans to develop technology</div>	<div>· Expanded the model line-ups by prod-uct/Improved efficiency/ Commercialized developed models</div> <div>· Enhanced base technology capacity that covers the entire product spectrum</div>	<div>· Enhance fundamental competitiveness that allows for response to environmental regulations and market changes</div> <div>· Establish directions in developing base technology as well as an base technology roadmap that integrates all BGs</div>
<div>02</div> <div>Digital Factory</div> <div>Secured differentiated competitiveness through shopfloor automation and digitalization by adopting the global manufacturing sector's innovative trend Industry 4.0 to the manufacturing factory</div>	<div>· Set up a five-year development roadmap by BG</div> <div>· Established decision-making and consultation systems led by production/ quality organizations by BG</div> <div>· Cooperated with automation/ digitalization-specialized companies in the manufacturing sector</div>	<div>· Adopt automated technological monitoring and facilities</div> <div>· Build a production monitoring system</div> <div>· Lay the data-based optimization basis and cross-functional data linkages</div>
<div>03</div> <div>Building an Integrated Design Environment and Adopting PJT</div> <div>Built an integrated design environment to identify and prevent major design quality issues and to respond to risks related to quality failures</div>	<div>· Formulated a 3D engineering environment system in consideration of major design issues</div>	<div>· Establish a system and adopt PJT to ensure the systemic completeness</div> <div>· Elaborate on tasks concerning construction and manufacturing in alignment with Industry 4.0</div>
<div>04</div> <div>Established ICT Infrastructure for New Business</div> <div>Created growth infrastructure to streng-then internal competitiveness and explore commercialization opportunities on the basis of ICT infrastructure</div>	<div>· Laid the foundation to manage/use plant data</div> <div>· Conducted the development of key applications</div>	<div>· Support the establishment of Digital Factory and an integrated design environment</div> <div>· Secure base technology to realize SPP Smart Power Plant (SPP)</div> <div>· Explore and utilize opportunities for commercialization by using ICT/SW</div> <div>· Advance mid/long-term change management</div>

Strengthening BG Competitiveness

Implementation Directions

We continuously strive to secure proprietary technology and strengthen our manufacturing capacity to make our existing business more competitive while moving towards a more sustainable future of our business by reducing cost and innovating operational processes so as to build a stronger competitive edge of our business operations. In addition to R&D innovation that helps our Business Groups (BG) raise their product competitiveness, our Central Research Center also cooperates in a way to strengthen the competitive edge of our base technology that covers the entire product spectrum so as to set us apart from the competition while endeavoring in such areas as R&D performance management, intellectual property management and technological assistance.

Initiatives Undertaken by Respective BGs

EPC BG

Our EPC BG optimizes its performance to cater to customer needs for high efficiency, large capacity and swift delivery in order to be a first mover in the market while advancing and upgrading its design capability to build price/technological competitiveness. In 2015, the BG developed an integrated design environment platform to lead Industry 4.0 and other latest technological trends, and in doing so, was able to allow all its value chain components to organically share three-dimensional data in real time from design to construction, which improved its competitive edge in order intake and project execution and helped create greater customer value. The adoption of value engineering that reflected project characteristics also assisted the BG in identifying and commercializing ideas to optimize plant configuration and auxiliary power. The EPC BG also utilized integrated performance calculation and dynamic characteristic analysis techniques for thermal power plant projects. The BG plans to upgrade its integrated design environment, build an optimized standard model and establish plant unit-based performance competitiveness in the upcoming years.

Nuclear Power BG

Our Nuclear Power BG is developing technology to reinforce its competitiveness in manufacturing key nuclear plant components and to expand its service market. The BG completed two projects to develop core manufacturing technology with an aim to reduce quality failures and improve productivity, and another two technology development projects to expand its service market. In addition, it identified two possible technology development projects in the back-end nuclear fuel cycle area to tap into new markets. The BG had previously completed the development of technology to establish the stability of welded sections where different materials are connected, set mid/long-term decommissioning plans, and developed SG replacement and SG tube maintenance technology. The Nuclear Power BG plans to realize Digital Factory to maintain its status as the ‘Global No. 1 Provider’ in the key nuclear equipment market while creating new growth drivers through technology development in the fields of services and back-end nuclear fuel cycle.

Boiler BG

Our Boiler BG is committed to building a stronger cost competitive edge by reinforcing its product line-up through the development of low-pollution, large-capacity boiler models that use diverse fuel sources, by developing high-efficiency, low-NOx combustion technology, and by expanding the

DTC area and adopting new burners. In 2015, the BG used its technology for the commissioning of the Shinboryeong plant’s unit 1 and 2 to verify its reliability. Our Boiler BG also aims to develop early on a low-quality coal boiler model to satisfy increasing customer needs for such boiler and to build its comparative advantage in boiler efficiency through its NOx-reducing combustion system. To respond to the recent fuel shift towards biomass in addition to the environmental issue related to NOx emissions, the BG developed its own biomass burner to significantly reduce NOx emissions. In 2016, it aims to verify the performance of the Shinboryeong plant’s unit 1 and 2, plan the development and demonstration of a HSC boiler, and develop an advanced D-NOx burner.

Turbine/Generator BG

Our Turbine/Generator BG signed a government-led demonstration project agreement with Korea Midland Power to commercialize our existing 60Hz 50MW R&M model. Furthermore, our 50Hz 350MW ST model was fully commercialized through the project contract awarded to our Turbine/Generator BG by Chile’s Red Dragon this year, in addition to the completion of concept and basic design of the gas turbine. The Turbine/Generator BG is building its product-line-up by securing USC, CCPP, nuclear steam turbine model, and G-class (60Hz) gas turbine model while improving turbine efficiency by developing advanced sealing, wet stage and high-efficiency blade technology. It also plans to establish its 50Hz 1,000MW and SC full model line-up for steam turbine, with plans to complete the basic design for compressor, combustor, turbine and SI for gas turbine.

Water BG

Our Water BG is building its MED manufacturing competitiveness in fresh water business and is reinforcing its OPEX competitiveness by upgrading RO pretreatment and using ICT capability. Since 2015, the BG has been performing big data analyses to advance its operations, including RO plant feedback analysis (PFA), while setting mid/long-term RO operational expenditure reduction targets and working to reach these targets in line with the growing RO O&M market. In the water treatment market, our Water BG aims to demonstrate its MBR/ZLD technology and build its competitive edge in WWT EPC. Following its winning contracts for Oman’s Al Ansab project and U.K.’s Bellozanne project, the BG is building on its achievement in creating EPC track records in the water treatment industry to strengthen its cost competitiveness. To this end, the BG aims to set new plans to reinforce its business competitive edge and put them to work from 2016 onwards.

Casting & Forging BG

To find new growth drivers, our Casting & Forging BG is expanding its pool of high value-added products and manufacturing ultra-sized forging steel products through the use of 170MN press while ensuring the stable quality and profitability of products identified as such. In 2015, the BG developed and commercialized high-strength materials for offshore plants, and specifically to realize Digital Factory, is expanding the application of the Manufacturing Execution System (MES) in addition to improving its manufacturing competitiveness. Our Casting & Forging BG plans to develop high-specification products – ultra-large-sized nuclear power plant products, high-efficiency thermal power plant products – and undertake continued R&D to deliver stable quality and reduce cost concerning existing products.

Securing Core Business Leadership through R&D

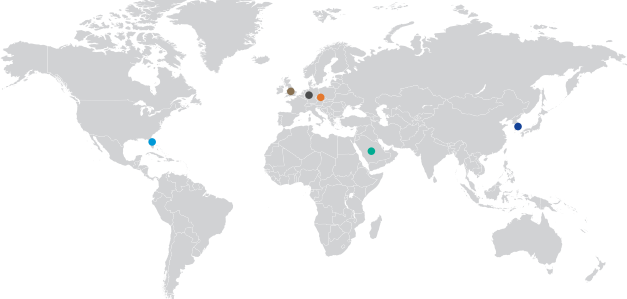
Strengthening Base Technology Competitiveness

We develop our base technology capability concerning database, design/ analytics tools and others to assist our BGs in strengthening their product competitiveness and ensure that such technology is adopted timely in project undertakings. In doing so, we continuously endeavor to secure leading technology for next-generation products so as to move ahead of the competition.

Area	Major Areas of Technology Development
Thermal & Mechanical Engineering	· Provide base technology to improve products’ efficiency/cost competitiveness/ RAM · Thermal performance improvement technology, etc. · Provide base technology to improve products’ operational flexibility · Technology to shorten the start-up time of coal-fired thermal power plants/ combined cycle power plants
Material & Manufacturing Engineering	· Secure proprietary manufacturing technology and material engineering competency in the HSC/GT areas
Electrical Engineering	· Standardize control/operation processes based on main equipment OEM technology and diversify constorl system models · Large-scale turbine control logic, nuclear TCS, integrated control system takeover, etc. · Secure core SPP technology and remote operation technology
Chemical Engineering	· Upgrade IGCC operation technology and secure technology to improve order-intake competitiveness · Improve technology in the desalination O&M and water treatment areas · Deliver the optimized operation of RO O&M in Gijang, etc.

Global R&D Network

Our R&D network spans all round the world: we are committed to hiring talented individuals across the globe and developing proprietary technology in consideration of business characteristics of respective overseas subsidiaries. Furthermore, we collaborate with presitigious overseas research institutes so that such open innovation initiatives accelerate our endeavor to develop leading technology.

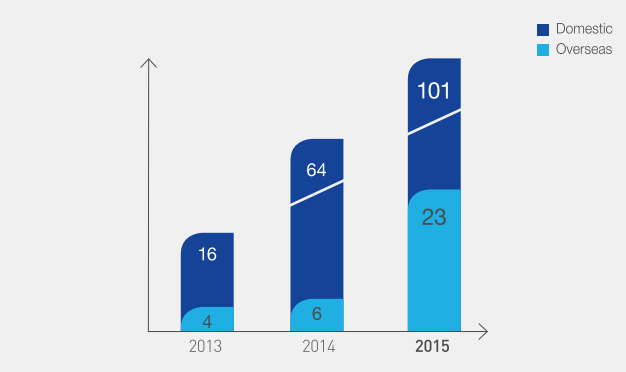


Category	Name of R&D Centers	Major Roles
Korea	Corporate R&D Center/BG R&D	Develop enabling technology and future technology Develop technology to secure product competitiveness
US	ATS America	Develop gas turbine technology
	Doosan Hydro Tech	Develop reverse osmosis (RO) technology
Saudi Arabia	Doosan R&D Center (Dammam)	Develop MED/MSF technology
Czech Republic	Turbine R&D Center	Develop steam turbine models and element technology
U.K.	Doosan Enpure	Develop water treatment technology
	Boiler R&D Center	Develop PC boiler models and element technology
Germany	Doosan Lentjes	Develop CFB & APC technology

Patent Application & Registration

In 2015, we made a total of 362 patent applications, including 124 related to new businesses and technologies. Our domestic and international patents that were registered in 2015 amounted to 195 in total. As of the end of 2015, the accumulated number of patents registered reached 1,043, which demonstrates our commitment to translating our technological capability into substantial assets.

No. of technology patent applications for new business



Upgrading R&D Operations

In 2016, our top priorities will be to upgrade our global intellectual property operations, to manage the performance of individual technologies, and conduct R&D in relation to global cooperation. Specifically, we will establish our global IP management system and operate BG specific IP strategic consultative groups so that the number of our patent applications would reach 50% of that of our global competitors. We will also build a systemic IP compliance monitoring system to minimize dispute-related risks. Furthermore, we plan to take the strategic perspective in establishing technologies that meet customer/market needs, update our Global Network Map, and facilitate partnership agreements so as to continuously expand our global R&D cooperation in new business/new technology areas while securing internal competitiveness.

Mid/Long-term Implementation Plans (2016-2020)

Upgrade Global IP Operations	· Establish a global IP management system, operate IP strategic consultative groups by BG, etc. · Establish an IP compliance monitoring system, set up a mid/long-term licensing-based exit strategies and processes
Performance Management of Technology Development	· Establish market/customer-oriented technology development strategy and reinforce its reviews
Global Cooperation	· Expand overseas R&D cooperation in new business/new technology areas · Analyze internal capabilities for different base technology fields and set up mid/long-term plans to develop such technology

Digital Factory

Implementation Background

Industry 4.0

The rapidly-developing internet of things (IOT), autonomous robots, 3D printing, and virtual/augmented reality are changing today's world and countries across the globe are taking policy initiatives, including Industry 4.0, to revitalize their manufacturing industry. Industry 4.0 creates real-time connections between digital systems and physical production systems (devices, operators) to optimize the entire production process, and aims to create a light, flexible and intelligent manufacturing environment on the basis of Cyber Physical System (CPS) and IOT technologies.

Our Four Digital Factory Goals

We defined four goals and seven technologies to optimize our design, manufacturing & construction and service processes.

4 Goals	Substantially improve productivity/quality	Real Time and improve flexibility	Prevent and respond early on based on factory visibility	Track root causes and innovate based on data
Major Technologies	Smart Machine (intelligent equipment)	Multidimensional simulation	Smart sensor, electronic tag, radio determination	Cloud Computing
	Advanced SW	Data conversion technology		Analytical tools, data mining technology

Substantially Improving Productivity/Quality

Due to the inherent characteristics of the heavy industry, it is highly likely that its large number of manually-operated processes lead to errors caused by operators. This prompted us to use the latest robotic and internet-of-things (IOT) technologies to automate our shopfloor. For instance, autonomous welding robots can weld components, and current/voltage monitoring sensors attached to these welding machines can perform quality monitoring during the welding process to automatically measure products in complicated shapes.

Real Time and Improving Flexibility

By standardizing and digitalizing production information and aligning data between design and production, we aim to create a seamless flow of information across different functions, which constitutes one of the key concepts of Industry 4.0. Our production plans and work instructions will be digitalized through simulation technology and such software technology as PLM and APS so as to improve the accuracy of these plans and instructions and to flexibly respond to any change in design and schedule. Furthermore, digitalized quality information and documents will enable us to earn trust from customers.

Preventing and Responding Early on Based on Factory Visibility

Since our shopfloor is vast in size and complicated in process, it is difficult to accurately understand its production status without performing physical inspections, and this urged us to continuously strive to improve the consis-

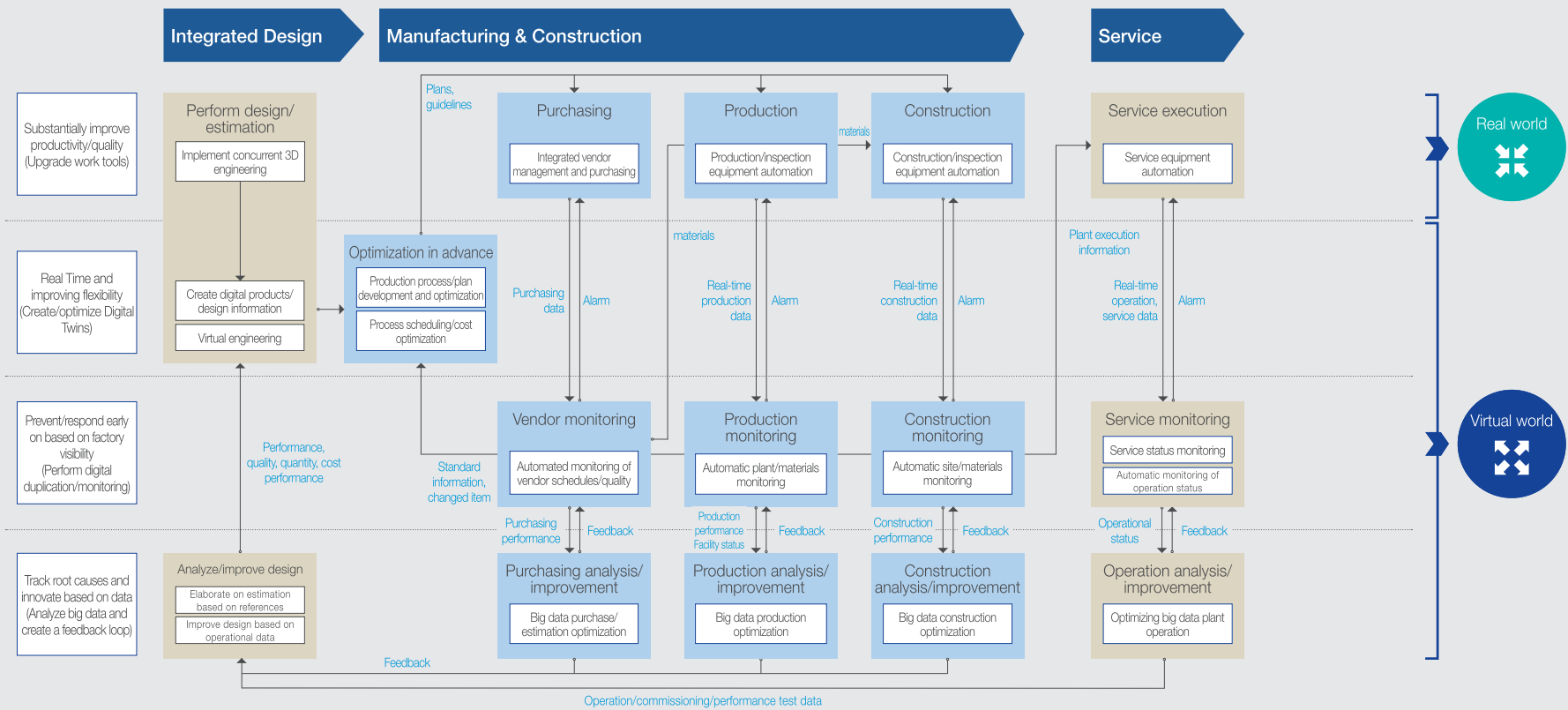
tency of reference production data. Recently, we have used IoT and wireless internet technologies to visualize all production-related information so that we immediately respond to any issues that occur and to track/manage the location and input status of materials and equipments. Furthermore, we will detect possible hazards in advance to prevent occupational injuries and their recurrence in the EHS area.

Tracking Root Causes and Innovating Based on Data

Big data analysis is the ultimate goal of Digital Factory, and this enables the improvement of operational efficiency through the processing/analysis of data accumulated via automation, visualization and mutual connections. Our goal is to utilize big data technology for facility maintenance, energy management and quality management to perform real-time monitoring, analyze root causes, and identify optimized operational/production conditions.

Our Digital Factory Implementation Plan

We aim to adopt Industry 4.0, an emerging global industrial innovation trend, to our shopfloor to set us apart from our competitors. By automating and digitalizing our manufacturing workplace, we can dramatically transform our design, manufacturing and service capability so as to build a fundamental competitive edge in quality/cost/delivery and deliver greater value to our customers.



Planning Integrated Design Operations

I-Construction uses integrated design capability to create a virtual construction/quantity management environment and to manage relevant risks so that quality management and construction coordination lead to savings in QFR cost and that the loading/unloading and location of materials are easily identified. Going forward, we plan to create such I-Construction environment to align this with other value chain components and to build a construction quantity management environment.

Implementation Plans in the Manufacturing Sector

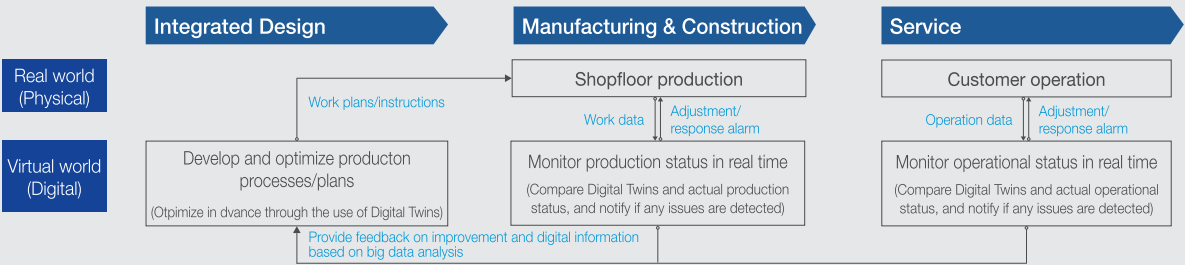
Digital Factory needs from nuclear, boiler and other business operations will base our endeavor to specify four goals and 12 initiatives. Detailed work methods and processes will be designed and five-year roadmaps will be developed for each BG so that tailored BC-specific initiatives are undertaken. To this end, decision-making bodies and consultation groups have been created both on company-wide and BG levels under the leadership of production/quality organizations, and they will be further completed through collaboration with specialized digitalization service providers.

Implementation Plans in the Service Sector

We plan to build a system that allows for the real-time monitoring of operation and service information through the automation of service equipment. We will also perform big data analyses to identify operational improvements and in doing so, will optimize our plant operation. Furthermore, we will establish systemic work procedures through inter-departmental communication, the re-definition of operational data schedules/levels, and the standardization of monitoring processes.

Example of Digital Factory Applications

The Digital Twins created through 3D engineering will be used for preliminary optimization in the virtual world, for effective monitoring through digital duplication in the actual production/installation process, and for the delivery of digital data platform through the creation of a feedback loop.



Building an Integrated Design Environment and Adopting PJT

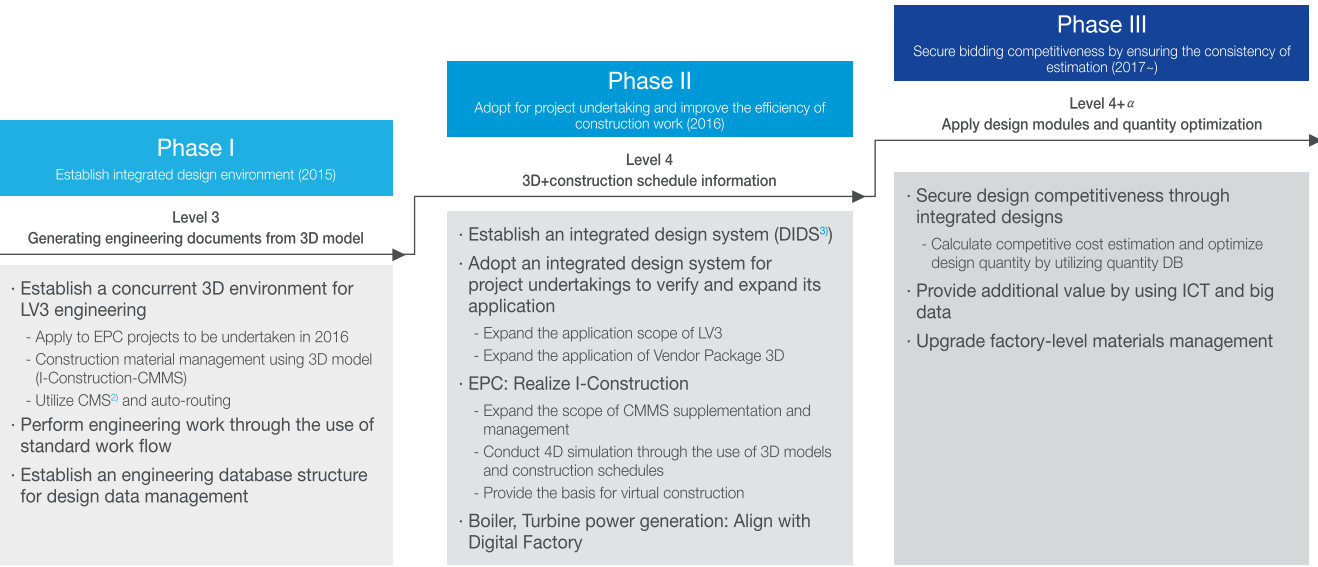
Implementation Directions

Our integrated design environment is under development with an aim to allow for swift customer response and real-time collaboration when needed and to minimize quality risks by identifying major design quality issues early on. We developed a three-phase mid/long-term integrated design roadmap to improve project quality and meet project deadlines by unifying engineering information through integrated designs and by using such information for estimation and engineering. In 2015, we laid the basis for an integrated design environment to take necessary steps systematically.

Outcomes and Future Plans

Kick-off Meeting to Build an Integrated Design Environment

On May 27 of 2015, we held a kick-off meeting to 'build an integrated design environment' with an aim to proactively respond to changing internal/external environments and to establish collaboration processes with overseas subsidiaries. The meeting served to share and discuss our plans and directions in building an 'integrated design environment' in a phased manner to adopt a more advanced and scientific approach in conducting engineering work as well as the legitimacy of design innovation initiatives and areas in need of assistance.



1) CAx (Computer-aided technologies) : CAD (Design), CAE (Analysis)
2) CMS : Cable Management System
3) DIDS : Doosan Integrated Design System (Tentative name)

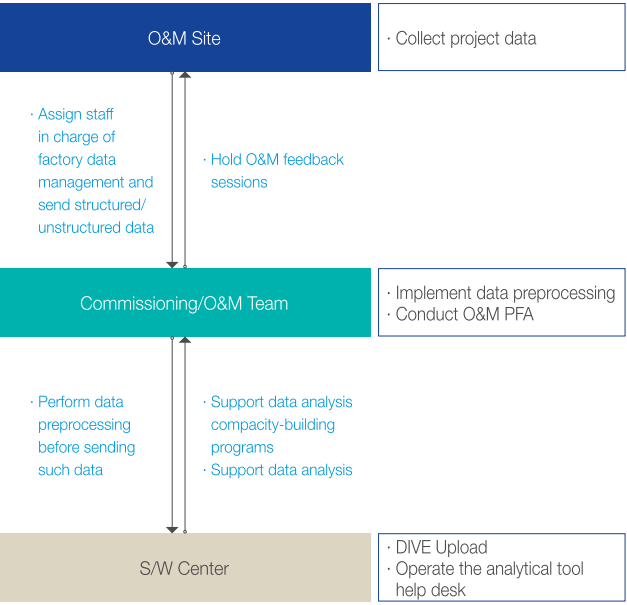
Establishing the ICT Infrastructure for New Business

Implementation Directions

As Korea is an open economy that pursues economic growth over the long haul in the face of the increasingly fierce global competition, it is highly critical that the nation builds its own Information and Communication Technology (ICT) capability. What's more, ICT investment and policy is moving beyond the ICT boundary to serve as the basis of growth for a nation's entire industry sectors. DHIC believe that its' profitability could be further improved by using ICT to perfectly control our operational situation and prevent any accidents. Convergence with ICT will help us lay the basis to gather information on plant design, construction and operation and turn into big data and use such data to improve our products and discover new business opportunities. Thus, we define ICT convergence as a new initiative to drive our future growth.

Establishing Data Management Protocols

Our Water BG established protocols that reflected local specifications for respective operation and maintenance (O&M) projects and developed data processing software to improve work efficiency. At the O&M project factory, operational data is regularly delivered to the Commissioning/O&M Team, which then uses Visual Basic for Application (VBA) to offer such data following data pre-processing to the S/W Center. The O&M plant feedback analysis (PFA) outcomes generated through operational data analysis serve as the basis to allow for quarterly communication with factories through O&M feedback sessions.



Internalizing ICT Competency

We provided specialized data analysis training to executives working in such Digital Factory-related fields as production, quality, purchasing, business management, EHS and strategy as well as executives interested in data analysis. These training courses aimed to help trainees develop analytics leadership to establish data-based decision-making practices, understand latest big data trends through lectures given by outside experts, benchmark advanced industry peers, and secure insights on data analysis and use through the examples of corporate data analysis. In 2016, we plan to provide regular data analysis courses and open such courses for all employees. These courses will be also categorized into introductory, basic and advanced levels: introductory courses will open consecutively for all office workers from 2016 onwards to promote a data-driven corporate culture, and advanced courses will be offered to employees who actually perform data analysis in their daily operations.

Implementation Plans to Internalize ICT Competency

Implementation Tasks	Details
Strengthen Data Analysis Training Courses and Analytics Competency	<ul style="list-style-type: none">Set up executive training courses on data analysisDevelop data analysis training content with a focus on heavy industry operations
Select KPIs for ICT Change Management	<ul style="list-style-type: none">Select the first four key performance indicators (KPI) to diagnose the level of ICT change management to perform measurement and share outcomesContinuous identification of meaningful KPIs planned in the process of future ICT implementation
Continuously Implement ICT Ready Initiatives	<ul style="list-style-type: none">Realignment of the existing optimizer initiatives and the re-definition of future directions for optimizers plannedInstall and test-run the RMS predictive diagnostics solution MVP
Improve Competitiveness through Digital Factory	<ul style="list-style-type: none">Workshops planned to identify new ICT initiatives by utilizing the design thinking technique
Implement SW Service Pilot Projects	<ul style="list-style-type: none">Implement pilot projects to acquire advanced service software development methodologies and SW platform utilization technologiesProvide collaboration and demonstration services for pilot projects to the customers of Korea East-west Power

Future Plans

We plan to build and expand our ICT capabilities by opening data analysis training courses for executives. We will also strengthen our fundamental competitiveness by realigning existing optimizer initiatives, re-defining directions for future optimizer initiatives, and installing and test-running the RMS predictive diagnostics solution MVP. Furthermore, we plan to host workshops to select new ICT initiatives so as to continuously discover new business opportunities.



Sustainable Management

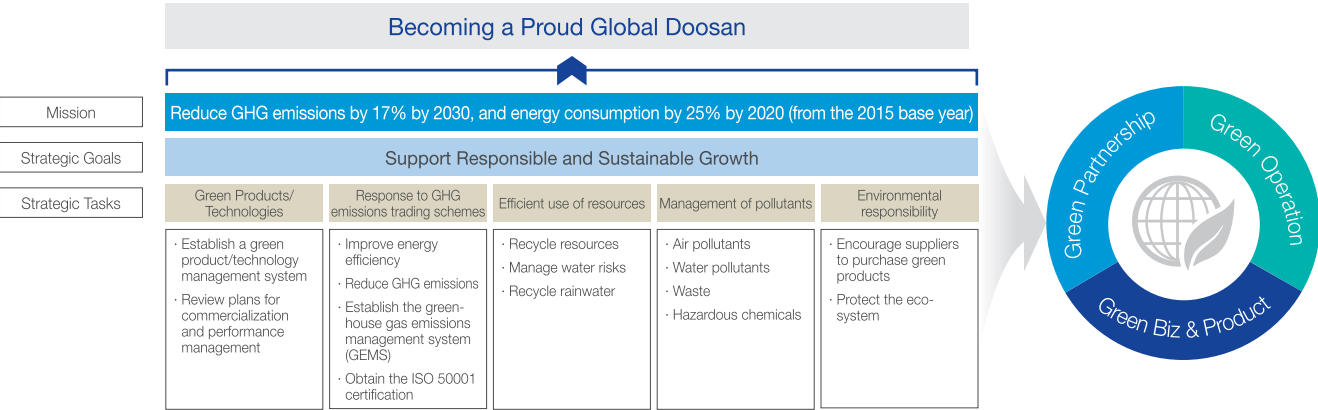
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We are whole-heartedly committed to fulfilling our role for society and the environment as a corporate citizen, and are pursuing sustainable growth through communication and cooperation with customers, employees, local communities and other stakeholders.



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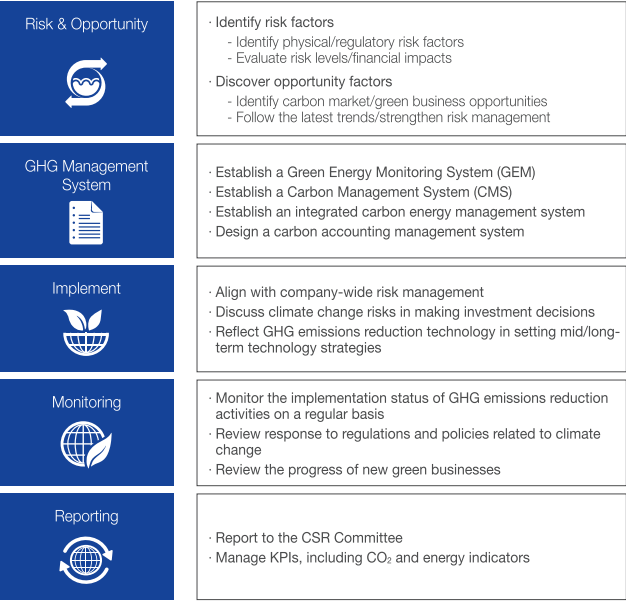
Green Management



Risk & Opportunity

The importance of responding to climate change is increasing as demonstrated by the World Economic Forum 2015 that placed numerous environmental issues – environmental pollution, water shortages, and natural disasters – on the list of global top 10 trends and risks. The demand of stakeholders including clients and investors is also growing in relation to green management, and green management regulations are being quickly adopted across the world. Thus, we strive to systematically manage risks and opportunities related to climate change by identifying risk and opportunity factors, building and integrating a greenhouse gas (GHG) management system, adopting the climate change process that consists of response, monitoring and reporting. In doing so, we aim to minimize our financial/non-financial losses from climate change and explore new business opportunities.

Risk & Opportunity Management Process

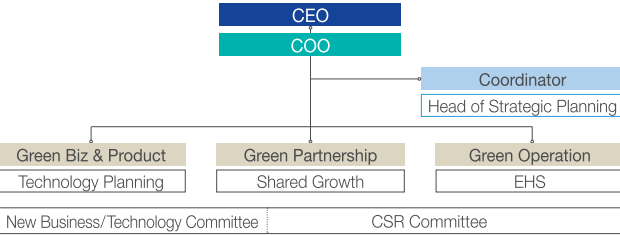


Exploring New Business Opportunities Related to Climate Change

The accelerating global warming is giving rise to damages caused by abnormal weather conditions across the world. We are actively pursuing business opportunities related to climate change by identifying risks and impacts from climate change and conducting new businesses in the fields of energy storage system (ESS), virtual power plant (VPP) and high-efficiency power generation. The launching of the Climate Change Fund (GCF), that assists developing nations in reducing damage from climate change through the funds raised by advanced nations, is also expected to create new markets. The GCF plans to raise US\$100 billion by 2020 and US\$100 billion per year from 2020 onwards to support developing nations, and has adopted the eight business categories of GHG emissions reduction, health, food and others concerning climate change adaptation. Specifically, the business categories of low carbon energy generation & distribution and access to clean water correspond to our key business areas. We will align our green portfolio management system with GCF utilization plans and expand our network to create new business opportunities in the climate change sector.

Climate Change Response Organization

Our climate change response organization consists of Green Biz & Product, Green Partnership and Green Operation, and is operated under the leadership of the Green Value Committee (GVC). Its work progress is regularly reported to the CSR Committee, and company-wide climate change response projects are reported to the corporate operating committee.

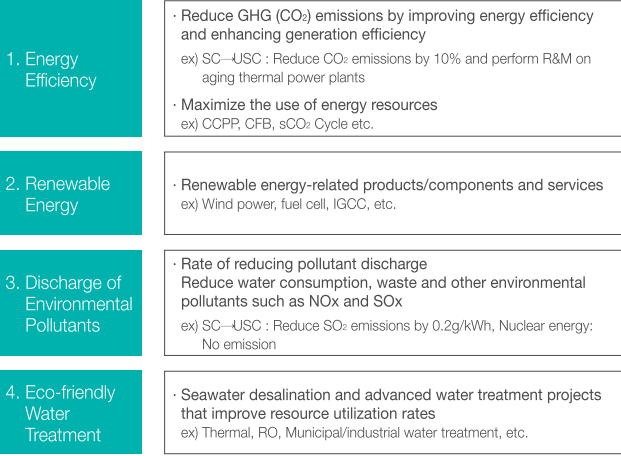


Green Biz & Product

Developing a Green Portfolio Management System

In 2015, we developed a green portfolio management system to pre-emptively respond to global green management risks: we defined green products and initiatives across the board and developed their classification system to ensure sustained review and management. Specifically, we defined green products and technologies by benchmarking the best practices adopted by industry leaders, and analyzed our current conditions as a company to establish our own green product/technology classification system. Furthermore, we are reviewing the feasibility of green business through the use of the GCF and other related funds, and updating green product/technology data in our integrated reports and other in-house/external corporate releases as part of our continued communication endeavors.

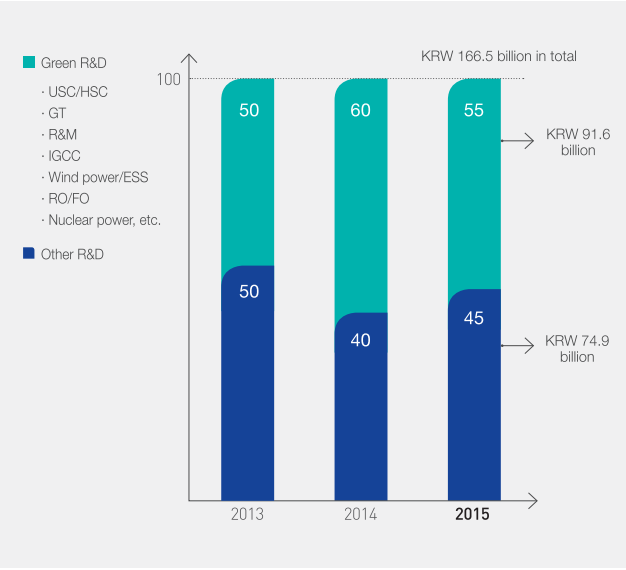
Classification of Green Products/Technologies



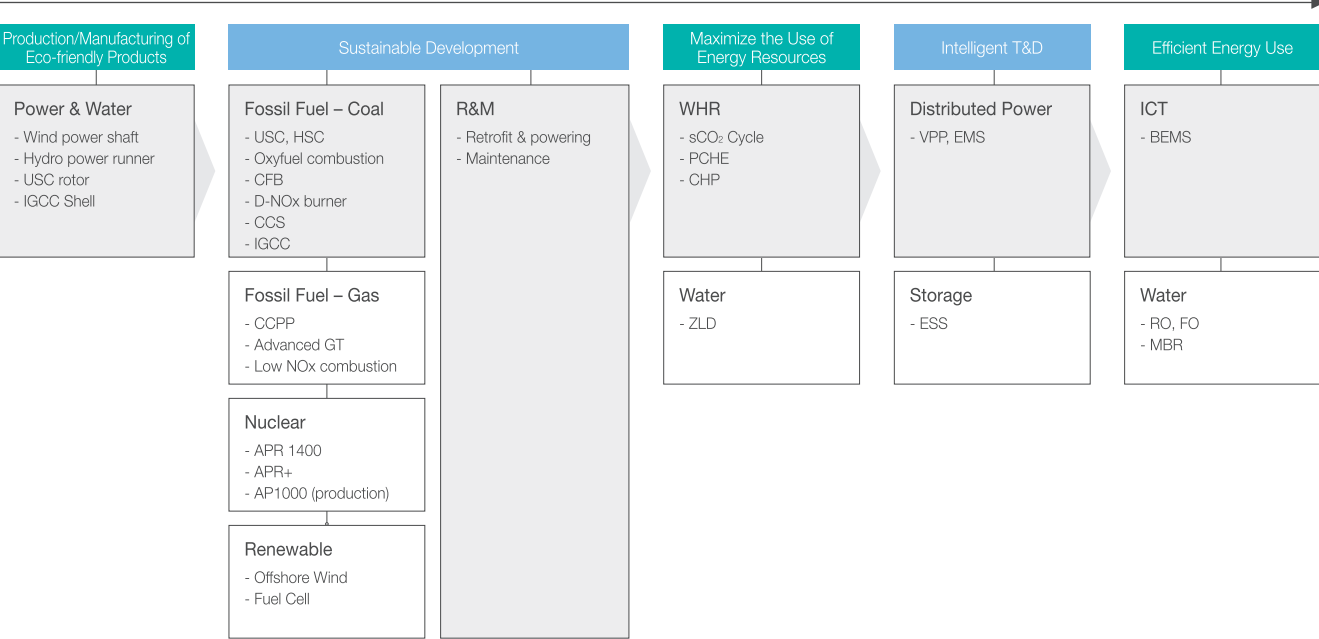
Status of Green Products/Technologies

Analyzing our green portfolio over the past three years revealed that our investment in developing green technology has been on the rise since 2014 and our green technology investment ratio is more than half of the total R&D expenditure. This clearly demonstrates our commitment to take long-term and strategic response to external factors (the environment, etc.) in addition to profitability as a way to ensure sustainable growth.

Green R&D by Year



Green Product/Technology Development Directions



Green Operation

Major Green Products/Technologies

Developing Ultra Super Critical (USC) Clean Coal-Fired Thermal Power Generation Technology

The ultra super critical (USC) technology we developed at DHIC represents the high-efficiency USC coal-fired thermal power generation technology that can be adopted under the world's best steam conditions (265 kg/cm^2 /610℃/621℃). We initiated the development of this proprietary design technology back in 2002 and completed its commercialization technology in 2015. Presently, we are verifying the performance of key power plant components through the Shinboryeong unit 1 and 2 demonstration plants. The 1,000MW USC coal-fired thermal power plant model to be adopted for the Shinboryeong unit 1 and 2 plants is highly efficient (44% or higher in generation efficiency), eco-friendly and large-capacity. Its generation efficiency is more than 5% higher than the existing super critical (SC) model, and this is expected to reduce annual CO₂ emissions by more than 350,000 tons. Following the Paris Climate Change Agreement, there will be continuously increasing customer needs for eco-friendly, high-efficiency coal-fired thermal power plants that perform better in reducing CO₂ emissions. As such, we endeavor to respond to both customer needs and climate change by developing advanced USC element technology in addition to establishing the reliability of our USC technology.

Developing Advanced D-NOx Burner and Eco-friendly Combustion Technology

In response to the environmental regulations that govern the pollutant emissions from coal-fired thermal power plants, we are developing technology to reduce the generation of NOx, one of the major environmental pollutants, by improving the design and combustion efficiency of burners that constitute the core part of boilers. Such eco-friendly burner will boast global top-tier performance by reducing NOx generation by more than 20% from the usual NOx generation of 140-160ppm. We built an in-house prototype demonstration facility to verify the excellent performance of this technology. Through our sustained endeavor to develop greener burner technology, we are pushing the boundary in developing eco-friendly power generation technology and promoting green growth.

Onshore and Offshore Wind Power System

We are Korea's 1st to develop the 3MW offshore wind power system WinD-S3000™. In 2010, we signed a contract for the 9MW wind power complex in Shinan-gun, South Jeolla Province, and in 2011, we were certified by the world-renowned German certification body DEWI-OCC. In 2012, we were awarded with a series of project orders including the 30MW Tamla offshore wind power project, Korea's 1st offshore wind power generation project, and the 24MW phase 2 Yeongheung wind power complex project. In 2013, our 3MW wind power generation system obtained the New Excellent Product certification from the Korean Agency for Technology and Standards, and in 2014, we won orders for the 42MW onshore wind power project in South Jeolla Province as well as the equipment supply project for the 21MW Sangmyung onshore wind power generation district. Our WinDS3000™ is Asia's first to be certified globally in 2011: this 3MW onshore/offshore wind power generation system boasts dramatically-improved safety and durability to endure typhoons and turbulences, and allows for rapid maintenance and repair as it was developed through our own technology, which will generate savings in operational cost. In developing this system, we were recognized for our technological prowess that create future value, and took a step forward in delivering technology that enhances the value of planet earth.

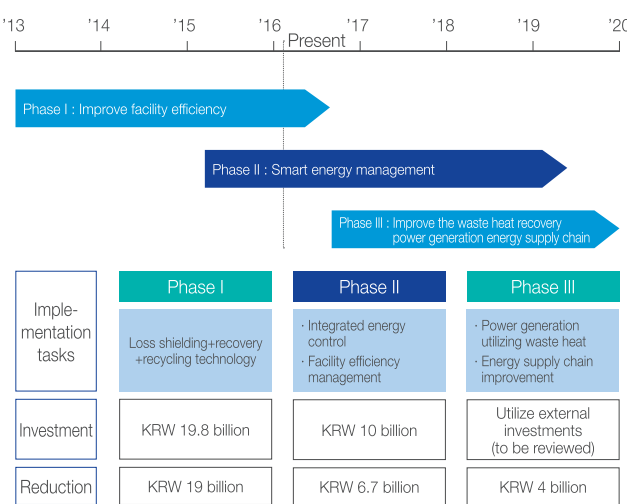
Responding to GHG Emissions Trading Schemes

We move quickly in accessing a wide range of climate change data to minimize any impact from climate change on our operations and respond systematically to climate change. In addition to coping with governmental climate change regulations and complying with relevant laws and regulations, we also act pre-emptively by detecting, monitoring and improving on risk factors. Specifically, the GHG emissions trading scheme introduced in Korea in 2015 stipulates that if a company's GHG emissions exceed the limit assigned by the government, the company has to bear the direct financial burden of purchasing carbon allowances in the market. Therefore, we estimate our GHG emissions through detailed climate change risk analysis and scenario-based analysis to measure our financial risks. Furthermore, we prioritize our responses in consideration of costs and benefits that occur due to the introduction of the trading scheme, and integrate them in our management decision-making. Our BGs also manage their own performance in reaching carbon allowance targets. We strive to build stronger internal capabilities by providing specialized training on energy management and carbon allowances for respective BG factories.

Reducing GHG Emissions

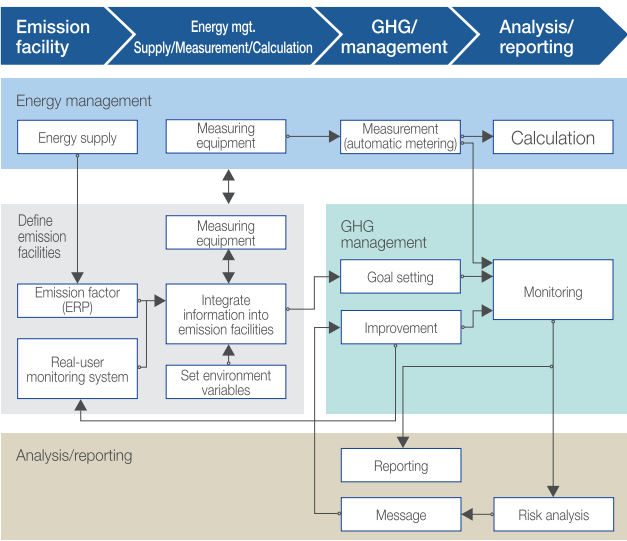
Green operation intends to practice green management from the operational aspect. We improve the energy efficiency of our manufacturing/production sites, and are building a future-driven low energy consumption structure on the basis of energy conservation programs led by working-level staff and ICT technology so as to reduce the waste of energy. Included in such energy conservation programs are shielding losses, recovering waste heat, optimizing combustion efficiency, controlling the pressure of compressed air, using high-efficiency pumps and cutting off standby power. In doing so, we reduced our energy use by 30TJ and our GHG emissions by 17,000tCO₂ in 2015.

Energy Efficiency Improvement Roadmap



Promoting the GEMS

As Korea's Green Growth Framework Act and Target Management System require that substantial actions be taken to reduce GHG emissions and that their effects be verified, we introduced the Green Energy Monitoring System (GEMS) in 2011. The GEMS allowed us to quantify the invisible data of GHG emissions, set our targets and perform real-time monitoring to identify improvement opportunities while generating analytical information. This ultimately helped us encourage our factories to engage themselves voluntarily and enhance our executorial capability.



Establishing the ISO 50001 Energy Management System

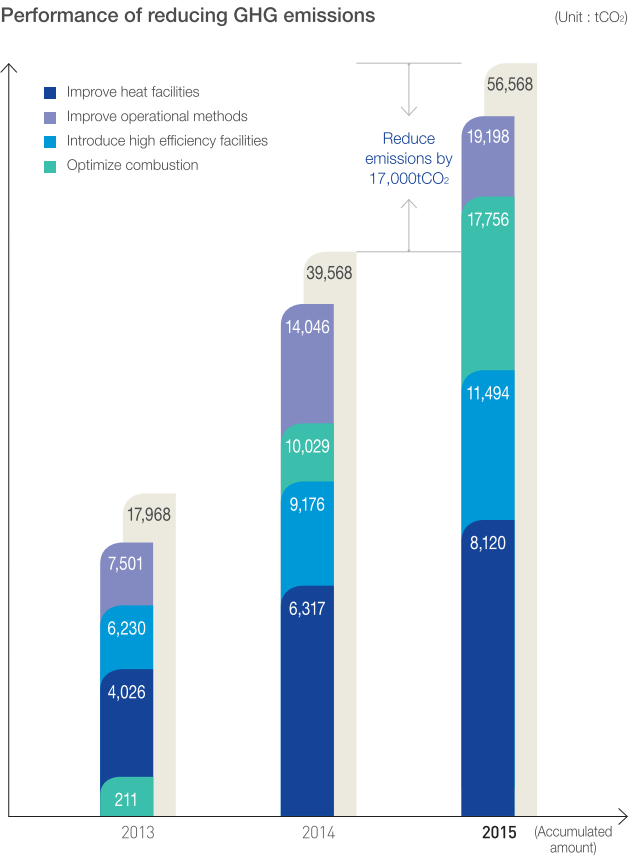
Our goal for 2016 is to build an ISO 50001 energy management system to respond to climate change/energy regulations in Korea and abroad while measuring energy losses to reduce energy consumption. The ISO 50001 energy efficiency certification will enable us to pre-emptively respond to the diverse export requirements of overseas markets and to increase our sales. Thus, we analyzed the status of the heavy industry environment and set energy management plans so as to identify measures to maximize energy conservation. Our energy management system was officially established in March 2016.

	<ul style="list-style-type: none">Analyze the heavy industry environmentTrain relevant employeesReview the status of energy management in the heavy industry and set directions
	<ul style="list-style-type: none">Plan energy management activitiesPerform energy mapping and reviewsDesignate important energy usesDocument the energy management system and design its functions
	<ul style="list-style-type: none">Analyze operational variablesDiagnose energy efficiencyAnalyze energy lossesIdentify optimal operational plans

Improving Energy Efficiency

We aim to promote both economic feasibility and eco-friendliness and to strengthen our fundamental competitiveness by efficiently using our energy sources. Thus, we have been working continuously to improve our energy efficiency across the board since 2012, which allowed us to save KRW 3.4 billion, which exceeded our 2015 target set in the beginning of the year by 180%. This is translated into KRW 18 billion in accumulated energy savings since 2012. Our energy conservation not only reduced our financial cost but also contributed to reducing GHG emissions by approximately 17,000tCO₂.

Performance of reducing GHG emissions



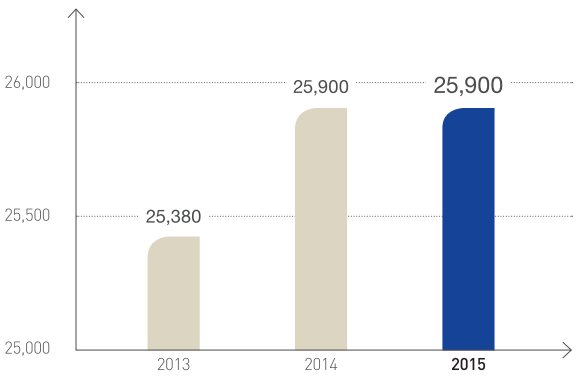
Efficient Use of Resources

Recycling and Reuse of Resources

We reduce the use of iron, one of the key materials that we use, and also recycle used iron through eco-friendly production. In 2015, we recycled 78,214 tons of recovered iron, and we plan to collect scrap iron from dis-used assets to continuously increase our recycling of recovered iron. To protect water resources, we also strive to recycle slag coolants and reduced our water consumption by a total of 25,900 tons in 2015.

Reduction in water use (Changwon Plant)

(Unit : ton)

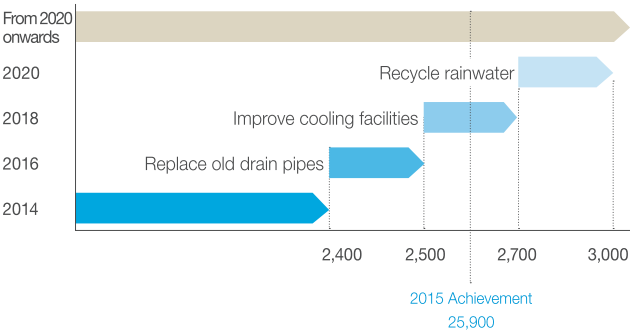


Water Risk Management

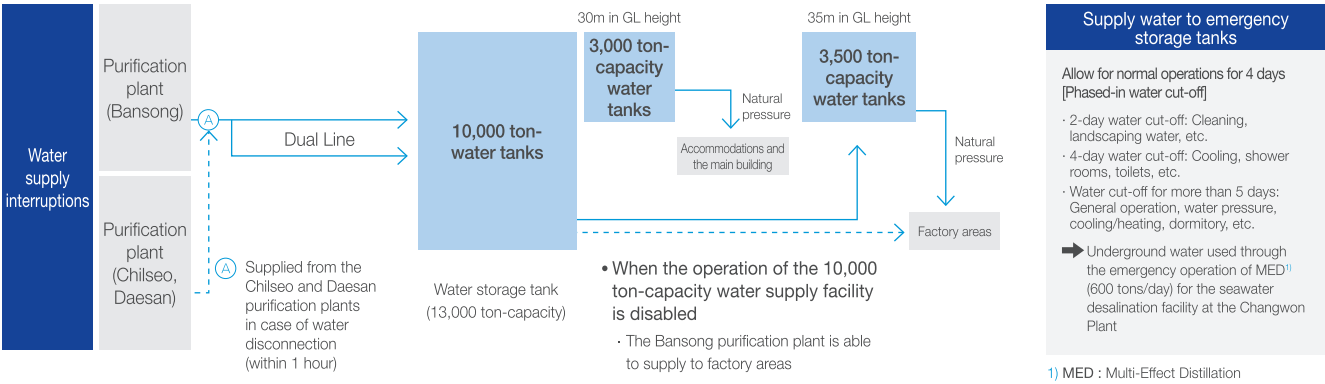
According to the Population Action International (PAI), available water resources in Korea amount to 63 billion m³ or 1,452m³ per person, which puts the nation on the list of water-stressed nations. To address water shortage issues, we developed our mid/long-term roadmap to reduce water consumption as well as a contingency system to respond to water supply interruptions so as to prepare for possible impact from water shortages on our operations. We installed three large-scale water tanks to store a massive amount of water that would meet our water needs for more than five days even in case of water supply interruptions. Included in our endeavors to reduce water consumption in the mid/long-term are the recycling of rainwater, the efficiency improvement of heavy water-consuming facilities, the improvement of cooling facilities, and the replacement of old drain pipes. In doing so, we prepare for any possible risks that may be caused by water shortages and supply interruptions.

Roadmap to Reduce Water Use

(Unit : m³)

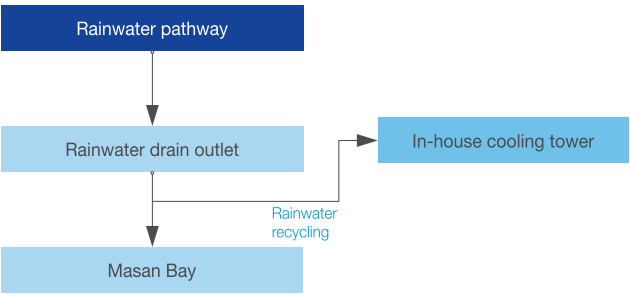


Contingency plan for water supply interruptions



Building and Stabilizing a Rainwater Recycling System

Our rainwater recycling facility, capable of fully recycling stream water and up to 5 mm of precipitation on the premises of our Changwon Plant, is slated for completion by December 2016. This is expected to generate KRW 170 million per year in saved water cost by recycling rainwater. Furthermore, the facility's technological effectiveness will be verified by adopting the water treatment technology of our Water BG, which will align this project with our business operations.



Pollutant Management

Management of Air Pollutants

We systematically practice green management that pursues both economic feasibility and eco-friendliness to minimize the impact of our business conduct on society. We define environmental issues in the manufacturing process and understand possible impact from such process in advance in order to identify major causes. These causal factors are then monitored and controlled within the appropriate management boundary so that we fully comply with environmental regulations and minimize our environmental footprint. We plan to reduce our air pollutant emissions within the 25% bottom range of the legally permissible threshold.

Management of Hazardous Chemicals

In accordance with Korea's Act on the Registration and Evaluation of Chemical Substances and Chemicals Control Act that took effect in 2015, we are operating a monitoring system to manage the entire range of chemicals that we use. We also fostered 16 hazardous chemical managers and assigned them to each and every site that handles chemicals. As part of our endeavors to reduce the use of harmful chemicals, we replaced Hydrazine hydrate with the less hazardous Carbohydrazide. In 2016, we plan to substitute six of the 14 hazardous chemicals in use with general chemicals and reduce their total handling quantity by approximately 30%. Over the long haul, our goal is to reduce hazardous chemicals currently in use by 70%.

Management of Water Pollutants

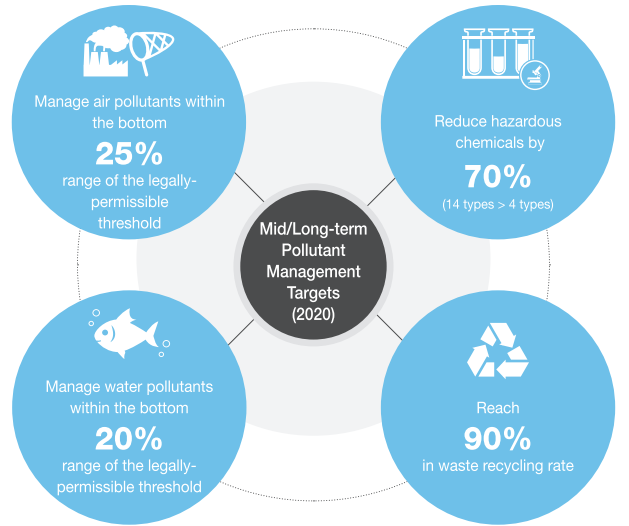
Our wastewater treatment facility processes 400 tons of wastewater per day on average by using such physical and chemical treatment techniques as coagulation, precipitation and filtration. We ensure that the treated water reaching the end of this entire process falls within the 20% range of the legally-permissible threshold in 17 categories. In addition, the recirculation of slag coolants allows us to reduce our water consumption by 25,900 tons per year, and 200 tons of water are reused each year through rainwater drain outlets. In 2016, we plan to build a rainwater recycling system to recycle rainwater for in-house cooling towers and to limit the discharge of water pollutants within the bottom 20% range of the legal thresholds.

Management of Waste

To reduce the generation of waste from factories and offices, we encourage our employees to recycle waste in their daily operations. Once recycled, waste is treated through the use of such dedicated collection equipment as dump trucks and rotating forklifts. We also identify new professional recycling service providers to continuously improve our waste recycling process, which helped us reach 88% in waste recycling rate in 2015. Our goal is to increase the rate to 90% by 2020.

Zero Rainwater Discharge (Prevention of Leakages)

Since our Changwon Plant borders the Masan Bay, we are doing our utmost to prevent any leaks of pollutants. We installed gates for each section of the route from the pollutant handling facility to the final drain outlet. In 2016, we plan to build a rainwater discharge prevention system that immediately collects discharged pollutants and directs them to the wastewater treatment plant so that these pollutants do not flow into the Masan Bay under any circumstances.



Fulfilling Environmental Responsibility

Preserving Endangered Wild Plants

We are fully committed to minimizing the impact from our construction projects on nearby ecosystems. In undertaking the urbn highway construction project that links Bibong and Maesong in Gyeonggi Province, we developed forestration plans to refrain from including unnecessary areas to minimize any damage against terrestrial plants and forest vegetation while adopting the slope protection technique for temples and mound slopes to ensure harmony with surrounding vegetation. We also replanted 430 pine trees and Japanese oak treess (including arbors and arborescents) to minimize impact from the construction on these trees. Since the older and larger pine trees in the vicinity of the village hall in maesong-myeon were highly likely to suffer damage as they were placed along the construction areas, eight of these trees were replanted in neighboring areas and they will be transplated again in the landscape planting area. In consideration of the mid-to-large sized mammals – elks or raccoons – that inhabit our project areas, we created animal travel routes and installed fences for them to use. Since eco pathways created to protect the green network are highly likely to be used by animals to travel, we install fences to preserve animals in addition to creating an inhabitable environment for them (creating concealed vegetation, building a pile of stones or a pile of old trees).



Creating a Healthy Yangjaecheon Project (Yangjae Stream)



Marine clean-up activities near Sogo Island in Jinhae

Creating a Healthy Yangjae Stream Project

We cleaned up and refurbished trails while creating flower gardens along Yangjae Stream near the Citizen's Forest Park in Seocho-gu, Seoul, to contribute to protecting the local ecosystem and to provide convenience to local residents. As part of our Doosan Day Community Service event, employees from diverse BG organizations were engaged in undertaking company-wide ecosystem protection initiatives on an on-going basis, which included this project that helped Yangjae Stream regain its vitality.

Local Clean-Up Events

As part of our Environment Day event, we have taken action to protect wetlands near the Bongam tidal flat of the Masan Bay and to clean up coastal areas in Guisan-dong. Our employees help remove tree branches and weeds piled up in rainwater drain outlets, and we, as a member of the Maritime Rescue & Salvage Association, are cooperating with the Gyeongnam Provincial Government, Changwon City Hall, Seongsan District Office, Kyungnam University and local civic groups to protect the marine environment. Each year, nearly 200 employees participate in collecting waste generated from non-point pollution sources. Furthermore, we pick up waste that washes up on the shores and breakwaters near the docks of the Masanhappo-gu Wonjean to help clean up the local environment.

Green Partnership

Our Green Partnership project aims to expand green management across the whole supply chain. We undertake wide-ranging initiatives to support our suppliers with environmental management by helping them build an environmental management system and by integrating environmental factors in selecting and evaluating suppliers.

Supporting Suppliers with Energy Efficiency Enhancement

We share our energy conservation practices with our suppliers and transfer relevant technology to them to elevate their understanding and awareness of green management. We helped seven of our suppliers including DHHI in identifying possible areas of energy conservation by reviewing their facility, manufacturing process and energy use & consumption structure. We also installed digital meters to help our suppliers identify possible improvements spanning from energy consumption management, compressor pressure optimization to transformer capacity modification. Furthermore, we offered training to 144 suppliers including HK Metal on seven occasions on our enegy efficiency improvement practices and needs for such practices. In consideration of the financial burden of our small suppliers, we assist them in introducing their own Energy Storage System (ESS) through non-interest loans (KRW 200 million). We aim to extend the scope of suppliers subject to our energy efficiency diagnosis, and to this end, will actively utilize governmental support projects to advance their green management so as to disseminate green management practices across our entire supply chain.



Support suppliers with energy efficiency improvement

Enhancing Suppliers' Awareness of Green Management

In line with strengthening global environmental regulations, we provide regular training to our suppliers on the appropriate management of substances subject to environmental regulations and environmental management system techniques. In doing so, we prevent any environmentally-harmful substances contained in components supplied by our suppliers as a way to build a stronger competitive edge in products.

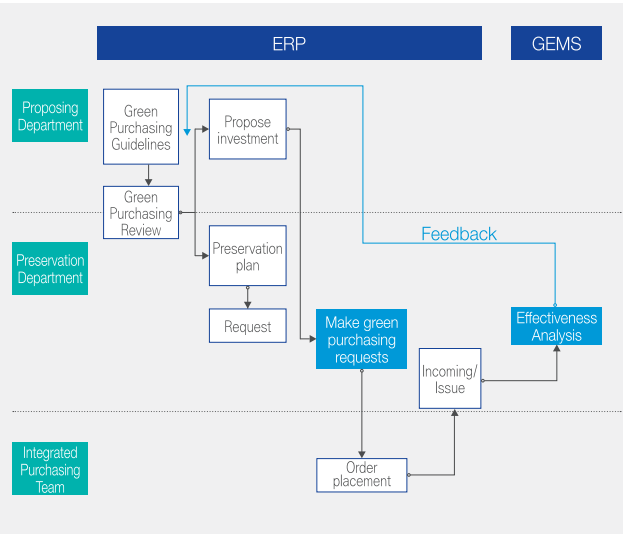
Purchasing of Green Products

We continuously strive to fulfill our corporate social responsibility and to minimize our environmental footprint. As such, we established our green purchasing guidelines and sustainable green purchasing processes in 2011 while signing a voluntary green purchasing agreement with the Korean government. We will further commit ourselves to increasing the purchase of eco-friendly products in the upcoming years.

Category	Unit	2013	2014	2015
Green Purchasing Outcomes	KRW 1 million	24,109	3,279 ¹⁾	18,597

1) Since the year 2014 belongs to the initial apartment construction phase, the purchase of eco-certified furniture was not included in the total purchase amount

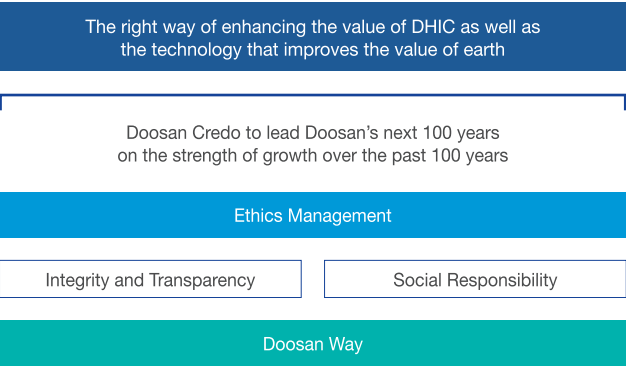
Procedure of Green Purchasing



Ethics Management

Today, a company's business conduct is governed by domestic/international trade laws on the prevention of bribery – Foreign Corrupt Practices Act (FCPA) of the U.S., the Bribery Act of the U.K. and OECD's Anti-Bribery Convention -, Korea's Fair Trade Act and other domestic/international anti-corruption regulations, and the supervision of governmental regulatory bodies. This implies that we should not only talk the talk but also walk the walk in practicing ethics management as the key that determines a company's continued survival as well as the success of unit operations. Following our declaration of the Code of Ethics in 2002 that led to the development of an ethics management system, we have complied with detailed ethical regulations since they were set forth in 2014 as the practical behavioral guidelines that realize the core values of the Doosan Way. Furthermore, we built an organizational system to systematically practice ethics management, provide wide-ranging training programs to help employees raise their compliance awareness, and undertake initiatives to prevent operational risks.

Ethics Management Strategies



Ethics Agent Workshop

Ethics Management Implementation System

Strategy Set-up Organization

The Ethics Division of the CSR committee is responsible for setting ethics management implementation plans in the ethical compliance area, and consults with the CSR Committee in making decisions concerning company-wide internalization/promotion plans.

Supervising Organization

The Ethics Office serves as the control tower of our company-wide ethics management. The Ethics Office is consisted of corporate center functions (Compliance, Legal Affairs, HR, Shared Growth) and the Ethics Agent, found within each BG, who takes the lead in implementing ethical management autonomously by complying with the Code of Conduct. The Ethics Office establishes ethics management activity plans, manages activity outcomes, monitors diverse programs to comply with the Code of Conduct, and runs discussion groups to proceed with ethics management activities. The Ethics Agents from each BG also undertake diverse ethics management activities, ranging from setting ethics management plans by BG/Division, training on ethical standards, to serving as a channel that provides relevant information.

Working-Level Implementation Organization

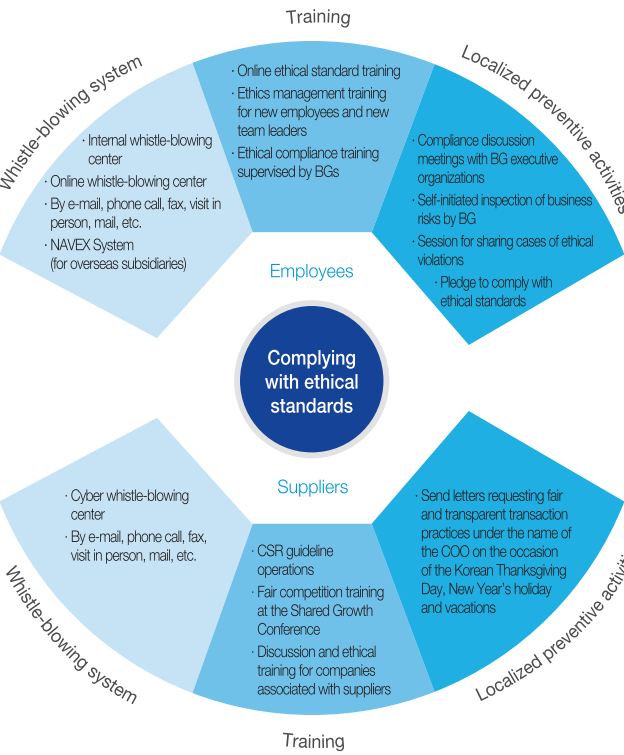
The company-wide execution organizations consist of the following: the Internal Audit that examines any violation of the Code of Conduct; the Legal Affairs that is responsible for raising awareness and managing the Code of Conduct; the Shared Growth that supervises suppliers' CSR activities; and the HR that supervises ethics management activities related to employees' human rights. Each organization in each BG/Division performs such activities to comply with the Code of Conduct.

Ethics Management Implementation Organization



Ethics Management Program

To facilitate ethics management, we expended our ethics management programs to include suppliers, and are operating a range of programs from the whistle-blowing system and training to localized preventive activities.



Preventing the Violation of the Code of Conduct and Incorporating Its Awareness

In order to prevent ethical risks before they occur, we hold meetings with divisions related to purchasing/outsourcing/design/quality management, and strengthened programs to prevent the recurrence of violating the Code of Conduct for organizations that had previously been a violator. We are also continuously providing training to raise suppliers' awareness on our Code of Conduct.

Strengthened Global Ethical Management System

We are striving to reinforce our ethics management system not only in domestic business entity but also in overseas subsidiaries by introducing the whistle-blowing system for each subsidiary and setting up compliance organizations. We also host the Global Compliance Council regularly between the head office and overseas subsidiaries to improve our mutual communication.



Global Compliance Council

Major Achievements in 2015

Building the Self-Initiated Ethics Management System by BG

Following the consensus that it is necessary to encourage company-wide participation instead of implementing restricted ethics management activities led by specific departments, we established the Ethics Office to serve as the control tower of ethics management and to efficiently guide ethics education by the working-level department. We also appointed Ethics Agents in each BG so that self-initiated ethics management activities can be implemented within each BG, while also holding regular consultative group meetings and workshops between the company and BGs for close collaboration. We provided self-initiated ethics promotion training for every organization under the supervision of executives and every BG. We analyzed the potential risks in each BG that could arise from violating the Code of Conduct, which resulted in establishing a self-inspection system within every BG to monitor the risk of violation.

Future Plans

Strengthening Autonomous Ethical Activities by BG

In 2016, we plan to promote the operation of the Ethics Office. To be specific, we plan on strengthening communication by holding workshops between the company and BGs, while simultaneously promoting company-wide and BG-level ethical compliance activities in order to internalize and spread employees' awareness on ethical practices, with plans to hold specialized ethical management training for employees subject to advanced training. Additionally, we also plan to promote self-initiated activities led by individual BGs, including developing training materials to comply with individual BG/unit's Code of Ethics and implementing those activities, as well as conducting self-inspections on risks.

Strengthening Ethical Management Systems and Programs

Our aim is to improve the operation of whistle-blowing channels of our overseas subsidiaries by stabilizing operational consultation channels and by creating new compliance organizations for them. We will also introduce wide-ranging programs – operation of the counseling desk and distribution of ethics management posters – to raise our ethics awareness and prevent relevant risks before they occur.

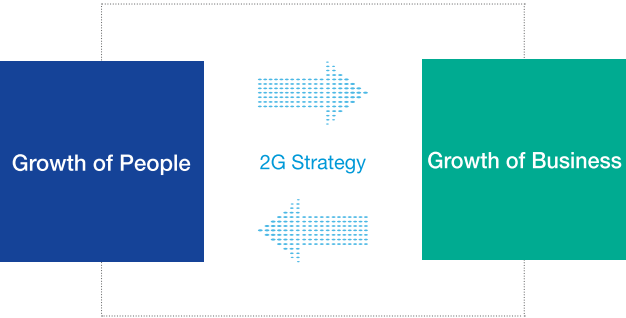
Talent Management



Family Day for New Employees

Talent Management

We believe that talented people are the most valuable assets that fuel our growth and development as a company. Recruiting and nurturing outstanding individuals drives our growth, which in return, creates opportunities for our employees to seek their growth. To establish this virtuous cycle of talent cultivation, we hire top-notch individuals each year and put our 2G (Growth of People, Growth of Business) strategy to work.



Fair Employment

Since we believe that the key to nurturing talented individuals lies in hiring such outstanding people in the first place, we adopt a stringent screening process in recruiting new employees with or without previous work experience so that competent employees join our company each year. Furthermore, we do not discriminate our candidate employees based on such personal characteristics as academic background, age, gender, ethnicity, and nationality to evaluate them fairly and open-mindedly.

Recruiting R&D Workforce to Secure Fundamental Competitiveness

To secure fundamental competitiveness and advance our technological capability, we further strive to hire talented R&D individuals in Korea and abroad. This serves as the basis for us to develop our future growth drivers, and we visit top-notch universities in Korea and overseas for on-campus recruitment to attract qualified R&D employees. We also host the ‘Youngster Energy Tech Forum’ for students with M.D.s and PhDs currently performing research in relation to power plant generation to share our industry-academia research and technology development endeavors as well as R&D vision as a way to hire top-notch researchers and engineers.

Employee Training

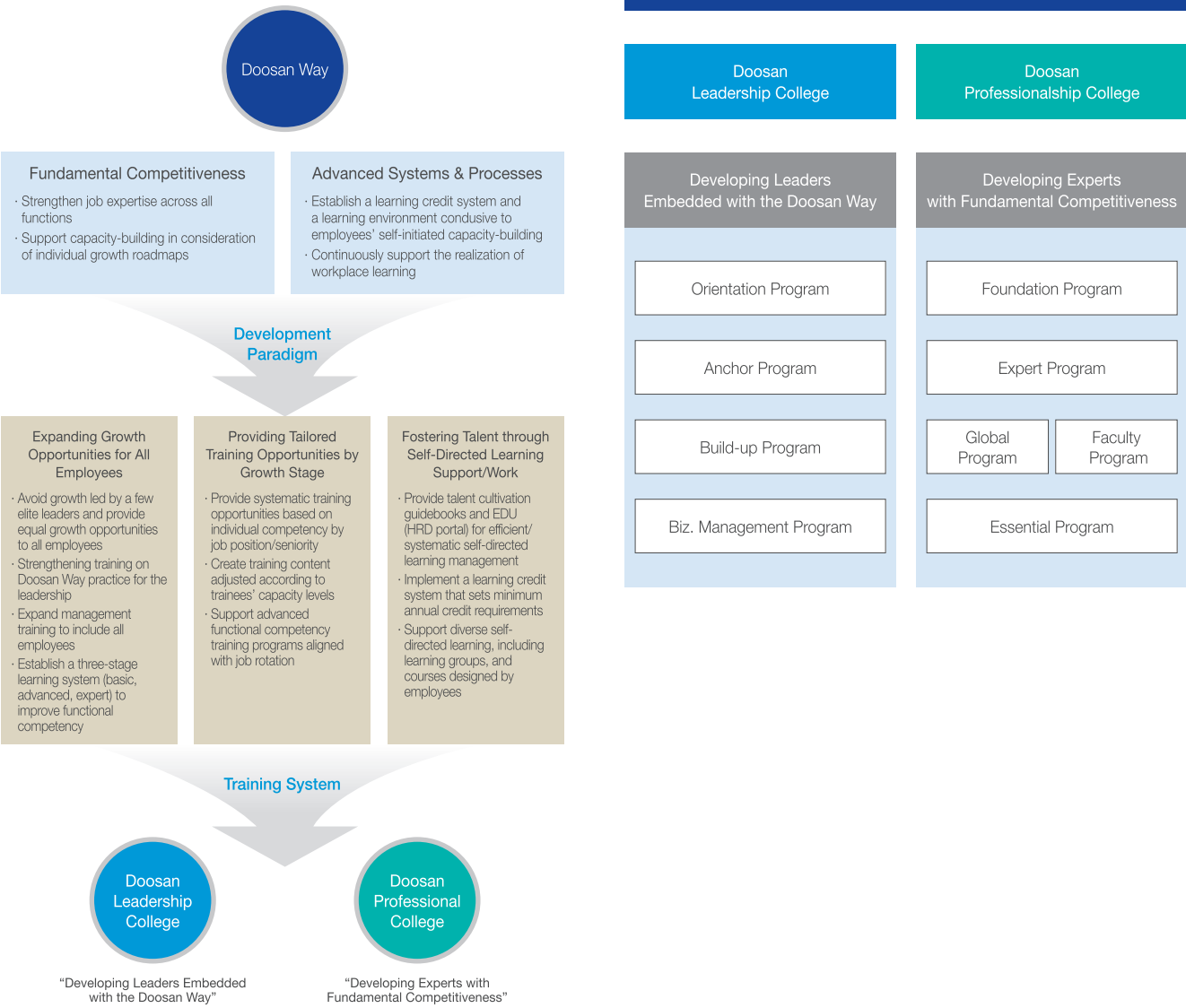
HR Development Approach

We believe that ‘people’ are the most valuable assets that drive our growth and development as a company. The virtuous cycle where individual growth bases a company’s growth, which in return drives individual growth, lies at the heart of our 2G strategy and represents our corporate philosophy that values talented individuals. We take a balanced approach to foster all our employees, rather than focusing on a few elite, and this ‘people’-oriented value is present across our HR development system. Our customized training that is provided in line with individual growth roadmaps ensure that all our employees have access to equitable training opportunities. Furthermore, we actively encourage diverse workplace-based learning programs, from training courses created and operated by employees to learning groups so as to establish a self-directed learning culture where employees themselves take initiative in developing their capacity.

HR Development System

With a goal to ‘nurture proud Doosan people’, we developed our HR development system that consists of ‘Leadership College’ and ‘Professional College’. Our ‘Leadership College’ offers leadership courses designed based on the Doosan Credo and special traits required of all Doosan employees as well as management courses that enable employees to develop problem-solving capacity and develop in-depth business insights. Our ‘Professional College’ provides function-specific job training. Each of these two colleges differentiates their courses by seniority and competency levels to allow all our employees to take fully-customized courses in consideration of their competency levels.

HR Development System



People Development Programs

Upgrading the Functional Competency Development System

To help all our employees build functional capacity, we established the Functional Competency Academy System for respective functions along the value chain. Each academy provides a three-stage learning system – basic, advanced and expert – based on competencies required for different job positions and seniority levels, and allows employees to choose from diverse job training courses in accordance with their competency levels and needs. In 2015, we focused on systemically upgrading the marketing/sales academy and quality academy, and specifically reviewed and supplemented the alignment between our company-wide functional competency assessment system and training courses provided by respective academies as a way to advance our functional competency development system.

Publishing the People Development Guidebook

We published the comprehensive people development guidebook that compiled all company-wide training courses into a single book. This guidebook even includes working-level training courses provided by individual teams so as to offer more practical information, and was indexed by job position and function to help readers use it more intuitively. This makes it easier for employees to find training courses that meet their own development needs, and leaders can use the guidebook as reference to coach their team members on necessary training courses in a timely manner. The guidebook was distributed to all construction sites in Korea and abroad as well as our Changwon head office and Seoul office, and is expected to serve a major role in upgrading our company-wide employee competency through training.



People Development Guidebook L&D (Learning & Development) Library

Expanding Training for Employees Working Abroad

Concerning our global business operations, we provide customized training based on local business needs to help our employees working abroad with capacity-building. In Vietnam, India and Dubai, we provided STEPS training to help improve problem-solving capacity and the Insight Program to help these workers strengthen their leadership competency. Specifically in Vietnam, we hosted a workshop to nurture in-house lecturers with an aim to localize our STEPS training. Furthermore, our e-Library system that includes 10,000 books allows all our employees working abroad as well as those stationed in Korea to read whenever or wherever they want to as a way to develop their potential and functional competency.

Encouraging In-house Faculty Activities

We encourage our employees to serve as instructor for our training programs so that these programs deliver practical content that is closely aligned with actual daily operations. Since these in-house lecturers go the extra mile to invest their time and efforts as faculty members while fulfilling their job duties, we offer them opportunity to build their teaching capacity as lecturer as well as learning credits (credits given to individuals according to their learning achievements) and lecture fees. Since 2015, we have celebrated Faculty Day as part of our diverse programs to instill a sense of pride to our in-house lecturers.

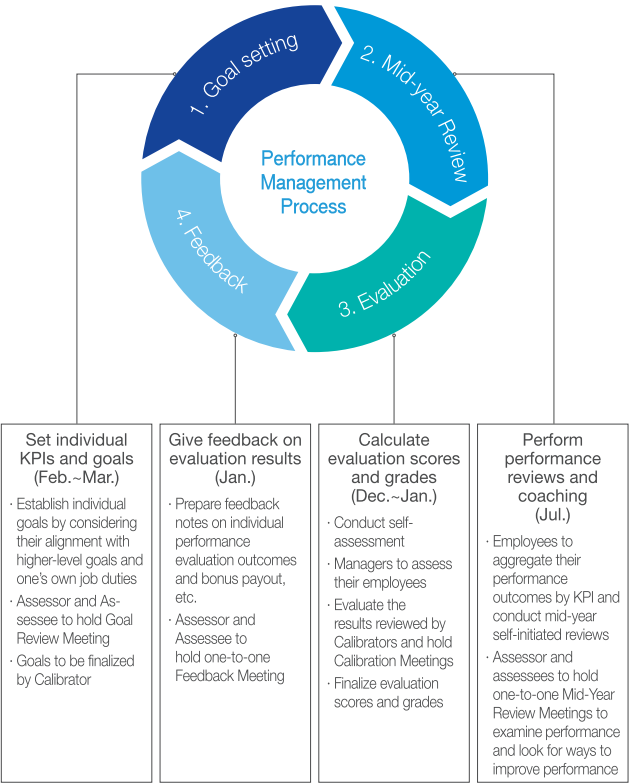
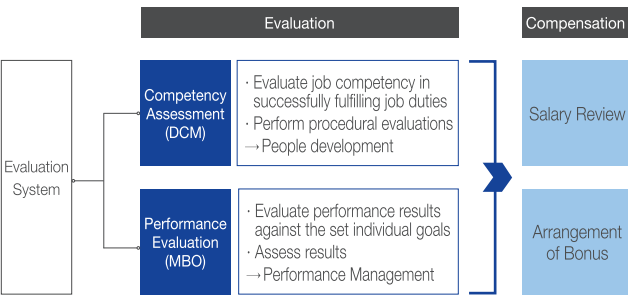


Fostering and Encouraging In-house Faculty

Employee Performance Assessment and Compensation

Evaluation System and Compensation System

Our employee evaluation system is categorized into competency assessments and performance assessments: competency assessments evaluate employees' capability to successfully fulfill their assigned job on the basis of our Doosan Competency Model (DCM) and pursue balance between people and performance leadership skills while performance assessments evaluate individual outcomes against the set targets by introducing the performance assessment system based on the Management By Objective (MBO) principle, and aim to align the goals set for the company and individual employee's goals to ultimately maximize corporate outcomes. Our compensation system is operated in a way to secure our market competitiveness and differentiate compensation in accordance with individual performance, and is classified into "salary adjustment" that reflects DCM assessment outcomes through 'Salary Review' as well as "bonus arrangement/pay" decided based on MBO results.



Advanced Labor-Management Relations

Concluding Dispute-Free Negotiations for 10 Consecutive Years

As we agreed on the collective bargaining peacefully, we successfully achieved 'the dispute-free collective bargaining agreement for 10th year'. Over the past decade, the company and labor have respected each other as cooperative partners, and have resolved conflicts through dialogue and concession. Our mutual trust built through this process enabled us to make efficient and democratic decisions in determining labor conditions and addressing diverse issues. This created a mutually-beneficial relationship where improved employee satisfaction leads to productivity gains, which, in turn, enhances the mutual interest of both labor and management, leading to the successful conclusion of dispute-free collective bargaining for ten consecutive years.

Contributing to Creating Company Value through Shared Growth of Labor and Management

In 2016, our trust-based mutually-beneficial labor-management relationship will contribute not only to our business conduct but also to our corporate brand value. We aim to build on this relationship to reduce social cost from labor conflicts to contribute to the betterment of our society. Our labor and management will continue to improve the quality of life and employment for employees and will help employees improve their workplace satisfaction and strike the right work/life balance by reducing work hours for double shifts in particular.

Joint Efforts by Labor and Management to Improve the Quality of Life and Employment

Our labor and management have joined hands to make great strides in improving the quality of life and employment for our employees. Collective bargaining, regular labor-management council meetings and other diverse channels served to ensure seamless communication and feedback gathering. This allowed us to create a robust welfare safety net that covers education, health care, housing, and childcare to improve the quality of life for our employees and their families, and to continuously deliver a better workplace for them. In 2015, our regular labor-management council meetings received a total of 143 agenda items, out of which six were discussed and addressed including extending the scope of employees eligible for housing fund support. The 'System Improvement Committee' jointly run by labor and management focused on improving the work environment concerning long work hours and night-time work for double shifts. Through a total of nine meetings, the committee coordinated feedback from both labor and management and agreed to test-run a new double shift system that reduced night-time work by two hours for three months from November. We will review the effectiveness of this new system in improving the quality of life and employment during the test-run period before deciding whether to expand the system.

Work-Life Balance

Enhancing Business Efficiency through Work System Improvement

We plan to introduce new work systems including compressed working schedules, night-work consultations and flexible work hours from March 2016 onwards to improve business efficiency. We will prioritize work duties to focus on top priorities for productivity gains, and will designate two hours between 10 a.m. and noon as core work hours during which travelling to other work sites or holding meetings should be minimized to maximize our business efficiency. Furthermore, our employees should consult with their team leaders or department heads if they find it necessary to work overtime so that team leaders document the purpose of such work on the system as a way to eliminate unnecessary night work. We will also allow our employees to decide their work schedules (e.g. 8 to 5 or 9 to 6) in consideration of their business operation with overseas colleagues to improve their job satisfaction.

Employee Welfare Programs

Work-Life Balance	<ul style="list-style-type: none"> Support backpacking in Europe and the Americas Provide 2-week summer vacation and 1-week year-end vacation Subsidize fitness club fees
Childcare Support	<ul style="list-style-type: none"> Offer financial support for infant childcare facilities Support tuition fees for middle/high schools and universities
Family DOO Program	<ul style="list-style-type: none"> Support employees working at overseas projects Travel invitation for employee families to overseas sites Family DOO volunteer activities
Housing and Financial Support	<ul style="list-style-type: none"> Provide financial support for housing and daily necessities Support real estate and property consultation service Offer financial support for job relocation
Medical Support	<ul style="list-style-type: none"> Help pay operation expenses Offer access to Chungang University Hospital's hotline Provide medical service benefits through partner hospitals and dental clinics Extend the scope of diseases eligible for healthcare subsidies Support infertile couples with fertility treatment expenses Expand rehabilitation support for employees' children with disabilities Support retirees with the comprehensive medical checkup program
Others	<ul style="list-style-type: none"> Provide psychological counseling from external experts for problems related to job stress, family relationships, etc. Establish and operate a comprehensive counseling center in the fields of legal affairs and investment techniques, etc. Improve the work environment by increasing investment in employee meals and by expanding the cafeterias or building new ones

Human Rights Management

Operating the Human Rights Committee for Minorities

In 2015, we launched the Working Mom Community (1 DOO I DOO, which means taking care of both work and child when pronounced in Korean) and hosted ad-hoc/regular offline meetings. These enabled community members to share their childcare experiences and grievances they have as working moms to assist them in striking the right work/life balance. Furthermore, we held meetings for foreign employees under the supervision of our HR department to listen to their difficulties as foreign worker and improve their work environment.



Operating the Working Mom Community



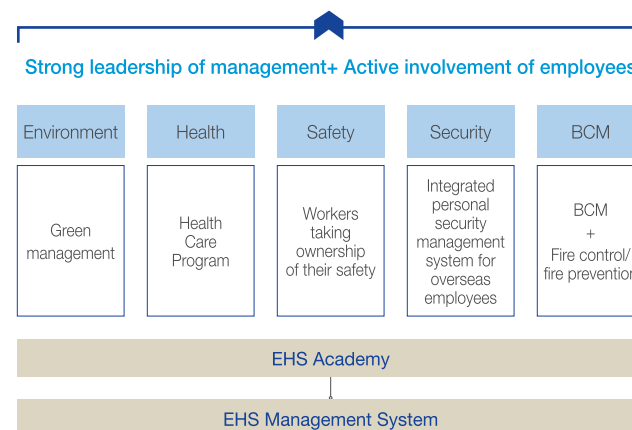
Celebrating the company-wide Human Rights Week and giving special lectures

Health & Safety

Health & Safety Strategy

We believe that providing a safe and clean environment is our responsibility to all our employees, their families and our society, and thus are taking preventive health & safety measures under our EHS management system.

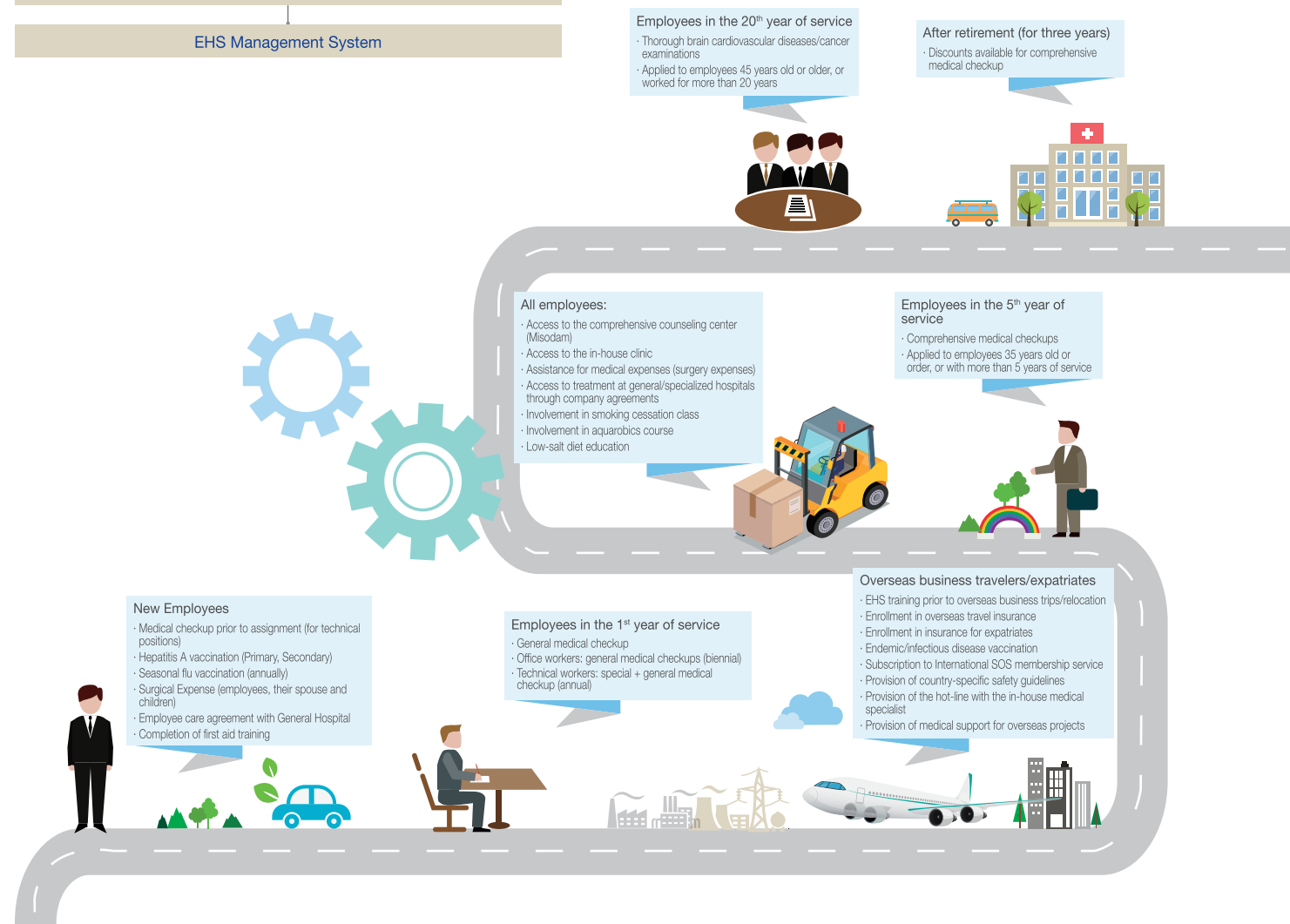
As stipulated by the Doosan Credo, a clean and safe work environment is the responsibility that we bear to all of us, our families and society.



Health: Health Care Program

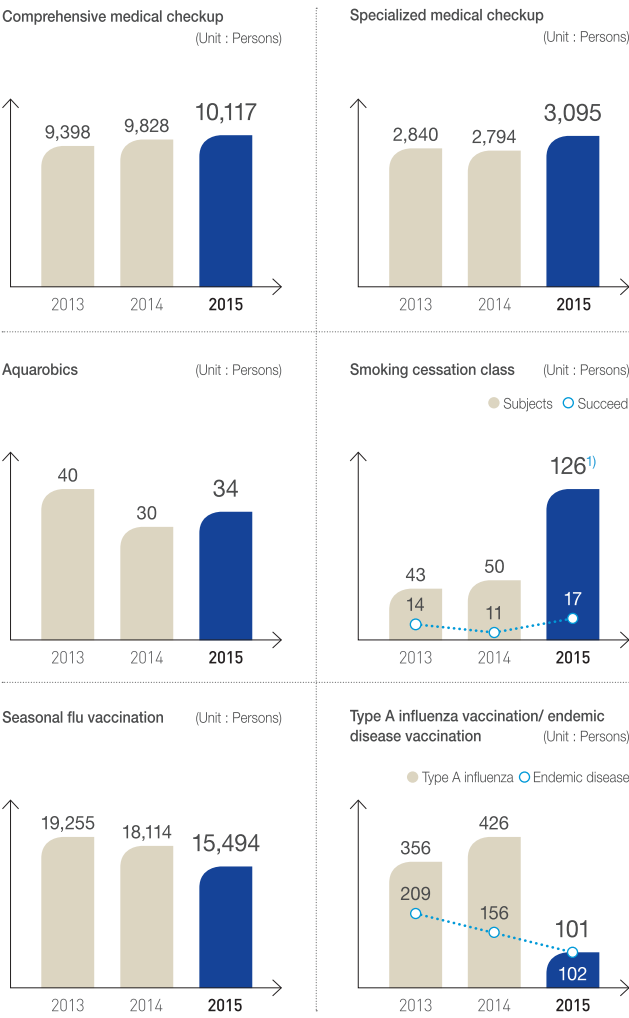
Health Care Program

Our systemic and scientific 'Comprehensive Health Care Program' intends to help our employees, their families and supplier employees live a healthy life. The in-house Health Promotion Center analyzes individual employees' general/comprehensive medical checkup outcomes to recommend preventive and follow-up healthcare activities, and the scope of our health care programs was extended to include psychological stress in 2015. To help employees prevent hypertension, diabetes and other brain cardiovascular diseases, we host healthy cooking and tasting events attended by in-house clinic doctors and cooking consultants for our employees and their families to build awareness on the importance of dietary habits in preventing such diseases. For those employees who have it difficult to promote therapy through the physical exercise, we offer them aquarobics class in the in-house swimming facility by inviting professional trainers. In addition, we provide health checkups and medical counseling services to employees who live apart from their families, and provide medical assistance to our overseas establishments located in areas where high-quality medical services are not readily available. Concerning this overseas medical assistance, employees of our clients and suppliers are also eligible for such service in addition to our employees.



Medical Checkup

The comprehensive medical checkups have been provided for screening for early detection and prevention of disease to employees and their immediate family members as well, and detailed screening for brain/cardiovascular disease and cancer, special/general medical checkups, these health programs are given to all employees and their family members. To detect early on and treat any disease that our employees may have, we have offered comprehensive medical checkups for employees and their spouses over the past three years (Total 29,343 persons: 9,398 in 2013, 9,828 in 2014 and 10,117 in 2015), and those diagnosed with specific medical conditions were arranged to receive treatment at general hospitals to prevent the progression of their diseases and provide early treatment. We also offered special health checkups to approximately 3,000 employees (nearly 9,000 employees over the past three years) who are exposed to occupational hazards twice a year (1st half/2nd half) to prevent their occupational diseases and other job-related diseases.



1) In line with the in-house program launched in 2015 to prohibit smoking at the workplace, the existing public healthcare center smoking cessation program was provided once, and an in-house smoking cessation program was provided.

Health Promotion Program

Our comprehensive counseling center ‘Misodam’ aims to assist our employees in dealing with stress and grievance they may have in their professional and private life with the help of professional counselors. We also provided a total of 370 sessions of counseling for employee families as well as our employees and supplier employees to help them relieve their stress and regain psychological wellbeing. To offer emergency medical aid for workplace accidents and general diseases and to ensure that our employees can readily access medial services, we are operating an in-house clinic with two medical specialists, three nurses, two physical therapists and one sports curer. More than 100 employees from the company and suppliers are visiting this clinic per day to use its service. In addition to medical service assistance, we also provide our employees with such health care services as aquarobics and smoking cessation class. Over the past three years, our aquarobics class benefited 104 employees who found it difficult to work out in their daily life to help them prevent musculoskeletal diseases while our smoking cessation class attended by 219 employees who wished to quit smoking helped 42 of them actually succeed.

Prevention of Infectious Diseases

Over the past three years between 2013 and 2015, we offered flue shots to 52,863 employees, their families and employees from suppliers to prevent annual influenza breakouts. In addition, hepatitis A vaccination was given to 377 persons and endemic disease vaccination was made on 467 occasions to prevent special infectious diseases. As a result of our commitment to promoting employee's healthcare management, not a single one of our employees was diagnosed with MERS (Middle East Respiratory Syndrome) during the 2015 global MERS crisis.

Hygiene Management

With the help of a professional hygiene inspection company, we perform regular hygiene diagnoses on nine cafeterias at our Changwon Plant: such diagnoses have been made three times per year along with more than six internal reviews per year since 2007 to prevent food poisoning and ensure food safety. We also work with Korea's largest disinfection service company to develop an integrated pest control system so as to eradicate harmful insects and prevent the spread of infectious diseases among our employees. Our commitment to providing safe-to-eat and healthful meals to our employees has ensured that no single case of food poisoning occurred at the workplace.



Medical support for construction sites

Safety: Field-Driven Safety Initiatives

Voluntary Involvement in EHS Activities

As a result of constantly undertaking EHS initiatives that encourage employee's voluntary engagement, our occupational injury ratio is declining continuously. The occupational injury ratio data published in 2015 on Korea's 1,000 construction companies revealed that we were chosen as the top-performer in safety management for two consecutive years from 2014 with a 0.08% injury ratio. To help our in-house contractors build capacity in health & safety management, we actively encouraged them to obtain the KOSHA 18001 certification: 24 of them passed the certification screening and were awarded with the plague of appreciation from the Korea Occupational Health & Safety Agency.

EHS Initiatives that Engage Employees

Category	Details
Safety Discussion	Discuss safe work procedures based on the videos made of actual work procedures
Risk Assessment	Identify risk factors for each work procedure based on what was discussed during Safety Discussions, and review issues that should be checked prior to work
Mandatory Safety Check Sheet	Locate the checklist created based on risk assessment outcomes at the workplace
TBM ¹⁾ Education	As part of the TBM, educate employees on risk factors and issues to be reviewed prior to initiating the work procedures of the day based on the mandatory safety check
Colleague Safety Card	If unsafe behaviors are found during the work process, all work procedures are suspended and colleague safety cards are issued to alert employees

1) TBM : Tool Box Meeting



Safety discussion with video observation

Security: Comprehensive Security Management System for Expatriates

As the number of our expatriate workers is on the rise, we provide them with a range of services to help them work in a safe and healthy environment. We provide medical services to our employees at overseas worksites and also to our clients and subcontractors as well and ensure that standardized safety management services are available at each and every worksite by realigning EHS work procedures and regulations of the domestic and overseas construction offices and sites. Such diverse global EHS initiatives enable us to overcome the limitations of geographical locations and work environments and to improve the quality of our health & safety operations.

BCM²⁾ + Fire Control/Fire Prevention

Development of competencies in emergency preparedness and response

We select high-risk worksites and procedures through factory-specific risk assessments and create scenarios on possible emergencies and detailed response measures in order to conduct on-site emergency drills. In 2015, a total of 62 emergency drills were performed, including unplanned evacuation exercises, on PSM, painting workshops, and high-rise buildings (dormitory and main building) that are vulnerable to the explosion of high-pressure gas and the high risk of casualties. We produced 20 types of videos to offer safety tips on emergency evacuation for respective buildings and situations and show them prior to commencing all meetings or events so that our employees and external stakeholders do not panic and follow manuals in the event of an emergency. Furthermore, we provide relevant information through smartphone apps as well to help all employees enhance their emergency preparedness and response capacity.

2) BCM : Business Continuity Management

BCM Training

We developed our own BCM system and response process to ensure the safety of our employees and their families as well as business continuity even in the event of natural disasters and emergencies. Practical drills were performed semiannually (1st half and 2nd half) in consideration of disasters and critical accidents of each individual worksite. In line with our expanding global operations, we ensure the safety of our employees who take overseas business trips or are assigned to overseas worksites through the services provided by International SOS, a global safety support service company that provides medical and security experts as well as air ambulance services. In doing so, these employees are educated on safety tips before their departure and ready themselves for any possible emergencies that may occur during their stay abroad.



EHS Academy

Our EHS Academy aims to establish self-initiated safety compliance practices and raise employees' EHS awareness. One of the key training programs for 2015 involved a lecture and discussions that followed under the theme of 'The Role of Senior Management in EHS Operations' as part of the leadership courses designed for executives and factory managers to help them clearly recognize the responsibility and role of EHS operations and take the lead in EHS initiatives. Concerning six job positions identified as highly prone to accidents through accident case analyses, we provided tailored training for respective situations such as field-driven customized training sessions that hosted discussions based on the videos that filmed risky work procedures, theoretical and hands-on training sessions designed for forklift drivers and signal operators who are exposed to large-scale accidents, and professional training that awards operator qualifications to those who pass strict field tests. We will ensure that our training courses provide highly practical working-level knowledge and effectively prevent safety accidents.

Future Plans

We will build an industry-leading disaster management system by upgrading our safety management system for expatriate workers and strengthening our emergency response capacity while reinforcing our internal safety practices driven by top teams. We will also increase investment in our health care infrastructure to promote the health of our employees and introduce a range of incentives to invite their voluntary engagement.

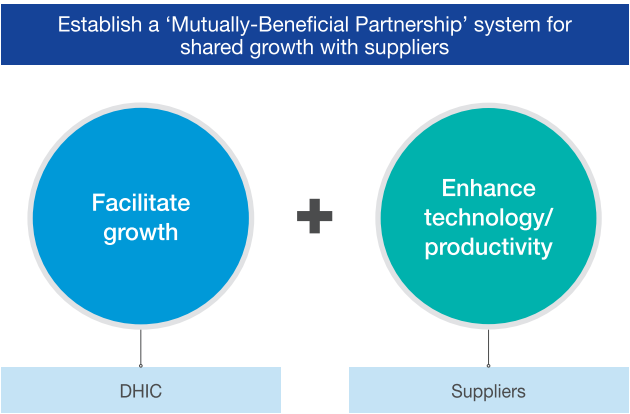
EHS Academy Training Systems

	EHS Leadership & Mindset		EHS Knowledge & Skill Level-up				
Executives	EHS Leadership Academy	EHS Session					
Plant managers (Team leaders) On-site engineer							
Part head Supervisor Senior	EHS Coaching Academy	BG/ Presentations on plant safety training	Management supervisor	EHS knowledge & skill training by BG/factory	Training at the Korea Occupational Health & Safety Agency, Launching of the Health & Safety Expo		
Worker	EHS mind-set training		Regular safety training		Health & Safety training at the time of recruitment	Special safety training for employees in harmful and hazardous work	Job transfer safety training
	Customized Health & Safety training by occupation						
	External experience training						
Office job (main building)	Regular safety training						
EHS professional course	Health training including CPR, etc.	Fire prevention education including fire drills, etc.	Practices for handling and signaling of heavy cargo	Forklift safety	High-risk work safety	Recovery program from injury or illness	

Shared Growth

Shared Growth Strategy

We build a 'mutually-beneficial' partnership with our suppliers to strengthen our global competitive edge. Under such 'mutually-beneficial partnership', we share our own management, quality, and technology systems, from our technological capability to business systems', with our suppliers to help them raise their competitiveness so as to succeed together in the global market. Rather than simply signing purchasing or subcontracting agreements, we assist our suppliers in strengthening their competitive edge and share with them the outcomes generated accordingly to further solidify this partnership. Our plan is to capitalize on our mutually-beneficial partnership to nurture 200 suppliers into small yet strong glocal companies to reinforce our global competitive edge.



Strengthen Suppliers' competency

Management Consulting for Suppliers

As our core suppliers support program that helps them strengthen competitiveness, our Total Operational Performance (TOP), Design to Cost (DTC), and Lean Manufacturing (LM) programs enable our suppliers to identify improvement tasks and take action accordingly with the help of Korea's top-notch professional consultants from external consulting firms who visit those companies for four months to offer assistance.

Management consulting programs for suppliers

Category	Details
TOP	Consulting that improves comprehensive performance by systematically exploring ideas that lead to on-site improvements at suppliers
DTC	Consulting to Reduce Cost through Design Improvement
LM	Professional consulting for suppliers to promote productivity gains from standardizing production lines and removing waste factors to improving facility utilization and processes

Capacity-Building Training for Suppliers

Based on our accumulated technological capability and top-notch training facility, we provide job competency training to current and future employees of our suppliers. In particular, those who attend such training are exempted from training expenses, and trainees who receive training for more than one month are eligible for KRW 200,000 in training allowances. We also provide financial support worth 150% of the minium wage to encourage employees of our suppliers to attend our capacity-building training programs.

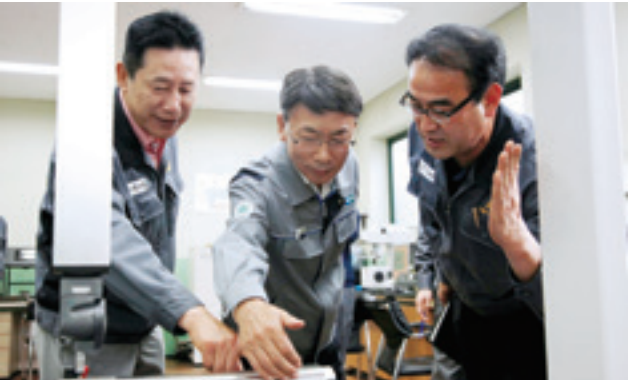
Going Global Together

We join forces with our suppliers in undertaking overseas projects to help them build their track records and increase sales in the global market. We also provide Pre-Qualification (PQ) support to ensure that our outstanding domestic suppliers can put their name on the vendor list approved by our overseas clients (end user). Using our brand image and vast overseas network, we assist our suppliers in attending the Power-Gen, the world's largest power generation exhibition, and other overseas exhibitions. In doing so, we help our suppliers explore overseas markets and undertand global power generation market trends.

Creating a Culture of Shared Growth

Communication with Suppliers

We set up a consultative group to promote shared growth and mutual communication with suppliers, and are building lasting and cooperative partnerships with them based on mutual trust. We hold regular discussion meetings to address major issues that arise between us and our suppliers while operating the Win-Win Call Center to receive and counsel on the difficulties, grievances and suggestions rasied by suppliers. Furthermore, we invite employees from suppliers to our family cultural festivals, family concerts and other cultural events that we host as part of our diverse communication initiatives.



Management's on-site visit to suppliers

Operating the Win-Win Settlement System

In order to improve the settlement system for the 2nd-tier and below suppliers, we use the win-win settlement system led by the Korean government. By increasing the number of companies eligible for the issuance of electronic credit sales bonds, this system ensures that those 2nd-tier and below suppliers can take loans based on these bonds within the boundary of credit sales bonds issued by large companies. This means that 2nd-tier and below suppliers can have access to financial resources at low interest rates by utilizing the credit ratings of large companies.

Facilitating the CSR of Suppliers

Performing CSR Assessment on Suppliers

We facilitate our suppliers to fulfill their corporate social responsibility by integrating CSR items – safety, environment, fair trade, and social issues – in performing suppliers registration assessments and comprehensive capacity assessments. Furthermore, we help them conduct their own CSR assessments to raise their CSR awareness and identify their strengths and weaknesses in relation to CSR so as to make necessary improvements.

Social Contribution Initiatives Undertaken Together with Suppliers

We celebrate Doosan Day of Community Service, one of our strategic social contribution events, together with our suppliers. We also support them in launching their own volunteer groups and engaging in volunteer work so that they take ownership in undertaking social-giving activities.



Suppliers' volunteer work for the Kimchi sharing event

Fair Trade Compliance Program

We introduced a fair trade compliance program (CP) to create a fair and ethical corporate culture. Our chief compliance officer is in charge of this program, and compliance officers and fair trade compliance departments are operated in each BG so that we faithfully implement our fair trade compliance program in accordance with the seven core principles of fair trade compliance. In 2015, we focused on our shared growth mind-set training provided to employees who come in direct contact with our suppliers. Going forward, we will improve our internal system to eliminate risks from legal violations, and investigate transactions with suppliers that violate fair trade regulations in order to prevent such risks.

Future Plans

In 2016, we aim to achieve the following: upgrade our score on the share growth index by improving perceptions on our shared growth initiatives, raise our cost competitiveness by working with differentiated top-performing suppliers, disseminate Digital Factory to suppliers, support the Gyeongnam Creative Economy Innovation Center in generating outcomes, and prevent the violation of fair trade and subcontracting regulations.

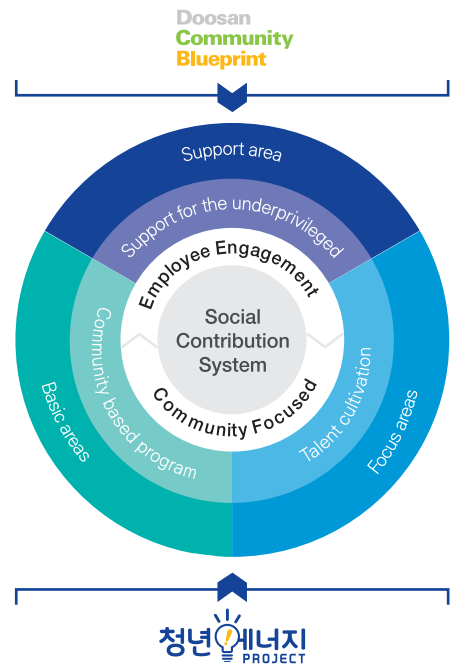
Work with Top-Performing Suppliers and Differentiate Suppliers
<ul style="list-style-type: none">· Select top-performers and differentiate suppliers for shared growth· Expand shared growth for 2nd-tier suppliers· Strengthen communication with 1st/2nd-tier suppliers
Upgrade Support for Suppliers in Strengthening Competitiveness
<ul style="list-style-type: none">· Upgrade consulting to strengthen competitiveness· Encourage participation in the performance sharing system· Disseminate Digital Factory to suppliers and support them in laying the CSR basis· Support training for employees of suppliers
Expand support for the Gyeongnam Creative Economy Innovation Center
<ul style="list-style-type: none">· Align with the center in localization/technology development· Explore center-aligned support for suppliers
Systematize the prevention of fair trade/subcontracting regulatory violations
<ul style="list-style-type: none">· Strengthen the practicality of subcontract training· Survey suppliers on fair trade practices· Strengthen subcontract monitoring

Social Contribution

Implementation Directions of Social Contribution

DHIC have undertaken numerous social contribution initiatives in Korea and abroad to nurture talented individuals, based on the talent-driven business philosophy of the Doosan Group. Under the shared social contribution goal of presenting the blueprint for local communities to improve their future competitiveness, we have lived by the three principles of business-oriented, community-focused, and employee engagement in taking systemic and strategic action in the three areas of talent cultivation, support for the underprivileged, and community based program. In line with our social contribution system and directions, our European subsidiaries (DPS, Babcock, Lentjes, Skoda Power) set their social contribution strategy in 2013, and Vietnam's Doosan VINA followed suit in 2014. In 2015, we assisted DPSI in India in establishing its social contribution strategy in response to the India nation's Companies Act, which completed our global social contribution system.

Social Contribution System



Global Social Contribution System

Mission	Enhance local communities' future competitiveness and corporate value through strategic social contribution initiatives		
Implementation Principles	Business Oriented	Community Focused	Employee Engagement
	Talent cultivation	Support for the underprivileged	Community-based programs
Implementation organization	Domestic (DHIC)	Europe (DPS)	
	Vietnam (Doosan VINA)	India (DPSI)	

Operation of Social Volunteer Groups

As of December 2015, 91% of our employees joined our social volunteer groups. They are engaged in regular social contribution programs mainly in Changwon and Seoul, to offer their helping hand to the marginalized in local communities. Furthermore, we support their social contribution activities through matching grants, weekday volunteer programs, a CSR computer system and commendation for top-performing volunteers so as to facilitate social contribution on a company-wide level.

Engaging Employees in Social Contribution Initiatives

Our goal is to make our social contribution initiatives more systemic and practical by reflecting our business characteristics while meeting the needs of local communities and by facilitating the voluntary engagement of our employees. In 2015, we defined our three top priorities of introducing a social contribution promotion system, expanding employee engagement in Seoul, and building a social contribution reporting system for overseas subsidiaries.

Introducing the Social Contribution Promotion System

We have introduced in-house systems to promote employee's engagement in our volunteer activities: our in-house volunteer organization was set up in 2011, our social contribution information system was developed in 2013, and our weekday volunteer activities were expanded in 2014. In 2015, we launched a certification system to recognize external volunteer activities undertaken by individual employees in addition to in-house volunteer activities led by the company, and initiated the 'CSR Awards' as a reward program for social contributions made by our employees.

Launching and Hosting the CSR Awards

We launched the CSR Awards with an aim to discover and reward the best practices of our social volunteer groups and employees who contributed to the development of local communities and the expansion of the culture of sharing. The 1st awards were hosted in March 2016 and awards were given in the three categories of Volunteer Group, Volunteer, Volunteer Leader. To ensure its fairness, awardees were chosen through 1st and 2nd internal screenings followed by in-depth interviews conducted by external judges, who are the representatives of social contribution partner organizations. These awards will allow us to enhance the morale and pride of top-performing volunteers and to encourage self-initiated engagement in volunteer work so that we can establish company wide culture of social contribution.



Doosan Way Awards 'CSR Awards'

Expanding Engagement in Seoul Office

Our social contribution programs, which were mainly implemented in Changwon where our head office is located, were all revitalized due to our company-wide initiative in 2014 to undertake social contribution initiatives in a more advanced and scientific manner. Our volunteerism was relatively sluggish in Seoul, which prompted us to reorganize our five volunteer groups (EPC BG Volunteer Group, Water BG Volunteer Group, Technology Research Institute Volunteer Group, Doori Volunteer Group, and Power Volunteer Group) to place a greater focus on Seoul. Furthermore, theme-based programs for local children centers and programs aligned with social welfare centers were implemented on a regular basis in line with the introduction of the weekday volunteer initiative, and large-scale Doosan Day of Community Service events were held semiannually (1st half and 2nd half). These localized social giving programs helped us raise employee participation in Seoul from 33% in 2014 to 53% in 2015.

Establishing a CSR Reporting System for Overseas Subsidiaries

In 2015, we set up a global CSR reporting system that connects the head office and overseas subsidiaries in order to facilitate mutual communication. This system allows us to be regularly briefed on the STEM¹⁾ program of DPS in Europe, Doosan VINA's project to establish a Korea-Vietnam technical institution, and other social contribution plans and issues of respective subsidiaries and to offer our feedback in return so as to promote mutual communication.

Creating Shared Value (CSV)

Since Creating Shared Value (CSV) is emerging as a topic of heated debates in addition to CSR, we adopted the CSV concept in our operations to define CSV in our own way and develop our CSV roadmap. In 2015, we set up a consultative group with CSV-related departments in line with our value chain of new businesses, and currently are engaged in discussions to identify CSV issues with a focus on new businesses.

Talent Cultivation
Youth Energy Project

Our Youth Energy Project aims to assist talented young people in developing into well-balanced, well-rounded and self-reliant individuals. All of its diverse programs are tailored to the respective growth phases of these individuals, and include basic capacity-building for children and teenagers, industry-academia cooperation, nurturing talent in science and engineering majors, and technical training for the unemployed. In 2015, we launched the pilot program ‘M.Y. Dream (Make Your Dream)’ Career Exploration Group for Youngsters to help teenagers explore career paths and develop appropriate vocational perceptions.

Primary school students	<ul style="list-style-type: none">· Theme-based programs for community children centers· Matching private institution expenses for low-income families· Donation of learning materials· Sponsorship for the Dream-High (Kumkum-Dda) Orchestra
Middle school students	<ul style="list-style-type: none">· M.Y. Dream (Make Your Dream) Career Exploration Group for Youngsters· Scholarships for academically-outstanding students from low-income families· Donation of school uniforms· Matching private institution expenses for low-income families· Donation of learning materials
High school students	<ul style="list-style-type: none">· Support for science high schools to nurture science talent· Operation of ‘Doosan Class’ in Meister / vocational high schools· Scholarships for academically-outstanding students from low-income families
University students	<ul style="list-style-type: none">· Operation of ‘Doosan Class’ for academia-industry collaboration in vocational colleges· Technology dissertation contests and visits to advanced overseas countries

M.Y. Dream (Make Your Dream) Career Exploration Group for Youngsters

The ‘M.Y. Dream (Make Your Dream)’ Career Exploration Group for Youngsters allows teenagers to develop an interest in diverse occupations and to decide early on their career paths through the three phase activities of career exploration, experience, and design. In 2015, we operated a pilot project of this program for children from community children center in Changwon, and 23 middle school students completed this program. Furthermore, we signed an MOU on career education with the Changwon Office of Education in preparation for the newly launched free semester system for middle schools in Korea. From 2016 onwards, we will run this program for 80 students from four middle schools in Changwon.



Presentations from the M.Y. Dream (Make Your Dream) Career Exploration Group for Youngsters in 2015

1) STEM : Science, Technology, Engineering, Mathematics

Support for the Underprivileged

Programs Aligned with Social Welfare Centers

To cater to local community needs, we plan volunteer programs hand-in-hand with social welfare centers who come in direct contact with the underprivileged in our society and also encourage our employees to participate in these programs. Such programs aim to provide emotional assistance and social skills programs to teenagers, seniors, people with disabilities, multicultural families and other less-privileged populations in conjunction with six social welfare centers in Changwon and four social welfare centers in Seoul. Furthermore, performance indicators are chosen for the respective programs to measure their effectiveness so as to quantify our social contribution performance. Such outcomes enable us to evaluate our contribution to enhancing stakeholder satisfaction and addressing the social issues of local communities.



Youth Dream Up Project

We joined the ‘Youth Dream Up Project’ supervised by the Child Fund Korea to support teenagers with exceptional talent and aptitude who find it difficult to make their dream come true due to financial difficulties: we assist five students – two in archery, one in shooting and two in Taekwondo – so that they can continue to pursue their dreams.

Theme-based Programs for Community Children Center

Since 2014, we have provided nine theme-based programs – historical field trips, ecological experience, tour around Changwon, woodworks, horticultural therapy, ceramics, and social/science/history education – for 58 community children centers in Seoul and Changwon with whom we forged sisterhood ties. In 2015, we helped 4,415 underprivileged children develop social and emotional skills through a total of 165 activities.

Operating ‘Doosan Class’ through Academia-Industrial Collaboration

To help nurture future engineers, we signed academia-industry cooperation agreements with four Meister/vocational high schools - Changwon Machine Technical High School, Busan Automobile High School, Sudo Electric Technical High School and Busan Aloysius Technical High School – and four vocational colleges - Changwon Moonsung University, Korea Polytechnic College Changwon Campus, Daegu Yeungjin College, and Inha Technical College. We launched ‘Doosan Class’ and our in-house meisters provide technology and capacity-building training tailored to meet our corporate needs. In 2015, we hired 22 students from Doosan Class to secure an engineering workforce. We have so far recruited 151 students since the launch of Doosan Class in 2011.

Performance Indicators of Social Welfare Center Programs

Program	Details	Performance indicators
Geumgang Happy Class	Emotional support including craftwork programs for seniors living alone	Self-competence improvement measurement
Life Matters!	Local community campaign to raise awareness on the importance of life	Pledge to practice respect for life
Vitamin D (DOOSAN)	Enhancement of senior's self-esteem for their energetic life	Measurement of depression reduction and self-esteem improvement
Revitalize! Date with Doo-si	Campaign for the underprivileged to revitalize their life	Beneficiary's satisfaction level
Do-With	Social skill development for children from single-mom families	Child personality development measurement
Health care programs for seniors	Yoga class for senior's health care	Depression reduction measurement
Woori Doori Supporters	Establishment of family relations between marginalized children and seniors living alone	Measurement of reduction in loneliness and life satisfaction levels
W-Medical	Emotional support program that provides house visits to seniors living alone	Stress reduction and life satisfaction levels
Do-gether	Community-building campaign launched with local communities	Self-efficacy measurement
Alsong Dalsong Science Class	Support for children from low-income families to study science	Measurement of attitude change towards science
Flowers Blossom in My Mind	Emotional development program for children from multicultural families	Measurement of attention span

Dasarang Dream

Our Dasarang Dream Program was initiated in 2011 in conjunction with the Korea Red Cross Gyeongnam branch to support under-privileged teenagers in the local community. In 2015, we packaged daily necessities and directly delivered them to 700 low-income households and those of national merit in Seoul and Changwon. Furthermore, we regularly offer bread or handmade chopped noodles as snacks for children at child welfare facilities that forged sisterhood ties with us.



MECENAT Sponsorship

Our MECENAT sponsorship programs promote the development of local culture and arts and help develop cultural talent. Specifically, we established sisterhood ties with the Seoul Metropolitan Youth Orchestra that consists of students from Korea's top universities and sponsors their regular performances to help orchestra members accumulate experience and develop competency. As an extension of this sponsorship, we also sponsor the Kumkumdda Orchestra whose members come from 15 community children centers in Changwon and support mutual exchange between the two orchestras through coaching school sessions delivered by the Seoul Metropolitan Youth Orchestra and concert invitations.

Community-based Programs

Offering Helping Hands to Seven Farming Villages

Under the sisterhood ties we forged with seven farming villages (Gwisan in Changwon, Janggi in Goseong, Misan in Haman and others), our employees offer their helping hands during the busy farming and harvest seasons each year. In 2015, 450 people, including our employees and members of the Changwon Volunteer Group Association's branch, visited these villages during the fall harvest season to help farmers collect kiwifruits and sweet persimmons.



Kimchi Sharing Event

To practice the spirit of sharing and love, we host the kimchi sharing event every year with local communities. In 2015, we made 10,000 batches of kimchi at our Changwon head office with nearly 500 people, including those from a government official family volunteer group, volunteer group association, Danuri volunteer group for multicultural families and our suppliers. The kimchi made at the event was donated to 5,000 people from local children welfare centers, vulnerable groups, social welfare facilities and multicultural families in Changwon.



Environmental Clean-Up

To create a pleasant environment in local communities and protect the environment for future generations, we regularly conduct environmental clean-ups near coastal and island regions as well as streams and mountains. On the 'Day of Sea' event on May 29th 2015, we launched a large-scale clean-up initiative near Masan Bay coastal areas in the vicinity of our Changwon head office as well as underwater clean-up activities in the region. This volunteer work was attended by nearly 120 people, including members of our in-house scuba diving club and other employee volunteers as well as those from Changwon's joint private-public volunteer group.



Doosan Day of Community Service

To fulfill our corporate social responsibility and promote the sustainable development of local communities, we have been celebrating 'Doosan Day of Community Service' attended voluntarily by all our employees at each and every worksite in Korea and abroad since October 2014. In 2015, 6,553 employees from 37 worksites in nine countries participated in the 1st and 2nd half of the year respectively to undertake a range of volunteer programs in conjunction with private/public stakeholders, including our representative social giving program 'Clean Changwon, with Doosan'. Our goal for 2016 is to develop programs that cater to the urgent needs of local communities in consideration of seasonal characteristics so that we continue with our warm-hearted spirit of sharing in a more effective way.



Korea

DHIC | 3,205 persons

Around 30 programs, including Clean Changwon, with Doosan, Revitalizing Traditional Markets during the Chuseok holiday, and Vitalizing the Park projects



U.K.

Doosan Babcock/Enpure | 1,758 persons

Environmental improvement for animal shelters, children centers and schools, and food assistance for the underprivileged provided through food banks



Czech Republic

Doosan Skoda Power | 298 persons

Facility maintenance and environmental improvement for local zoos, kindergartens and nursing homes



Germany

Doosan Lentjes | 205 persons

Donation of clothes for refugee organizations and low-income households, and food assistance for the underprivileged



India

Doosan Power Systems India | 640 persons

Environmental improvement for primary schools with sisterhood ties, schools for the disabled and public facilities



Vietnam

Doosan VINA | 235 persons

Environmental improvement for primary schools, house cleaning for low-income families, and building the House of Love



U.S.

Doosan Hydro Technology | 34 persons

Facility maintenance, clean-ups and vehicle repair for the center for underprivileged children



UAE

Middle East Operation Center | 158 persons

Clean-up in the vicinity of the worksite and blood donation



Saudi Arabia

Doosan Power Systems Arabia | 16 persons

Environmental clean-up in local coastal areas and parks

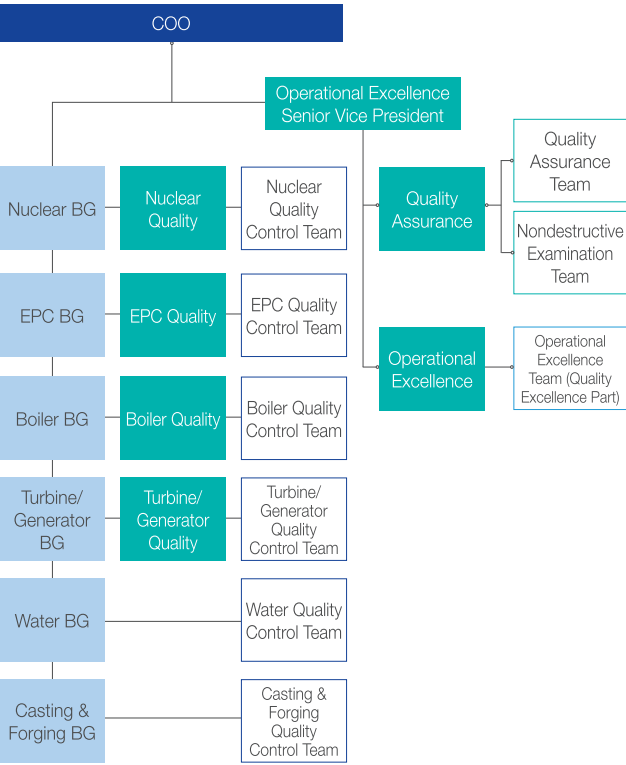
Quality Management

Quality Policy

To achieve our corporate vision to become a ‘Global Leader in Power & Water’, we are building capabilities in world-best class plant design, manufacturing, construction and commissioning. With our best quality competitiveness, we lead the market in nuclear power plant, thermal power plant, desalination plant and industrial plant business. Our top business priority is to improve customer satisfaction and contribute to the creation of customer value. To guarantee the level of performance required by customers and to deliver defect-free and satisfactory quality, we maintain a well-organized and systematic quality assurance system that meet global standards. Furthermore, all our organizations and employees thoroughly follow general requirements set forth in our quality policy.

Quality Organizational System

Our Operational Excellence Senior Vice President under the leadership of the COO is in charge of general quality operations, and each of our six BGs – Boiler, Nuclear, Turbine/Generator, EPC, Casting & Forging, and Water – operates their own Quality Control Team. In addition to these quality control teams, the Quality Assurance Team, Nondestructive Examination Team and Operational Excellence Team (Quality Excellence Part) are under operation in relation to quality assurance and quality/operational excellence so as to ensure a company-wide systematic quality management. Furthermore, each BG Operational Excellence Team/Quality Control Team implements activities for quality excellence tailored to its business characteristics, and respective functions – design, purchasing, etc. – designate quality agents to deliver exceptional quality.

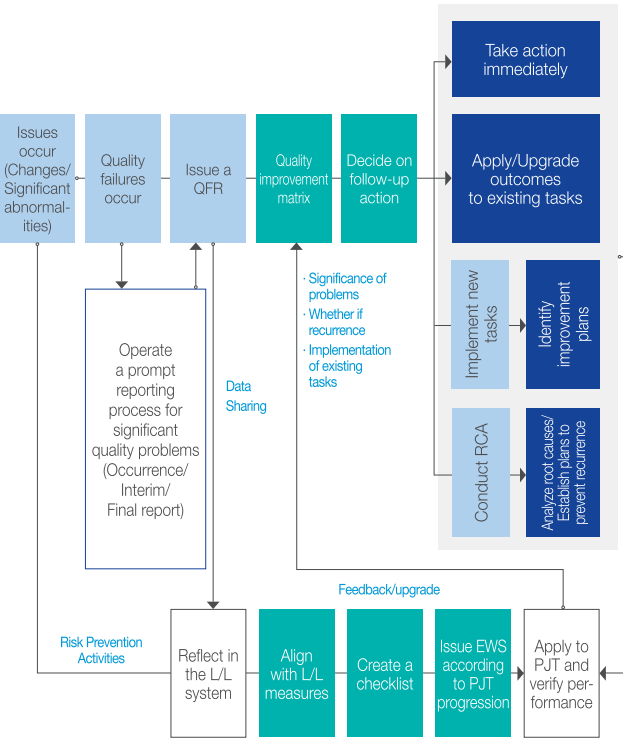


Activities for Implementing Quality Excellence

Process to Prevent Quality Problems and Their Recurrence

Our systematized QFR¹⁾-based response process was designed to cope with quality issues so as to minimize any negative impact these issues may have on our business conduct and prevent their recurrence. In the event of quality failures, a QFR is issued swiftly and the quality improvement matrix is used to decide on necessary follow-up measures. In consideration of the significance of such failures, whether if recurrence, and the implementation of existing tasks, such response measures are implemented as taking immediate action, applying/upgrading outcomes to existing tasks, implementing new tasks and conducting RCA²⁾. As a way to prevent quality failures and risks, actions are taken to minimize such risks at each of the time points where their causes – project-specific changes/abnormalities – arise. Diverse success/failure cases that we experience in project undertaking are uploaded on our Lessons Learned³⁾ system so that they are accumulated into our asset of experience and checklists are generated in alignment with L/L measures, which are then shared with respective projects/managers through the Early Warning System, and immediately used to review relevant outcomes.

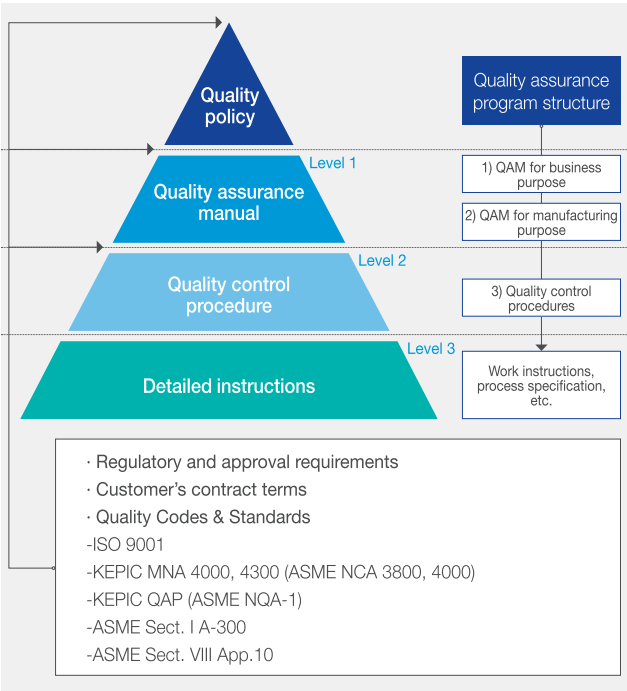
Advanced Prevention/Recurrence Prevention Process



1) QFR(Quality Failure Report) : Quality failure report that records nonconformance, disposition methods and responsible organizations, etc. to control quality failures
2) RCA(Root Cause Analysis) : Identify the root causes for major quality failures as well as plans to prevent their recurrence
3) L/L(Lessons Learned) : Accumulate the diverse successes/failures experienced through project undertakings as asset of experience and share them to prevent risks

Quality Assurance Program Hierarchy

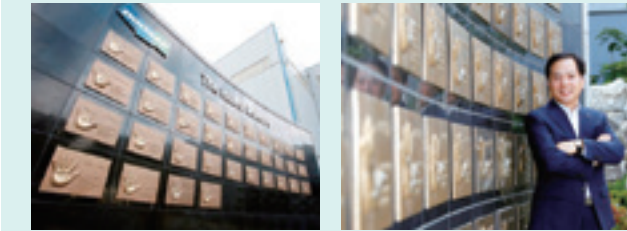
We laid the systematic basis to deliver unrivaled quality by developing our quality assurance program that satisfies relevant laws, regulations, codes and standards. This program is accessible anywhere through the quality assurance information portal if online connections are established.



Special case

Case 1. Meister

The Human Resources Development Service of Korea and the Korean Standards Association award the title of meister to technicians who have developed top-notch skills in the industrial field and contributed to the development of skills and the enhancement of skilled technicians. At DHIC, we have the largest number of meisters – 34 including 12 Republic of Korea Meisters, 23 National Quality Meisters, and one who holds both of these titles – in our industry, and set up the meister consultation group to help suppliers reinforce their competitiveness and nurture talented technicians. Furthermore, we developed internal meister selection procedures such as in-house selection committee's screening and peer reviews to foster more meisters.



Improving the Project Risk Management System

Through the predictive risk outlook aligned with reference models on the basis of previous risk cases, we set prevention targets and manage relevant performance, and constantly improve our predictive consistency. Furthermore, we develop plans to take preventive action and L/L measures on the basis of predicted risks in accordance with the key milestones set for each major project. We build a project-level preventive action system based on predicted risks and quality failures. We also hold project-level risk review sessions and operate a crisis management system so that we pre-emptively respond to risks and minimize their impact through the timely open of risks and collective intelligence.

Future Plans

Our focus in 2015 was to establish an integrated risk/quality failure management system. In 2016, we plan to set detailed preventive action plans based on the IT system to generate tangible performance. Through fundamental preventive measures and pre-emptive response to cope with quality failures, we will minimize their impact on our operating profit, and will take system/data-based preventive action to maximize our business efficiency.

Case 2. Winning the Gold Prize in the National Quality Circle Team Contest

The Rotation Circle from our Turbine Shop 2's manufacturing welding operations was awarded with the 'Gold Prize' at the National Quality Circle Contest, which honored DHIC with the Gold Prize at the competition for six consecutive years between 2010 and 2015. Our Rotation Circle presented their success story of reducing work time by improving the turbine diaphragm manufacturing method', which resulted in dramatic productivity gains through the development of a universal-purpose jig used for the manufacturing of diaphragm.

Awarded at the 2014-2015 National Quality Circle Contest

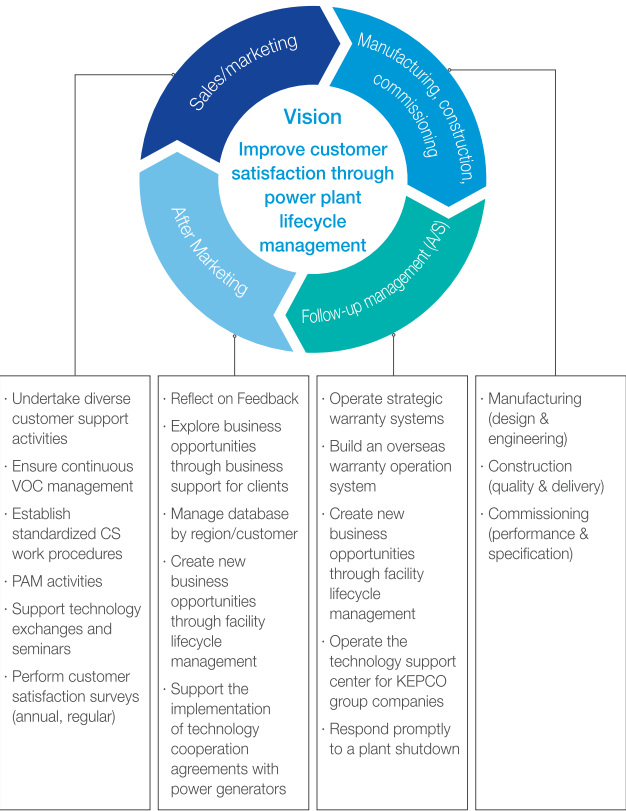
Year	Presented theme	Awards
'14	Reduced transport time by improving the grand assembly work method for APR-1400MW steam generators	Gold Prize
	Reduced nonconformance rates by improving the welding process for the header sturb of 1,000MW-class USC boilers	Silver Prize
'15	Reduced work hours by improving the turbine diaphragm manufacturing method	Gold Prize

CS Management

As it has become easier for a company to identify stakeholder requirements as a way to ensure its sustainable growth, today's stakeholders expect more from companies in responding to their needs. Specifically among diverse stakeholder groups, customers are increasingly important and they present even higher expectations, which makes it highly critical that a company takes action to cater to their needs. At DHIC, we constantly innovate our customer services to satisfy their specific needs on the basis of our customer-centered corporate culture. Particularly, we use our wide-ranging online/offline channels to communicate with customers and enhance customer value. From the preliminary marketing phase, we set a differentiated marketing strategy to satisfy customer requirements, and present a range of possible solutions in the manufacturing/construction/commissioning phases to deliver customer satisfaction. In the follow-up management and aftermarket phases, we support the stable operation of power plants through our plant lifecycle management program to ultimately expand the boundary of the power generation plant market.

Lifecycle-based Customer Management

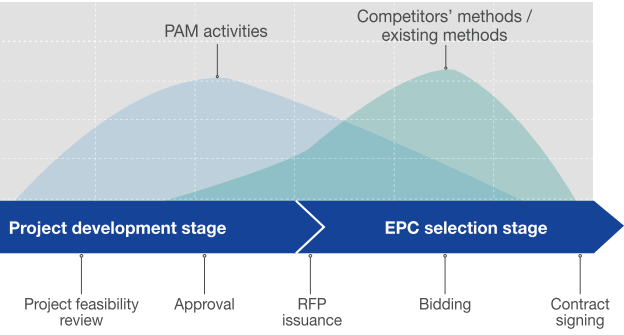
We improve customer satisfaction through our systemic customer management process. This process is categorized into the four phases of sales/marketing, manufacturing/construction/commissioning, follow-up management, and improvement and after-marketing, and we address possible complaints in each of these phases.



Sales/Marketing

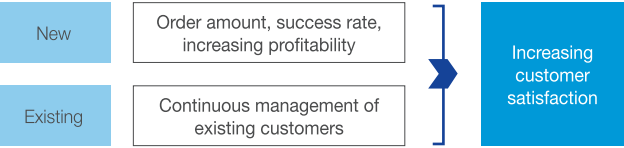
In the preliminary sales/marketing phase, we practice customer management, set differentiated region/customer-specific marketing strategies and conduct brand marketing. Our management regularly visits the head office and project sites to listen to customers and gather their feedback, and we strengthen our network with each of our clients to build lasting business relationships. We also differentiate our marketing programs by region and customer in consideration of market/customer analysis outcomes, network levels, and available resources. Specifically, our 'growing' sales strategy that has a differentiated competitive edge helps us to increase the possibility of winning contracts and generating profits, laying the basis for sustainable growth. Through this 'growing' sales strategy, we participate from the initial business feasibility review stage (thereby 'growing' the concerned project) and thus raise the possibility of winning the contract and generating profits, rather than participating in a fierce competition to win a project whose RFP has been already developed. By adopting this new strategy, our order-intake success rate rose by 53% and our average annual order intake amount skyrocketed by 83%. Furthermore, sharing the success story of this growing sales strategy helps our employees develop a customer-centered mind-set, and create localized growing sales solutions to accelerate our advancement into new markets.

PAM activities – level of resource input by project stage



1) PAM activities : Investing resources from the project development stage to improve the possibility of winning orders and generating profits, by undertaking in-depth marketing activities from the initial project stage (project feasibility review, approval, etc.)

Effects of PAM Activities



Manufacturing/Construction/Commissioning

We propose and perform preventive diagnosis to prepare for large-scale accidents that may occur due to aging generation facilities and excessive plant operations as well as recovery equipment procurement plans. In doing so, we provide our customers with pre-emptive measures against catastrophic facility failures as well as solutions to address limitations and the lack of executional capacity on the part of power generators.

Follow-Up Management

We operate an independent Warranty Team to guarantee the quality of our products and services. In the event of a power plant shutdown, we set up a task force team to receive the requirements of power generators and respond to them early on.

After-Marketing

As an extension to the conventional customer management process that consists of marketing, design and purchasing, manufacturing and construction, commissioning and warranty offering, we undertake after-marketing programs to identify customer needs through power lifecycle management, support the execution of the technology cooperation agreements signed with power generators, and collaborate with customers in extending free-of-charge warranty programs into fee-based programs, thereby contributing to creating new market segments. Specifically, we are focused on identifying customer needs before they occur through plant lifecycle management and exploring follow-up business opportunities in doing so. Noteworthy examples include the maintenance project that we won from Egypt's East Delta Electricity Production Company and the project to supply key spare turbine parts for the Korea Standard Nuclear Power Plant (KSNP).

Case 1. Maintenance Project with Egypt's East Delta Electricity Production Company

Current Status	Identifying the status of the warranty offering on Ain Sokhna, and confirming the needs from the client for technical support/maintenance following warranty expiration
Progress	Conducting a project proposal presentation on technical support/maintenance for Egypt's East Delta Electricity Production Company
Marketing Point	<ul style="list-style-type: none">Identify the examples of overseas maintenance projectsSupply spare parts following the maintenance projectsImprove facilities by obtaining operational data

Case 2. Project to Supply Key Spare Turbine Parts for Korea Standard Nuclear Power Plants (KSNP)

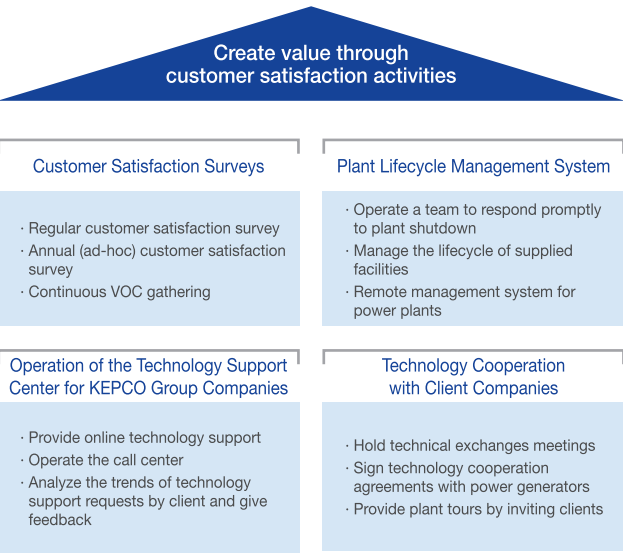
Current Status	Implementing PAM activities to persuade the Korea Hydro & Nuclear Power's management about the need to secure essential spare parts due to risks arising from operating old facilities
Progress	<ul style="list-style-type: none">Created consensus about the need for spare parts at the Korea Hydro & Nuclear Power/Central Research InstituteSigned an MOU for technology cooperation with the Korea Hydro & Nuclear Power
Marketing Point	<ul style="list-style-type: none">Ensure a stable and exclusive supply of spare partsFind ways to expand the scope of supply by stage

Customer Satisfaction

We continue to deliver innovative services on the basis of our customer-driven corporate culture. Specifically, we use wide-ranging online/offline channels to communicate with customers and create customer value. We deliver customer satisfaction through the lifecycle management of supplied facilities, and strive to create follow-up business opportunities by improving the quality of our customer support operations. We strategically respond to our customers at the contact point and forge partnerships with them to build lasting customer relationships.

Customer Satisfaction Initiatives

We improve customer satisfaction through diverse and systematic initiatives.

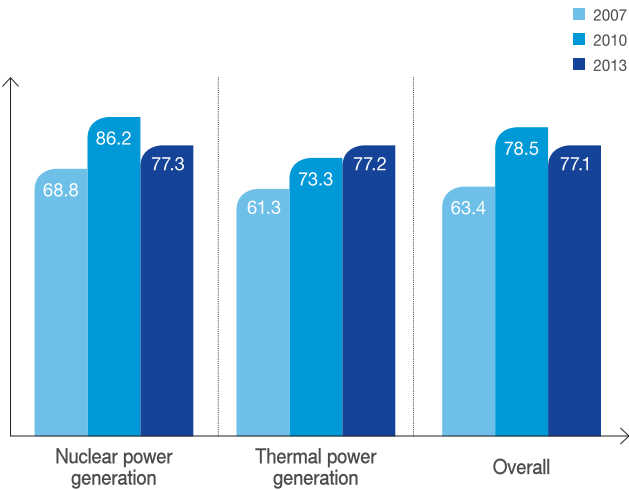


Customer Satisfaction Survey

Regular Customer Satisfaction Survey

We perform regular customer satisfaction surveys every three years, and have established positive customer relationships through our prompt response to on-site issues and improved customer responses. Our customer satisfaction survey on nuclear customers revealed that their overall satisfaction declined due to nuclear power plant issues while customer satisfaction in our thermal power plant business is constantly on the rise. Going forward, we plan to reorganize our regular customer satisfaction survey methods to focus more on customer value and market creation, given that customers’ product and quality needs give rise to customized customer service and improved reliability.

Regular Customer Satisfaction Survey Outcomes



Category	Regular Customer Satisfaction Survey Directions
1 st (2007)	Strengthening the Prompt Response System - Understand customer needs and establish a response system - Establish active and responsible customer response attitudes
2 nd (2010)	Strengthening Technological Capabilities - Demand for design/technology in less-competitive areas (I&C, etc.) - Strengthen subcontracting management (quality, technological capability, etc.)
3 rd (2013)	Strengthening Relationships through Mutual Xxchange - Expand mutual technology exchanges and training opportunities - Expand mutual technology exchanges and training opportunities
4 th (2017)	Creating Customer Value - Offer outstanding values to customers - Create markets where the customer value provided directly leads to business opportunities

Annual (Year-Round) Customer Satisfaction Survey

We hosted an event to share the outcomes of our annual customer satisfaction survey performed in 2015 for power plants of Korea Midland Power and Sejong Natural Gas. Attendees were briefed on survey outcomes and changes in technology trends as well as how we would respond to customer needs and strengthen customer relationships and how we selected and performed improvement tasks in response to the major issues identified through the Voice of Customers collected over the past year. When compared to our regular surveys performed every three years, these annual surveys, conducted on power plants completed within the past year and thus requiring relatively more proactive collaboration with customers, aim to swiftly respond to customer requirements to deliver improved quality and to enhance customer satisfaction to build lasting relationships. Similar to the previous annual survey conducted on the Yeongheung thermal power plant, this survey identified improvements to be made to strengthen customer relationships in addition to on-site issues so as to reinforce our partnership with the customer and to integrate customer requirements into our products and services.

Technology Cooperation with Clients

Technical Exchange Meetings

Our 'Technical Exchange Meetings' include both seminars and discussions to encourage customer engagement and the effectiveness of such events. To address information asymmetry between us and our customers, we provide information on emerging technology and the latest technological trends while customers share their data on facility improvement and operation so as to build mutually-beneficial partnerships.



Technology Cooperation Agreements Signed with Power Generators

We are expanding our agreements with power generators on technological and operational support to forge cooperative partnerships. In doing so, we pursue mutually-beneficial shared growth through joint R&D projects and government-led projects aimed at improving the efficiency and capacity of power generation facilities.

Invitational Tours of the Changwon Plant for Clients

We provide tours around our Changwon Plant to new and experienced employees of our client companies, which solidifies our customer relationships and improves our corporate brand image.



Operation of the Technology Support Center for KEPCO Group Companies

Online Technology Support for Customers

We provide prompt and accurate answers to any technology support requests made online by our clients concerning our products and services, which helps us earn trust from customers and ensure customer satisfaction. By changing our customer awareness and improving communication among collaborating organizations and their capacity-building, we shortened the time taken to respond to customer inquiries from approximately 12 days in 2013 to 8 days in 2014 and then 7.4 days in 2015.

Days taken to promptly respond to customer inquiries

Category	2013	2014	2015
Inquiry handling time	11.8	8	7.4

- Improve corporate image and secure the reliability of supplied facilities by reducing the time taken to answer customer inquiries.
- For matters that take a longer period of time for reviews (design modifications), ask for understanding on the part of the customer and respond swiftly.

Operation of the Call Center

Our emergency call center ensures customer satisfaction through swift response to any emergency that affects customers’ plant operation. In addition to offering online technological support to address general technical inquiries, we also operate an offline channel that offers more prompt technical support.

- CS119_Please Make Any Requests (☎055-278-8273)
- CS114_Please Ask Anything (☎055-278-8200)

Lifecycle Management of Supply Facilities

Operating a Prompt Support Team to Respond to Plant Shutdown

Our prompt support team is responsible for swiftly offering customer support in the event of emergency power situations or peak power seasons.

- ※ Emergency Call in the Event of Emergency at Power Plant
 - Primary system of nuclear power plant (☎055-278-8272)
 - Secondary system of nuclear power plant (☎055-278-8273)
 - Thermal power plant (☎055-278-8273)

Lifecycle Management of Supplied Facilities

We deliver high-quality service to customers through timely response to any customer requests on the plant facilities that we supplied until their decommissioning. Such lifecycle management covers even those facilities whose warranty period terminated so as to do our utmost in improving customer satisfaction.

Remote Power Plant Management Service

We developed a remote monitoring system that allows for the ICT-enabled real-time monitoring of plant operational data without any time or space restraints. Our RMS Team was created in 2013 to fully launch our RMS business, and the opening of the Remote Monitoring Service Center (RMSC) in 2014 allows us to offer remote management services to help power plants improve their performance. These remote management services are provided year-round to support stable plant operations, and include real-time operational information monitoring, an abnormality monitoring system and failure prediction/analysis systems.

Remote Monitoring Service Center (RMSC)

Creating Value	Creating Customer Value
<ul style="list-style-type: none">· Increase the availability, performance and reliability of power generation companies· Improve power generation operation technology and sales	<ul style="list-style-type: none">· Reduce maintenance cost· Improve operational competency through technology cooperation



Remote Monitoring Service Center (RMSC)

Information Security

Information Security Governance Overview

Our Security Audit Team is in charge of our company-wide information security policies, and our ‘Global Security System’ is up and running to minimize risks associated with security incidents and to strengthen our competitive edge. In Korea, we set forth our corporate security policy that consists of one regulation and eight guidelines governing physical, human and facility and assigned security managers to respective departments across the board. We also expanded our security infrastructure as a way to establish a systemic information security system.

2015 Accomplishments

Information Security Training for Employees

We provide online/offline security training to all our employees, and support our overseas subsidiaries by offering such training. Our company-wide offline security training includes corporate security policies, recent revisions to the security procedures, the protection of trade secrets, data privacy, and security incidents, and our overseas subsidiaries are capable of providing the same level of security training as the head office. Furthermore, online training programs are offered to new recruits with or without previous work experience to help them understand basic security operations.



Online Doosan Information Security Training

Information System Reviews

To protect our information system and ensure its operational effectiveness and efficiency, our Security Audit Team provides guidelines on the overall IT operations to the department in charge of IT operations and performs periodic reviews. This enables us to systematically operate and manage our information system.

Preventing the Leakage of Trade Secrets through Suppliers

To enhance the security of our trade secrets that are disclosed through the contracts signed with suppliers, we realigned security-related terms and conditions in the standard contract, made it mandatory for suppliers to comply with our security requirements at the time of their registration, and provided security training materials to supplier employees. As a way to minimize any damage on us in the event of security incidents caused by suppliers, we improved security terms and conditions in the standard contract used in our electronic contract system. Our suppliers should give their consent that they agree to the security terms and conditions when they are registered in our purchasing system, and our security policy stipulates that a separate Non-Disclosure Agreement (NDA) be signed when confidential information is provided so as to raise security awareness. We also offer training materials and checklists to assist suppliers in providing their own security training and assess their security performance level.

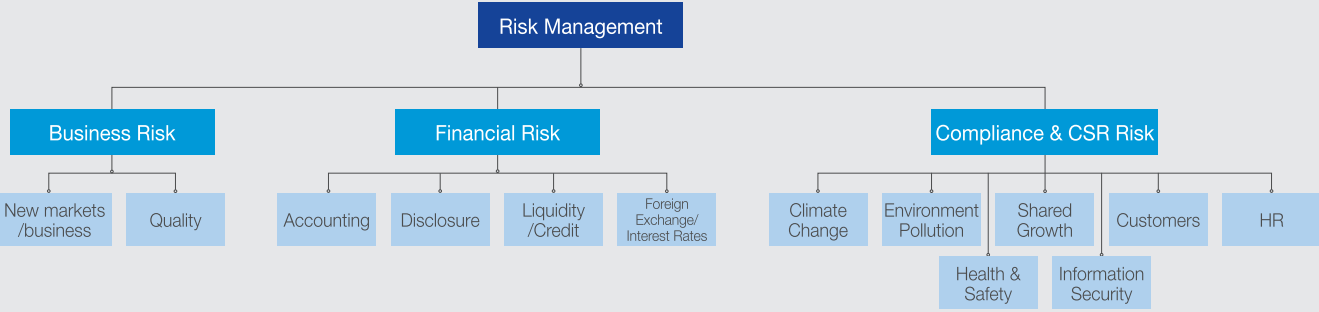


Information security training for employees

Integrated Risk Management

Integrated Risk Management System

Our integrated risk management system intends to effectively manage a range of risks. We recognize new markets and businesses, quality, and intellectual property as business risks, accounting, liquidity/credit, exchange rate/interest rate, taxation, and disclosure as financial risks, and climate change, environmental pollution management, certification/standards management, information security, and recruitment as non-financial risks. Each of these risk groups is monitored by relevant departments, and is managed under the leadership of executives in charge in respective divisions. For those risks that have grave impact on our operations, our Board of Directors makes the final decision on addressing these risks.



Business Risk

We recognize new markets and businesses, quality, and intellectual property as our business risks. In line with rapidly-changing market conditions across our wide spectrum of businesses from power generation to forging & casting, we pre-emptively recognize business risks and set clear response criteria and procedures to manage them across the board so as to improve the stability of our business conduct and pursue sustainable growth. In 2015, such endeavors allowed us to lay the basis to facilitate exchange with Iran and tap into new markets through the Morupule A project in South Africa among others. Furthermore, we are expanding our new businesses – eco-friendly power plant facility, fuel conversion projects (biomass), nuclear decommissioning, the development of spent nuclear fuel storage containers, and new forging products – to better cope with uncertainties in order intake while continuously striving to generate a stable source of future revenues by strengthening our power plant aftermarket business.

Risk (Response Organization)	Type of Risk	Response Methods/Strategies
New markets/ Businesses (Strategy)	Setbacks and delays in project undertaking	Shorten project time and prevent related risks through Lesson Learned (L/L, recurrence prevention measures)
	Process delays and cost overruns	Establish an early warning system and prevent risks by strengthening the process analysis/reporting system
	Changes in order intake due to market and environmental changes	Secure a stable flow of order intake through the growing sales strategy and the exploration of exclusively-undertaken projects
		Discover markets with the high possibility of winning projects through in-depth market research
	Decreases in productivity of investment assets	Establish a wider pool of order placements through proactive marketing activities
Quality (Quality)	Errors in measuring the fair value of M&A target companies	Strengthen stress tests for generating future profits
		Deal Team to continuously monitor the outcome of due diligence and to report regularly
	Failure of certification acquisition/renewal	Prevent trial & error in advance through cooperation with external experts
		Seek compensation for damages caused by the erroneous information provided in relation to the company to be sold
	Quality issues from external NDE ¹⁾ suppliers	Form a task force team to develop knowledge on evaluation processes and to receive evaluation

1) NDE : Nondestructive Evaluation

Financial Risk

As a large global company that operates 104 consolidated subsidiaries, we are exposed to a range of domestic/international financial risks such as foreign exchange and interest rates as well as accounting, liquidity and credit risks. Thus, we proactively and pre-emptively manage these diverse risks to facilitate our financial execution. Furthermore, we respond to various risks related to financing, foreign exchange and interest rate fluctuations that are expected in business conduct while transparently disclosing relevant details and outcomes to stakeholders as a way to minimize our corporate credit and disclosure risks.

Risk (Response Organization)	Type of Risks	Response Methods/Strategies
Accounting (Accounting)	Failure to fully or accurately adopt accounting management standards	Attendance at training, recruitment of experts, and advice from external experts
	Substandard management of fixed assets including omissions in the ledger	Systematic review of asset management status through regular financial investigations
	Obsolescence, losses and damages of inventory assets	Continuous monitoring of long-term inventories
	Real-time identification of the status of payments made in advance	Establishment of a real-time information sharing system between the head office and overseas branches
	Human errors made in the accounting settlement process	Prevention of distortion/omission of settlement adjustments through the use of settlement checklists
Liquidity/Credit (Finance)	Overestimation/underestimation of liquidity	Establishment of precise fund receipt and disbursement plans that are classified into sales/investment/financial activities
		Establishment and monitoring of liquidity-related KPIs
	Risk of errors in handling and executing funds	Establishment of standard processes by type of fund execution work
		Creation of an automated environment to prevent errors and misconducts in funding execution
Foreign Exchange/ Interest rates (Finance)	Fluctuations in exchange rates	Reasonable review of spending plans through the analysis of prior year's expenditure/concerned year's expenditure/planned budget
		Establishment of foreign exchange risk management guidelines
		Securing independence and expertise by segmenting foreign exchange risk management organizations
		Identification of accurate foreign exchange positions through the internal forward exchange system and the promotion of management stability
	Fluctuations in interest rates	Deterrence on the possibility of foreign exchange risks by restricting the management of derivatives
		Systematic analysis of risks for interest rate fluctuations (type, amount, period)
Disclosure (IR)	Changes in stock prices due to internal information leaks	Thorough implementation of disclosure systems/regulations regarding internal information
	Various restrictions imposed on non-compliance with disclosure regulations	Establishment of a regular disclosure monitoring system
		Training for disclosure managers from respective BGs to enhance their understanding on disclosure systems/regulations

Compliance & CSR Risk

We ensure a systematic management of and response to wide-ranging legal and non-financial risks ranging from climate change, environmental pollution management, information security, the recruitment of talented individuals to the prevention of safety accidents and meeting local community needs. Specifically, our CSR Committee and Green Value Committee assist us in actively responding to new regulations - Paris Climate Change Agreement (COP 21) – and diverse CSR issues in the fields of human rights, labor, environment, fair trade and local communities as a way to pursue sustainable growth. For detailed information on our response strategies and actions taken in respective fields, readers may refer to the corresponding sections of this report.

Risk (Response Organization)	Type of Risks	Response Methods/Strategies
Climate Change (Energy Environment)	Increases in worksite operational cost due to the increasing cost of energy purchasing Increases in raw material cost and damage to worksites	Development of carbon emission processes and BG specific target management
	Obligation imposed to reduce GHG emissions	Phased-in facilitation of energy efficiency improvement and energy integration
	Impacts on sales including the sluggish growth of existing business caused by reduced demand in such business that uses conventional fossil fuel due to climate change issues	Exploration of new business areas including ESS, etc.
Environment Pollution (Energy Environment)	Leakage of water pollutants into the Masan Bay	Recovery of all hazardous substances and their disposal via wastewater treatment plants
Health & Safety (EHS)	Occurrence of safety accidents at worksites	Raising EHS mind-set, including Safety Discussions, EHS Academy, etc.
		Implementation of worker-led EHS management activities, including risk assessments, safety discussions, etc.
	Risk of complicated large-scale disasters	Operation of the BCM system, including emergency response drills, emergency capacity-building training, etc.
	Continuous occurrence of chronic disease patients	Operation of health care programs
	Decreases in work productivity due to stress	Operation of the psychological counseling center
	Exposure to terror/kidnapping situations	Security management for employees working in high-risk countries
	Increases in project EHS risks	Establishment of EHS issue response processes for new overseas projects
Shared Growth (Shared Growth)	Violation of the Korea Fair Trade Act/Subcontracting Act	Continued training on the Fair the Korea Fair Trade Act/Subcontracting Act
		Prevention of legal violation risks through surveys on unfair trade practices
		Improvement of internal systems to remove risks from regulatory violation
Information Security (Security Audit)	Leakage of trade secrets and technology know-how through retirees	Improvement of employees' security awareness through online/offline security education
		Legal actions taken, and NDAs are signed when data sharing is required
	Leakage of and damage to data caused by attacks from malicious codes	Security solutions installed in preparation for hacker attacks and malicious codes, and real-monitoring conducted
		Safe internet use promoted through continuous security training
	Decreases in the stability and quality of information systems	Periodic audits conducted on information system management status
Customers (Customer Support)	Diverse customer needs	Identification of nonconformities in information system management, and development of improvement directions
		Annual customer satisfaction surveys performed in alignment with regular customer satisfaction surveys
		Technology Exchange Meetings hosted, and active participation in the technology seminars hosted by customers
		Identification of customer needs through regular visits and the continued offering of technological support
HR (HR)	Sustainable growth drivers	Recruitment of outstanding R&D staff in the fields of gas turbine, ICT and ESS
	Guarantee of labor rights and human rights	Operation of the Human Rights Committee for minorities and two-way communication training
	Existence of inefficient factors within the organization	Enhancement of employees' work-life balance through flexible work hours and the removal of inefficiencies at workplace
	Delays in job-based infrastructure system	Reinforcement of job diagnoses through the development of a job-based operational competency system Job capabilities strengthened by operating diverse training programs by service year/level

Sustainable Taxation



Sustainable Tax Policies

Excessive tax optimization by global companies that operate across multiple jurisdictions may rather pose significant risks on their business conduct over the mid/long-term. A company’s tax policy and tax structure should always assume that the company would pay its due taxes to the jurisdiction where it creates economic value. Thus, we develop and comply with sustainable tax policies in the four areas of planning, compliance, audit management and advanced tax solutions.

Planning

Fair Tax Policy

Our tax policy primarily intends to practice such passive tax management as eliminating double taxation and effectively using applicable tax laws. We operate only within the legally-permissible business environments and systems, and do not pursue aggressive taxation policy that goes beyond such boundary. Furthermore, our tax policy is developed in a way that satisfies relevant business purposes and does not compromise our business fundamentals (sales competitiveness, quality, brand value, efficiency, etc.). As an extension to this, our tax policy is implemented in conformity with business performances. Specifically in distributing income among related parties, decisions are made in consideration of the functions performed by them, the risks that are taken and assets used. Last but not least, meeting the purposes stated above means that we thoroughly understand applicable tax systems and relevant regulations since developing ‘fair’ tax policies is only possible on the basis of accurate knowledge on the applicable tax laws that require our compliance.

Audit Management

Fulfilling Responsibility to Cooperate with Tax Authorities

We faithfully respond to any tax investigations or requests for cooperation made by tax authorities. Upon accepting tax investigation notices, our tax department immediately reports to the CFO while preparing and reviewing the basic data that may be required during such investigations so as to

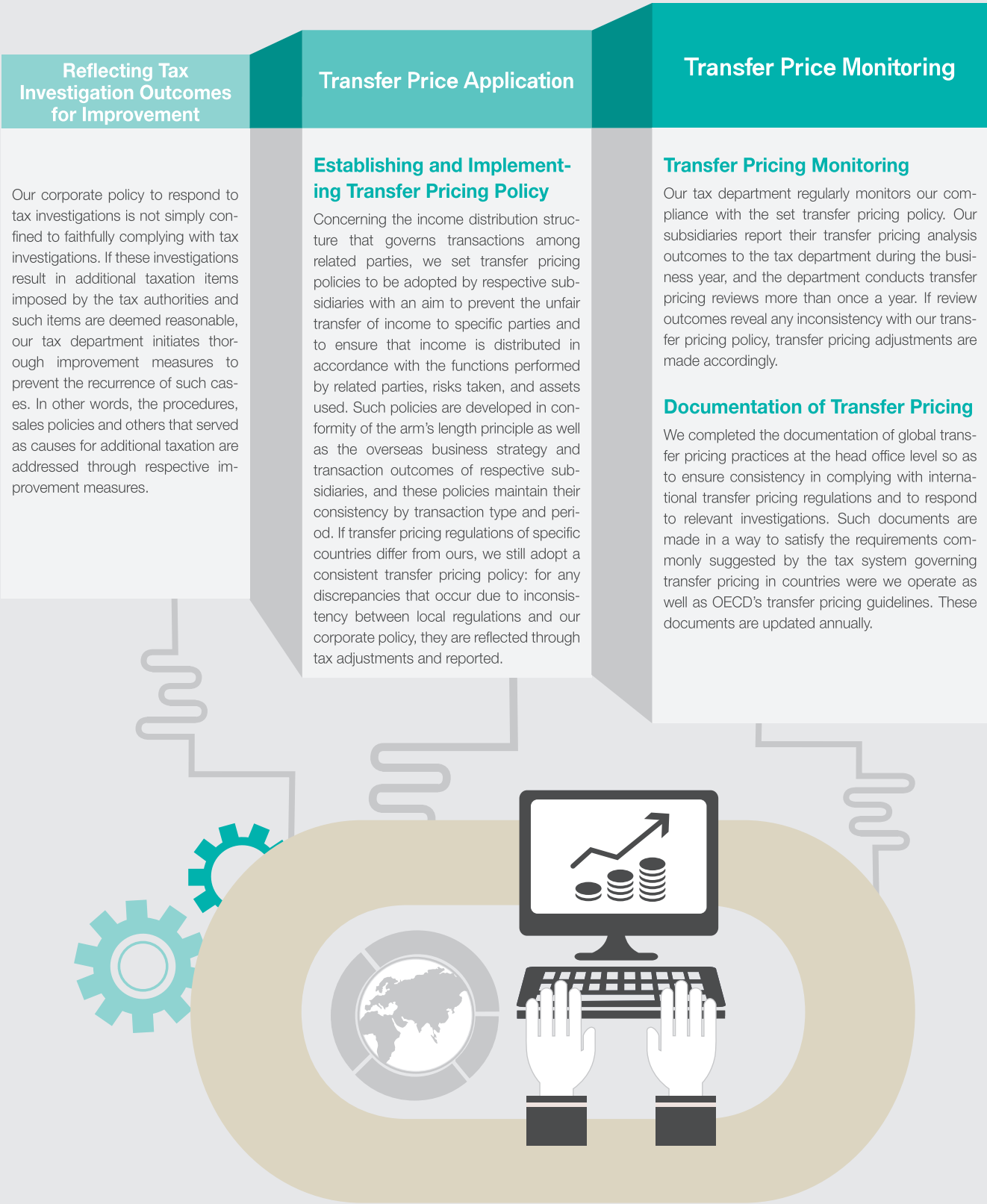
submit accurate data to tax authorities. Aside from fulfilling its responsibility to cooperate, our tax department also reviews the legitimacy of the legal logic used by tax authorities in imposing taxes, and actively presents our corporate feedback for any unreasonable taxation practices.

Preliminary Review and Information Offering to Support Business Departments

We assist business departments in making optimal decisions by providing them with timely and sufficient operational support. Our tax department closely cooperates with business departments in providing useful tax information so that they fully understand and review the impact of taxation in making important decisions. Preliminary tax reviews mainly include business restructuring, the establishment and liquidation of overseas subsidiaries, worksites and projects, carry trade and licensing agreements, transactions among related parties, investment in new large-scale fixed assets, stock transfer/transaction, dividend, EPC contracts and other supply/service contracts.

Compliance

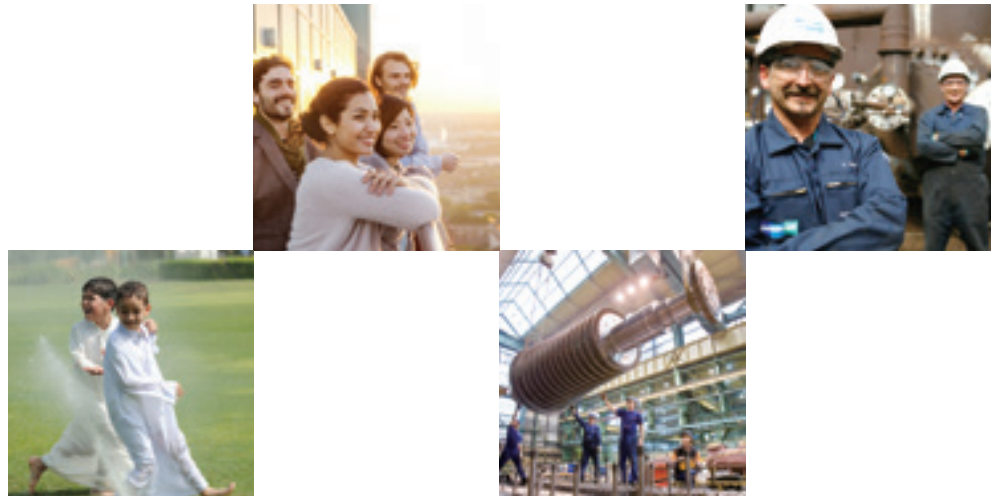
We strive to properly conduct tax filing and comply with relevant tax regulations by constantly monitoring the enactment and revision of applicable tax regulations. We sincerely fulfill our responsibility concerning tax filing and tax payment as stipulated by relevant local regulations. In case that such tax operations are performed by departments other than the tax department. We monitor to ensure that tax return be filed on time. We also stringently manage relevant tax documents, including tax return reports and tax work reports. While we retain such documents beyond the legally-required period, we follow our corporate policy if such period is shorter than the one stipulated under our policy. Concerning tax management plans and responsible organizations, we comply with our corporate policies and take into account the relevant regulations of the jurisdictions where we operate.





5 Performance of Overseas Subsidiaries

DHIC's global subsidiaries are striving to become a part of the Proud Global Doosan and accumulate business synergy in accordance with the Doosan Way.



Doosan Power Systems	98
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Doosan Power Systems (DPS) unites the rich heritage of Doosan Babcock, Doosan Skoda Power and Doosan Lentjes to provide innovative products and services that improve the quality of life of customers and local communities. DPS combines the strength of major industry players to design and deliver integrated solutions to meet customers needs.

Company Introduction

Since its foundation in 2010 as a holding company in the UK, DPS has expanded to include Doosan Babcock in the UK, Doosan Skoda Power in the Czech Republic, and Doosan Lentjes in Germany as its subsidiaries. DPS is a global leader in clean technology and power generation which includes the construction of power plants and the manufacturing of equipment for boilers, turbines, nuclear power.

Name of Company	Doosan Power Systems (DPS)
CEO	Kwangseob Jung
Type of Business	Holding Company
Head Office	65, boulevard Grande-Duchesse Charlotte, L-1331 Luxembourg

Composition of the Board of Directors (As of May 31, 2016)

Name	Position
Kwangseob Jung	DPS SA CEO
Danny McBride	DPS SA Secretary
Jitaik Chung	DHI COO
Myeongho Jang	DHI CFO
Yongjin Song	DJI Strategic Planning Division



Financial Performance (As of December 31, 2015 | Unit : KRW 100 million)

Doosan Power Systems	2015
Sales	12,546
Total assets	15,870
Operating profits	427
Liabilities	8,048

Major Subsidiaries & Products

Major Subsidiaries	
Doosan Babcock	Doosan Babcock is a specialist in the delivery of engineering, aftermarket and up-grade services to the power generation, oil and gas, petrochemical and process sectors. With a focus on the delivery of low-carbon technologies and an industry-leading project management capability, the company builds, maintains and extends the life of customer assets worldwide.
Doosan Skoda Power	Doosan Skoda Power is a leading global manufacturer and supplier of equipment for power stations and machine rooms especially equipped for steam turbines. The company's portfolio includes steam turbines ranging from 10 to 1,200MW. With its vast experience in applications for gas, coal, cogeneration, nuclear and CSP power production, along with ongoing investment in R&D, the company offers high efficiency products combined with extreme reliability and operational flexibility.
Doosan Lentjes	Doosan Lentjes is a global provider of processes and technologies for energy production from renewable and fossil fuels. The company's specific areas of expertise include circulating fluidised bed boilers, key technologies for the generation of energy from waste, and flue gas cleaning systems. Doosan Lentjes' technologies have been pioneering energy solutions for 90 years and convert millions of tonnes of waste into energy every year.

Products & Services		
Green energy	• Circulating fluidized bed technology	• Air pollution control technology
	• Waste-to-energy technology	
Power plant EPC	• Nuclear power plant	• Thermal power plant
Power plant equipment	• Combustion system	• Turbines/steam turbines
	• Secondary NOx control	• Heat exchangers
Power plant retrofits and Upgrades	• Biomass co-firing and Conversion	• Retrofit and Upgrades
	• Plant Maintenance	• Decommissioning
	• Shutdowns and Turnarounds	• Asset support services



Doosan Babcock

Based on the principles of talent cultivation, reliable operation and responsible engagement, Doosan Babcock has been diligently operating its CSR programs. This not only helped improve the quality of its business, but also had a positive effect on attracting new talent, developing suppliers and giving back to local communities.

Company Introduction

Doosan Babcock has been a global company in power plant facility design and engineering for more than 120 years. The company holds proprietary technologies in the design, engineering and manufacturing pulverized coal-fired boilers that are one of the key components of thermal power plants. Based on its world-class technologies and abundant experiences, Doosan Babcock provides power plant facilities to around 30 countries around the world, including the US and Europe. The company also delivers services, including the operation and maintenance of thermal and nuclear power plants, and continuously works to win contracts for the project of low carbon power plants.

in the price fluctuations of raw materials and their supply quantities. In order to respond to market ambiguity, we are making group-wide efforts to find the appropriate price and trade condition. Other risks include time constraints and timeliness of construction projects. In the event of delay in overseas projects due to economic downturn or environmental issues, Doosan strives to maintain customer trust by establishing a schedule management plan for large-scale projects at the group level so that the work load of on-site workers is reduced and such projects are completed within the set deadline.

Composition of the Board of Directors (As of May 31, 2016)

Name	Position
Andy Hunt	Doosan Babcock CEO
Kwangseob Jung	DPS SA CEO
Hojun Hyun	DHI Boiler BG Head
Byungman Kim	DHI Boiler BG's Planning

Business Analysis and Performance
Business Environment Analysis

The demand for base-load thermal power plants from non-OECD countries remains unchanged, and diversified market demands for new and renewable energy power plants are rising due to decreases in the average cost of electricity production and the governments' political support. Continuous growth of gas power generation is expected with changes in customer demands resulting from ICT developments. The biggest uncertainty in the current market situation lies

Business Performance

In 2015, Doosan Babcock was chosen as one of the preferred bidders for the proposed Hinkley Point C nuclear new build programme by EDF Energy. The ACTAN Consortium which consists of Doosan Babcock and suppliers, Cofely Axima, a subsidiary of ENGIE, and nuclear HVAC¹⁾ specialist Tunzini Nucleaire, a VINCI Energies subsidiary, are now set to be awarded a HVAC contract worth over £200m. The Consortium's Classified HVAC contract will involve the design, equipment qualification, procurement, installation and testing of all heating, ventilating and air conditioning equipment at Hinkley Point C. Other noteworthy achievements made by Doosan Babcock include two long-term contracts signed with Abu Dhabi Gas-Industries Limited (GASCO) as well as a long-term contract signed with Taweelah Asia Power Company (TAPCO) to provide maintenance and technical support services to the Taweelah B power and desalination plant in Abu Dhabi.

1) HVAC : Facilities that are essential in operating nuclear plants, including removing dust through ventilation and controlling temperatures by letting hot or cold air flow in indoors through the ceiling

Corporate Social Responsibility

In 2015, Doosan Babcock achieved ISO 26000, the international guidance standard on Corporate Social Responsibility (CSR), following an LRQA Stage 2 audit conducted by Lloyd’s Register. The first certification of its kind to be achieved by a member of the Doosan Group, this is a significant achievement for Doosan Babcock and its CSR commitments, and underpins the global Doosan strategy. ISO 26000 accreditation acknowledges the integral role CRS plays in the business. Doosan enthusiastically implements CSR activities by holding the CSR Committee on a quarterly basis. The company ranked high in the 2015 CSI (The CIPS Sustainability Index) evaluation conducted by the Chartered Institute of Purchasing & Supply (CIPS), with scores of around 90% in all areas linking the environment, economy and society.



Doosan Babcock CEO Andrew Hunt and the CSR team receives the ISO 26000 certification

Talent Management

Doosan Babcock thrives amidst a global corporate culture based on its 2G strategy (Growth of People, Growth of Business). In order to provide equal opportunities and respect employees’ personal characteristics, Doosan Babcock is spreading its corporate values and implementing the group’s diverse regulations. In particular, we are making efforts to raise employees’ awareness about welfare and promote corporate culture, by embodying the best practices in talent management established in 2014 which include areas related to employment, wage, education and promotion. In addition, we ensure fair opportunities to all employees based on their strengths and capabilities, making sure all employment, evaluations and promotions are conducted through systematic and transparent procedures. We continue to improve regulations and procedures related to welfare, employment and evaluation, so that they meet global standards. In terms of products and services, Doosan Babcock prohibits discrimination against any individual, group, customer or the public sector, and makes sure that none of its employees receive unfair treatment for their age, disability, gender, ethnicity, religion and sexual orientation. We encourage and embrace all aspects of diversity in businesses, while creating a healthy work environment where actions such as verbal attacks, blackmail, abuse of power and violence are treated with zero tolerance, and may be subject to punishment and discharge depending on the extent of such action.

Health & Safety

Doosan Babcock is safely managing all worksites by setting up a health and safety management system by dispatching experts to the head office and all power plant and oil and gas sites. For sites with high risk of safety accidents, we provide briefing and training to remove preliminary risk factors through our own differentiated process of critical task analysis. We are also managing internal and external safety-related risks by establishing a three-year plan to improve health and safety on worksites, including internal and third party verifications on risks and outcomes and the following year’s goals, the health & safety consultative group meetings as well as self-reviews by the management and executives, and advice from the health and safety experts. Doosan Babcock’s health and safety system complies with the UK’s Health and Safety at Work Act which outlines global standards, and Doosan Babcock is regularly evaluated for its ability to maintain the OHSAS 18001 certification from the LRQA. As a result, our worksite in the Eggborough and North Yorkshire region won the Sword of Honour Awards, the highest level in the BSC 5-star audits hosted by the BSC (British Safety Council), receiving recognition as the one of the safest workplaces in the UK, and won the Gold Award for safety and health.



Doosan Babcock won the British Safety Council Sword of Honour



Doosan Babcock won the RoSPA 2015 Gold Award for Occupational Health and Safety

Compliance with international agreements on health & safety services / Implementation of occupational health & safety measurements at workplaces
Review and improvement of major health & safety processes
Workshops held to educate on environmental awareness
Training provided on emergency leakage and waste management
Training provided on thorough IOSH ¹⁾ management
Periodic performance measurement and establishment of the following year’s plan

1) IOSH : Institution of Occupational Safety and Health

Social Contribution

In order to foster future engineers, Doosan Babcock is supporting STEM (Science, Technology, Engineering and Maths) activities to enhance the expertise of students from local communities in related fields, including science, technology, engineering and mathematics. Support and promotion of STEM subjects is a key pillar in Doosan Babcock’s CSR policy enabling students to develop an interest in STEM subjects while informing them about career opportunities in the field of study. Doosan Babcock supported a number of STEM career fairs in 2015 including the Big Bang Fair, the Skills Show, Imagineering 2015, Big Bang South East Fair and was a key sponsor at Powering the Future exhibition at the Glasgow Science Centre, Scotland. We were also highly recognized locally for having employees working in the U.K., Germany, Poland, the UAE and Hong Kong implement various CSR activities on the Doosan Day of Community Service, which included helping various local charities, raising funds and donations for food banks and helping local parks and councils. In addition, we addressed economic imbalances in society in local communities through various donation activities. In particular, employees from around the U.K. donated 7,000 pounds for the Genes for Jeans event on Doosan Day of Community Service, to help children and families suffering from genetic disorders. Additionally, Doosan Babcock’s employees working in the U.K. donated four tons of food to the food bank, enabling about 9,700 people to enjoy healthy meals. The food donated by Doosan Babcock is given to communities through the Trussell Trust, which operates the food bank around the U.K.. As such, Doosan Babcock recognizes its economic, environmental and social impacts in local communities through business activities, and implements strategic and diverse CSR activities to bring positive changes to local communities.



Powering the Future exhibition held at the Glasgow Science Center in Scotland



Donated to the Genes for Jeans event



Donated food to the Trussell Trust Food Bank

Response to Climate Change

By establishing a lower carbon and energy distribution policy, Doosan Babcock aims to actively participate in responding to climate change and contribute to sustainable industrial development. Therefore, we are implementing businesses to realize our lower carbon objectives through our technologies which include biomass conversions, retrofits and the promotion of Doosan’s fuel cell technology. This is expected to reduce energy consumption and greenhouse gas emissions as well as contribute towards decreasing hazardous substances such as NOx and SOx. Doosan Babcock established a target to reduce GHG emissions by 20% by 2020. In 2015, these emissions were independently verified through LRQA as part of our ISO14064 certification. In order to meet our 20% reduction target by 2020, we aim to obtain the Carbon Trust Standard certification in 2016.

Reduced 165,000 tons of CO ₂ emissions through Tri-generation based on fuel cell technology
Industrial cooperation with universities and local STEM groups to strengthen R&D technology, etc.



Doosan Skoda Power

Doosan Skoda Power is fully governed by CSR principles and high ethical standards, and is committed to responsible engagement in terms of exemplary environmental performance. We are continually improving working and living conditions for our employees, as well as giving back to local communities to establish a long-term positive relationship.

Company Introduction

Doosan Skoda Power is a specialized steam turbine supplier with over 150 years of history. We achieved world-class performance, efficiency, reliability, and maintenance of steam turbines through effective design and quality manufacturing. Our steam turbine technologies are constantly evolving to meet the changing needs of our customers.

Composition of the Board of Directors (As of May 31, 2016)

Name	Position
Jiri Smondrk	Doosan Skoda Power CEO
Michal Kosacky	Doosan Skoda Power CFO
Kwangseob Jung	DPS SA CEO
Heungkwon Park	DHI Turbine/Generator BG Head
Ikhan Do	DHI Turbine/Generator Planning

Business Analysis and Performance

Business Environment Analysis

In 2015, the power plant business sector changed course from continuous decreases in power plant installations, contributed by the global recession, to the renewed growth spurred by increasing power demand originating from the global economic recovery. The power plant industry faced difficulties due to decreases in raw material prices and stagnation in the market, but coal-fired power plants continued to act as a base load generation in non-OECD countries in Latin America, Southeast Asia as well as India. New demand for gas power plants also increased in the MENA region due to medium and long-term gas prices reduction and strengthened environmental regulations in OECD countries. Increasing demand for renewable sources of energy (biomass, waste to energy, solar power plants) is being observed in the EU, Latin America and Southeast Asia.



Business Performance and Forecast

Doosan Skoda Power succeeded in entering into China's plant market by outdoing competitors and signing supply agreements for 90MW steam turbines and generators with China's Shandong Electric Power Construction Corporation, Doosan Skoda Power also entered the South African market by signing an agreement with the Botswana Power Corp to supply turbines and generators to improve the outworn Morupule A power plant. In addition, we entered into other overseas markets, most notably supplying 770MW steam turbine generators to Mexico. We will continuously explore new markets by conducting promotional activities and providing customized services based on in-depth market analysis to seize new business opportunities. In order to develop customized products that meet customer needs for improved product efficiency, we hope to strengthen our R&D capabilities. Lastly, we plan to apply the latest industrial technology that incorporates Industry 4.0 principles and actively fulfil our key role in the global R&D center to build an impressive portfolio of steam turbine technologies.

Corporate Social Responsibility

Doosan Skoda Power holds CSR Committee meetings on a quarterly basis to review CSR achievements and re-establish our directions. We strive to enhance the company's brand value and strengthen future capability of local communities by systematically carrying out CSR activities, with the ultimate goal of contributing in improving corporate competitiveness.

Talent Management

Doosan Skoda Power recruits talent in a fair and transparent manner following the Group's code of conduct and provides equal opportunities to all applicants. In order to provide equal opportunities to employees, we comprehensively reflect and evaluate the qualifications, diversity, and personal characteristics of each employee. All of our employees are strictly protected by the labor laws and regulations in the region where they are stationed for work. Doosan Skoda Power has continually improved its collective agreement on an annual basis, taking into account the opinions of related stakeholders during this process. We annually verify all information regarding human rights through strict corporate procedures.

Response to Climate Change

In 2015, Doosan Skoda Power was able to reduce its energy use by shifting to high efficiency lighting and installing light control systems. We also installed insulation devices on the outer wall of the building to conserve energy and cut down on heating expenses.

Health & Safety

Doosan Skoda Power improves its work efficiency through safety and health management of its employees, which also enhances their satisfaction with the work environment. In 2015, we reduced the risks of manual handling by purchasing and installing 5 manipulators. We were able to protect our employees from noise pollution by installing soundproof mobile cabs. We also reduced the likelihood of safety accidents by providing evacuation training in the event of a fire. In 2016, we will work to strengthen our employees' awareness on health and safety and reduce the likelihood of accidents by continually providing training and preventing safety accidents.

Social Contribution

In 2015, Doosan Skoda Power established a new strategy for social contribution in order to create a consensus for importance of social contribution within the company and to systematically implement the social contribution activities. We will focus on carrying out various activities according to the new social contribution strategy, including supporting community sports, providing training support, conducting the clean-up of public spaces and implementing disaster relief activities. The support provided to the soccer team Viktoria Plzen is one of Doosan Skoda Power's key corporate social activities, which has had a positive impact on improving employee morale and boosted pride within the company. We have also participated in Doosan Day of Community Service for the third year running, conducting activities such as house cleaning, renovation and painting.



Employees volunteering for the Doosan Day of Community Service event



Volunteer activities at the Pilsner Volunteer Center



Doosan Lentjes

Across all of its technologies, Doosan Lentjes aspires to be a leading innovator of products and services that improves the quality of life for people and communities around the world.

Company Introduction

As a global provider of power plant equipment and engineering, Doosan Lentjes boasts environmentally-friendly proprietary technologies in specialized areas such as Circulating Fluidised Bed (CFB) boilers, air pollution control systems and waste-to-energy technologies. As a result of securing CFB combustion boiler technology, we generated synergy from the combination of this technology with Doosan Babcock's pulverized coal boiler technology, thereby laying the basis to provide diverse solutions to customers.

Composition of the Board of Directors (As of May 31, 2016)

Name	Position
Thomas Stetter	Doosan Lentjes CEO
Andreas Aschbacher	Doosan Lentjes CFO
Kwangseob Jung	DPS SA CEO/CFO
Hojun Hyun	DHI Boiler BG Head
Byeongman Kim	DHI Boiler BG Planning

Business Analysis and Performance

Business Environment Analysis

Even in the face of difficulties caused by the global economic recession, Doosan Lentjes was able to overcome the crisis through its employees' abundant experiences and excellent risk management skills. We also improved our price competitiveness by reducing the cost of components through close cooperation with DHIC, while improving the process required for project planning, production and execution.

Business Performance

As a result of the relevant EU legislation, it is forecast that the household waste-to-energy facility market will greatly increase in Europe with an annual investment of KRW 3 trillion expected for the next five years due to restrictions on burying household waste under the

ground. Therefore, Doosan Lentjes increased sales with its key technologies in eco-friendly power generation, including the supply of 2 units of boilers and equipment to the Krakow Refuse Derived Fuel (RDF) production plant, whose project contract was won by Posco E&C from the City of Krakow, Poland in 2015.

Corporate Social Responsibility

Response to Climate Change

In 2015, Doosan Lentjes received recognition domestically and internationally for its design and construction of household waste-to-energy facilities. Doosan Lentjes' rotary kiln technology minimizes the ecological impact of hazardous waste treatment, thus helping reduce the need for landfills. This will be essential in responding to increasing energy demand and consumption generated by China's rapid industrial and economic growth.

Health & Safety

Doosan Lentjes operates a health and safety management system according to OHSAS 18001, which helps prevent and minimize occupational hazards identified by the company. This management system is periodically audited both internally and by accredited organizations to verify its compliance with legal standards.

Social Contribution

Doosan Lentjes is supporting R&D activities through academia-industry collaborations with local universities in Aachen and Bochum. In order to assist the socially underprivileged, we hold events to provide daily necessities for refugees, which have emerged as a major social issue in Europe, participate in charity marathons to help the needy, and hold the Make a Wish event to make the wishes of children from low-income households come true. We also carry out other community-based CSR activities, including reforestation in the Ratingen region and the clean up of the Rhine River as part of the annual Doosan Day of Community Service event.



Company Introduction

Doosan Power Systems India (hereinafter referred to as 'DPSI') is evolving into a comprehensive power plant solutions company based on the proprietary Boiler Technology owned by DHIC and world-class manufacturing facilities at Chennai. DPSI provides integrated power plant solutions including EPC for power plants manufacturing the main equipment for Boilers independently and executing R&M for enhanced efficiency and life extension of power plants. In 2011, DPSI consolidated all DHIC owned subsidiaries in India. In October 2012, we established the robust foundation to become a comprehensive power plant company by merging with the DCW (Doosan Chennai Works), a local boiler manufacturing plant. DPSI with its indigenous expertise and world class manufacturing facility at Chennai is well equipped to deliver advanced mega power plant solutions to the highly promising Indian power market.

(As of December 31, 2015)

Name of Company	Doosan Power Systems India (DPSI)
MD & CEO	ChangSeob Son
Type of Business	Supply main power plant equipment, power plant EPC, service and AQCS ¹⁾ business
Office	DPSI Registered Office: FF-35, Vasant Square, Plot No. A, Community Centre, Pocket-V, Sector- B, Vasant Kunj, New Delhi – 110070 DPSI Head Office: 16 th Floor, DLF Square Building, Jacaranda Marg, Near NH-8, DLF Phase- II, Gurgaon-122002 (Haryana)
Number of Employees	1,292 persons

¹⁾ AQCS : Air Quality Control System

Corporate Governance

DPSI's Board of Director consists of 4 executive directors and 3 Nominee directors. The Nominee Directors are also periodically informed about the business activities of the company and consulted about important company decisions. Besides the technical expertise, most of the Board members have knowledge and expertise in the applicable areas, including Strategy, Finance, Sales and Marketing, Production, Project Management etc.

Doosan has differentiated itself in the Indian power market by delivering on-time sophisticated power solutions and successfully executing power plants by leveraging our advanced technology. We are also making efforts to strengthen fundamental competitiveness to achieve sustainable business growth, as well as enhancing the local communities' self-reliance and DPSI's corporate value through strategic CSR activities.

Share (stock) Composition of the company

Category	Percentage of shareholding
Doosan Heavy Industries & Construction Co., Ltd. Korea	99.45%
Doosan Power Systems Overseas Investment Ltd., UK	0.55%

Composition of Board of Directors (As of May 31, 2016)

Name	Position
ChangSeob Son	MD & CEO
Sangju Jeong	CFO, Director
Jongseok Park	Strategy Head, Director
Dukhee Jeong	Manufacturing Head, Director
Jitaik Chung	Nominee Director (DHIC-COO)
Myeongho Jang	Nominee Director (DHIC-CFO)
Yongjin Song	Strategic Head and Outside Director of DHI

Financial performance (Unit : KRW 100 million)

Doosan Power Systems India	2015
Sales	3,141
Total amount of assets	4,438
Liabilities	3,438



Raipur coal-fired thermal power plant in India



Sipat coal-fired thermal power plant in India

Management Strategy

To fulfil the vision of becoming the leading company in India’s power plant industry by providing the best value to customers, DPSI has established three strategic directions, including strengthening fundamental competitiveness, reinforcing business execution and management capabilities, and establishing the robust business foundation for sustainable growth.



1) Strengthening fundamental technologies and cost leadership : Integrate DHIC's advanced technologies and DPSI's business execution experience and indigenous expertise in India to strengthen technologies and cost competitiveness

2) Reinforcing business execution and management capabilities : Successful on-time delivery of projects and minimize the risks of projects based on past projects' lessons learnt

3) Creating a foundation for sustainable business growth : Implement a sustainable management system that meets global standards and creates positive economic & social impact for the local communities, which yields longer term value for all stakeholders.

Business Analysis and Performance

Introduction of Business

DPSI provides end-to-end solutions from engineering to commissioning of power plants with the proprietary state-of-the-art technologies owned by DHIC. This unhindered technology access, along with Doosan Power business group’s synergies, fully complements DPSI’s indigenous expertise across the power generation value chain. Doosan has been the pioneer in bringing the Super-critical technology to India by successfully commissioning the first Super-critical boilers in India. Our Chennai factory is at the same level as DHIC’s Changwon Plant and manufactures super-critical and ultra-super-critical boiler pressure parts with a manufacturing capacity of 2.2 GW per annum.

Business Environment Analysis

According to a global consulting agency’s survey in October 2015, India was chosen as one of the best countries to invest in for the next three years by the top 500 global companies. Indian government’s key flagship program ‘Make in India’ and ambitious target of ‘Power for All’ by 2019 will be the key demand drivers for Power. Driven by increased industrial demand due to ‘Make in India’ and growing middle class, there is going to be an upward pressure on the per capita electricity consumption which will further increase the need for more high-quality electricity. However, on the supply side, the financial soundness of electricity distribution companies (Discoms) and private power developers is weak. The Indian government is currently executing programs to improve the financial health of discoms, which is expected to de-bottleneck the power value chain. Even though the Indian Government aims to increase the share of renewables, conventional thermal power shall continue to play a dominant role in meeting power demand for at-least another decade. In accordance with global environment concern, Government has also issued strict emission norms for Thermal power plants in December 2015. DPSI is actively seeking introduction of environmentally friendly technologies that are currently part of Doosan Power Group’s portfolio and will be deployed in India to become a significant partner in Indian Government’s commitment towards reducing the carbon emissions.



Mundra coal-fired thermal power plant in India

Corporate Social Responsibility

DPSI is actively implementing its CSR activities based on Doosan Way and 2G strategy (Growth of People, Growth of Business), enhancing local communities’ future self-reliance and DPSI’s corporate value through strategic CSR activities. To achieve this, we will establish DPSI’s CSR management system to reflect India’s local ethos harmonized with Doosan’s CSR management philosophy and practices.

Talent Management

DPSI’s Corporate Human Resource Policy has a robust framework which inspires innovation and motivation for our human capital. In order to identify, select, develop and retain top talent within the organization, Talent Management programs are implemented for all employees, effectively fostering the leadership capabilities of employees according to their position and role.

Respecting Human Rights and Diversity

DPSI upholds the sanctity of Human Rights in letter and spirit and seeks to identify, assess and manage human rights impacts within its sphere of activities. In order to protect employees’ human rights, we provide human rights training and regularly inspect any violation of human rights at all worksites. DPSI has zero tolerance for sexual harassment at workplace and has adopted a Policy on prevention, prohibition and re-dressal of sexual harassment at workplace in-line with the provisions of the Sexual Harassment of Women at Workplace Act, 2013. DPSI believes in an inclusive approach to employment. Our recruitment rules, procedures and general conditions of service stipulate equal opportunities for all its employees at the time of recruitment as well as during the course of employment irrespective of gender, ethnicity, nationality, sexual orientation, political or religious affiliation.

Business Performance

Despite the sluggish recovery of India’s power plant market over the past years, DPSI continuously won orders, including the Harduaganj (1x660MW) project in September 2015 and the NTPC Barh-I (3 x 660MW) project in January 2016. This is largely the fruits of our tireless efforts to deliver highly efficient power plants in a timely manner which promises an even brighter future by building mutual trust between DPSI and our esteemed clients. Additionally, we kept our promise with clients by successfully achieving project milestones, despite difficult construction conditions, namely, Boiler Initial Firing of Unit 1 at Kudgi (3x800MW), Hydrostatic Test of Unit 1 at Lara (2x800MW) and Performance Test at GMR Raipur (2x685MW). Also, DPSI is continuously exploring new business opportunities in the southwest Asian power plant markets such as Sri Lanka, Pakistan and Bangladesh, etc.

Business Outlook

The GDP growth rate of India has surpassed China’s in 2015, and it is forecasted to maintain a high and stable growth outlook in the medium to long term. The economic growth momentum is moving gradually into a recovery mode and the industrial sector is expected to lead this recovery. Key Government initiatives like ‘Make in India’, ‘Power for All’, ‘Clean India’ etc. are likely to pick up speed in the coming few years and aid economic growth and demand for power. Conventional Power market is seeing a gradual revival as Government is showing firm intent to resolve the structural issues, as demonstrated by the recent Coal blocks re-allocations and going forward, many reforms are underway and their full impact would be visible in next few years and will consequently stimulate the project pipeline and awards run-rate.



Environmental improvement activities at the Gurgaon BVM School



Implementation of the 'Clean India Mission'

Cultivating Employees

To cultivate 'Doosan People' and implement 2G strategy (Growth of People, Growth of Business), various learning and development initiatives are taken to impart skills and coach employees to transition them to the next level. To build pipeline of potential candidates and nurture the next generation of leaders, systematic succession planning is conducted through a 'People Session' This session is aimed at identifying and developing high potential current employees to fill key business leadership positions. Functional Competency System is a process of assessing employees' competency levels and cultivating them to enhance organization's fundamental competitiveness. Some of the key training programs organized are Strategic Thinking Enhancement Through Problem Solving (STEPS) program, INSIGHT, Online MBA courses. These programs nurture future leaders to further understand, internalize and embed the Doosan Way and step-up to become role models.

Health & Safety

EHS is an integral part of DPSI's commitment to providing a safe and healthy workplace to all employees and stakeholders. It is an integral part of the Annual Management Objectives for the top management. To imbibe a culture of safety, DPSI has ensured that all employees at its plant and sites are trained in health and safety procedures and follow them as a regular practice. For this regular sessions are conducted, safety has been made a mandatory part of induction modules and all safety concerns are highlighted and addressed as soon as possible. Safety performance is being reviewed at regular intervals at all levels at the plant and sites. As reflected in our Safety Index, DPSI Chennai with 950 employees has not recorded any fatality since 2013. In 2015, we recorded a 0.09 accident rate (LTIR & TRIR)¹⁾ with one case of minor injury accident. We also set up a sewage treatment system directly at the plant to treat all plant waste water while also preventing emissions of air pollutants.

1) LTIR : Lost Time Incident Rate, TRIR : Total Recordable Incident Rate

Social Contribution

DPSI's social contribution activities are focused on community-based programs that foster talented people and promoting the self-reliance of most vulnerable sections of the society. This is aligned with Doosan's core values and talent-oriented management philosophy, which encourages the self-support of beneficiaries, providing fundamental solutions to social issues in local communities and encouraging employees' voluntary participation. Since 2012, we initiated several activities to significantly improve the educational infrastructure of schools for underprivileged children, as well as to provide necessity items for differently-abled institutions. Furthermore, we are also improving the welfare of local communities, sharing their burden and implementing multi-year projects near the Chennai factory and our project sites. In December 2015, when the city of Chennai flooded due to heavy rains, DPSI's employees voluntarily raised money, in addition to the company's contribution, and donated to the Tamil Nadu State government and a NGO's relief fund for flood victims. Employees who were flood victims themselves and in-house suppliers' employees all took part in damage relief. One of the biggest characteristics of DPSI's social contribution activities is its employees' voluntary participation. Besides, DPSI's Board Level CSR Committee, we have constituted 'CSR Operational Committees', comprising of 40 representatives from across departments. This working level committee motivates voluntary participation and enhances the transparency of our CSR operations. The number of employees participating in the Doosan Day of Community Service has increased consistently since 2014, from 310 employees took part in October 2014 to about 340 employees in March 2015. In September 2015, 430 DPSI employees participated highlighting their real involvement as they experience a sense of joy in helping others, rather than only contributing through donations. Environmental improvement activities and implementation of the 'Clean India Mission' were some of the key initiatives across DPSI.



Company Introduction

Doosan VINA is Vietnam's number one company in heavy industry and has been producing major equipment for the power, water and logistics sectors that includes boilers, seawater desalination plants and cargo container cranes. Doosan VINA is an important part of DHIK's global production system.

(As of Dec. 31st, 2015)

Name of Company	Doosan VINA
CEO	Yeonin Jung
Type of Business	Producing major equipment for power generation, seawater desalination and logistics
Address of Head Office	Dung Quat Economic zone, Binh Thuan, Binh Son, Quang Ngai
Number of employees	2,351 persons

Corporate Governance

The Doosan VINA Board of Directors consists of seasoned management experts and includes three internal directors. The decisions the board makes follow company regulations and are all made in accordance with the Doosan Way.

Composition of the Board of Directors

(As of May 31, 2016)

Name	Position
Yeonin Jung	Head of Corporation & CEO of Doosan VINA
Byounghwee Lee	CFO of Doosan VINA
Hojun Hyun	Boiler BG Head of DHI
Byeongman Kim	DHI Boiler BG Planning
Hyuk Kim	DHI Operational Innovation Supervisor
Jongmun Lee	DHI Controller

The primary mission of Doosan VINA's management and staff is to ensure the company's basic competitiveness and sustainability. Doosan VINA is a company that not only serves the domestic market in Vietnam but also has many international customers. They meet global standards for business operations as well as fulfilling the company's CSR, economic, environmental and societal goals.

Financial performance

(Unit : KRW 100 million)

Doosan VINA	2015
Sales	2,291
Total assets	4,233
Operating profits	18
Liabilities	3,555

Strategy

Doosan VINA has played a pivotal role in the localization of Vietnam's industrial sector by supplying products of exceptional quality. These products have been installed in Vietnamese power plants and are enhancing the local economy and lifestyle. In addition, Doosan VINA has laid the foundation and is becoming a global production base; bringing a diversified product line to the country while developing the market through order-intake and international standards of execution.



Mong Duong thermal power plant 2



Doosan VINA boiler plant

Business Analysis and Performance

Introduction of Business

Doosan VINA's heavy industry operations require skilled manpower, large-scale facilities and cutting-edge technology in order to produce the key equipment they make for: Thermal power generation, Sea water desalination, Port logistics and Petrochemical and oil refineries. Doosan VINA plays an important role in DHIC's global production system. They currently manufacture power plant boilers, desalination evaporators, structural steel, mega cranes for ports and other equipment. Based on the continuous introduction of new technology; that is needed to be competitive in the global market-place, we have grown steadily and in 2015 Doosan VINA completed the delivery of two boilers for the 1,200 MW Mong Duong II power plant project, while also producing boilers for Song Hau I and Vinh Tan IV power plants.

Business Environment Analysis

In 2016, Doosan VINA will make concerted efforts to secure domestic orders and suppliers, while nurturing relationships with clients regionally and worldwide. Recently, based on the geographic advantage that Doosan VINA has with its coastal Southeast Asian base and its own port, orders have increased steadily for its products, including boilers and duct work for power plants, cargo container cranes and structural steel. As a result, we expect stable growth from operations which is being benefitted from our entrance into the Singaporean and Malaysian markets in 2014. Doosan VINA has actively promoted DHIC head office's operational excellence activities to attain global operational standards. In particular, we are securing manufacturing competitiveness by seeking the optimal production method for Doosan VINA through LM activities adopted for advanced production management and operation. Through the DQE (Doosan Quality Excellence) adopted in 2015, we improved our quality management capability to meet international standards. And in order to secure sustainable operational capability and prevent accidents, we implemented "Visualization" on the shop floor for on-site management to foster and retain core manpower. In 2016, we will also focus on improving Doosan VINA's operational capability to secure global QCDS competitiveness while continuing the production of a diverse range of products.

Business Performance

Doosan VINA has aggressively designed and carried out sales programs to win orders for cranes used in port logistics, structural steel buildings and boiler pressure and non-pressure parts. Due to Vietnam's continued economic development and increasing use of electric power, power generation projects continue to be proposed and the company has won orders for the Song Hau I (600MW x 2) and the Vinh Tan 4 projects. However, as the uncertainties in the global economy increase due to a number of variables at home and abroad, Doosan VINA took action to diversify its customer base to allow the company to win a separate order for non-pressure parts for industrial boilers for the first time. They also won an order for 12 cranes from BMCT-PL that will be used to load and unload cargo containers. Notably BMCT-PL is a subsidiary of the world's number one port operator PSA, (Port of Singapore Authority). And they've also secured an order for eight cranes from Saudi Arabia's SGP.

Future Outlook

Due to the prolonged period of low oil prices, it is felt their 2016 market will not change significantly compared to the previous year. However, Doosan VINA along with DHIC is forecasted to secure additional business opportunities in 2016 as a result of Vietnam's increased demand for electricity. It is notable that Doosan is currently building Vinh Tan 4 (600MW x 2) and Song Hau I (600MW x 2) power plants. Doosan VINA also received recognition for its original technology and established cooperative relationships with several clients such as PSA and has entered the domestic and overseas non-pressure boiler market to pursue new opportunities based on its strength in quality management as mentioned above.



Shipping of Shuweihat S2 desalination evaporator



Desalination evaporator assembly

Corporate Social Responsibility

Doosan VINA is doing its utmost to create and strengthen economic performance by fulfilling its environmental and social responsibilities. To achieve this, we provide sustainable solutions for our customers and society to practice responsible management based on trust with our stakeholders.

Ethics Management

We are aiming to be a "Proud Global Doosan" by establishing the Code of Ethics and implementing detailed guidelines based on the core values stressed by the Doosan Way. The Code of Ethics and detailed guidelines are the criteria that all employees must comply with when performing their duties. The seven compliance categories include: integrity, anti-bribery, conflicts-of-interests, protection of company assets, fair competition and internet use.

Talent Management

Employee Training

Doosan VINA is providing a wide range of training programs to foster leadership and the technical skills of its employees. Office workers focus on strengthening leadership, job competency and global business ability to serve next-generation leaders. Technical workers are provided with training to improve their expertise and leadership. We also provide training on the Code of Conduct and foreign languages to realize the Doosan Way.

Creating a Happy Workplace

Doosan VINA, in compliance with the human rights principles of Vietnam's Labor Standard Act and the International Labor Organization (ILO), is providing welfare programs to improve the employees' quality of life. Our employees follow a five-day workweek and we also provide a variety of services to improve our employees' welfare, including providing expenditure for congratulations and condolences, dormitories, commuter buses, company housing, in-house hospital or clinic and regular medical checkups. In particular, we provide regular training on human rights to realize the value of the Doosan Way, and by doing so, work to prevent human rights violations.

Response to Climate Change

Activities for Reducing Energy Use

Doosan VINA minimizes energy loss from excessive energy consumption by conducting regular inspections on energy consumption. Shutting off air conditioners 15 minutes before leaving the office is one part of our energy conservation efforts. When air conditioners are turned on, we make sure all of the doors and windows are closed. When working late at work, we ask employees to always turn off the lights and other electric equipment after work has been completed.

Environmental Pollutant Control

Doosan VINA discharges treated waste water that results from its business operations to meet Vietnam's legal standards on pollutant emission. We also installed bag filters and wet scrubbers in facilities that generate air pollutants to meet Vietnam's standards. Going forward, we will continue to reduce the emission of environmental pollutants.



Medical services in Vietnam

Health & Safety Management

In order to make sure the supervisors and staff are equipped with EHS knowledge and understanding, Doosan VINA developed text-books on EHS regulations and potential risk factors, so that these training materials can be widely used during internal EHS training. We also developed EHS training textbooks for different technical positions and specialized EHS training for specific conditions. In particular, we publish an EHS newsletter once a month and hold a quiz contest based on the newsletter to give out prizes, which helped raise employee awareness about EHS. In order to ensure our employees can handle medical emergencies at the workplace, we hold regular training for all employees and have professionally trained staff for emergency situations in each division. In order to create a safe and clean workplace, we will actively and preemptively carry out EHS activities through programs to identify those in need of health care management and strengthen management activities for high risk processes, such as 3D 5S activity and hydraulic tests.

Social Contribution

Medical Volunteer Activities in Vietnam

Since 2009, Doosan VINA has overseen medical volunteer activities in Vietnam together with Chung-Ang University Hospital. In 2016, we provided a five-day period of free medical care for about 2,823 underprivileged individuals in Quang Ngai. Since 2009 the company has provided free medical treatment for a total of about 16,000 persons. We've also donated medical equipment and supplies to Quang Ngai Hospital, including an EO gas sterilizer to sterilize and disinfect hospital equipment as well as nine pieces of physical therapy equipment for local resident's rehabilitation treatments.

Talent Donation to Vietnam's National Archery Team

As part of a series of exchanges with other countries and a part of DHIC's talent donation, we sent the company's archery team to Vietnam to help the training of Vietnam's national archery team. We visited the national archery team in Hanoi, Vietnam to help pass on our know-how in training and the use of high-tech archery equipment. In November 2013, DHIC signed an agreement for regular exchanges to help with Vietnam's archery team and the Vietnam Archery Association's development. This year marks the third year of cooperative



Archery team talent donation

training. Since DHIC began collaborating with the Vietnamese team, they've reaped remarkable success, including winning gold medals in men's competition and individual matches at the Southeast Asian Games in 2013, as well as winning gold medals for the women's group and men's individuals at the SEA Games in 2015.

Activities to Support Education

On 'Doosan Day of Community Service,' Doosan VINA built toilets, constructed a football pitch of 800㎡ and other facilities which provided a better environment for more than 300 children at Binh Thuan Primary School. We also carried out large-scale environmental activities in communities around the company and we joined hands with Chung-Ang University to offer educational support for students at many locations in Quang Ngai Province.

Major Social Contribution Performance in 2015

Category	Details
<div>Health management</div> <div></div>	Children provided with free vitamins (1 million)
	Blood donation (8,750ml)
	Financial support for surgical operations (35 persons)
<div>Talent cultivation</div> <div></div>	Conducted volunteer service at schools in Quang Ngai Province (4 schools)
	Provided scholarships in Quang Nam, Quang Ngai and Da Nang (49 persons)
	Supported internship programs in Quang Ngai and Da Nang (52 programs)
	Training for Vietnam's national archery team
	Free use of kindergartens (95 persons)
<div>Establish foundation</div> <div></div>	Provide Lunar New Year's gift sets for the socially underprivileged (100 sets)
	Repair houses (5 households)
	Clean and renovate houses (13 households)

Appendix

6

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Performance Summary

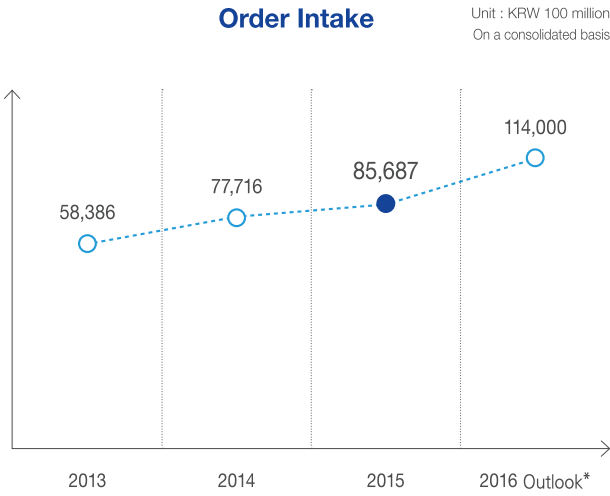
Financial Performance

In 2015, our consolidated sales declined by 10% from the previous year to KRW 16.2 trillion, and our consolidated operating profits amounted to KRW 62.1 billion in reflection of decreased sales and one-off cost. Such drop in sales is mainly attributable to the sustained global economic slowdown that dragged down the overall plant, construction and other economically-sensitive economic sectors. While our operating profits could be estimated at KRW 607.9 billion if only the decline in sales is considered, the cost of restructuring the workforce and assets of our subsidiaries reduced our operating profits further to KRW 62.1 billion.

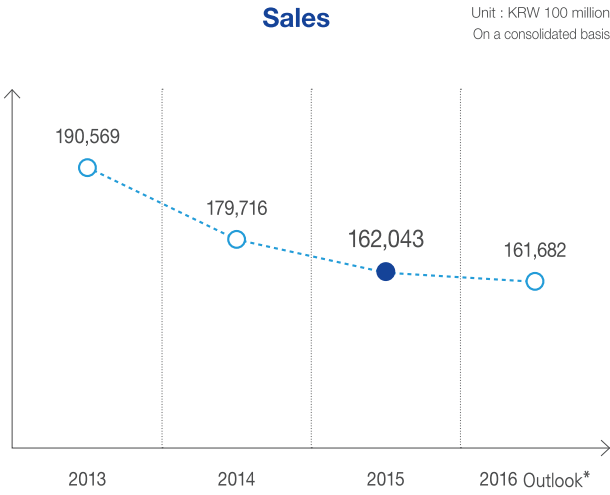
Our order intake in 2015 rose by KRW 797.1 billion from the previous year to KRW 8.5 trillion, which increased our order backlog by 11.4% to KRW 17.6 trillion during the same period accordingly. This brings our order backlog to sales ratio to approximately 2.5 years, which is considered fairly stable. In 2016, we expect our business to make a turn-around based on the positive flow of our order intake volume. Concerning our heavy industry business, we are working on overseas power generation projects in South Africa, Turkey, Vietnam, the Philippines, and Kuwait among other regions, including approximately KRW 2 trillion projects to deliver key components to the Shinhanul units 3 and 4 in Korea, and set a goal of posting KRW 11.4 trillion in order intake.

In 2016, we aim to post KRW 16.2 trillion and KRW 1.2 trillion in consolidated sales and operating profit respectively (7.1% in operating profit ratio). As our heavy industry business has witnessed a sustained growth in order intake since 2012, its sales performance is expected to turn around from 2016 onwards. Meanwhile, Doosan Infracore forecasts growth in North America, Europe and other advanced markets, and Doosan Engineering & Construction and Doosan Engine also expect better performance from this year onwards based on their order intake volume that has been on the rise since 2014. Our operating profit target is set at KRW 1155.6 billion, which represents a significant jump from the previous year that would be made possible through improvement in one-off cost factors, restructuring efforts that resulted in improvement in labor/fixed cost, and sales increases.

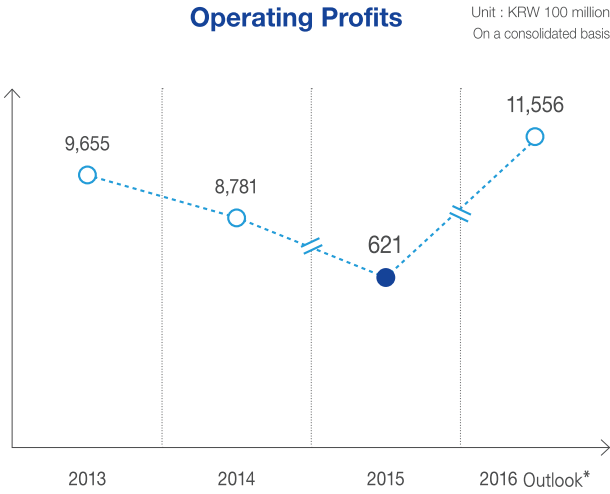
Order Intake



Sales



Operating Profits



Consolidated Statements of Financial Position

As at December 31, 2015
As at December 31, 2014
As at December 31, 2013

Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries	(Unit : Korean won in units)		
	December 31, 2013 (Restated)	December 31, 2014 (Restated)	December 31, 2015
Assets			
Current assets	11,174,222,538,459	10,812,341,341,836	10,724,405,644,031
Cash and cash equivalents	942,761,662,374	1,297,560,213,962	1,893,007,747,878
Short-term financial instruments	777,857,734,507	591,481,515,302	475,822,932,100
Short-term investments in securities	11,917,827,393	31,385,470,088	440,994,129
Trade receivables	2,813,844,956,768	2,564,431,426,660	2,512,793,814,167
Due from customers for contract work	2,303,598,373,694	2,035,389,942,663	1,898,305,160,818
Other receivables	399,665,688,714	331,073,026,441	389,866,374,113
Prepayments	570,231,903,673	623,678,714,210	617,000,416,576
Prepaid expenses	119,671,338,313	97,716,964,385	80,051,592,909
Short-term loans	617,545,492,572	541,593,602,039	178,384,058,498
Derivative financial assets	123,034,100,744	37,340,410,136	24,409,004,032
Firm commitment assets	22,095,293,873	64,068,051,449	111,500,155,075
Inventories	2,205,794,006,937	2,331,909,520,735	2,196,491,764,508
Other current assets	243,191,832,090	264,712,483,766	227,111,159,002
Non-current assets classified as held-for-sale	23,012,326,807		119,220,470,226
Non-current assets	16,551,257,576,292	16,739,565,170,467	16,535,734,966,227
Long-term financial instruments	87,452,362,744	84,712,208,686	77,402,476,564
Long-term investments in securities	200,132,851,400	187,942,074,247	190,420,094,063
Share of investments in associates and joint ventures	312,921,350,015	226,744,904,296	62,411,138,388
Long-term loans	519,007,967,286	719,430,932,517	1,019,229,605,248
Property, plant and equipment	7,231,823,590,854	7,190,139,774,839	7,206,578,365,565
Intangible assets	6,924,583,095,371	6,863,345,310,432	6,657,774,324,948
Investment property	69,939,577,561	68,163,327,038	30,516,385,496
Derivative financial assets	119,236,994,110	27,913,927,369	63,996,129,207
Firm commitment assets	31,003,113,369	56,626,716,041	73,771,115,605
Guarantee deposits	245,391,277,932	309,024,141,234	253,322,937,601
Deferred tax assets	752,356,463,180	944,406,898,458	782,988,943,041
Other non-current assets	57,408,932,470	61,114,955,310	117,323,450,501
Total assets	27,725,480,114,751	27,551,906,512,303	27,260,140,610,258
Liabilities and equity			
Current liabilities:	10,572,273,744,543	11,132,072,630,704	12,455,495,879,242
Trade payables	2,285,172,690,453	2,691,130,566,041	2,259,960,866,728
Short-term borrowings	2,401,143,971,677	2,967,464,808,128	3,943,165,035,852
Asset-backed loan	270,000,000,000	397,347,705,208	394,044,438,739
Other payables	630,132,663,407	720,622,823,183	797,731,063,373
Advanced receipts	429,706,500,550	361,265,911,412	346,939,985,983
Due to customers for contract work	1,658,024,496,845	1,120,201,735,582	1,200,598,386,238

Consolidated Statements of Financial Position

As at December 31, 2015
As at December 31, 2014
As at December 31, 2013

Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries			(Unit : Korean won in units)
	December 31, 2013 (Restated)	December 31, 2014 (Restated)	December 31, 2015
Withholdings	68,062,469,620	116,998,812,277	84,990,443,174
Accrued expenses	510,816,836,799	488,643,525,511	579,421,166,491
Current tax liabilities	186,279,450,215	69,207,517,934	35,923,644,791
Current portion of long-term debt	1,535,151,584,309	1,631,163,514,293	2,252,663,857,555
Derivative financial liabilities	119,688,709,263	185,685,205,347	217,439,689,022
Firm commitment liabilities	190,652,648,109	65,365,984,651	16,325,825,501
Other provisions	147,587,636,606	137,223,875,500	130,417,938,027
Other current liabilities	139,854,086,690	179,750,645,637	195,873,537,768
Non-current liabilities	9,241,412,168,643	8,742,832,161,667	7,778,537,058,884
Debentures	2,887,157,633,453	3,009,799,381,248	2,547,984,215,918
Long-term borrowings	4,287,909,733,652	3,597,626,371,249	3,282,290,330,730
Long-term asset-backed loan		42,677,714,962	150,408,282,978
Long-term other payables	47,405,256,022	51,247,058,484	41,882,360,478
Employee benefits liabilities	930,390,792,822	1,020,609,311,678	900,192,936,968
Deposits received	255,307,344,867	223,675,032,387	152,617,695,614
Derivative financial liabilities	86,766,639,332	128,730,391,781	147,638,954,643
Firm commitment liabilities	76,128,783,708	26,648,783,925	28,734,919,118
Deferred tax liabilities	173,871,721,051	82,460,285,676	118,224,240,213
Other provisions	270,763,381,188	237,747,776,849	244,242,092,508
Other non-current liabilities	225,710,882,548	321,610,053,428	164,321,029,716
Total liabilities	19,813,685,913,186	19,874,904,792,371	20,234,032,938,126
Equity			
Equity attributable to owners of parent	4,726,636,500,447	4,659,419,568,882	3,580,669,218,847
Issued capital	530,791,280,000	596,808,980,000	596,808,980,000
Capital surplus	1,521,655,341,205	1,828,284,636,585	1,563,917,672,526
Other components of equity	(13,188,236,134)	(101,795,674,821)	(105,157,160,978)
Accumulated other comprehensive income(loss)	324,556,819,190	220,918,859,061	512,011,506,902
Retained earnings	2,362,821,296,186	2,115,202,768,057	1,013,088,220,397
Equity attributable to equity holders of the parent	3,185,157,701,118	3,017,582,151,050	3,445,438,453,285
Hybrid equity instruments	508,259,603,649	508,259,603,649	841,695,963,991
Other non-controlling interests	2,676,898,097,469	2,509,322,547,401	2,603,742,489,294
Total equity	7,911,794,201,565	7,677,001,719,932	7,026,107,672,132
Total liabilities and equity	27,725,480,114,751	27,551,906,512,303	27,260,140,610,258

Consolidated Statements of Profit or Loss

As at December 31, 2015
As at December 31, 2014
As at December 31, 2013

Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries			(Unit : Korean won in units)
	December 31, 2013 (Restated)	December 31, 2014 (Restated)	December 31, 2015
Revenue	19,056,862,946,219	17,971,644,255,839	16,204,318,150,763
Cost of sales	15,875,391,437,402	14,903,359,919,907	13,646,660,617,300
Gross profit	3,181,471,508,817	3,068,284,335,932	2,557,657,533,463
Selling and administrative expenses	2,215,927,059,531	2,190,177,562,750	2,495,591,387,773
Operating profit	965,544,449,286	878,106,773,182	62,066,145,690
Finance income	1,054,683,207,208	922,501,649,469	1,236,190,085,496
Finance costs	1,769,400,835,668	1,774,300,682,583	1,955,240,535,134
Other non-operating income	144,289,727,406	127,761,681,063	95,823,099,160
Other non-operating expense	262,587,569,531	279,269,541,575	915,042,029,100
Share of loss in associates and joint ventures	(47,619,865,974)	(79,859,494,062)	(81,659,482,860)
Profit for the year before tax	84,909,112,727	(205,059,614,506)	(1,557,862,716,748)
Income tax expense(benefit)	54,685,743,682	(104,804,644,013)	167,893,229,951
Loss from continuing operations	30,223,369,045	(100,254,970,493)	(1,725,755,946,699)
Profit(loss) from discontinued operations	(11,560,543,114)	14,779,623,313	(25,143,382,810)
Profit for the year	18,662,825,931	(85,475,347,180)	(1,750,899,329,509)
Attributable to:			
Equity holders of the parent	69,223,510,612	(94,675,179,547)	(1,038,543,220,644)
Non-controlling interests	(50,560,684,681)	9,199,832,367	(712,356,108,865)
Earnings per share:			
Basic, profit for the period attributable to ordinary equity holders of the parent	772	(1,082)	(10,631)
Loss for the year from continuing operations	881	(1,209)	(10,427)
Profit(loss) for the year from discontinued operations	(109)	127	(204)
Diluted, profit for the period attributable to ordinary equity holders of the parent	772	(1,082)	(10,631)
Loss for the year from continuing operations	881	(1,209)	(10,427)
Profit(loss) for the year from discontinued operations	(109)	127	(204)

* The 51st and 52nd consolidated statements of comprehensive income or loss have been revised because of the business suspension of our subsidiary Doosan Engineering & Construction.

Consolidated Statements of Comprehensive Income or Loss

As at December 31, 2015
As at December 31, 2014
As at December 31, 2013

Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries			(Unit : Korean won in units)
	December 31, 2013 (Restated)	December 31, 2014 (Restated)	December 31, 2015
Profit for the year	18,662,825,931	(85,475,347,180)	(1,750,899,329,509)
Other comprehensive income	845,763,847,903	(339,645,498,514)	319,962,397,817
Items that will not be reclassified to profit or loss in subsequent periods:	1,012,330,726,069	(110,653,424,631)	378,588,917,167
Remeasurement of the net defined benefit liabilities	141,473,301,425	(110,461,283,972)	18,841,106,569
Net gain on revaluation of land	870,857,424,644	(192,140,659)	359,747,810,598
Items that may be reclassified to profit or loss in subsequent periods:	(166,566,878,166)	(228,992,073,883)	(58,626,519,350)
Net change in unrealized fair value of available-for-sale financial assets	(19,947,267,764)	1,496,857,115	(3,104,626,549)
Effective portion of changes in fair value of cash flow hedges	(50,657,406,284)	(3,822,332,135)	12,063,776,264
Equity adjustments in equity method	(3,131,825,306)	(2,626,931)	1,340,919,348
Net gain (loss) on translation of overseas operations	(92,830,378,812)	(226,663,971,932)	(68,926,588,413)
Total comprehensive income (loss), net of tax	864,426,673,834	(425,120,845,694)	(1,430,936,931,692)
Attributable to:			
Equity holders of the parent	728,097,030,565	(277,122,175,008)	(726,791,363,904)
Non-controlling interests	136,329,643,269	(147,998,670,686)	(704,145,567,788)

Consolidated Statements of Changes in Equity

As at December 31, 2015
As at December 31, 2014
As at December 31, 2013

Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries							(Unit : Korean won in units)
	Issued capital	Capital surplus	Other components of equity	Accumulated other comprehensive income (loss)	Retained earnings	Non-controlling interest	Total equity
As at December 31, 2014	596,808,980,000	1,828,284,636,585	-101,795,674,821	220,918,859,061	2,115,202,768,057	3,017,582,151,050	7,677,001,719,932
As at January 1, 2015	596,808,980,000	1,828,284,636,585	-101,795,674,821	220,918,859,061			
Loss for the year							
Remeasurement of the net defined benefit liabilities, net of tax							
Net change in unrealized fair value of available-for-sale financial assets				-30,340,636,819			
Effective portion of changes in fair value of cash flow hedges				55,555,208,269			
Equity adjustments in equity method (debit)				2,183,896,859			
Net loss on translation of foreign operations				-16,612,368,911			
Net gain on revaluation of land				280,306,548,443			
Total comprehensive income				291,092,647,841	-1,017,884,011,745	-704,145,567,788	-1,430,936,931,692
Dividends					-84,230,535,915		-84,230,535,915
Stock option		2,100,996,093	-1,116,157,779				984,838,314
Changes in consolidation scope						1,080,996,843	1,080,996,843
Dividends of the subsidiaries						-85,494,554,491	-85,494,554,491
Transactions of treasury shares by subsidiaries		23,860,561,032				-33,858,304,362	-9,997,743,330
Capital increase by issuing new shares of subsidiaries			-231,156,754			916,908,916,650	916,677,759,896
Convertible bonds by subsidiaries		-65,478,549,444				105,988,016,531	40,509,467,087
Stock option of subsidiaries		1,928,367,105	-1,731,065,518			315,353,901	512,655,488
Business transfer between subsidiaries			-283,106,106			283,106,106	
Changes in non-controlling interests		-226,778,338,845				226,778,338,845	
As at December 31, 2015	596,808,980,000	1,563,917,672,526	-105,157,160,978	512,011,506,902	1,013,088,220,397	3,445,438,453,285	7,026,107,672,132

Consolidated Statements of Cash Flows

As at December 31, 2015
As at December 31, 2014
As at December 31, 2013

Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries			(Unit : Korean won in units)
	December 31, 2013 (Restated)	December 31, 2014 (Restated)	December 31, 2015
Net cash flows provided by operating activities	150,437,826,314	603,808,922,454	(74,372,146,286)
cash provided from operations	871,850,798,660	1,399,114,247,015	565,940,588,916
Profit (loss) for the year	18,662,825,932	(85,475,347,180)	(1,750,899,329,509)
Adjustments	1,777,624,103,190	1,830,501,922,424	2,796,807,824,518
Working capital adjustments	(924,436,130,462)	(345,912,328,229)	(479,967,906,093)
Interest received	65,650,972,160	55,528,847,058	41,862,736,122
Interest paid	(700,940,713,445)	(618,203,026,965)	(576,553,756,935)
Dividends received	5,624,266,779	1,558,270,393	1,716,215,002
Income taxes paid	(91,747,497,840)	(234,189,415,047)	(107,337,929,391)
Net cash flow used in investing activities	(1,048,383,347,463)	(544,738,511,865)	(379,715,191,840)
aggregate cash inflows from investing activities	616,858,058,290	668,610,861,316	842,311,411,325
Proceeds from disposal of short-term financial instruments	139,897,985,814	288,798,834,598	202,203,565,224
Proceeds from disposal of short-term investments in securities	47,109,274,754	73,071,978,911	80,499,361,714
Collection of short-term loans	119,408,535,287	181,531,790,623	103,894,172,141
Proceeds from disposal of long-term financial instruments	9,611,466,277	4,431,747,297	11,158,450,670
Proceeds from disposal of long-term investment in securities	93,255,887,013	6,911,704,798	15,745,912,830
Collection of long-term loans	27,494,654,224	78,556,516,994	132,493,369,838
Proceeds from disposal of investments in Associates		6,474,033,289	5,999,506,443
Proceeds from disposal of investments in Subsidiaries			126,667,468,493
Proceeds from disposal of property, plant and equipment	109,620,267,563	14,126,457,253	30,891,342,577
Proceeds from disposal of intangible assets	4,424,797,402	3,555,188,974	2,863,652,101
Proceeds from disposal of investment property	56,475,398,106	1,486,728,579	1,577,382,829
Proceeds from disposal of non-current assets classified as held-for-sale	4,872,000,000	9,665,880,000	
Changes in scope of consolidated subsidiaries	4,687,791,850		
Business transfer			128,317,226,465
aggregate cash outflows from investing activities	(1,665,241,405,753)	(1,213,349,373,181)	(1,222,026,603,165)
Acquisition of short-term financial instruments	(426,032,782,232)	(95,207,452,344)	(79,222,803,135)
Acquisition of short-term investments in securities	(39,282,339,734)	(65,228,155,478)	(3,955,604,933)
Increase in short-term loans	(389,349,882,306)	(104,582,725,328)	(155,702,429,216)
Acquisition of long-term financial instruments	(22,234,079,904)	(1,117,551,401)	(56,094,727,889)
Acquisition of long-term investment in securities	(28,438,447,392)	(20,269,579,917)	(12,416,609,062)
Increase in long-term loans	(22,196,476,852)	(293,311,264,050)	(212,259,140,998)
Acquisition of investments in associates and joint ventures	(72,999,741,669)	(268,400,000)	(1,108,000,000)
Acquisition of investments in subsidiaries			(54,940,467,860)
Acquisition of property, plant and equipment	(401,455,378,897)	(372,668,244,664)	(388,747,759,099)
Acquisition of intangible assets	(262,340,746,210)	(260,695,999,999)	(253,851,630,523)
Acquisition of investment property	(911,530,557)		(3,727,430,450)

Consolidated Statements of Cash Flows (cont'd)

As at December 31, 2015

As at December 31, 2014

As at December 31, 2013

Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries			(Unit : Korean won in units)
	December 31, 2013 (Restated)	December 31, 2014 (Restated)	December 31, 2015
Cash flows from financing activities	4,013,982,789	326,347,849,486	1,058,645,079,958
aggregate cash inflows from financing activities	4,407,035,042,324	5,507,657,268,169	4,838,023,592,354
Net increase in short-term borrowings		580,935,632,821	1,172,995,994,644
Proceeds from short-term bonds	117,000,000,000	30,000,000,000	
Proceeds from asset backed loans	620,000,000,000	1,028,000,000,000	1,294,518,541,269
Issuance of debentures	1,155,801,483,500	649,688,561,247	710,193,878,690
Proceeds from long-term borrowings	1,330,355,765,610	2,842,390,469,873	742,556,421,012
Proceeds from disposal of treasury shares	299,918,800,070		
Proceeds from disposal of treasury shares by subsidiaries		3,963,729,410	
Capital increase by issuing new shares		372,678,874,818	
Capital increase by issuing new shares of subsidiaries	883,915,833,144		916,677,759,896
Stock option exercised	43,160,000		
Changes in consolidated coverage			1,080,996,843
aggregate cash outflows from financing activities	(4,403,021,059,535)	(5,181,309,418,683)	(3,779,378,512,396)
Net decrease in short-term borrowings	(17,005,645,675)		
Repayment of current portion of long-term debt	(2,336,435,388,570)	(2,030,330,435,447)	(1,255,456,228,592)
Repayment of assets backed loans	(656,800,000,000)	(829,350,000,000)	(1,203,450,000,000)
Repayment of debentures	(310,174,143,523)	(137,771,678,621)	(45,694,643,604)
Repayment of long-term borrowings	(982,493,058,161)	(1,990,867,314,625)	(1,094,394,528,323)
Extinguishment of debt for financial lease			(660,278,141)
Dividends paid	(66,782,821,500)	(74,134,313,250)	(84,230,535,915)
Dividends paid by the subsidiaries	(17,862,000,000)	(28,418,000,000)	(85,494,554,491)
Acquisition of additional shares in subsidiaries	(3,699,999,990)	(4,763,339,000)	
Acquisition of treasury shares by subsidiaries	(11,768,002,116)	(85,674,337,740)	(9,997,743,330)
Net foreign exchange difference	9,541,490,600	(30,619,708,487)	(9,110,207,916)
Net increase (decrease) in cash and cash equivalents	(884,390,047,760)	354,798,551,588	595,447,533,916
Cash and cash equivalents as at January 1	1,827,151,710,134	942,761,662,374	1,297,560,213,962
Cash and cash equivalents as at December 31	942,761,662,374	1,297,560,213,962	1,893,007,747,878

Non-Financial Performance

In 2015, we were successfully listed on the Dow Jones Sustainability Index (DJSI) Korea for two consecutive years on the basis of our sustained CSR endeavors, and were rated grade A in the corporate governance sector of the ESG evaluation performed by the Korea Corporate Governance Service. Our commitment to reducing GHG emissions as a way to strengthen our competitive edge in climate change adaptation, enabled us to reduce 17,000tCO₂ in GHG emissions. Our top-notch safety management system allowed us to post 0.2052% in occupational injury ratio, and our strategic

CSR initiatives not only helped enhance our corporate brand image but also earned us the honor to top the list of companies most favored by under-graduates for five years in a row. Furthermore, we provided ethics training to suppliers and shared the benefits of our improved performance with 2nd-tier suppliers to disseminate the culture of ethics and shared growth along the entire supply chain. We are determined to fulfill our role as a corporate citizen to ensure that we as a company and society as a whole achieve sustainable development.

MEMBER OF
Dow Jones
Sustainability Indices
In Collaboration with RobecoSAM

Listed for two consecutive years

DJSI Korea

Rated Grade A

in the evaluation performed by the Korea Corporate Governance Service

(in the corporate governance sector)

Celebrated the Human Rights Week

Targeting all employees

0.2052%

Injury ratio

Ranked 1st for five consecutive years

Most Favored Company Survey conducted on undergraduate students

17,000tCO₂

Reduction in GHG emissions

130 companies

Provided training on the Code of Ethics to suppliers

Expanded the performance sharing program

(Including 2nd-tier suppliers)

2.5%

Ratio of R&D investment to sales

31,816 hours

Total hours of volunteering

10 years in a row

Concluded dispute-free collective bargaining negotiations

Won the Grand Prize

9th Best Patent Awards in Korea

Rated grade A for two consecutive years

Health & Safety Cooperation Program

KRW 180 million

Investment in air pollution control facilities

Korea's Most Admired Companies in 2015

Ranked 1st the plant engineering sector (Selected by KMAC)

Consumption of raw materials

Category		Unit	2013	2014	2015
Non-recycled raw materials	Consumption of primary/subsidiary materials	ton	140,975	161,873	182,433
	Steel manufacturing volume	ton	196,892	223,520	231,200
	Total	ton	337,867	385,393	413,633
Recycled raw materials	Recycling of recovered steel	ton	82,876	79,465	78,214
	Total	ton	82,876	79,465	78,214
Total		ton	420,743	464,858	491,847

Energy

Energy Consumption

Category		Unit	2013	2014	2015
Total	Fuel consumption	TJ	2,003	2,066	2,185
	Electricity consumption	TJ	3,132	3,212	3,209
Head office	Fuel consumption	TJ	1,987	2,042	2,022
	Electricity consumption	TJ	3,044	3,132	3,012
Seoul office	Fuel consumption	TJ	15	16	15
	Electricity consumption	TJ	43	49	48
Dongtan I&C (Daeduk R&D Center)	Fuel consumption	TJ	-	-	1
	Electricity consumption	TJ	31	11	21
DC Center	Fuel consumption	TJ	1	7	1
	Electricity consumption	TJ	14	21	15
Domestic construction sites	Fuel consumption	TJ	-	16	112
	Electricity consumption	TJ	-	54	24
Overseas construction sites	Fuel consumption	TJ	-	280	34
	Electricity consumption	TJ	-	73	89

Reduction in energy consumption

Category	Reduction (tCO ₂)	Reduction (KRW 100 million)
Heat facility improvement	1,803	4
Improvement of operational methods	5,152	11
Adoption of high-efficiency facilities	2,318	5
Combustion optimization	7,727	16
Total	17,000	36

Total water intake by source

Category	Unit	2013	2014	2015
Surface water (domestic)	ton	-	20,767	114,433
Surface water (overseas)	ton	-	32,920	-
Groundwater (domestic)	ton	3,442	3,328	44,607
Groundwater (overseas)	ton	-	14,600	29,900
Water supply (domestic)	ton	1,550,000	1,147,525	1,759,446
Water supply (overseas)	ton	250,000	179,062	82,984
Total	ton	1,803,442	1,398,202	2,031,370

* Including domestic and overseas construction and manufacturing operations.

Emission of air pollutants

GHG emissions by worksite

Category		Unit	2013	2014	2015
Total	Total emissions	tCO ₂	274,513	308,826	292,827
	Direct emissions	tCO ₂	122,333	146,085	136,840
	Indirect emissions	tCO ₂	152,180	162,741	155,987
Head office	Total emissions	tCO ₂	269,196	278,063	272,058
	Direct emissions	tCO ₂	121,327	125,968	125,774
	Indirect emissions	tCO ₂	147,869	152,096	146,284
Seoul office	Total emissions	tCO ₂	3,075	3,410	3,313
	Direct emissions	tCO ₂	983	1,018	946
	Indirect emissions	tCO ₂	2,092	2,393	2,367
Dongtan I&C (Daeduk Research Center)	Total emissions	tCO ₂	1,526	545	843
	Direct emissions	tCO ₂	-	-	91
	Indirect emissions	tCO ₂	1,526	545	752
Doosan Technology Research Institute (DC center)	Total emissions	tCO ₂	716	1,404	1,077
	Direct emissions	tCO ₂	23	376	28
	Indirect emissions	tCO ₂	693	1,029	1,049
Domestic construction sites	Total emissions	tCO ₂	-	3,889	8,845
	Direct emissions	tCO ₂	-	1,045	7,661
	Indirect emissions	tCO ₂	-	2,844	1,184
Overseas construction sites	Total emissions	tCO ₂	-	21,512	6,691
	Direct emissions	tCO ₂	-	17,678	2,340
	Indirect emissions	tCO ₂	-	3,834	4,351

GHG emissions by scope

Category	Unit	2013	2014	2015
Direct GHG emissions	tCO ₂	109,499	105,736	108,183
Indirect GHG emissions	tCO ₂	147,869	156,062	155,675
Mobile combustion	tCO ₂	1,389	3,743	10,503
Process emissions	tCO ₂	15,767	17,881	18,466

GHG emissions reduction

Category	Unit	2013	2014	2015
Improvement of heat facilities	tCO ₂	2,911	2,291	1,803
Improvement of operational methods	tCO ₂	8,317	6,545	5,152
Adoption of high-efficiency facilities	tCO ₂	3,745	2,946	2,318
Combustion optimization	tCO ₂	12,477	9,818	7,727

Emission concentrations of NOx, SOx and other major air pollutants

Category		Unit	2013	2014	2015
Domestic	NOx	ppb	-	0.0184	0.017
	SOx	ppb	-	-	0.015
	POPs (Persistent Organic Pollutant) in water	pg-TEQ/L	0.204	0.989	5.642
	POPs (Persistent Organic Pollutant) in air	ng-TEQ/Sm ³	0.0905	-	0.004
	Dust (*compared to the legal threshold)	%	20	20	20
	NOx	ppb	-	92.66	0.05
	SOx	ppb	-	66.69	0.054
	Dust (*compared to the legal threshold)	%	38	-	11.3
Overseas					

* If it is required by environmental impact assessment regulations, our domestic and overseas construction projects are subject to regular environmental air quality measurements (dust, NOx, SOx, etc.) (All of them satisfy legal requirements, and they do not concern the emission of air pollutants from fixed emission facilities as shown in this format.)

Wastewater discharge

Category	Unit	2013	2014	2015
Changwon Plant	ton	128,027	135,004	139,305
Domestic construction	ton	-	73,288	100,505
Overseas construction	ton	-	274,308	50,657
Total discharge	ton	128,027	482,600	290,467

* In processing wastewater, our Changwon Plant and domestic construction sites adopt physical/chemical treatment techniques, and our overseas construction sites use septic tanks.

* Our Changwon Plant discharges its wastewater to the sewage treatment plant in Deokdong, Changwon, and our domestic/overseas construction sites discharge their wastewater to nearby streams.

Wastewater Recycling

Category	Unit	2013	2014	2015
Changwon Plant	ton	25,380	25,900	25,900
Domestic construction	ton	-	14,232	28,614
Total	ton	25,380	40,132	54,514

Wastewater quality

Category	Unit	2013	2014	2015
COD	mg/l	14.37	12.87	15.76
SS	mg/l	2.64	2.74	1.89
N-H	mg/l	1.35	0.73	0.13
Cr	mg/l	0.004	0.001	0.001
Zn	mg/l	0.049	0.013	0.08
Pb	mg/l	0.017	0.001	0.002
Fe	mg/l	0.025	0.021	0.096
T-N	mg/l	5.675	4.053	4.095
T-P	mg/l	0.205	0.022	0.022

Discharge of waste

Category		Unit	2013	2014	2015
Waste from worksites (general)	Recycling	ton	50,630	74,496	78,955
	Incineration	ton	1,126	2,073	314
	Landfill	ton	9,481	53,675	11,242
	Others	ton	-	26,879	16,155
Waste from worksites (specified)	Recycling	ton	649	627	679
	Incineration	ton	552	504	677
	Landfill	ton	3,523	7,864	9,562
	Others	ton	-	3,494	11
Total		ton	65,961	169,612	117,595

* Including data from domestic and overseas construction sites since 2014.

Recycling of waste

Category		Unit	2013	2014	2015
Domestic	Changwon Plant	ton	51,729	60,923	59,605
	Construction	ton	-	12,958	19,932
Overseas	Construction	ton	37,482	1,243	97
Total		ton	89,723	75,124	79,634

* Based on the Allbaro System of the Korea Environment Corporation.

Recycling of waste

Category	Unit	2013	2014	2015
Recycling of waste	%	78	85	87

Total expenditure and investment in environmental protection

Total environment-related cost

Category	Unit	2013	2014	2015
Waste treatment outsourcing cost	KRW 1 million	1,033	2,618	1,986
Waste analysis fees	KRW 1 million	3	2	5
Recycling service outsourcing cost	KRW 1 million	291	607	617
Profits from waste disposal	KRW 1 million	993	1,227	818
Other expenses	KRW 1 million	2	909	1,480

Purchasing of eco-friendly products¹⁾

Category	Unit	2013	2014	2015
Purchasing of eco-friendly products	KRW 1 million	2,129	1,779 ²⁾	18,597

- 1) Since the year 2014 belongs to the initial apartment construction phase, the purchase of eco-certified furniture was not included in the total purchase amount.
2) The purchase amount of green building certified furniture products is not reflected in 2014 because it was the early stages of the apartment construction projects.

Status of quality/EHS certifications

Category	Type of certification	Unit	2013	2014	2015
ASME ¹⁾	N, NPT, NS, N3, NA, Site NA, Site NPT, A,PPS,U,U2,H,NB R, ASME NB(Nuclear/Non-Nuclear)	Number of certificates	16	16	16
KEPIC ²⁾	Manufacturing : MN, SN, EN Construction : MN, SN, EN, MH	Number of certificates	7	7	7
ISO ³⁾	9001, 14001, OHSAS, KOSHA	Number of certificates	4	4	4
Others	PED H, H1, KR, NK, BV, LR, DNV etc	Number of certificates	28	30	33
Total		Number of certificates	55	57	60

- 1) ASME : The American Society of Mechanical Engineers.
2) KEPIC : Korea Electric Power Industry Code.
3) ISO : International Organization for Standardization.

Outcomes of self-initiated EHS evaluation programs

Category	Unit	2013	2014	2015
Evaluation target	Case	692	711	710
No. of improved cases	Case	385	321	252

Employees

Employee data

Category		Unit	2013	2014	2015
By employment arrangement	Permanent Employees	Persons	7,310	7,448	7,173
	Non-permanent Employees	Persons	1,393	940	736
	Total	Persons	8,703	8,388	7,909
By age (Permanent Employees)	20's	Persons	1,393	1,245	732
	30's	Persons	2,153	2,398	2,639
	40's	Persons	2,136	2,101	2,034
	50's or older	Persons	1,628	1,704	1,768
	Total	Persons	7,310	7,448	7,173
By job position (Per- manent Em- ploy- ees)	Executives	Persons	184	155	131
	General Mgr, Principal Researcher	Persons	768	793	719
	White Collars				
	Sr Manager, Manager	Persons	2,010	2,156	2,079
	Assistant Mgr/ Researcher	Persons	1,037	1,144	1,299
	Entry Level Staff	Persons	1,066	947	650
	Total	Persons	5,065	5,195	4,878
Site/ Factory Em- ploy- ees	Engineering Director	Persons	37	44	50
	Principal Engineer	Persons	242	274	299
	Senior Engineer	Persons	655	676	695
	Engineer	Persons	680	632	588
	Assistant Engineer	Persons	307	335	377
	Entry Level	Persons	324	292	286
	Total	Persons	2,245	2,253	2,295
Social minorities	Female	Persons	515	404	375
	Individuals with disabilities	Persons	193	200	178
	Men of national merit	Persons	188	187	184
	Total	Persons	896	791	737

Ratio of employees subject to the collective agreement

Category	Unit	2013	2014	2015
Total No. of employees (eligible for membership)	Persons	4,285	4,240	4,287
Number of unionized employees and employees on the Labor-Management Council	Persons	2,196	2,241	2,268
Ratio of unionized employees and employees on the Labor-Management Council	%	51.2	52.9	52.9

Status of the retirement pension system

Category	Unit	As of December 31, 2015
Retirement funds under management (DB)	KRW	242,320,564,380
No. of subscribers (DB)	Persons	6,638

Rate of new hires and resignees

Category		Unit	2013	2014	2015
No. of new hires	Male	Persons	-	647	409
	Female	Persons	-	74	55
	Total	Persons	-	721	464
Ratio of new hires		%	-	8.6	6
Turnover ratio		%	0.9	1.3	0.5 ¹⁾

1) Ratio of permanent workers against job leavers.

Ratio of employees subject to the collective agreement

Category		Unit	2013	2014	2015
Permanent Employees	No. of employees subject to regular performance assessments	Persons	5,065	4,818	4,804
	No. of employees who receive regular performance assessments	Persons	5,065	4,818	4,804
	Ratio of employees who receive regular performance assessments	%	100	100	100
Non-permanent Employees	No. of employees subject to regular performance assessments	Persons	836	522	479
	No. of employees who receive regular performance assessments	Persons	836	522	479
	Ratio of employees who receive regular performance assessments	%	100	100	100

Ratio of locally-hired managers

Category	Ratio of locally-hired managers (No. of persons)	No. of locally-hired managers (No. of persons)	Ratio of locally-hired managers (%)
DPS	26	5	19.2
DPSI	1,179	15	1.3
Doosan VINA	2,299	0	0
Doosan Babcock	3,948	22	0.6
Doosan Lentjes	228	5	2.2
Doosan Skoda Power	1,310	15	1.1

Parental leave

Category	Unit	2013	2014	2015
No. of employees who took parental leave	Persons	34	46	36
No. of employees reinstated after parental leave	Persons	34	45	35
No. of employees who worked for one year or longer after reinstatement	Persons	21	21	36
Ratio of employees reinstated after parental leave	%	100	98	97
Ratio of employees who work for one year or longer after parental leave	%	83	88	74



Health & Safety

Zero-injury hours of construction projects

Category	Name of project	Unit	2013	2014	2015
Domestic	Yongin Administration Town	1,000 hours	2,820	-	-
	Main facility construction for the Shin Kori nuclear plant unit 3 and 4	1,000 hours	2,730	3,640	4,550
	Residential and commercial complex in Heungin-dong	1,000 hours	1,000	1,910	-
	Wonju-Gangneung rail construction zone 3-2	1,000 hours	-	127	582
	Trimaze construction site	1,000 hours	-	-	910
	Doosan We've 2-cha in Sangdo-dong	1,000 hours	-	-	910
	LH construction site in Hyeon-dong, Changwon	1,000 hours	-	-	910
	Desulfurization in Shin Boryeong	1,000 hours	-	-	910
Overseas	Rabigh PP2	1,000 hours	20,042	40,000	50,000
	Ras Al Khair (Saudi Arabia)	1,000 hours	16,023	24,000	28,000
	Jedda RO (Saudi Arabia)	1,000 hours	-	-	-
	Yanbu (Saudi Arabia)	1,000 hours	-	2,000	10,000
	JBL M (UAE)	1,000 hours	-	-	-
	Raipur (India)	1,000 hours	-	-	-
	Mong-Duong 2 (Vietnam)	1,000 hours	-	10,000	-
	Ain Sokhna (Egypt)	1,000 hours	-	8,500	-
	Noibai-Laocal Expressway (Vietnam)	1,000 hours	7,508	-	-
	Kudgi (India)	1,000 hours	-	6,000	-
	Al Khalij (Libya)	1,000 hours	-	3,000	-
	Vinh Tan 4 (Vietnam)	1,000 hours	-	-	2,000

Injury ratio

Category		2013	2014	2015 ³⁾
Manufacturing	Changwon Plant ¹⁾	0.18	0.16	0.2052
	Suppliers ¹⁾	0.13	0.07	0.00
Construction	Domestic construction ¹⁾	0.08	0.08	0.0613
	Overseas construction ²⁾	0.0135	0.0077	0.0042

1) For our Changwon Plant, suppliers and domestic construction, we used the injury ratio published by the Korean Ministry of Employment and Labor until 2014
[(No. of fatalities X 5) + No. of injured employees / No. of regular employees] X 100]

2) For our overseas construction sites, we have been adopting LTIR since 2012
[Lost Time Incident Rate (LTIR) used by the U.S. OSHA(LTIR)]

3) LTIR has used in calculating injury ratios in our entire operations since 2015

Health & Safety risk management training for domestic construction projects

Category	Unit	2013	2014	2015
Trainees who completed basic training	Persons	-	32,905	33,585
Trainees who completed special training	Persons	-	21,875	14,649
Total No. of trainees who completed safety training	Persons	-	54,780	49,100
Hours of basic training	Hour	-	68,654	44,444
Hours of special training	Hour	-	43,750	24,531
Total hours of safety training	Hour	-	112,404	100,214

Health & Safety risk management training for overseas construction projects

Category	Unit	2013	2014	2015
Trainees who completed basic training	Persons	31,999	56,583	31,405
Trainees who completed special training	Persons	26,003	25,698	14,368
Total No. of trainees who completed safety training	Persons	58,002	82,281	45,773
Hours of basic training	Hour	63,998	76,168	47,143
Hours of special training	Hour	31,979	27,299	25,176
Total hours of safety training	Hour	95,977	103,467	72,319

Average per capita per annum training hours

Category		Unit	2013	2014	2015
White Collars	No. of employees	Persons	5,065	5,195	4,878
	Per capita training hours	Hour	65.25	112	108
Site/Factory Employees	No. of employees	Persons	2,245	2,253	2,295
	Per capita training hours	Hour	11.8	15.1	16.1
Educational outcomes of the Technology Training Institute	Total training hours	Hour	46,063	51.877	49,131 ¹⁾

1) Excluding outsourced education.



Human rights and anti-corruption

No. and rate of security agents who received human rights education

Category	Unit	2013	2014	2015
Total No. of security agents	Persons	78	75	86
No. of security agents who received human rights education	Persons	78	75	86
Ratio of security agents who received human rights education	%	100	100	100

* Human rights education is supervised by the Emergency Planning Team, and CPR, BCM (fire drill) and other training programs are also under operation.

* A total of 86 security agents work in Changwon (70 persons), Seoul (13 persons) and Dongtan (3 persons), and all of them completed training.

The 2013-2014 data excluded those working in Seoul and Dongtan (Those excluded had completed training at the time).

No. of worksites evaluated for corruption risks

Category	Unit	2013	2014	2015
Number of worksites evaluated on corruption risk	No. of worksites	1	1	1

* Changwon Plant.

Confirmed cases of corruption and actions taken against them

Category	Unit	2013	2014	2015
No. of confirmed cases of corruption	Case	9	9	1
No. of corruption cases that led to disciplinary actions or dismissal	Case	5	7	3

Status of the whistle-blowing program to address unethical practices

Category	Unit	2013	2014	2015
Online	Case	15	15	21
Offline	Case	7	8	26
Total	Case	22	23	47

Supply chain

Organizational supply network

Category	Unit	2013	2014	2015
Suppliers with regular transaction records	Company	910	850	852

* A company that does business with DHIC with more than two transactions concluded per year and KRW 100 million or more in total average annual transaction amount.

Notification and training on anti-corruption policies and procedures

Category	Unit	2013	2014	2015
Ratio of employees who completed anti-corruption education	%	26	29	91
No. of suppliers who provided anti-corruption education	Persons	250	201	133

Compliance with Laws and Regulations

Legal actions for unfair trade practices

Category	Unit	2013	2014	2015
Legal actions for unfair transaction behavior	Case	1	1	1

* With reference to the bidding for a construction project of natural gas pipelines and management of-
fice issued by the Korea Gas Corporation, the company was fined a penalty of KRW 4,467 million and
ordered corrective actions for violation of No.3 and No.8 of Paragraph 1 of Article 19 of the Monopoly
Regulation and Fair Trade Act. However, this penalty may be reduced depending on the outcome of
the litigation for revocation of imposition of the penalty surcharge.

Penalties and sanctions for violations of laws and regulations

Details	Unit	2013	2014	2015
Total amount of imposed fines	KRW 100 million	-	166	45
Number of non-monetary sanctions	Case	-	-	-
Number of lawsuits	Case	-	2	-

* The company was fined the penalties totaling KRW 16,601 million for bid rigging of the Honam railroad
and KRW 4,467 million for the bid rigging of a pipeline project (total of KRW 21,068 million) by the Fair
Trade Commission, but both cases are currently under administrative proceedings.

* The company was fined a penalty of KRW 70 million for bid rigging of a pipeline project by the court.

R&D performance

Category	Unit	2013	2014	2015
R&D investments	KRW 100 million	1,829	1,568	1,665
R&D investments against sales	%	2.74	2.85	2.47
No. of R&D projects	Improvement	77	76	69
	New technology/ new product	68	81	72
	Future business	19	26	9
	Total	164	183	150
R&D personnel	Persons	692	734	700

* R&D investments were re-calculated due to changes in the calculation criteria.

Status of technology patents registered

Category	Unit	2013	2014	2015
No. of IP registrations (domestic)	Case	50	141	190
No. of IP registrations (overseas)	Case	6	9	5
No. of IP registrations (total)	Case	56	150	195
No. of technology patent applications made for new businesses (domestic)	Case	16	64	101
No. of technology patent applications made for new businesses (overseas)	Case	4	6	23
No. of technology patent applications made for new businesses (total)	Case	20	70	124
No. of accumulated patents registered in Korea and overseas	Case	710	860	1,043

Social contribution expenditure

Category		Unit	2013	2014	2015
Social contribution expenditure	Total	KRW 100 million	151	132	127
	Charitable donations	KRW 100 million	12	22	14
	Investment in local communities	KRW 100 million	136	99	106
	Others(Commercial Initiative)	KRW 100 million	3	11	7
Expenditure by area	Talent Cultivation	KRW 100 million	128	83	65
	Support for the underprivileged	KRW 100 million	12	21	13
	Community-based	KRW 100 million	10	28	49

Status of social contribution funds

Category		Unit	2013	2014	2015
Social contribution funds ¹⁾	Amount carried over from the previous year	KRW 100 million	1.2	1.4	0.8
	Funds raised per year	KRW 100 million	5.5	5.4	4.8
	Funds spent per year	KRW 100 million	5.3	6.0	4.6
Details of expenditure	Donations to child welfare facilities with sisterhood ties	KRW 100 million	3.7	4.2	2.8
	Support to theme-based/welfare center programs	KRW 100 million	-	1.2	1.6
	Support to other programs	KRW 100 million	1.6	0.6	0.2

1) Social contribution funds: Fractions of employees' salary and the Hope Account + company' donations made to match 100% of the funds raised by employees.

Volunteering

Category	Unit	2013	2014	2015
No. of activities	No. of occasions	608	605	412
No. of participants	Persons	3,153	3,721	3,853
Participation rate	%	44	52	58
Total volunteer hours	Hour	28,031	33,775	31,816
Per capita volunteer hours	Hour	4.28	5.17	5.19

Shared growth programs for suppliers

Category	Unit	2013	2014	2015
Shared growth funds raised	KRW 100 million	1,158	1,008	1,008
Outcomes in operating the national human resources development consortium (No. of persons who completed the program)	Persons	772	792	647
Management advisory group	No. of companies	9	10	11
No. of persons who took fair trade education courses	Persons	1,609	2,113	918

Audit Report

Independent Auditors' Report

To the Board of Directors and Stockholders

March 17, 2016

Doosan Heavy Industries & Construction Co., Ltd.

We have audited the accompanying consolidated financial statements of Doosan Heavy Industries & Construction Co., Ltd. (the "Company") and its subsidiaries (collectively, the "Group"), which comprise the consolidated statements of financial position as of December 31, 2015 and 2014, and the consolidated statements of profit or loss, consolidated statements of comprehensive income or loss, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the consolidated interim financial statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards ("KIFRS"), 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 opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audit 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 consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated 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 consolidated financial statements.

We believe that the audit evidence we have 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 consolidated financial position of Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries as of December 31, 2015 and 2014, and their consolidated financial performance and cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.



Myungho Jang,

Internal Control over Financial Reporting Officer

Geewon Park,

Chief Executive Officer or Chairman

This audit report is effective as at March 19, 2015, the independent auditors' report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the auditors' report date to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modification to this report.

Management’s Assessment on Internal Control over Financial Reporting

The Board of Directors and Internal auditor (Audit Committee) of
Doosan Heavy Industries & Construction Co., Ltd.

March 17, 2016

I, as the internal control over financial reporting officer (“ICFR Officer”) of Doosan Heavy Industries & Construction Co., Ltd. (“the Company”), assessed the status of the design and operations of the Company’s internal control over financial reporting (“ICFR”) for the year ended December 31, 2015.

The Company’s management including the ICFR Officer is responsible for the design and operations of its ICFR. I, as the ICFR Officer, assessed whether the ICFR has been effectively designed and has operated to prevent and detect any error or fraud which may cause any misstatement of the financial statements, for the purpose of establishing the reliability of financial reporting and the preparation of financial statements for external financial reporting purposes. I, as the ICFR Officer, applied the ICFR standards for the assessment of design and operations of the ICFR.

Based on the assessment of the operations of the ICFR, the Company’s ICFR has been effectively designed and has operated as of December 31, 2015, in all material respects, in accordance with the ICFR standard.



Myungho Jang,

Internal Control over Financial Reporting Officer

Geewon Park,

Chief Executive Officer or Chairman

Independent Assurance Statement

Introduction

Doosan Heavy Industries & Construction Co.,Ltd. (hereinafter referred to as “Doosan Heavy Industries & Construction”) commissioned DNV GL Business Assurance Korea Ltd. (hereinafter referred to as “DNV GL”), part of DNV GL Group, to undertake independent assurance of the ‘2015 Integrated report’ (the “Report”). The directors of Doosan Heavy Industries & Construction have sole responsibility for the preparation of the Report. The responsibility of DNV GL in performing the assurance work is to the management of Doosan Heavy Industries & Construction in accordance with the terms of reference. DNV GL’s assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith.

Scope of assurance

The scope of assurance included a review of sustainability activities and performance data over the reporting period 1st January to 31st December 2015. This included:

- Evaluation of the principles for defining the sustainability report content in the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines 4.0
- Verification of disclosures to check the Report is prepared ‘In accordance’ with the GRI Guidelines G4 (Core option) (Verification on aggregated level of data and activities that refers to the period between January and December in 2015)
- Evaluation of the process for determining material aspects for reporting and the management approach to material issues and the process for generating, gathering and managing the quantitative and qualitative data in the Report.
- Collection and consolidation process of the specific performance

Basis of our opinion

We performed our work using DNV GL’s assurance methodology VeriSustain™¹⁾, which is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000). We applied the limited level of assurance. The audit was carried out in April and May 2016. The site visits were made to Doosan Heavy Industries & Construction. We undertook the following activities as part of the assurance process:

- Challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls;
- Interviewed representatives from the various departments;
- Conducted document reviews, data sampling and interrogation of supporting databases and associated reporting system and associated reporting systems as they relate to selected content and performance data;
- Reviewed the outcomes of the materiality assessment report

Limitations

The engagement excludes the sustainability management, performance and reporting practices of Doosan Heavy Industries & Construction’s suppliers, contractors and any third-parties mentioned in the Report. DNV GL did not interview external stakeholders as part of this Assurance Engagement. Economic performance based on the financial data is cross-checked with internal documents, the audited consolidated financial statements and the announcement disclosed at the website of Korea Financial Supervisory Service (<http://dart.fss.or.kr>) as well as Doosan Heavy Industries & Construction’s website (<http://www.doosanheavy.com>). These documents, financial statements and the announcements are not included in this Assurance Engagement. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. The baseline data for Environmental and Social performance are not verified, while the aggregated data at the corporate level are used for the verification. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Opinion and Observation

On the basis of the work undertaken, nothing comes to our attention to suggest that the Report does not properly describe the adherence to the Principles for defining report content in GRI G4 nor is prepared ‘in accordance’ with GRI G4 Core option. Further opinions with regards to the adherence to the following Principles are made below;

¹⁾ The VeriSustain protocol is available upon request at www.dnvgl.com/assurance/reporting/verification.html

Stakeholder Inclusiveness

Doosan Heavy Industries & Construction has identified internal and external stakeholder groups such as Shareholders, Customers, Employees, Partners, Local communities, Government and Competitors by considering mutual influence, nearness to site and direct and indirect responsibility related to business activities. The Report presents key issued and effects on each other, through various channels with stakeholder at company and business unit levels.

Sustainability Context

The report covers the context of sustainable development from CSR strategy to business analysis and prospects, risk and opportunities and Doosan Heavy Industries and Construction's contribution in economic, environmental and social aspects.

Materiality

The Report presents the material assessment process. The relevant issue pool was derived from internal guideline and external sources (GRI Guideline, ISO 26000, media research, analysis of peer group reports and stakeholder interview). Material issues were selected with two aspects, the relevance and interest. Audit team evaluated that twelve material issues were reflected the views of the stakeholders and properly prioritized.

Completeness

The Report covers sustainability aspects of economic, environmental and social impacts for the reporting period. Doosan Industries & Construction discloses information on the activities and decisions of the key sustainability issues for the reporting period.

Opportunity for improvement

The following is an excerpt from the observations and opportunities reported to Doosan Heavy Industries & Construction's management. However, it does not affect our conclusions on the Report, but is provided to encourage continual improvement.

- The focus of reporting can be changed according to changes of sustainability context, issues and maturity of interest, but the performance of key indicators needs to be reported with medium & long term and annual target for a comparable and consistent reporting, therefore stakeholder can make decisions based on that information. Various media communication channels like website can be a good way for disclosing sustainability issues and performance when the space of the report is limited.
- It is recommended to utilize the benefit from the integration report by providing non-financial information in conjunction with financial information

Competence and Independence

DNV GL Business Assurance is part of DNV GL Group and a global provider of certification, verification, assessment and training services, helping customers to build sustainable business performance. Our environmental and social assurance specialists are present in over 100 countries. The assurance work was performed by independent team which meets DNV GL's competence requirements. DNV GL was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement.

3 May, 2016,
Seoul, Korea

In Kyoon Ahn
Country Representative
DNV GL Business Assurance Korea Ltd



Ahn Kyoon

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1) In the case of scope change in data reported, it shall be indicated separately.
2) This fact is also reported in DHIC's website (website : <http://www.doosanheavy.com/kr/csr/ethics/creed.do>)

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DHIC Integrated Report by Year



2012



2013



2014

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