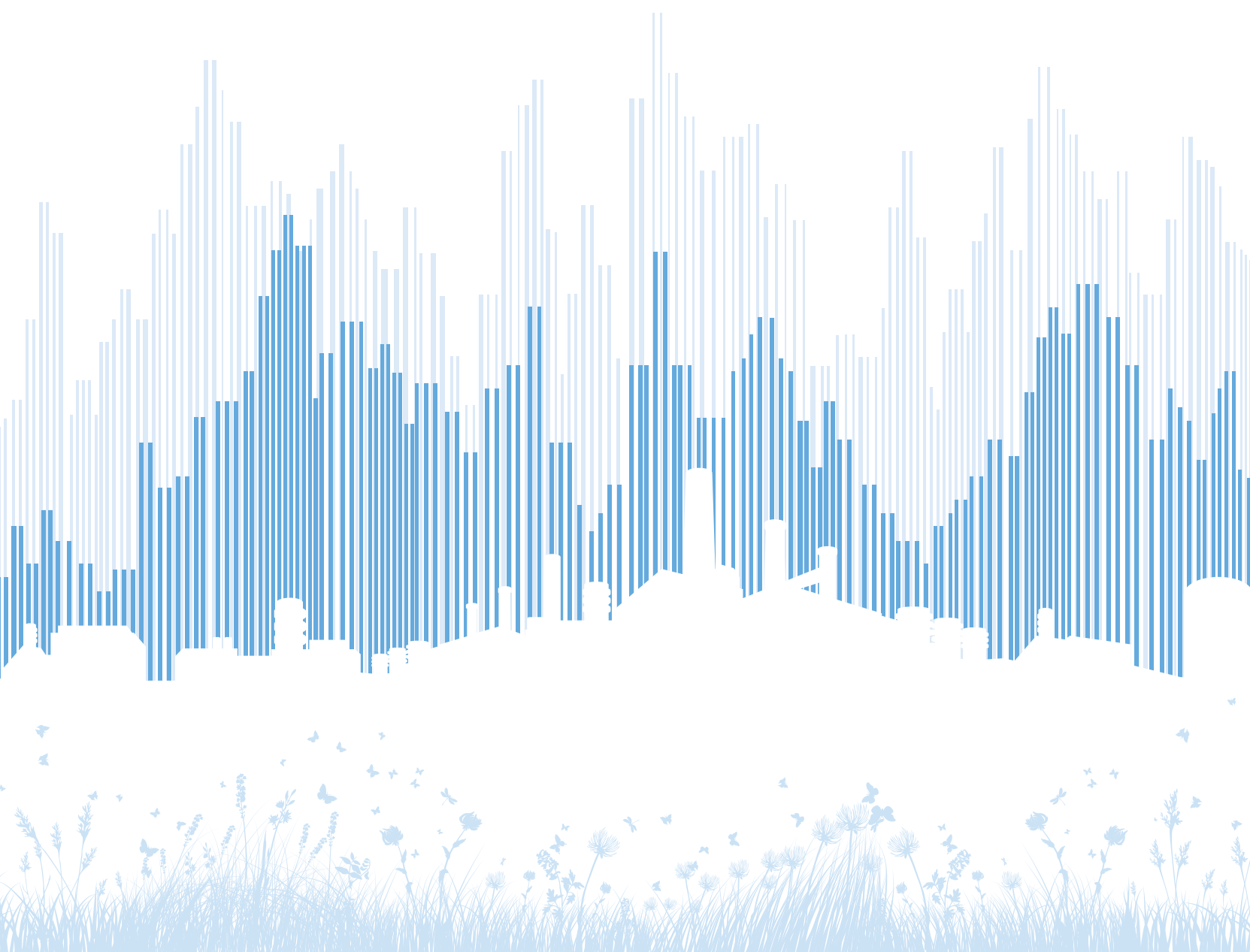


Creating the Best Value

POSCO E&C Sustainability Report 2013



About this Report

Introduction

This report discloses activities and performances of POSCO E&C (Engineering & Construction) in economic, environmental, and social areas that have been identified through materiality test. The report primarily focuses on disclosing sustainability elements of our domestic business areas (excluding investee companies and subsidiaries), and also covers major overseas project sites in Brazil, Vietnam, and Chile. Quantitative performance disclosed in this report is based on data of domestic business areas. Reporting period of this report is from January 1, 2013 to December 31, 2013. We present key quantitative data for the most recent three years to help readers understand changes, trends and improvements for time-series analysis. There is no change in the reporting scope, boundary, and calculation method compared to the previous year. We prepared this report on the basis of the Core option of the GRI G4 guideline and conducted verification by a third party. Independent assurance statement provided by a third party is presented on Page 78 and 79 of this report.

* GRI: Global Reporting Initiative

Features of the Report

Application of the GRI G4 Guideline

POSCO E&C Sustainability Report 2013 was written based on the GRI G4 guideline updated in May 2013. We prepared contents in accordance with material aspects drawn from the materiality test and applied the Disclosure on Management Approach to provide background issues, our corresponding actions and outcomes. In this way, we aim to enhance stakeholders' understanding of the key material aspects of our sustainability management.

Report on Sustainability Management Activities of Overseas Project Sites

POSCO E&C reports sustainability management activities performed in major overseas project sites (currently in Brazil, Vietnam and Chile), introducing detailed aspects of environment, safety, employees, and local communities and relevant key quantitative data.



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Cover Story

The title of this report “Creating the Best Value” reflects our commitment to adding new values to all human lives by pursuing sustainable growth. POSCO E&C will lead changes on forward thinking, advanced technologies, and passion for what we do to build a better and healthier future.

CEO Message



POSCO E&C is committed to enriching the quality of our lives by delivering innovative technology and forward thinking business.

Dear Stakeholders,

Since its establishment, sustainability has been at the heart of the POSCO E&C. At POSCO E&C, We are eager to enrich the quality of lives by delivering innovative technology and forward thinking business. We continue to build a sustainable future by fulfilling our responsibility as a corporate citizen and leading changes and innovation.

Along the journey we have taken, we are proud to be at the forefront of the industry; POSCO E&C is ranked one of Korea's five largest construction companies, achieving more than KRW 10 trillion in annual orders for the past four consecutive years. This is a result of our consistent efforts to enhance competitiveness and reach our business goals.

Today, mega global challenges and rapidly changing business environment require us to implement sustainable growth and embody environmental and social aspects as a part of our core values. POSCO E&C is a progressive company who aims to integrate sustainability in every essence by further focusing on the following management activities.

Sustainable Growth and Future Value Creation

We will continue to develop first-class services and products through our projects. We will focus on expanding our services - and business regions - by leveraging our competitive edge. To optimize corporate values and secure profitability we will - develop our business strategy in accordance to a holistic market insight. In addition, we will strictly monitor, manage and mitigate potential risks that may take place during every process of our projects.

Enhancing Corporate Value and Profitability

We are determined to build a corporate culture where creative resilience is valued, performances of employees are fairly evaluated, and active communication is encouraged. We will help employees relate their personal goals with the company vision, for we understand that synergetic success relies on employees identifying and aligning their goals with the company's vision and strategy. Over the course of 2014, we will also foster an open and collaborative working environment, for the employees to nurture - their potentials and fully utilize their abilities.

Safety as a Core Value

Safety is one of our core values. POSCO E&C will continue to pursue the highest level of safety and health management system by enforcing safety measures of global standards and putting efforts to achieve zero accident rate at all stages of our projects.

Social Responsibility

Corporate Social Responsibility and Corporate Citizenship have always been fundamental to POSCO E&C. We will embrace new ideas to address societal challenges faced by local communities and create long-term values that go beyond POSCO E&C and touch the local communities around the world. We will pursue transparent management systems at all times and also strive to enhance our environmental management system by pioneering eco-friendly technology.

We understand that sustainability is the key to a successful journey which we have embarked. We will continue to dedicate ourselves for the evolution of sustainable corporate values and take-the essential steps to fulfill our responsibility as a conscientious Corporate Citizen. Our pursuit of social values and profitable business will lead us to be a global E&C company in the coming future, and we look forward to receiving your support throughout this journey.

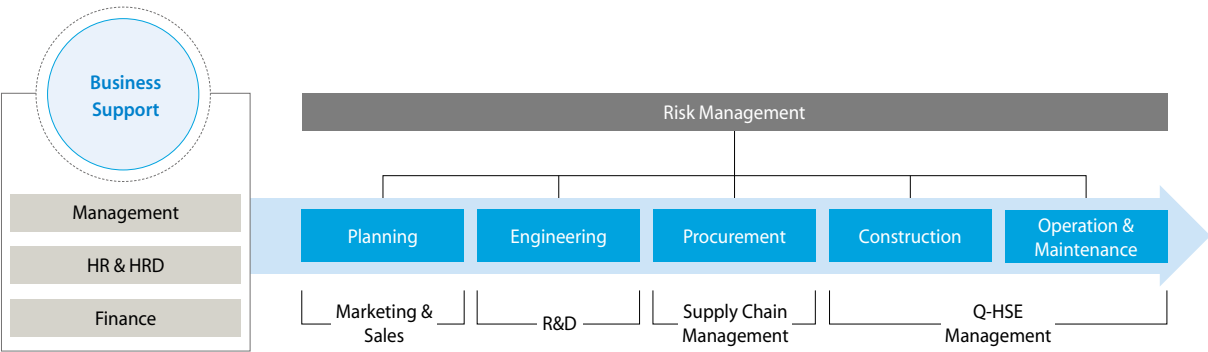
President & CEO of POSCO E&C **Tae-Hyun Hwang**

Company Overview

POSCO E&C is growing into a company leading the E&C industry worldwide with globally competitive technology and knowhow on plant engineering. We have extended our business into Asia, the Middle East, South America, and Europe, and strengthened our position in the global market place. As a leading total solution provider of projects, POSCO E&C will continuously devote its best efforts to enhancing core technologies and professionalism and provide greater value to customers.

Business Model

Responding to increasing overseas projects and diversification of its business portfolio, POSCO E&C is focusing on upgrading its current business model centered on EPC (Engineering, Procurement, and Construction) to PEPCOM (Planning, Engineering, Procurement, Construction, Operation & Maintenance) system. In effect, we have strengthened risk management level in each step of projects, building a high level of quality management, environment, and safety control system. We also strive to enhance the sustainability of our company and society by implementing socially responsible business activities such as engaging in community affairs and reinforcing ethical management.



Business Area



Plant Engineering & Construction Division: Laying the Foundation for the National Economic Development

Based on knowhow and technology accumulated from the construction of Pohang and Gwangyang steelworks, Plant E&C Division successfully completed Indonesia Integrated Steelwork Project, and is in the process of building Brazil CSP Steel Plant. With its global recognition of EPC capability, the E&C Division earned the order of Brazil CSS Steel Plant, and also is spurring on new market entry in Venezuela and other countries.



Civil & Environment Division: Contributing to Local Development through Advanced Technology

Civil & Environment Division, currently contributing to local communities in overseas markets, has been producing high performance evenly in areas of railroads, harbors, and tunnels of Korea by focusing on technology enhancement such as E&M (Electric & Mechanic) Steel mill projects in Gwangyang and Indonesia allowed POSCO E&C to secure capabilities to build seawater desalination facilities. In addition, winning the construction project of waste recycling facility in Poland opened opportunities to enter the Eastern Europe market.



Energy Engineering & Construction Division: Demonstrating World-Class technological competitiveness

In December 2006, POSCO E&C was the first large domestic construction company to establish Energy Engineering & Construction Division and so far, the division has achieved noticeable growth in energy business. Especially, based on EPC capability that was highly recognized through Nueva Ventanas Coal-fired Power Plant in Chile, we have been emerging as a leader in the Central and South American energy market. The scope of our energy business also expands to private-invested power plant projects in Korea such as Ansan Combined Cycle Power Plant as well as eco-friendly energy projects.



Architecture Division: Building Striking and Creative Landmarks

POSCO E&C has successfully conducted large scale urban development projects in Songdo, Incheon and An Khanh, Vietnam. These projects allowed us to gain high recognition in the field of urban development in the global market and led to winning and completing the Hanoi New City Master Plan. These performances carved our status as a leader in the urban development business. In addition, we are making great success in the housing market backed by proving our differentiated marketability and quality to customers.

Business Status and Operating Performances

POSCO E&C has continuously diversified its business portfolio with years of firm experience in steel plant construction. Our business includes civil engineering, architecture, energy, and urban development and is now expanding to renewable energy and urban regeneration. New orders in 2013 amounted to KRW 12.1 trillion (KRW 6.2 trillion in Korea and KRW 5.9 trillion in the global market). Sales in 2013 increased by KRW 1,517.9 billion year-on-year to KRW 10.2 trillion and operating profit also rose by KRW 122.8 billion to KRW 448.4 billion. To respond to unfavorable global construction market conditions such as intensified competition and weakening profitability, POSCO E&C is refraining from indiscriminately winning new orders for quantitative growth. We will continue to create performances by expanding valuable new orders through strict profitability analysis.

Corporate Profile

Classification	Conent
Company name	POSCO E&C Co., Ltd.
Headquarters	180, Daesong-ro, Nam-gu, Pohang, Gyeongsangbuk-do, Korea
No. of employees	4,262 persons (as of December 2013)
Overseas subsidiaries	China, U.S., Venezuela, India, Indonesia, Vietnam, Mexico, Brazil, Cambodia, Australia, and Ecuador
Establishment	December 1, 1994
President & CEO	Tae-Hyun Hwang
Industry	Engineering & Construction
Business area	Steel plant, energy plant, chemical plant, water treatment & environmental plant, civil infrastructure, and architecture

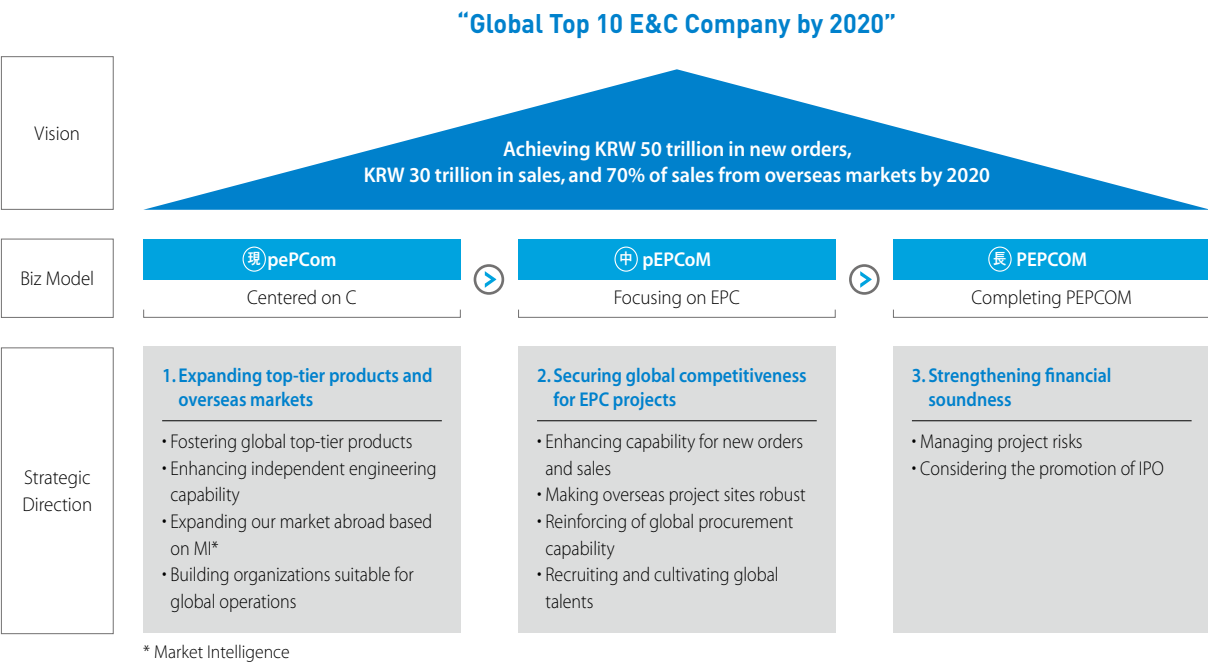
Operating Performance

(As of December 31, 2013, consolidated financial statements)

	Total assets	KRW 8,641.6 billion
	Total equity	KRW 2,946.4 billion
	Sales	KRW 10,155.2 billion
	Operating profit	KRW 448.4 billion
	New orders in 2013	KRW 12.1 trillion

Vision and Strategy

Under the vision of “2020 Global Top 10 E&C Company,” POSCO E&C endeavors to achieve the management goal of KRW 50 trillion in new orders, KRW 30 trillion in sales, and 70% of sales from overseas markets by 2020. To this end, we established the 3 core strategic directions of “Expanding top-tier products and overseas markets,” “Securing global competitiveness for EPC projects,” and “Strengthening financial soundness.” We will enhance our execution capability to realize these strategies by setting up detailed action plans and goals.



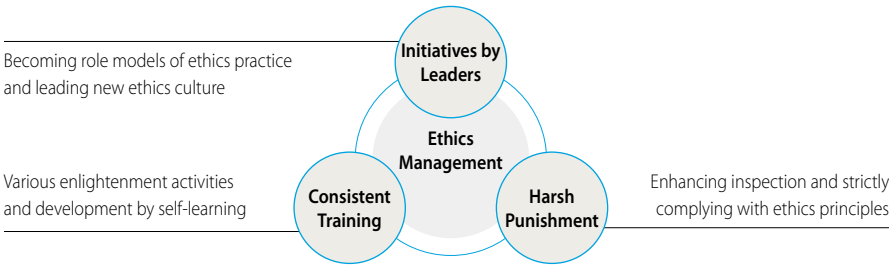
Ethics Management

POSCO E&C is well aware that business ethics is an essential foundation for sustainable growth and it is focusing on planting ethics management as part of key corporate culture. We will continue to comply with the principle and process of ethics management to enhance the transparency of the company.

Direction and System

Ethics and integrity management have been core values and principles of POSCO E&C since its establishment. In 2003, we established a global ethics management system by setting the Code of Conduct and the guideline to comply with the FCPA (Foreign Corrupt Practices Act). In 2005, the Ethics Group in charge of ethics management was launched to conduct and manage ethics training, unethical behavior prevention activities, Compliance Program, and online reporting bulletin. In addition, we organized the Ethics Committee chaired by the Independent Standing Auditor to revise the ethics standard and review the compensation for reporting unethical cases. We also appointed the Ombudsperson who manages ethical activities of each division and the ethics promotion leader who manage ethical activities of each department in order to put ethics management into action throughout the company.

3 Principles for Ethics Practice



Key Activities and Performances

Departmental Ethical Practical Assessments

POSCO E&C encourages each department to voluntarily implement business ethics and provides fair evaluation and feedback on their activity results in order to increase the level of company-wide ethics management. In 2013, we evaluated 177 departments and project sites. The evaluation items included participation results in all ethics training sessions of each department’s ethics practices such as execution of corporate ethics self-practice program, completion of ethics training, occurrence of unethical activities, awards from external institutes, and records of stakeholder meeting result reporting.

Strengthening Ethics Training

At POSCO E&C, ethics management has routinely practiced through various training courses - customized training for each department and project site conducted by direct visit of the independent standing auditor and the staff of the Ethics Group, cyber training, pop-up training, and executive-led training. Since 2013, it has been mandatory for newly appointed project site managers to take a pledge to comply with business ethics and an interview with the Independent Standing Auditor. We also offer ethics trainings to leaders and executives when holding operation meetings for each division.

Ethics Training Results

Ethics Training		Unit	2011	2012	2013
Employees	Participants	Persons	15,275	17,743	15,994
	Training hours	Hours	18,820	18,479	18,938
Business Partners	Participants	Persons	568	476	1,558
	Training hours	Hours	568	476	1,558



Ethics training for employees

Ethics Management of Business Partners

To ensure transparent and ethical trade with business partners, we make the attachment of special terms for ethics in all contracts compulsory. They face restrictions in case of unethical actions and violations of the Framework Act on the Construction Industry. Those have also been applied to all transactions and contracts with the POSCO Family since 2012. We offer ethics training to new business partners. Ethics trainings are also conducted for project site managers and staff of all business partners before national holidays. In 2013, a total of 123 projects sites (97 in Korea and 26 in the world) received ethics training.

Audit Portal System

POSCO E&C operates the Audit Portal System to continuously monitor the level of ethics management in each project site. Through the system upgrade in 2013, we have set 102 scenarios to discover any symptom related to ethics management. Upon the occurrence of symptom in each scenario, it is immediately reported to relevant departments and the Corporate Audit Department monitors all the procedures.

Reward System for Reporting Unethical Behaviors

We receive reports on violations of business ethics through diverse channels such as homepage, fax, mail, and phone. In 2013, the online reporting bulletin was realigned as a banner onto the initial screen of our homepage to help users easily find it, and the procedure for reporting was simplified. The report can be written anonymously or using their real name and the reporter’s identity is protected based on the Whistleblower Protection Act. Since May 2012, we have increased the compensation up to maximum KRW 1 billion for reporting unethical activities and also operate the autonomous report immunity system. In 2013, a total of 778 cases were reported and appropriate measures taken and KRW 174 million was given to the reporters as of the end of 2013.

Future Plans

As our global business has been expanding, we will establish a global ethics management system and offer customized ethics training materials to overseas project sites. This will help ethics management to be embedded in not only dispatched employees but also locally hired employees.

Case Study

Stakeholder Meeting Result Reporting System

To prevent unethical behaviors and promote proper meetings with stakeholders, we operate the “Stakeholder Meeting Result Reporting System.” Once an employee reports the result of meeting with stakeholders, it is reported to the superiors through email. Then, superiors make coaching comments about the results and the comments are automatically sent back to the employee. This system helps to preemptively prevent the occurrence of unethical behaviors.

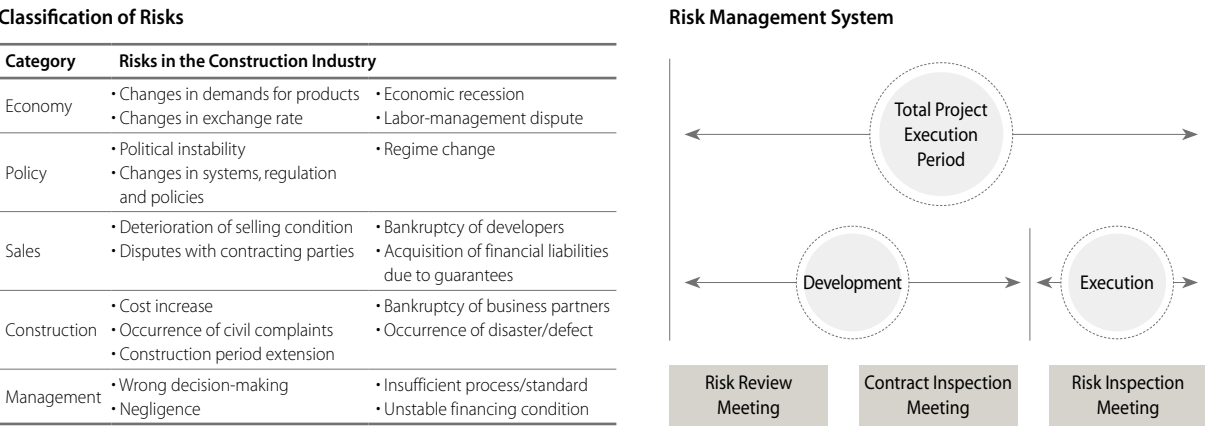
Stakeholder Meeting Result					
Dept.	Overseas Sales Office of Plant E&C Div.		ID number		Register
Stakeholder					
Name		Organization		Position	
Meeting Result					
Date	July 1, 2014	Time	2~3 p.m.	Place	3F, Head Office Bldg.
Contents	1. Sector: supply of piping materials 2. Location: Gangseo-gu, Busan 3. Purpose: request for estimates for piping materials 4. Details: sharing of information on overseas piping materials market environment and features of clients related to Saudi Aramco				
Coaching Comment by Superior					
Contents	Draw up an estimate after exactly checking the standards prescribed in the ITB of clients with respect to materials				

Risk Management

POSCO E&C operates risk management system for the entire process of each project. By preemptively managing any risk that may occur depending on the situation, we will prevent potential losses and increase profitability overall.

Direction and System

POSCO E&C manages risks which can occur during the entire process of a project by dividing them into types and situations. Risk types are classified into 5 sectors: economy, policy, sales, construction, and management. We also manage risks that may occur in the stages of development and execution depending on the situation. In the development stage, we examine the project quality in the financial aspect by holding the Risk Review Meeting and Contract Inspection Meeting. In the execution stage, we manage financial and non-financial risks in conducting projects through the Risk Inspection Meeting.



Key Activities and Performances

Strengthening Risk Management before Winning Orders

We strictly manage risks from the initial development stage before winning orders by holding the Risk Review Meeting and Contract Inspection Meeting. Each project is evaluated in terms of 7 criteria – scale, profitability, investment amount, P/F guarantee, participation type, client, and business environment – and risks are divided into the classes of A, B, and C through the meetings. The Risk Review Meeting and Contract Inspection Meeting take company-wide deliberation, RM deliberation, and deliberation by division in accordance with the level of risk, enhancing the efficiency of risk management.

Risk Management Performance

Our tightening preemptive risk management enabled us to mitigate guarantee conditions and reduce investment amount, which realized KRW 260 billion worth of financial improvement effect. We also identified and resolved more than 30 risk factors after reviewing risks in non-financial aspects such as project schedule, quality, and complaints.

Future Plans

By performing risk analysis for each type of project based on past cases, we will strengthen the preemptive risk management of new projects. As for risks in the execution of projects, we will establish a system to manage all kinds of risks spanning the project life cycle to increase profitability.

Sustainability Management

POSCO E&C will continue to add impetus to its sustainability management by monitoring and improving the following four strategies; strengthening sustainability management culture, consolidating infrastructure, developing businesses for sustainable growth, and activating stakeholder communication.

Direction and System

Our sustainability management is further driven by operating a systematic process consisting of establishment of sustainability management systems, activities based on strategic directions, monitoring, performance review, and reporting. Relevant departments participate in each stage of the process to boost the sustainability throughout the company. We also check performances in sustainability management and upgrade our strategic directions by publishing the Annual Sustainability Report.



Key Activities and Performances

We have been striving to improve our capabilities to manage each sector of sustainability management. In 2013, a total of 11 items were identified as improvement activities, of which 7 were completed and the remaining 4 are currently in progress. Completed items were registered on the DB of the company. We will continue to grow our sustainability by consistently developing and setting tasks and targets.

Classification	Improvement Task	Details	Remark
Human Rights	Establishing human rights issue management system	• Including human rights protection in contract requirements • Including human rights issues in HR information database of overseas project sites	Completed
Local Communities	Establishing and conducting local purchasing policies at major project sites	• Inspecting local purchasing results at each project site	Ongoing
Employees	Promoting certifications for organizational culture	• Promoting certifications for the Best Family Friendly Management	Completed
Business Partners	Reflecting CSR elements in evaluating business partners	• Building criteria for evaluating business partners' CSR activities • Planning to expand supports for business partners' CSR activities	Ongoing
	Building mid to long-term plans for promoting win-win growth	• Establishing mid to long-term win-win growth plans	Completed
Environmental Management	Building mid to long-term environmental management strategy system	• Identifying mid to long-term strategic directions and promotional tasks by each step	Completed
	Establishing carbon risk management system	• GHG management system per unit	Completed
	Improving capability for managing GHG and environment through establishing green management	• Settling GHG management system	Completed
Risk	Strengthening ERM (Enterprise Risk Management) system containing nonfinancial risks	• Listing company-wide risks	Ongoing
Social Contribution	Developing manuals for social contribution at overseas project sites	• Defining social contribution process at overseas project sites • Defining activities by each social contribution process	Completed
Report on Performance	Enhancing ability to publish annual sustainability report	• Developing a manual for publishing annual sustainability report • Reporting CSR educational materials on the online bulletin board	Ongoing

Future Plans

We will promote education for responsible staff of each area and workshops with experts in order to reinforce the capability to promote sustainability management. To raise the awareness of sustainability management amongst all employees, we will think innovatively and use various ways such as placing CSR educational materials on the online bulletin board.

Stakeholder Engagement

Active communication with stakeholders is a crucial factor for promoting successful sustainability management. POSCO E&C operates various communication channels to gather the opinions of major stakeholders and endeavors to reflect issues raised by them in management activities.



POSCO E&C's social contribution in the domestic and overseas project sites has become a major public service for local communities beyond just volunteer work. A recent trend of corporate social contribution is involving stakeholders in activities. In this aspect, POSCO E&C's social contribution together with university student volunteers has significance. I know POSCO E&C has been actively conducting social contribution activities centered on education and culture in the world. I hope the company will develop and diffuse exemplary cases to boost global social contribution.

Hyuk-Jun Choi | President of Lime Globe

POSCO E&C is promoting social contribution activities centered on local communities. By focusing on overseas projects, we are carrying out social contribution activities that meet the characteristics of each country. We will continue to grow together with local communities by conducting contribution activities they need.

Society



Definition of Stakeholder

Whole society affected by our business activities including geographical and administrative local communities where POSCO E&C operates and conducts business.

Communication Channel

- Social contribution program (year-round)
- Discussion meeting with opinion leaders (frequent)
- Survey on public perception (once a year)



I believe figuring out the customers' need beforehand to remove inconvenience is the most important in customer satisfaction management. If any trouble arises, customers cannot help feeling dissatisfaction even though the trouble is solved in time. I hope POSCO E&C will consider this aspect in customer satisfaction management. Last but not least, I expect POSCO E&C to continuously manage and monitor all houses, so that customers living in these spaces feel a sense of pride.

Ju-Hee Lee | Resident at Songdo The Sharp Harbor View I

POSCO E&C is committed to understanding customer needs and adopting them to products in order to raise customer satisfaction. We will increase satisfaction and minimize inconvenience at the initial stage of moving in by assigning managers to support each household.

Customer



Definition of Stakeholder

People who use products and services provided by POSCO E&C. Not only the end-users but people to share the value POSCO E&C generates in all business processes.

Communication Channel

- Housewives advisory group (The Sharpist) (frequent)
- Homepage (year-round)
- Survey on customer satisfaction (once a year)



Last year, we collected employees' opinions and strived to improve working conditions by holding the Labor-Management Council and jointly visiting project sites. Through this process, we were able to identify their high interest in communication within the organization and fair performance evaluation. It is necessary to further activate communication not only between the head office and project sites but also among employees. I hope for the current performance evaluation system to be embedded in the company and employees' opinions to be reflected in management activities.

Jin-Gab Kim | Representative of the Labor-Management Council

POSCO E&C will continue to improve systems for healthy labor and management relationship as well as build an organizational culture based on trust and active communication. To this end, we will upgrade the in-company bulletin board operation and prepare additional methods to systematize mutual communication among employees.

Employee



Definition of Stakeholder

Employees are the most important and essential resource allowing the company to grow. They include not only full-time employees but all workforces in local and global project sites.

Communication Channel

- Labor-Management Council (once a quarter)
- Junior Board, Challenge Board (frequent)
- In-company bulletin board (frequent)

Investor



Definition of Stakeholder

Direct and financial investors including potential investors

Communication Channel

- IR briefing (once a quarter)
- DART system (frequent)
- Face-to-face meeting (frequent)
- Participating in surveys by domestic and global credit-rating providers (frequent)



Current real estate market conditions in Korea are bringing a lot of uncertainty in the domestic housing construction industry. Global business also encounters higher risks with regard to construction, schedule, and costs than domestic business. Therefore, strict risk management system is essential. POSCO E&C should create synergy by organizing consortiums with the POSCO Family to capitalize on their advantages. For instance, the engineering capability of POSCO Engineering and facilities and equipment of POSCO PLANTEC will help win more new orders.

Han-Seung Choi | Senior Researcher of Korea Ratings

We newly established the PMO (Project Management Office) Group to manage risks from increasing overseas projects. We will continue to strengthen our capabilities to manage risks in all processes ranging from preparing orders to executing construction.

Environment



Definition of Stakeholder

Natural environment which is affected by POSCO E&C's business activities and should be protected for sustainable growth

Communication Channel

- Eco-friendly construction and R&D (frequent)
- Improving eco-friendly management process (frequent)
- Environmental campaign (once or twice a year)



We highly appreciate your commitment to voluntarily participating in the GHG and Energy Target Management pilot project and reducing GHG emissions in 2013 compared to the previous year. Your environmental performances are more meaningful in that the construction industry has been recognized to be passive in reducing GHG emissions. It is especially great that POSCO E&C verified the status of GHG emissions from a third party institute to ensure the credibility of the data.

Choon-Seung Yang | Executive Director of Korea Sustainability Investing Forum

We plan to execute GHG management in overseas project sites, which is currently only executed in domestic project sites. We are also striving to protect the biodiversity around overseas project sites including the CSP project site in Brazil.

Partner



Definition of Stakeholder

All subjects including business partners who have direct and indirect influences mutually in our business activities

Communication Channel

- Win-win Growth Supporters (once a month)
- Satisfaction survey of business partners (once or twice a year)
- Discussion meeting with business partners (frequent)



POSCO E&C has built a win-win partnership to ensure prosperity within SMEs (Small and Medium-Sized Enterprises) based on an ethics management system. POSCO E&C's Industry Innovation Movement 3.0, unwavering interest and affection of the Win-win Growth Supporters, and performance sharing system have helped us ensure differentiated quality and productivity, which contributes to upgrading our corporate competitiveness. I hope that POSCO E&C will fulfill its social responsibility and role by expanding win-win growth activities.

Yeong-Jun Jang | Head of Construction Business, Woojin Form Tech

Regarding business partners as companions that grow together, POSCO E&C continuously promotes win-win growth activities centered on supports for enhancing their corporate competitiveness.

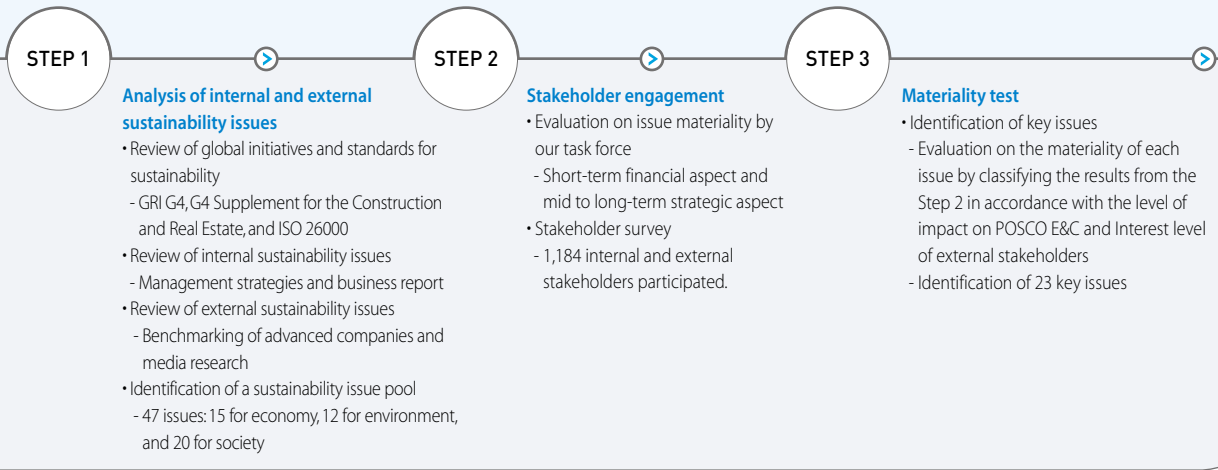
Materiality Test

POSCO E&C identified key issues through the materiality test in order to effectively respond to various sustainability issues raised by internal and external stakeholders and to report the results. Every stakeholder evenly participated in the process of materiality test to objectively evaluate POSCO E&C’s sustainability issues. We prioritized those issues based on evaluation results and reflected them in our sustainability management activities.

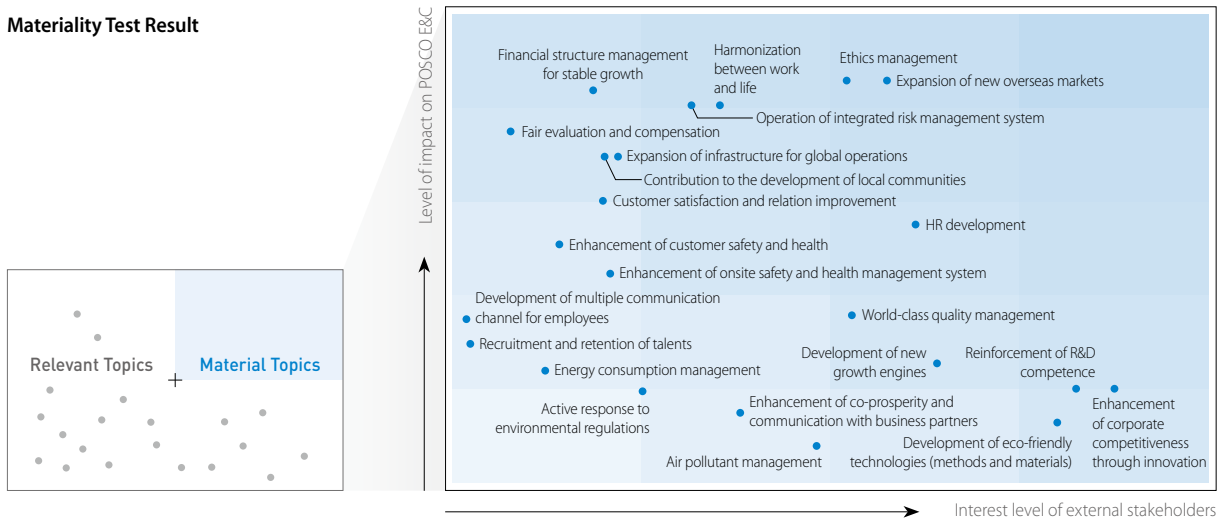
Materiality Test Process

First, we analyzed various internal and external sustainability issues related to our businesses, and then, identified key issues through reviews of the GRI G4 guideline and ISO 26000, benchmark of advanced companies, and media research. A stakeholder survey was conducted to find the priority of the selected issues in which a total of 1,184 internal and external stakeholders participated. By evaluating the levels of effect on POSCO E&C and interest of external stakeholders, we selected 23 key issues and conducted improvement task identification and performance inspection for them. This report was composed of those key issues to provide stakeholders with significant performances in our sustainability management.

* GRI : Global Reporting Initiative



Materiality Test Result



* Through an internal and external stakeholder survey to prioritize a total of 47 issues, 23 issues were selected as key sustainability issues.

STEP 4

Reflection in decision-making for sustainability management

- Development of sustainability improvement tasks
- Review of task performance and target setup

STEP 5

Disclosure of key reporting areas

- Analysis on changes in key issues

Changes in Key Issues

Newly-rising key issues in 2013 were “enhancement of corporate competitiveness through management innovation,” “reinforcement of R&D competence,” “development of eco-friendly technologies (methods and materials),” and “expansion of new overseas markets.” This is due to increasing needs for improving profitability through management innovation, R&D enhancement, and oversea market expansion to respond to extending recession in the construction industry. In addition, “enhancement of onsite safety and health management system” became a newly-listed key issue in 2013, as the safety issue of site workers was on the rise due to increasing occupational accidents in the construction industry.

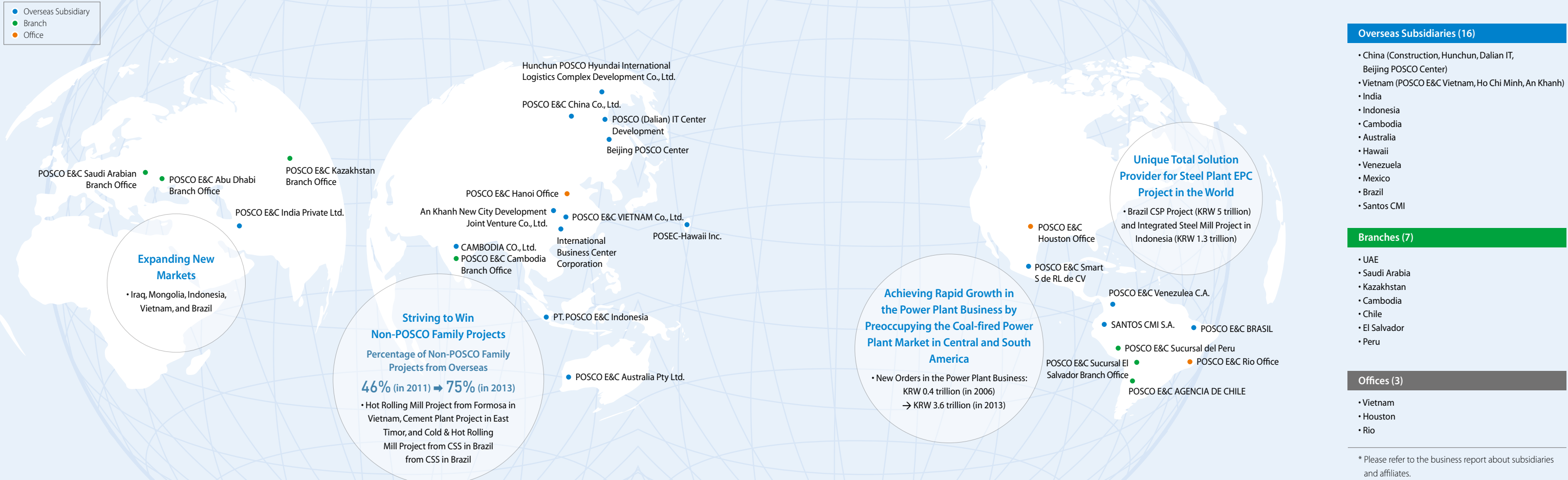
Reporting Contents and Classification of Aspect

We classified 23 key issues in line with the GRI G4 guideline, then, we shortlisted 14 material aspects – 3 aspects in economy and governance, 6 aspects in environment and safety, and 5 aspects in society. Those aspects contain overall sustainability management of POSCO E&C and have significant influences on its internal and external stakeholders.

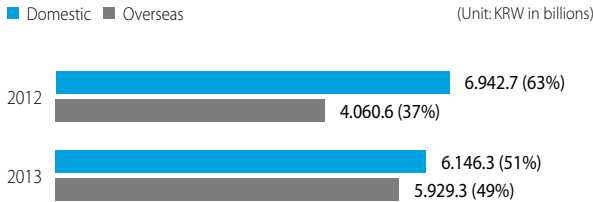
Key Issue	G4 Aspect	Aspect Boundary
Economy / Governance Enhancement of corporate competitiveness through innovation Reinforcement of R&D competence Expansion of new overseas markets Ethics management Development of new growth engines World-class quality management Operation of integrated risk management system Financial structure management for stable growth Expansion of infrastructure for global operations	Economic Performance Market Presence Anti-corruption	Internal Employees External Customers, investors, and business partners
Environment & Safety Development of eco-friendly technologies (methods and materials) Air pollutant management Active response to environmental regulations Enhancement of onsite safety and health management system Energy consumption management	Energy Emissions Effluents and Waste Products and Services Compliance Occupational Health and Safety	Internal Employees External Environment, society, and business partners
Society HR development Harmonization between work and life Enhancement of co-prosperity and communication with business partners Contribution to the development of local communities Customer satisfaction and relation improvement Fair evaluation and compensation Enhancement of customer safety and health Development of multiple communication channel for employees Recruitment and retention of talents	Employment Training and Education Local Communities Customer Health and Safety Product and Service Labeling	Internal Employees External Customers, society, and business partners

Expanding Global Market Entry

POSCO E&C is striving to expand its global business as a resolution to the slow-moving domestic construction market. The global business division is leading the business expansion into neighboring regions. We are proactively developing the Southeast Asian market based on successful results in Vietnam. In South America, we are focusing on not only building a strong position in the steel and power plant construction market that we have conducted projects, but also entering the civil engineering and architecture markets. In addition, POSCO E&C aims to secure large clients who can consistently place new orders of more than KRW 300 billion every year.

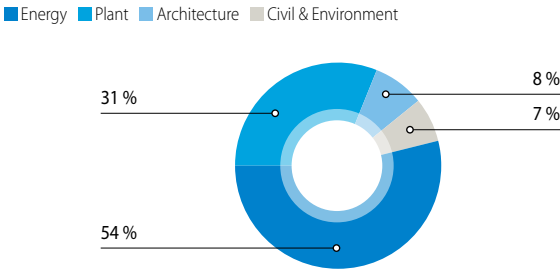


New Orders



New orders in 2013 increased by 9.8% compared to the previous year to KRW 12.1 trillion. In particular, we achieved KRW 5.9 trillion, a sharp increase of 46%, from overseas markets thanks to proactive global business expansion. The company continues to pursue stable growth by refraining from indiscriminately winning new orders for quantitative growth and strictly reviewing profitability to respond to unfavorable global market environment such as fierce competition and weakening of profitability.

Breakdown of New Orders

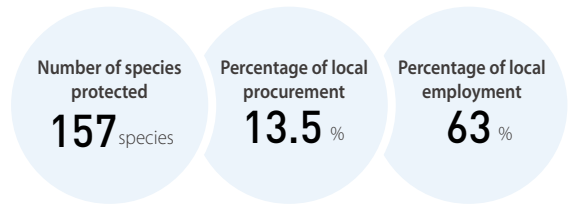


Energy and Plant businesses accounted for 85% of entire new orders from overseas markets. As it is projected that the global power plant market will continue to grow centered on emerging countries, we intend to expand the energy business into regions with high demands for electric power such as Asian countries by capitalizing on our accumulated experiences and reputation. Moreover, we will continuously strengthen our execution capabilities for steel plant and petrochemical plant projects.



[Location: Ceara State, Brazil Beginning: July 2012 Completion: August 2015 Ordered by: CSP] [CSP Integrated Steel Plant Project in Brazil]

Brazil



CSP Integrated Steel Plant Project (herein “CSP project”), one of the biggest five projects in Brazil, is to construct large-scale integrated steel plants. It is the first EPC turnkey base project among integrated steel plants in Brazil, receiving special attention from the Central and South American market as well as Brazil. Prior to the CSP project, Brazil’s steel plants had been constructed with the support of basic equipment and engineering from European companies. However, POSCO E&C is conducting this project on the basis of a turnkey contract encompassing engineering, procurement, construction, test run, and commissioning. This project has proved the quality of our technology to the world and has opened doors to other Central and Latin American markets.

Environment Focused Area 1

Onsite Environmental Management

The CSP project is executed in compliance with all applicable local environmental regulations and policies of Brazil as well as our independent guidelines and principles in consideration of the environment. Wastes from the project site are moved out after being separated into recycling dumpsters in accordance with Brazil’s technological standard and National Environment Committee’s resolutions. Data on each separated waste is strictly managed through monthly monitoring.



Waste recycling dumpsters by waste type

We manage the quality of water used during the project by installing onsite sewage treatment facility and obtaining a permission to discharge treated sewage. Data on the quality of treated sewage is reported to the Brazil Water Resource Corporation every month.

In 2014, POSCO E&C purchased and rented ten sprinkler trucks to reduce dust and improve air quality at this project site and plans to operate another seven ones after July when the dry season starts. We utilize Ringelmann Chart to measure the amount of polluted emissions drawn out from diesel trucks and equipment. The Ringelmann Chart offers official scale with five parameters for determining the levels of pollution by exhaust gases from diesel engines. In Brazil, its environmental regulation restricts this level to be no more than level 3. Therefore, we measure the level of exhaust emissions from all construction equipment including those of business partners regularly and prohibit the operation of diesel trucks and equipment below level 3.

Biodiversity Protection

To preserve biodiversity, we perform various types of research to rescue animals and plants and relocate them to suitable locations. We educate all employees and workers on this project site on how to carefully deal with animals and plants when discovered and report to the HSE team. Then, the HSE team conducts confirmation procedure and relocates the animals and plants with the help of professionals. In all cases, we gather and keep all related data and information for historical record. We strive to minimize our impact on the ecosystem, in order to protect pigeons, snakes, wasps, frogs, squirrels, guinea pigs and various other animals in Brazil.



Protection of a wasp nest

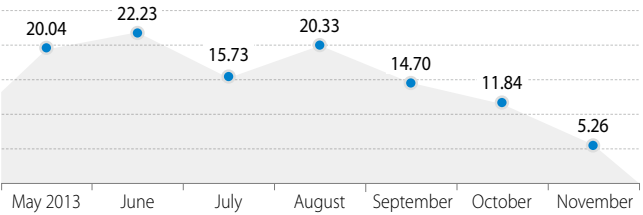
Safety Focused Area 2

Onsite Safety Management

POSCO E&C promotes the Area Ownership System to comply with local safety regulations which require stronger execution than Korea and encourage local workers and safety staff to effectively promote safety activities. This system divides the project site into areas that should be safely managed by the owners responsible for them. Each area should promote safe working conditions for all workers (both Brazilian and Korean) as well as be responsible for any accident and unsafe action that may have occurred within the areas. In this way, we encourage workers to

increase awareness on safety, and this leads to changes in their behavior and attitude to implement safety on the project site at all times. The system was enforced in August 2013 and 63 areas were selected in each of nine CSP project sites. 114 employees were signed to be the Area Owners and 3,100 cases were reported to be below the safety level. The Accident Rate has reduced dramatically since the start of this system.

Accident Rate after Implementing the Area Ownership System (Unit: %)



Employees Focused Area 3

Recruitment and Cultivation of Local Workers

At the CSP project site, we operate the PET (Programa de Encaminhamento ao Trabalho, Program for Connecting to Local Workers) which is supported by a national institution, SENAI (Servico Nacional de Aprendizagem Industrial). This program allows POSCO E&C to connect to skilled local workers in Ceara, which helps us to promote efficient HR management and add value to the life of local workers in Brazil. Due to the local labor condition, it is hard to hire skilled labor force and makes companies hire workers from other regions. It causes an increase in labor costs such as trip costs, other allowances. In this situation, PET program helps companies to hire skilled workers and maintain appropriate staffing level which is supported by a national institution. It is also expected to vitalize the local economy in the long run by helping in the employment of local people around our project sites. We hope confirmed and skilled local workforce at our current project sites can continue to work with us for the CSP steel plant operation after its completion.

Local Community Focused Area 4

Social Contribution Activities

POSCO E&C has been conducting various social contribution activities in collaboration with the project owner CSP in order to provide practical supports to underprivileged people in Brazil. As part of this, each of our eight construction sites for the CSP project has set up a sisterhood relationship with eight different local welfare facilities for children and elderly people. They have been implementing not only regular volunteering works but also One & One Support activities including water facility development to support long-cherished desires of local residents. In 2013, volunteering activities were held on 80 occasions, alongside providing financial support amounting to 80,000 BRL (KRW 36 million). We also delivered free medical services in collaboration with volunteers from the Korean Welfare Medical Association in Brazil, supporting residents who lack health benefits, around the project site. In addition, our employees are regularly involved in cleaning up areas where many Koreans reside, which helps raise favorable public awareness towards foreigners in Brazil.



Volunteer service based on sisterhood relationship – developing wells

Supply Chain Focused Area 5

Securing Local Business Partners

With the progress of the CSP project, collaboration with local business partners has been increased. POSCO E&C is implementing the PDR (Programa Desenvolvimento Regional, Local Development Program) with local business partners involved in this project with the support of CSP and Ceara government. This program was prepared to secure local business partners and establish a firm cooperative relationship with them, which has helped us find local business partners efficiently from the early stages of this project. As of the end of 2013, we have secured information on about 860 business partners by sourcing local companies in the fields of consulting, subcontract, material and equipment supply, environmental waste treatment, accommodation, and food supply. In addition, we have held the "business meeting" thrice to help Korean business partner companies which are performing the

main process cooperate with Brazilian companies for consultation and procurement. The "business meeting" is a kind of exhibition to help business partners of POSCO E&C and CSP project have direct meetings with companies in Brazil. Procurement through consultation is to be completed at once in the "business meeting". We are preparing the fourth business meeting to ensure better and active procurement. The meetings have helped Korean business partners who first entered Brazil conduct local procurement, which contributes to shortening product delivery schedule, reducing costs, and consequently supporting them to successfully complete this project.



3rd PDR meeting

Quality Management Focused Area 6

Compliance with the ISO 9001

The Brazil CSP Business Unit established a quality management plan in compliance with the ISO 9001 and encourages all employees to execute construction, analysis, and improvement activities based on the plan in order to ensure high quality beyond customer satisfaction. POSCO E&C and its business partners appoint quality control managers and they engage in quality monitoring and monthly autonomous quality improvement activities by using the 3-step quality management system. In addition, we share quality trend analysis materials including best practices for construction with all workers and employees in the CSP project site to ensure higher quality.



Quality management activity

POSCO E&C Brazil's Quality Manual

1. Understand and satisfy customers' requirements and go beyond customers' expectation.
2. Enable managers in charge of each section, understand the direction and purpose of quality management and fully participate to create an internal environment to achieve this goal.
3. All employees concentrate their efforts to complete projects successfully.
4. To achieve the goal effectively and efficiently, manage resources and activities as processes, and manage processes that are interlinked as one system
5. To keep working to improve consistently, and not be satisfied with only the current output and outcome.
6. Make decision making based on data and information analysis
7. Pursuit win-win growth with suppliers and create shared value
8. Fulfill all requirements specified in the ISO 9001 guideline

Interview



Director of POSCO E&C Brazil, Tae-Hwa Jung

“We have been making a concerted effort to manage risks from the early stage of the project. Such experience is expected to provide a firm foundation in doing business and implementing projects in Brazil in the future”

We experienced difficulties in customs procedure of offshore materials, HSE (Health, Safety and Environment), and localization in early stage of the CSP project. There were also managerial risks due to incomplete procurement, accounting, and cost control systems. We have been overcoming these risks and difficulties by consulting with local experts and establishing the ERP system for finance and accounting. Through this experience, we classified risk factors that may occur when implementing projects in Brazil and systematically put it all together as a database. We expect that this will increase our competitive advantage in winning new orders and conducting projects in Brazil in the future. In view of the importance of the CSP project, POSCO E&C Brazil will do its best to successfully complete the first phase construction by the end of 2014. Thereafter, by capitalizing on experiences and knowhow in the project, we will expand our horizon to thermal/hydro/wind/solar power plants, mine and infra development projects.



[Location: Northern Vietnam Beginning: July 2009 Completion: June 2014 Ordered by: VEC] [Noi Bai - Lao Cai Highway Construction in Vietnam]

Vietnam



* Compared to local legal minimum wage for entry-level male workers

With extensive experience in Vietnam over the past 20 years, POSCO E&C has successfully completed the highway project that connects Noi Bai near Hanoi and Lao Cai, nearby border line of Vietnam and China. This highway is expected to contribute to activating the logistics industry in the northern area of Vietnam and trading business with neighboring countries such as China. We believe that in addition to this project, various infra development projects such as Ho Chi Minh-Dau Giay highway and Me Linh roadway, steel plant construction and urban development projects are contributing significantly to the economic growth of Vietnam. POSCO E&C is receiving high recognition for its quality and transparent project site operation from the Vietnamese government, clients and local business partners.

Environment Focused Area 1

Onsite Environmental Management

POSCO E&C encourages every site worker to raise awareness of environmental attitudes and behaviors at project sites. As part of this, every Saturday is named "Environment Day", where site workers including subcontractors participate in cleaning up and arranging the project site before works. The event helps them realize the importance of environmental management in every function of our projects and prevent any environmental problem. In addition, our onsite environmental management capability has been enhanced by establishing and operating waste and wastewater control systems and regularly measuring environmental level.

Safety Focused Area 2

Onsite Safety Management

We make a concerted effort to prevent any accident and create a safe working environment for local workers as well as to ensure project quality and schedule in Vietnam. It is crucial that all employees including responsible managers and employees of business partners come together to ensure safety. Our executive provides training on HSE to all employees on a quarterly basis and regularly promotes safety work campaigns and rewards to inspire them with the awareness of safety. To respond to increasing demands for safety from our clients and other local foreign companies, we obtained the ISO 9001 and OHSAS18001 certifications, both internationally recognized audit qualifications for safety management. POSCO E&C is always taking a step forward to advance its safety management and promote a safe working culture.

Employees Focused Area 3

Recruitment and Cultivation of Local Workers

We use a variety of activities such as cooperation with universities in Vietnam to recruit skilled local talents. When recruiting new local workers, we provide them with specific works and entry-level training programs to grow into skilled workers the company expects. Every employee in Vietnam is also provided with strategic and systematic training programs for their jobs and self-development.



Training for new employees

HR Development Program

Classification	Details
Global Competence Enhancement Course	Understanding and learning local languages and culture
Onsite Manager Course	Offering training on leadership, expertise, and global business competence to onsite managers
Next-generation Leadership Course	Providing leaders with training on leadership and their roles
New Employee Course	Mentoring system to help new employees acquire corporate values and improve job performance and adapt to organizational culture
Job Specialty Enhancement Course	Providing employees with systematic job training, taking into consideration the characteristics of each region and project site

Introduction of the MBO System

POSCO E&C is promoting the "Glocalization" policy to achieve the globalization and localization at the same time. As part of this, we introduced the MBO (Management by Objectives) system to implement fair evaluation and compensation for local employees. This system contributed to enhancing work efficiency by helping local employees obviously recognized their personal objectives and check and manage performances. Compensation for achieving objective also afforded great satisfaction to them. Consequently, POSCO E&C's advanced HR management system has been a catalyst for increasing both work efficiency and employee satisfaction.

Local Community Focused Area 4

Social Contribution Activities

Since the entrance into Vietnamese market in 1995, POSCO E&C has been involved in various social contribution activities under the slogan of "5 themes CSR Activity" to become a company that is loved by local people. The 5 themes are as follows; 1) Scholarship for students in need, 2) Housing for the underprivileged, 3) Medical and life support for victims of defoliant, 4) Operating the Welding Training School, and 5) Providing medical services. We spend approximately 4,000 hours per year for volunteer services for local communities. These activities have been highly recognized and led us to select as the best CSR Company by the Ministry of Industry and Trade of Korea in 2011 and 2013.



Volunteer medical service in Vietnam

Cultural Exchange Activities

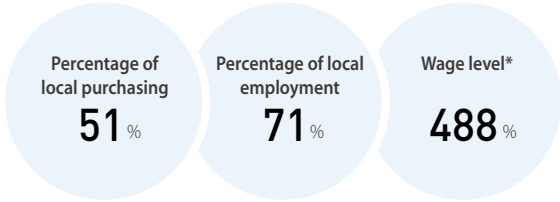
POSCO E&C's college student volunteers, the Happy Builder, visited the culture center located in Dong Nai to introduce various aspects of Korean culture with 1,100 local residents. They presented K-pop performances, shared Korean food, and introduced Hanbok (Korean traditional clothing) and cultural plays such as Chegichagi. Local students and cultural arts team also played their cultural performances such as Vietnamese traditional martial arts. This event served as a momentum for understanding the culture of each other.

Support for Defoliant Patients

POSCO E&C provided support for local defoliant patients in collaboration with Inha University Hospital and Medical and Pharmaceutical Association of Incheon of Korea. The medical volunteering team offered various medical checkup services to them and, in particular, delivered medical equipment such as wheel chairs to the patients with poor mobility. We also helped poor patients relocate to better housing and donated clothes to children of their family members.



Chile



* Compared to local legal minimum wage for entry-level male workers

The Cochran project is POSCO E&C’s fourth project executed in Chile following the Ventanas, Angamos, and Campiche projects. Its aim is to construct a coal thermal power generation plant to supply power in the mine area of northern Chile. With our prior knowledge and experience in Chile, we are efficiently managing various risks in terms of local regulations, safety, environment, labor conditions, and quality control that may occur in the course of project implementation. We will successfully carry out this project so that we build a firm reputation in Latin America and secure a sustainable growth engine.

Environment Focused Area 1

Onsite Environmental Management

A wide range of environmental activities are carried out in the Cochran project site, which include managing fine dust and waste, preventing soil pollution and measuring marine condition. To minimize fine dust, we enforced speed limits for moving equipment and vehicles within the project site. We also operate roofed dump trucks and intensively sprinkle water on excavation areas. To avoid soil pollution, we limit installation of oil tanks, and provide fuel for vehicles and equipment only at designated areas, through a tank lorry. We also observe changes in marine conditions through frequent monitoring by a certified organization. Furthermore, we observe physical and chemical impact associated with coastal drilling through daily monitoring. Recyclable wastes are provided to the neighboring areas where they can be efficiently used.

Biodiversity Protection

POSCO E&C has collaborated with related organizations and associations since the start of the Cochran project to monitor the ecosystem and protect endangered species around the project site. Before starting the project, we analyzed the abundance period and population of endangered birds, particularly in Gaviotin, in order to take corrective measures to protect them. Every year from August to February, which is the period of greatest abundance of Gaviotin, we train all workers, to promote the importance of protecting biodiversity.

Safety Focused Area 2

Onsite Safety Management

We are putting in every effort to promote the safety of all workers at the Cochran project site by following the Safety Management Policy we have established. We establish a safety management policy and make all client and business partner workers in the project site comply with the policy. In extreme cases, we eliminate workers from the project site if they refuse to take action under the policy. We also created an emergency shelter near the project site and evacuation route close to the accommodation of workers to minimize any impact that may occur from natural disasters such as earthquake and tsunami.



Emergency exit map at the Cochran project site

Employees Focused Area 3

Forming Relationship with Local Employees

POSCO E&C is striving to build a firm relationship with local employees. We communicate with them within small teams every month and at the end of the year, we unite all the workers together at an Annual Gathering. On Chile’s Independence Day, gifts and travel expenses are offered to them. We try to understand the local culture and promote active communication with local employees to reduce any risk that may occur between the local workforce and the management team and achieve the synergy effect.

Local Community Focused Area 4

Social Contribution Activities

We put in great efforts to support the Valparaíso region, Chile’s UNESCO cultural heritage site which was severely damaged by a fire, leaving lots of people homeless and in despair, by providing \$8,000 worth of relief supplies for the community in the region. Chile has a high social inequality rate, and Mejillone, where POSCO E&C has a project site, is one of the regions where the gap between the rich and the poor is high. To contribute to promoting community welfare in Mejillone, POSCO E&C is engaged in various community



Delivery of relief to the victims of forest fire damage in Chile

welfare activities such as supporting local residents who are in need of surgery expenses, and constructing an artificial football field for the community. A total of USD 13,000 was donated for these activities.

Quality Management Focused Area 5

Onsite Quality Management

We are pursuing win-win growth with clients in the Cochran project site through customer focused strategy and onsite quality management. We focus on reviewing quality standards for high customer satisfaction and such quality management activities are eventually helping to bring about a positive impact on cost reduction and process enhancement. In one case, our client required us to change the concrete strength standard from 25 Mpa to 35 Mpa for the Cochran project site. We tested the durability of the 35Mpa concrete through ASTM C 1202 international standard testing before using the new concrete. Eventually, this change allowed us to reduce the cost of the concrete used for seawater construction structures while guaranteeing product quality to our client.

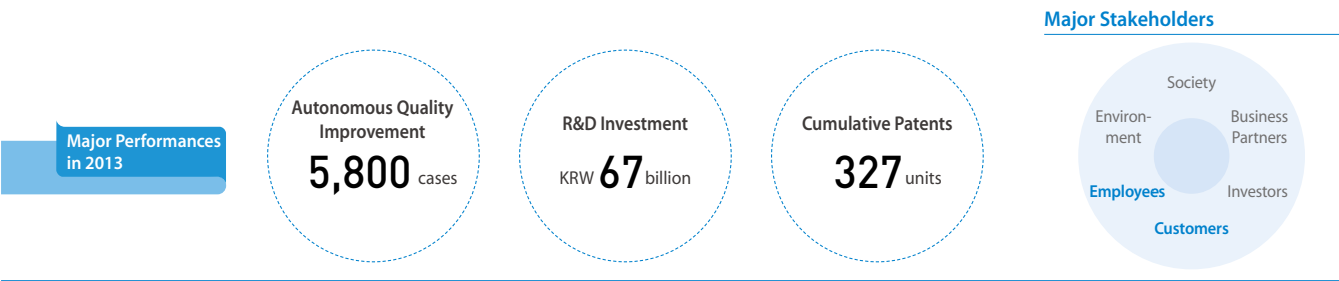
Creating Future Value and Pursuing Profitability



Product Competitiveness	30
Innovation and Financial Soundness	36

Product Competitiveness

POSCO E&C is ever determined to deliver the best products to its customers to stay ahead of the industry. To achieve this, we have built a mid to long-term strategy to accurately identify the level of quality and enhance the maturity of quality management. Development of breakthrough and pioneering technologies for future businesses is also being promoted.



- Key Issues for Product Competitiveness
- World-class quality management

Reinforcement of R&D competence

Price competitiveness had been a significant element to secure competitive advantage in the construction industry for many years. However, today, product competitiveness beyond competitors assures corporate survival. Enhancing product competitiveness is not a choice but an essential factor for POSCO E&C, as the company is gradually expanding the proportion of overseas business to develop new growth engines.

Best-in-Class Quality through Quality Management

Direction and System

POSCO E&C delivers proactive quality management rather than taking a reactive stance. We believe that this can create increased value for our customers and go beyond customers' expectations. Three core values are the drivers of our quality management: Customer Inside, Basic Inside and, Synergy Inside, as shown below. We will achieve our vision of the "2020 Global Top 10 E&C Company" by enhancing the maturity of quality management based on three core values and consequently secure higher product competitiveness. In addition, we will establish a global-level quality management system through mid to long-term quality management strategy and concrete action plans.



* Maturity of quality management: Result of the evaluation on quality management effectiveness of the POSCO Family
* Please refer to the supply chain section on page 72 for more details of Synergy Inside.

Key Activities and Performances

Customer Inside

POSCO E&C promotes quality improvement activities that stress the autonomy of each project site to reduce customer complaints and even adopt customers' potential needs.

Regular Quality Diagnosis System at Project Sites

We run a quality diagnosis system frequently in every project site to secure global standard quality management and improve construction quality. This system is used for evaluating the level of construction quality and any nonconformance are improved through corrective measures. We also use this system to quantitatively measure the adequacy of quality action plan, inspection test management based on the plan, construction quality level, participation in quality improvement activity, and inspection on seasonally insufficient construction process management. Feedbacks on insufficiencies identified through the system and solutions are regularly reported to project sites for better quality improvement. We also reward project sites with excellent evaluation results to inspire employees to participate in quality management activities.



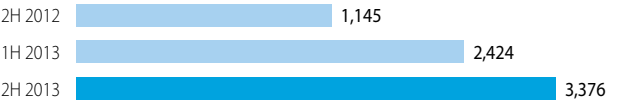
Operation of regular quality inspection at project sites

Autonomous Quality Improvement

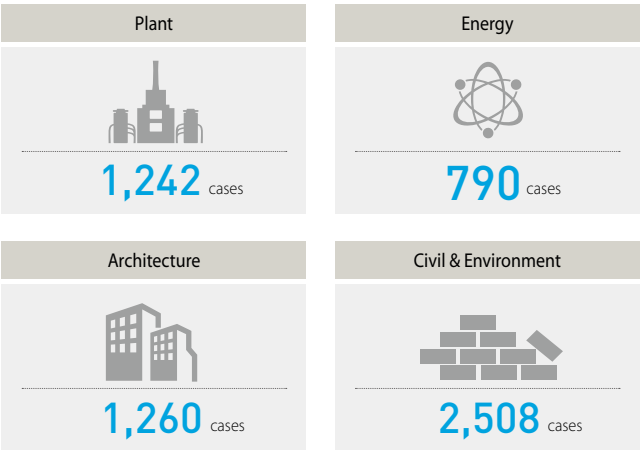
Our project sites implement autonomous quality improvement activities. When discovering defects during the construction process, any project site suspends operations and makes the nonconformance report. And then, those defects are corrected according to corrective action plans and in-depth analysis is conducted to prevent reoccurrences of similar cases. We gather information on nonconformance at all project sites in the NCR database system for integrated management and analyze the trend on a regular base. Based on this analysis, we establish preventive measures and provide training accordingly to employees at each different project site.

Number of Quality Improvement Activities

(Unit: cases)



Number of Quality Improvement Activities by Business



Basic Inside

We are increasing our quality standard by following the basic principles and implementing standardized quality management systems to prevent any quality gaps between projects.

Standard Document System

The standard document system based on the ISO 9001 standard serves as a basic infrastructure of our quality management system, which contributes to eliminating waste and deviation and finally upgrading work efficiency. Standard documents are categorized into three levels; manual, process and guidelines as shown below. Around 2,100 species of standard documents are stored on the standard document system that can be accessible anywhere the internet is available. We update the documents via internal evaluation every year for better utilization of this system.

Standard Document System



Quality Management of Overseas Projects

POSCO E&C satisfies requirements and quality standards of clients in both domestic and overseas projects through standardized quality management process. We acknowledge that quality management is the key to the success of overseas projects. Thus, we review and monitor our project quality by following various international standards including the ISO9001. The standardized quality control helps to reduce costs and shorten construction periods. In case of the R combined cycle power plant project in Israel, we succeeded in meeting the quality standard required by the client despite the poor infrastructure and business environment in the Middle East, by allocating skilled human resources appropriately and conducting the project in compliance with global standards in quality management.

Future Plans

POSCO E&C aims to secure global-level quality management capacity and to meet various quality requirements of our clients. In all the stages of our overseas projects, we will establish an integrated quality management system and nurture experts to acquire certifications in the areas of quality management, including IRCA, CWI and ASME.

* IRCA:International Register of Certificated Auditors

* CWI: Certified Welding Inspector

* ASME: American Society of Mechanical Engineers

Quality Management Results and Plans

Classification	Unit	2011	2012	2013	2014
Diagnosis on quality management of POSCO Family	Points	674.7	782.3	802.6	850
Number of IRCAs (cumulative)	Persons	11	11	16	-

* 16 IRCAs are those who completed relevant training. Approximately 10 persons are planning to obtain the certification in 2014.

Case Study

Global Q-HSE Procedure and ITP Standardization

POSCO E&C has standardized documents for construction process and ITP (Inspection & Test Plan) to maintain consistent quality level and prevent any miscommunication that may occur due to unstandardized documents from various overseas projects. As a result, construction process and standards, role and responsibility of workers, and work descriptions are recorded in standardized forms, which facilitate efficient communication. In this way, we are able to maintain the quality level, by planning the witness point and required inspection items, and by standardizing ITP which needs approval by the client. This standardization allows us to reduce the occurrence of unnecessary costs as well as ensure high quality of our projects around the world.

* Witness point: A working point where a supervisor wants to inspect.

Procedure


Classification	Quality	Safety & Health	Environment	Total
Kinds	112	36	15	163

ITP

Classification	Common	Machinery	Electricity	Civil	Architecture	Total
Kinds	6	8	12	4	1	31

Procedure & ITP in English

► Procedure

	Project		Des. No.	Rev. No.	Page
	Work Procedure				
	Field Fabricated Piping		NOP-030-014	0	19/15

ATTACHMENT 4 Certification Test Record

Name(Pipe/bending work)			Material and specification		
Construction :			Scheduling Machine :		
Outer Diameter	Pipe Thickness				
Prepared angle for bending :	Temperature :	Bend	Fineness (cold bending)		
Inspection	Result	POSCO E&C	DINENR	Remarks	
Visual inspection	Acceptable or Not	Sig. Date	Sig. Date		
Local Permeant Examination(PT)	Acceptable or Not				
Thickness of U/L Shell	Shrinkage rate (%)			Thickness prior to bending	
Ovality				Thickness after bending	
Cracks	%			DO : DAN : DMX :	
Bent angle					
Bent diameter	D				
Prepared by	DATE				

- ▶ ITP (Inspection & Test Plan)

posco inc.		INSPECTION & TEST PLAN FOR CONCRETE WORK		Rev. No.		EPR-000-001	
DESCRIPTION OF INSPECTION / TEST		APPROVED SPEC OR PROCEDURE		REWORKING		PARTICIPATION	
NO.				SUBJECT	CC	GC	REMARKS
1	Prior Inspection Results and Layout Check	DWG				R	R
<p>Diagnostic Determination of Material</p> <p>1. Soil - Concrete Interface</p> <p>a. Determine design as per Client's Contract</p> <p>b. Verify Design</p> <p>c. Verify Design</p> <p>d. Verify Design</p> <p>e. Verify Design</p> <p>f. Verify Design</p> <p>g. Verify Design</p> <p>h. Verify Design</p> <p>i. Verify Design</p> <p>j. Verify Design</p> <p>k. Verify Design</p> <p>l. Verify Design</p> <p>m. Verify Design</p> <p>n. Verify Design</p> <p>o. Verify Design</p> <p>p. Verify Design</p> <p>q. Verify Design</p> <p>r. Verify Design</p> <p>s. Verify Design</p> <p>t. Verify Design</p> <p>u. Verify Design</p> <p>v. Verify Design</p> <p>w. Verify Design</p> <p>x. Verify Design</p> <p>y. Verify Design</p> <p>z. Verify Design</p>							
2	Form Work	SQP-0004-001	SQP-0004-004	H	M	R	R
3	a. Rebar Material Verification		SQP-0004-004	H	M	R	R
4	b. Settlement, Load Check		SQP-0004-001	H	M	R	R
5	c. Visual Inspection	PWP	SQP-0004-004	H	M	R	R
6	d. Determine Ageing Tightness		SQP-0004-001	H	M	R	R
7	e. Rebar & Shoring Check		SQP-0004-004	H	M	R	R
8	f. Material Verification	PWP	SQP-0004-001	H	M	R	R
9	g. Determine Settlement & Level		SQP-0004-004	H	M	R	R
10	h. Visual Inspection		SQP-0004-001	H	M	R	R
11	i. Determine Pumping Rate		SQP-0004-004	H	M	R	R
12	a. Slump Check		SQP-0004-001	H	M	R	R
13	b. Moisture Content & Laboratory Test		SQP-0004-004	H	M	R	R

LEGEND: M Monitoring R Review SR Spec/ Witness W Witness H Hold

FORM IAC

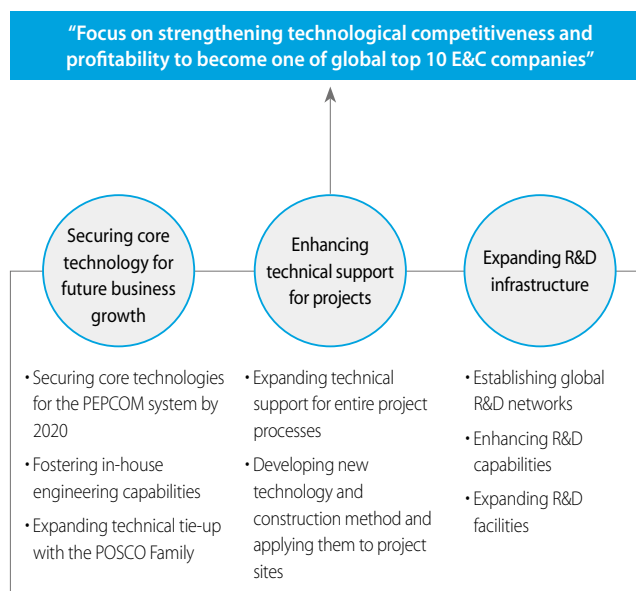
FORM IAC-001 (Rev. 01)

Enhancement of Profitability and Technology Capacity through R&D

Direction and System

POSCO E&C aims to strengthen technological power for new product development and secure profitability. To this end, we set up the strategic directions of securing core technologies, enhancing supports for projects, and expanding R&D infrastructure based on global technological trend and management strategy. We will push ahead with systematic R&D activities by establishing mid to long-term technology master plan and TRM (Technical Road Map) based on globally competitive steel plant engineering capabilities.

R&D Management System



Enhancing Technical Support for Projects

POSCO E&C completed the cQSS (construction Quick Six Sigma) integration system throughout all processes of our projects. We built a database on technical support that can be of assistance and utilization when implementing similar projects. We have acquired certification for new technologies and eco-friendly green technologies to apply in various projects. These certified technologies will provide a foundation for winning projects, leading POSCO E&C to secure higher profitability. In 2013, 314 technical supports were provided to 94 projects in the plant, civil engineering and architecture sectors. Those included technical supports for stress, transformation and analysis of heat flow for plant sector, ground bed, structure, materials and port for civil engineering sector, and noise, vibration, air quality and structure for architecture sector.

Expanding R&D Infrastructure

We have established a foundation for sharing information and advanced-technology cooperation by making use of global R&D branches located in the US and Germany. Technical partnership has been signed with Fugro Consultant (U.S.) on marine/energy plant ground technology and with PHI (Germany) on zero energy. We also inspire creative R&D activities by providing TRIZ advanced education to R&D professionals. We are promoting the construction of an R&D facility in Chungju and utilizing the POSCO Green Building for establishing an eco-friendly building monitoring system.

R&D Performances

Classification	Unit	2011	2012	2013
R&D investment	KRW in billions	42.0	60.8	67.0
Certification of new environmental and green technology	Cases	2	8	7
R&D specialist	Persons	63	64	59

Future Plans

POSCO E&C's R&D center will secure core technologies for future growth business through developing 17 core product technologies and promoting technical collaboration with the POSCO Family. Other plans include practically applying R&D results to project sites and establishing a global technical assistance system for profitability enhancement. Technical tie-up and joint research with leading global companies will be also promoted to expand our global network.

Key Activities and Performances

Securing Core Technology for Future Growth Businesses

To secure core technology for future growth businesses, we have been increasingly participating in government-led R&D projects. We are developing new ferroalloy manufacturing technology in the steel business and offshore wind turbine technology and CO₂ capture facilities in the energy business. We also aim to own design technology for skyscrapers of more than a hundred stories for the purpose of strengthening proprietary engineering capacities. In addition, the company plans to reinforce activities for the POSCO Family Technology Strategy Conference System at the group level.

R&D Performances

Railway



Embedded Rail Track System for Wireless Low-floor Trams

POSCO E&C developed the embedded rail track system which was designated as new innovative technology in the transportation sector for the first time in the construction industry, and is in the middle of developing eco-friendly railway infrastructure engineering technology. As embedded rail tracks are constructed mainly in urbanized areas, this system requires stricter standards for noise and vibration as well as high insulation technology. To this end, we developed the system that fixes rail on cast-in-place slabs with synthetic resins. The materials for the upper track can be varied and flexibly used depending on the purpose. This system can also be applied to busy roads that need reduction in noise, vibration and maintenance cost. Currently, a one kilometer-long rail track has been successfully completed as a pilot project to verify the performance of the wireless low-floor trams and the embedded rail track system.

* Tram: an eco-friendly transportation system that is useful for handicapped users, which can be one of the alternatives to light railway which causes low-emissions



Embedded rail track system for wireless low-floor trams

Water



Sea-water Desalination Process Brand Technology

Nearly KRW 4 billion has been invested to secure sea-water desalination process technology and we currently operate five technology testing facilities with a total capacity of 1,100 tons a day (as of reverse osmosis method) in testing centers located in Udo, Jeju, and in Gwangyang steel plant complex. The technology is optimized for sea-water desalination process management. It is also eco-friendly and energy-saving technology to efficiently control core equipment including MF filter, RO filter, pressure pump, and energy recovery device. It can reduce approximately 50 % of membrane pollution and power consumption by lengthening the filtering cycle. Moreover, this technology extends the lifespan of filters through our patented maintenance cleaning technique and reduces the amount of chemicals used, reducing the overall operating expenses.



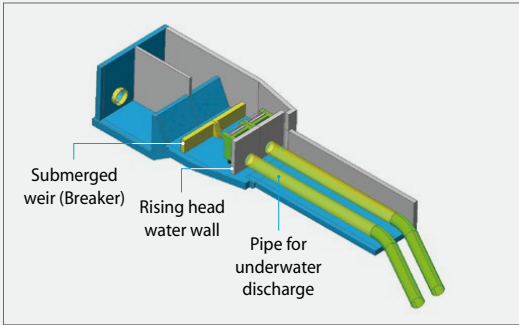
Sea-water desalination project site in Gwangyang

Coal-fired Power Plant

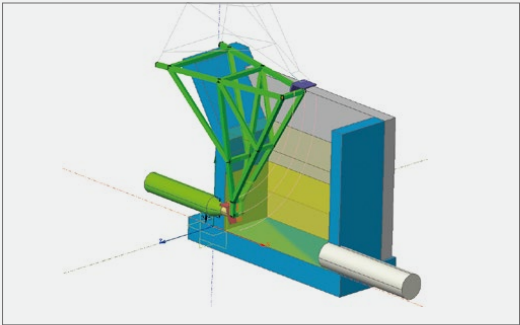


Improved Discharge Structure Reducing Sticky Bubble at Coal-fired Power Plant

Sticky Bubbles are created inside the discharge system at power plant which uses seawater as coolant. These phenomena may cause to lessen discharge efficiency and increase Operating and Maintenance cost. To solve this problem, POSCO E&C developed two types of discharge system, which are standard flat type and high elevation type according to apply to local terrain. The standard flat type features sluice gate and drainage pipe at the bottom those easily control the water level inside and protect bubbles to leak out to the sea. The high elevation type that intend to used for coping with elevation making bubble problem worse can simplify the discharge system by decreasing high energy head. This type that might be rarely applied but developed to overcome handicaps of terrain is designed which is chosen for construction. By using these technologies, PO-HANG byproduct-gas CCPP-combined cycle power plant, site can reduce not only capital cost, but O&M cost and get a high efficiency on their discharge system.



Flatland type drainage structure



Drop type drainage structure

Architecture



Concrete Manufacturing Technology Utilizing Slag

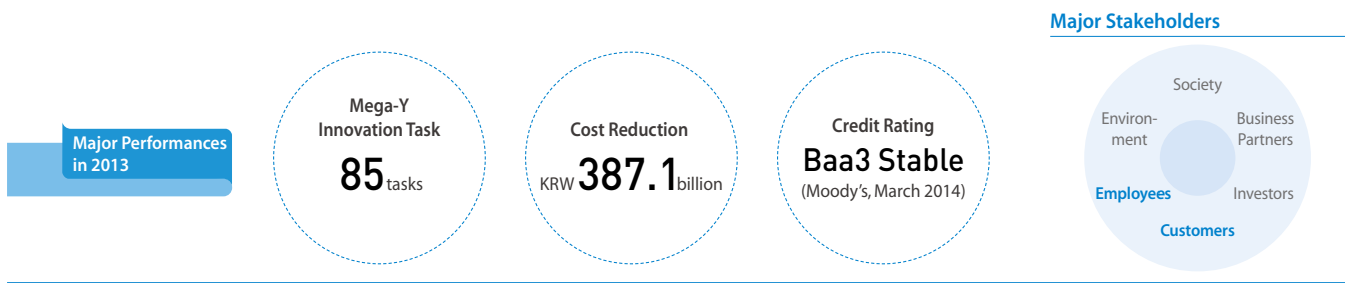
We succeeded in developing eco-friendly concrete manufacturing technology that recycles industrial waste created from steel-making processes. This technology reduces the amount of cement used, leading to carbon emission cut. Using the blast furnace slag from steel plants, we could maintain our product quality, while cutting CO emission by 30 %. We applied it to plant and civil engineering project site in Gwangyang such as SNG (Synthetic Natural Gas) project, high strength steel project and seven natural coke raw material dock project. Using the blast furnace slag, we could increase the initial strength of concrete, which shortened the construction period and led to cost reduction.



Project site to apply slag concrete

Innovation and Financial Soundness

POSCO E&C has been active in strengthening corporate competitiveness by pursuing management innovation and a stable financial structure. We will continue to enhance our fundamental capabilities through innovation and focus on winning profitable projects based on in-depth market analysis and feasibility study. Financial soundness will be also improved by strictly managing debt-to-equity ratio.



Key Issues for Innovation and Financial Soundness

- Enhancement of corporate competitiveness through innovation
- Development of new growth engines
- Financial structure management for stable growth

Currently, every company including POSCO E&C is looking to divert risks into opportunities to overcome uncertain business environments at home and abroad. Along with business innovation with constant changes, financial soundness for stable operation of business is vital in the crisis.

Enhancement of Corporate Competitiveness through Innovation

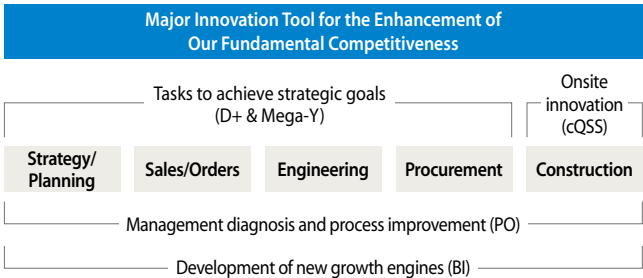
Direction and System

In 2013, POSCO E&C announced ‘innovative management’ to preemptively respond to risks and prepare a new leap, and reestablished three strategic directions for innovation; Together, Ownership and Performing. These are comprised of detailed innovation tasks such as improving fundamental competitiveness, proactively reducing waste, raising ownership spirit and activating process innovation. Specialists in innovation who have been nurtured since 2010 are at the front of implementing various innovation activities throughout the company.



Together – Improving Fundamental Competitiveness

POSCO E&C is implementing innovation in every aspect of our business operation and management, which contributes to reducing costs, cultivating new growth engines, managing risks, and consequently enhancing fundamental competitiveness of our company.

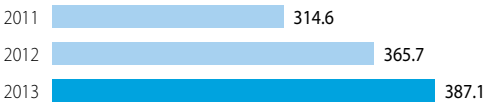


Innovation Activities to Achieve Strategic Goals

Innovative activities to achieve mid-term strategy and future goals are categorized into strategy execution activities and Mega-Y activities. In 2013, we drew a total of 187 innovation activities by breaking down mid-term strategies of each business division. Process and performance of these innovation activities are managed and monitored through the ‘i-sharp’ system to improve the execution capability. We also divided the company-wide Mega-Y activities of 2013 into PLC (Project Life Cycle), E&C, and procurement sectors to implement more efficiently. As a result, we accomplished KRW 387.1 billion worth of cost reduction through 85 activities for improving profitability.

Cost Reduction Results

(Unit: KRW in billions)



Onsite Innovation Activities

The cQSS to manage the 5 KPIs (cost, safety, environment, quality, and process) at project sites is POSCO E&C’s unique onsite innovation brand and the standardized cQSS has been applied to all domestic and overseas project sites. Through field technical support, one of cQSS activities, we identified 95 items for cost-saving and prevented 150 risk factors for construction, thereby reducing expense worth about KRW 78 billion. We plan to apply the cQSS to all construction risk management processes to deliver practical support at each project site.

Developing New Growth Engines

POSCO E&C is executing BI (Breakthrough Innovation) activities to develop future growth businesses by capitalizing on innovative ideas embracing product, technology, and process. Every employee participates in developing innovative ideas for profit creation and completing marketability assessment and business model development through advices from diverse experts, which contribute to creating new corporate value. In 2013, a total of 66 BI ideas were developed, and two of them are in preparation for real business.

Establishing and Improving Global Leading Work Process

As the process has been complicated and management scope has expanded due to increasing number of new business and overseas branches, the necessity of preemptive risk management also has increased, and therefore we promoted improving business process. In 2013, through quarterly management diagnosis, we conducted 37 process improvement procedures in four areas of strengthening overseas business execution capabilities, upgrading the utilization system of global engineering centers, increasing profitability of the civil and environment business and securing new growth engines, and raising actual utilization of R&D. These activities have significantly contributed to the enhancement of profitability. In 2014, we plan to conduct business diagnosis on company-wide strategies such as expanding overseas orders, reinforcing execution competency for PLC (Project Life Cycle), and securing financial soundness, and apply them into practical business performance.

Ownership - Combining based on Ownership Spirit

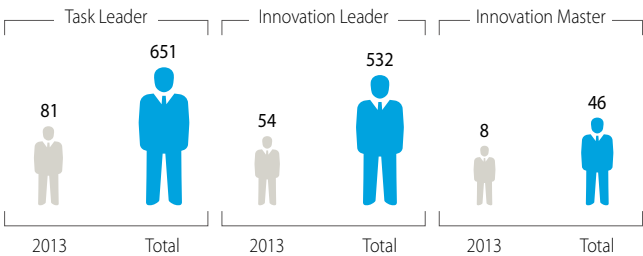
POSCO E&C provide all employees with institutional supports and trainings to encourage them to promote innovation with ownership spirit, and eliminate waste in day-to-day works.

Enhancement of infrastructure capabilities for innovation

For more efficient innovation activities, we classify innovation workforces into three categories; innovation master, innovation leader, and task leader. We continuously provide opportunities for creative thinking and promote innovation activities, so that they can enhance their core capabilities and problem solving abilities. These internal activities reinforce the infrastructure needed for continuously implementing innovation activities throughout our business areas.

Fostering Innovation Experts

(Unit: persons)



* Task Leader: Conducting tasks, Innovation Leader: Responsible for innovation of the Group and project sites, Innovation Master: Responsible for innovation of each division and department

Extreme Efforts to Reduce Waste

POSCO E&C inspires all employees to reduce waste during their day-to-day works while improving their productivity and maximizing performance. In 2013, we defined 3 waste elements that were frequent in office works and conducted a total of 251 improvement activities to eliminate them, which saved around 7,800 working hours.

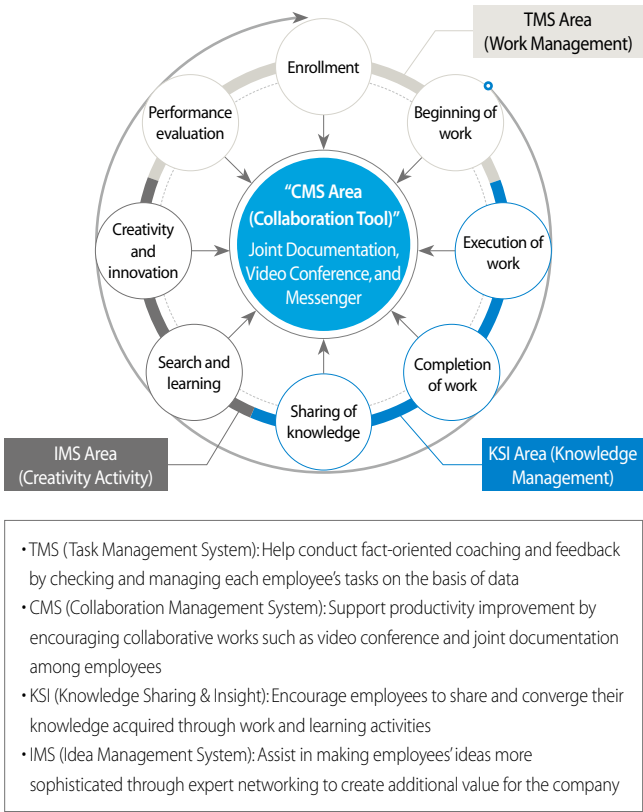
Performing – Operating Strict Practice System

The execution ability is essential for embedding innovation activities in our business. We are making efforts to internalize innovation activities in the daily work schedule of our employees by establishing the innovation execution system.

Creation of a Smart Workplace

A global-level work support infrastructure was established by introducing the SWP (Smart Workplace) system that can ensure creative productivity and stronger power of execution as well as remove waste elements through integration, communication, and collaboration.

SWP (Smart Workplace) Workflow

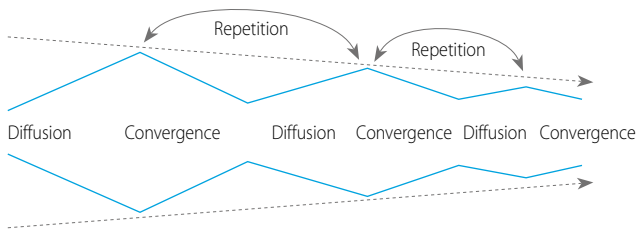


Case Study

TESAL Methodology for Successful Implementation of BI (Breakthrough Innovation)

POSCO E&C introduced the TESAL (Target, Explore, Spark, Accelerate and Launch) methodology to develop new growth engines. It provides new approaches and adds new value beyond existing methods depending on individual insight. When we find new business opportunities, we build concrete business plans including business models, target markets, and profitability in accordance with the TESAL methodology with the support of experts from POSRI (POSCO Research Institute). In 2013, two ideas including the 'Commercialization of Smart Water FO-RO, Sea-water Desalination Process Technology' have been commercialized by using the TESAL methodology. Based on best practices of the TESAL methodology, we will continue to develop new businesses, markets, and products.

BI Methodology



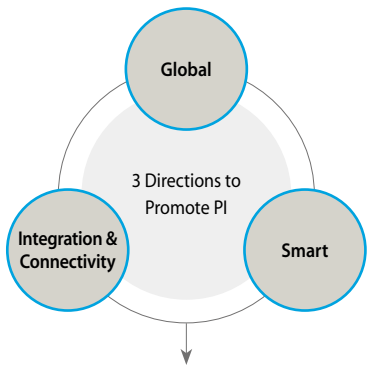
- Implementing a repetitive process of 'Diffusion' - that is for accepting various points of view such as searching for new opportunities, groundbreaking ideas, and 'Convergence' - that is to classify, combine, select and embody them.
- Minimize risks of BI issues, at the same time, raising success factors by continuously reviewing uncertainties through break down of processes into stages.

Roadmap for the 5-Step TESAL Methodology



PI (Process Innovation) Implementation

To establish a world-class PLC (Project Life Cycle) management platform, POSCO E&C drew up an action plan in July 2011. It started the operation in July 2013 after going through all stages of basic and detailed system design, construction and testing, and stabilization. System construction was intended to support the five core areas of PLC: order marketing, business management, management support (finance, capital, operation, and HR), overseas subsidiaries and decision making by the management. Over the two years, we restructured company-wide core processes to maximize work efficiency, concentration and performance. At POSCO E&C, we focus on performance oriented working environment rather than extensive working hours in the office and thus, provide a flexible working environment.



9 Big Pictures of PI

1. Enhancing business activities to win new orders in the global market
2. Consolidating risk response and project management abilities through the entire PLC
3. Strengthening estimate and budget management capabilities to secure cost competitiveness
4. Upgrading ECP-based global business capabilities
5. Securing world's top procurement competitiveness
6. Reinforcing responsible management in each division and project
7. Promoting the globalization of financial and HR services
8. Internalizing innovation and improving the way we work
9. Innovating IT platforms to support global business

Future plans

We will redefine four main issues of innovation activities considering internal and external business environment changes. We will strengthen fundamental competitiveness for developing sustainable future growth engines and open up new overseas markets targeting neighboring countries where we already do business. Other focuses will be on innovating fundamental financial structure through profitability enhancement and improving management infrastructure to secure global leading project execution capabilities. Through these innovation activities, we will establish a substantial profit-oriented management system.

Secure Financial Soundness and Raise Corporate Value

Key Activities and Performances

Increasing High-quality New Orders

Risk management in the construction industry has been mainly centered on projects. Currently, the LSTK (Lump Sum Turn Key) base project has become mainstream, in which the contractor is responsible for a range of activities including engineering, procurement, and construction. In this situation, the contract price is decided in advance. Thus, this can result in high profit or big loss depending on the market situation or the capabilities of the contractor. POSCO E&C manages profit ratio through strict risk management considering the scale, profitability, guarantee on project financing, and local business conditions. In addition, we implement risk evaluation prior to starting a project and at each project stage. We will continue to strive to win high-quality orders by operating a flexible risk management process.

Enhancing Balance Sheet Management

For long-term corporate management, creating financial soundness is more important than managing revenue and net profit of the fiscal year. Therefore, POSCO E&C has been reinforcing non-resource financing by selling real-estates and non-business purpose land and also has been reducing project financing (PF). As a result, we outperformed leading competitors in the industry in terms of debt-to-equity ratio and operating margin as of the end of 2013.

Upgrade in Global Credit Rating

As we are expanding business in the global market, credit rating from global credit rating agencies has critical influences on sales and marketing activities to win new orders. POSCO E&C has been rated by Moody's, the global credit rating agency, and our credit rating has been adjusted from Baa3 negative to Baa3 stable as of April 2014. This proves the soundness of our financial structure and increased corporate value despite global recession.

Special Story

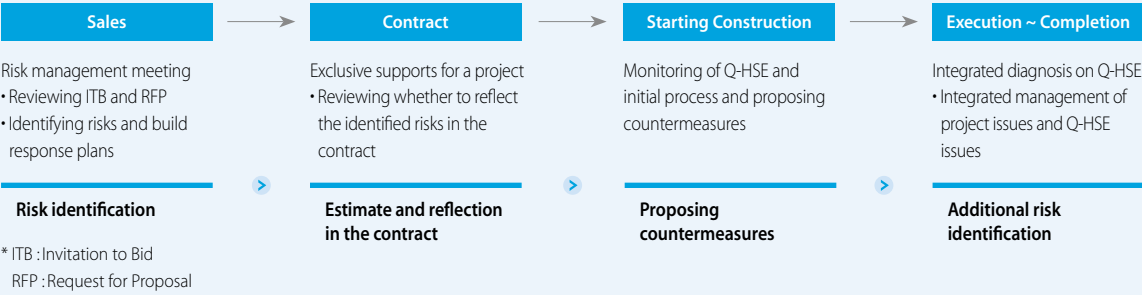
Enhancing Risk Management for Overseas Projects

Overseas projects encounter various risks in terms of economic, social and environmental aspects by country and region. We focus on managing risks that can occur at all levels of the PLC (Project Life Cycle) including quality, HSE, schedule, and financial administration. Risk factors in each stage of the PLC are defined, and these classified risks are managed through a system that we have established. In addition, we cultivated professionals who can look over these risks in overseas project sites and established the PMO (Project Management Office) group/Oversea Project Support Team to manage overseas projects. In this way, we enhanced the system, organization, and human resources to control risks from overseas projects.

PLC (Project Life Cycle) Risk Management

We developed a manual checklist for all stages of the PLC including common issues, HSE, schedule, financial administration and quality, to proactively respond to potential risks that may happen in a project. This checklist allows us to find potential risks, monitor these risks and take measures accordingly.

Risk Management Process



Risk management process starts with identifying risks. At contract stage, we research potential risks that can happen in a particular country and also assess profitability of a project through intense risk management meetings. The PLC checklist for each stage allows us to analyze the possibility of certain risks happening, how serious these risks are and how they should be managed. These risks are analyzed to see how they should be managed and monitored during the project period. Selected key risks are discussed more intensively in meetings for each specific risk. After the completion of each project, we share information on how we managed various risks and this information is kept as a database for use. In the case of the Nam Lik Hydroelectric Power Plant project in Laos, we found 18 key potential risks through the PLC checklist. To respond to these risks, we took various kinds of action such as implementing the “Permit to Work” policy to prevent any delay in project schedule, purchasing local materials and examining local regulations considering certain country risks. To prevent any risks related to human resource, we provided one-on-one training and training materials on risk management to project site managers.

Identification of Risk Factors

POSCO E&C has identified risk factors that need to be commonly managed at overseas project sites to enhance the efficiency of risk management. A total of 591 risk factors in 5 sectors were selected from overall project processes of common issue, HSE, construction, FA, and quality, as well as potential risk factors in project support businesses including HR, labor, accounting and tax.

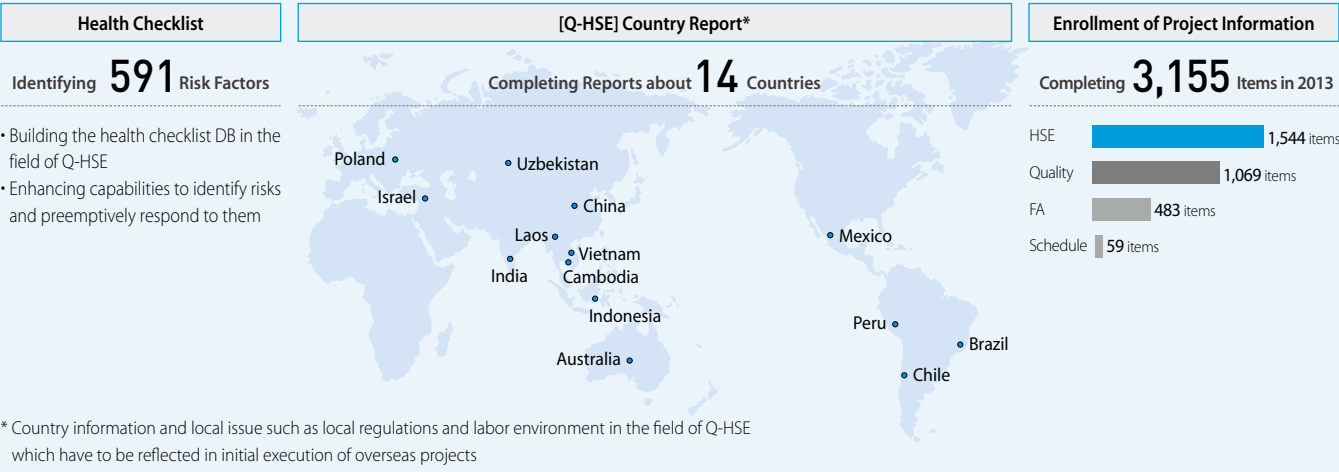
Health Checklist

Sector	Category	Risk Factors (Example)
Common	• Country	• Were the licensing requirements, project schedule, and customs procedure for the construction examined?
	• Project site	• Was local infrastructure such as roads, electricity, and water supply reviewed?
	• Project management	• Were performance risks such as low-priced facilities and plans for removal of workforce and equipment after completion considered?
HSE	• Local regulations	• Are the revisions of local HSE regulations updated and reviewed regularly?
	• Owner risk	• Were the matters to be approved by the owner for project execution reviewed?
	• Project site	• Are safety and environment facilities meeting local regulations and owner’s requirements installed and operated?
	• Local condition	• Was the general price level of safety supplies for the establishment of safety control budget reviewed?
Schedule	• Time management	• Were owner’s criteria (e.g. delay of 5% and above) and documents to be submitted in case of project delay, reviewed?
	• Time plan	• Was local labor productivity (e.g. 50% level compared to the domestic technicians) considered?
	• Time operation	• Were the kind of documents and the number of copies for submitting progress reports, reviewed?
FA	• HR/Labor	• Was an emergency communication network with labor-related institutes (Ministry of Labor, Information Bureau, and Immigration Office) built?
	• Accounting/Tax	• Was document management, necessary for local tax investigation, conducted?
	• Materials and equipment, etc.	• Were customs for local purchasing and relevant standards identified?
Quality	• Local regulations	• Was the staff engaging in quality inspection and services certified?
	• Project site management	• Were mandatory training implementation plans that can affect project execution drawn up?
	• Owner risk	• Were the construction process and ITP (Inspection & Test Plan) for additional requirement tests, drawn?

Building a Database for Risk Factors

Risks factors identified in various overseas projects are gathered to build a database and it is updated on a regular basis. The database is categorized into project types and countries, which makes it easy and efficient to search for relevant risks when implementing a project. This database allows us to manage risks from the beginning of any new project.

Major Activities and Performances



Q-HSE Expert Program to Fostering Risk Management for Overseas Projects

We cultivate experts for each area of Q-HSE as more advanced project management capabilities are needed due to enlargement and diversification of overseas projects. To provide employees with overseas management experiences, we are conducting diverse training courses with regard to best practices in overseas projects, global standards, and OJT at overseas project sites. Our employees are also able to experience various global working environments through job rotation system between the domestic and overseas project sites.

Promoting EHS Enhancement

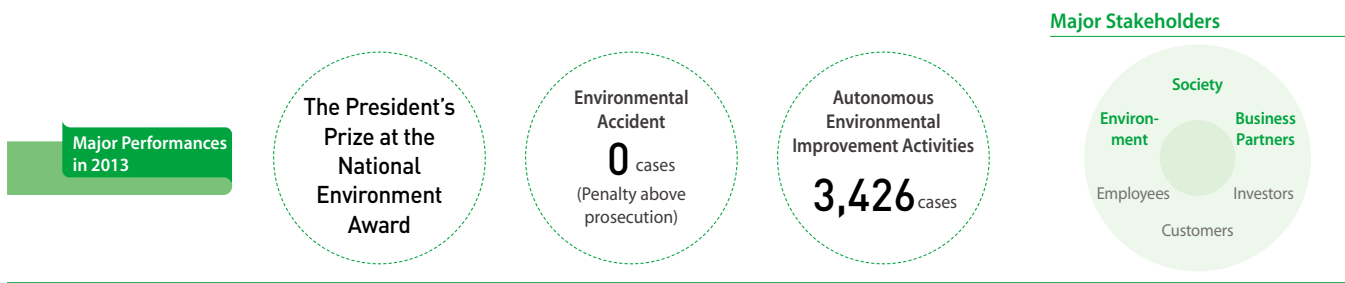
EHS: Environment, Health and Safety

Eco-friendly Management	44
Response to Climate Change	50
Safety and Health at Project Sites	52



Eco-friendly Management

POSCO E&C is enthusiastically implementing eco-friendly management at all project sites. Together with employees and business partners, we are promoting and applying appropriate systems, policies and culture to actively respond to diverse environmental regulations. We will continue to enhance our corporate value by growing eco-friendly businesses.



Key Issues for Eco-friendly Management

Development of eco-friendly technologies (methods and materials)

Active response to environmental regulations

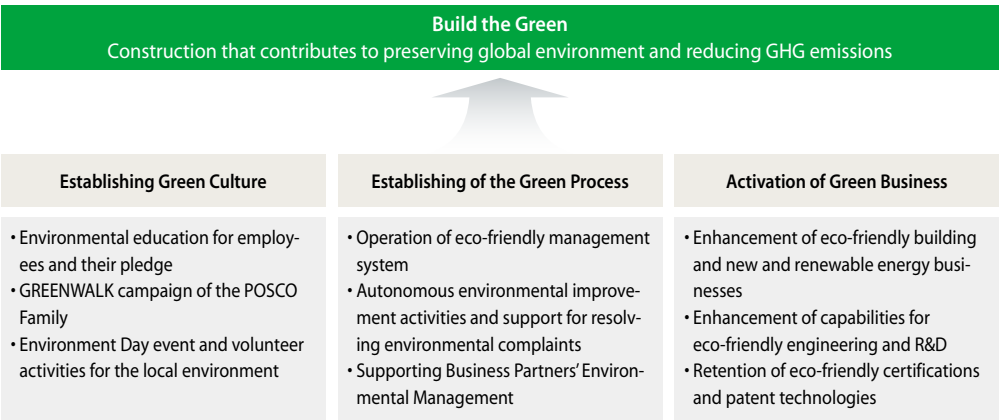
Environmental regulations are reinforced in line with increasing stakeholders’ interest in environmental issues. And eco-friendly management is now a part of the core elements in operating businesses. Eco-friendly technology also provides a gateway to new value creation as well as competitiveness in cost control, quality, and project schedule to the construction industry.

Environmental Management and Performance Creation

Direction and System

Vision and Goals for Environmental Management

Vision and Goals for Environmental Management POSCO E&C has set its eco-friendly management goal as “promoting eco-friendly construction culture” under the vision of “Build the Green.” Based on the goal and vision, the company raises employees’ awareness of the environment and leads them to practice eco-friendly management at all project sites by creating a “green culture.” We have also established the “green process” structure to upgrade the eco-friendly management system and propagate it throughout the entire supply chain. In addition, we are continuously striving to foster “green business” such as eco-friendly buildings and new and renewable energy in order to proactively respond to climate change and take the initiative in protecting the global environment.



Key Activities and Performances

Green Culture

Eco-friendly Management Policy of the POSCO Family

The POSCO Family has complied with its collective eco-friendly management policy established in 2010 to form a foundation for sustainable growth. The policy reflects POSCO Family’s will to achieve sustainability management by solidifying environmental soundness through constant environmental improvement, pollution prevention, law abidance, resource circulation society, and environmental technology development and application.

Environmental Education for Employees and Business Partners

POSCO E&C educates employees at every project site to comply with environmental regulations. We provide not only competency training annually, but also environmental education customized to different managers. Employees appointed to overseas projects are provided with education about local environmental risks and countermeasures to support our overseas business to implement systematic eco-friendly management. We also provide educational videos to business partners and receive their pledges towards eco-friendly management.

Expanding GREENWALK Campaign

The GREENWALK Campaign (walk, turn off, reduce, and collect) of the POSCO Family is contributing to promoting eco-friendly culture and raising employees’ awareness of the environment. On June 5, the Environment Day, we extended the campaign to our business partners and identified over 150% increase in visits to our GREENWALK website after the event, which showed a huge interest in the campaign and environmental protection.

Green Process

POEMS (POSCO E&C Environment Management System)

We operate an eco-friendly management system optimized for the construction industry. Through the system, we set goals, understand regulations, establish plans and manage performance with regard to eco-friendly management. This system also enables us to automatically collect and analyze environmental data for waste and greenhouse gases. We will strive to minimize negative influences on local communities and lead effective use and recycling of energy and resources through precise analysis on environmental impact.



POEMS (POSCO E&C Environment Management System)

System to Resolve Environmental Complaints

At POSCO E&C, a system to resolve environmental complaints started in 2013 to support pleasant living and minimize harm from scattering dust within communities. We held meetings to deal with complaints with the Central Environmental Dispute Mediation Committee under the Ministry of Environment and share the need for systematic management of environmental complaints. We also strive to minimize environmental impacts during construction and offer appropriate compensations for those that have occurred. External experts are involved in this system to boost the confidence of the public.

Violation of Environmental Regulations

Classification	Unit	2011	2012	2013
Non-monetary restriction	Cases	14	10	8

Developing Equipment to Control Environment

POSCO E&C conducts various activities to improve the environment of project sites. We developed cleaning equipment to effectively reduce scattering dust within project sites. We also held demonstrations for environment managers and related departments to introduce the equipment and demonstrate how to use it.



Development of equipment to reduce scattering dust

Noise Management

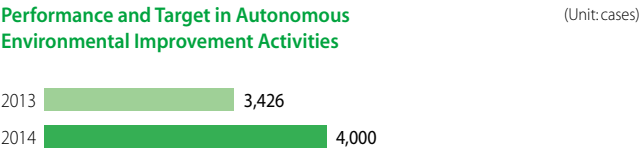
POSCO E&C is running parallel with equipment placement and workload adjustment to minimize noise through a noise prediction simulation program at the initial phase of construction projects. Moreover, we use movable air wall for soundproofing to create high quality sound insulation and reduce noise source around the area.



Air wall for soundproofing

Autonomous Environmental Improvement Activities

We implement autonomous activities for environmental improvement, to raise awareness of environmental policies and regulations and prevent any environmental accident. We have selected ten environmental issues that can be easily violated at project sites and issued instructions to take autonomous action to improve them. In 2013, a total of 3,426 items were improved, which exceeded the annual goal of 3,000 items. In 2014, we aim to attain 4,000 improvements to further raise the awareness of environment and prevent environmental accidents at project sites.



Allocation of Environmental Managers for Overseas Projects

To prevent environmental accidents in overseas projects, we established task system for effective environmental management by identifying each country’s environmental regulation and demands, from the process of signing order to implementation. We appoint and place environmental managers at all overseas project sites and also educate employees to newly start works in overseas project sites about various environmental risks such as violation of local regulations, waste treatment and extra costs in advance.

Green Business

Eco-friendly Design

POSCO E&C encourages eco-friendly construction to cut down maintenance costs, create energy efficient housing and eco-friendly space for the community. We reduce power consumption by a maximum of 10 % through standby power interception equipment. We also apply the HEMS (Home Energy Monitoring System) to setting energy goals and check real-time energy usage. In addition, we build eco-friendly spaces to reduce temperature in urban areas. Songdo POSCO green building was designed to secure the green area ratio of over 25% and Biotope*. This building is recognized as a futuristic building which is eco-friendly in all construction processes from design to construction, maintenance, and disposal. It also produces 35% of energy needed within the building and generates electricity of 280kw per hour.

* Biotope: ecosystem space for land and aquatic ecosystem with artificial and natural aids for animals

Application of the CFT Methods to Structural Steel

POSCO E&C developed CFT (Concrete Filled Tube) method, which is a combination of high strength steel and super high strength concrete. This method was applied to ‘The Sharp City Avenue’ located in Busan, which reduced the consumption of steel by 70 % compared to existing TOPDOWN method using H-steel, contributing to dramatically reducing the amount of carbon emission. This method was also applied to U Tower in Suji and Wangsimni Redevelopment Project Site 3 in Seoul, which led to cost reduction through shortening of the construction period.



Application of the CFT methods to structural steel

Eco-friendly Material - Rubber Foam Adiabatic Material

In July 2013, POSCO E&C developed rubber foam insulating material for a fire pump. We attained green technology certification (GT-13-0014) for this material, jointly with the SMEs that contributed to the development. We applied this material in constructing the POSCO Green Building and Legal Research Institute. The material has high resistance to heat and fire,

reducing over 20% of construction costs. It also ensures the same heat insulation property with less material thickness and can be produced in various colors, adding values to design and eco friendliness aspects.



Development of rubber foam insulating material

Eco-friendly Material – Poscrete

We developed ‘Poscrete,’ carbon reduced super high strength concrete to minimize the amount of carbon emission and harmful substances produced in construction processes. It was applied to ‘Seoul Forest The Sharp’, which reduced CO emission by 12,000 tons. We are currently expanding the application of this material to various projects including the POSCO Green Building, Park City in Yeonsan-dong, Busan, The Sharp Master View and The Sharp GREENWALK 3 projects in Songdo.

Certification on Eco-friendly Materials

To create pleasant living spaces and raise the value of buildings, we are putting in efforts to attain related green building certifications at home and abroad. The Songdo POSCO Green Building received the highest class of green building certification for its energy and resource reduction techniques, eco-friendly material utilization, eco-friendly construction management without destroying the local ecosystem and for its application of renewable energy. POSCO E&C and Gale International are taking steps to acquire LEED certification for the projects developed in Songdo. We use water saving technique that can cut water use by 20% and try to design and create more green and open spaces. Furthermore, we create green and insulated rooftops for selected projects. As of the end of 2013, we acquired 12 LEED certifications in Songdo and plan to attain 7 more including LEED-ND for Songdo complex.

LEED Certification Status

Classification	Project	Certification	Year
Constructed by POSCO E&C (8 projects)	Songdo Convensia	LEED Certified	2010
	Chadwick International School	LEED Certified	2011
	The Sharp Central Park I	LEED Certified	2012
	The Sharp Central Park II	LEED Certified	2012
	The Sharp Harborview I	LEED Certified	2012
	The Sharp Harborview II	LEED Certified	2012
	The Sharp Green Avenue	LEED Silver	2013
	POSCO Energy Future Energy Campus	LEED Platinum	2012
Developed by POSCO E&C (4 projects)	Sheraton Incheon Hotel	LEED Certified	2011
	Songdo IBS Tower	LEED Gold	2012
	Songdo Prugio Harborview	LEED Certified	2012
	Songdo Xi Harborview	LEED Certified	2012

Korean Green Building Certification Status

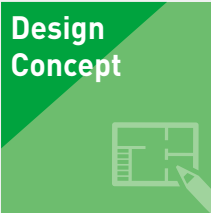
Project	Certification	Year
Cheonwang 2nd District Complex I	Construction Level Certification on Korean Green Building	2014
	Construction Level Certification on Energy Efficient Rating	2014
3rd Esiapolis (Daegu, Korea)	Clean & Healthy Building Construction Standard	2011
Cheongna The Sharp Lake Park	Construction Level Certification on Korean Green Building	2013
	Construction Level Certification on Energy Efficient Rating	2013
	Housing Performance Grading	2008
Songdo POSCO Green Building	Construction Level Certification on Green Building	2013

Future Plans

POSCO E&C will strive to conduct autonomous environmental improvement activities to build a culture of eco-friendly construction. We will reinforce environmental education and management improvement and conduct eco-friendly R&D in order to increase product competitiveness. Constantly acquiring eco-friendly certifications will also contribute to environmentally-friendly business.

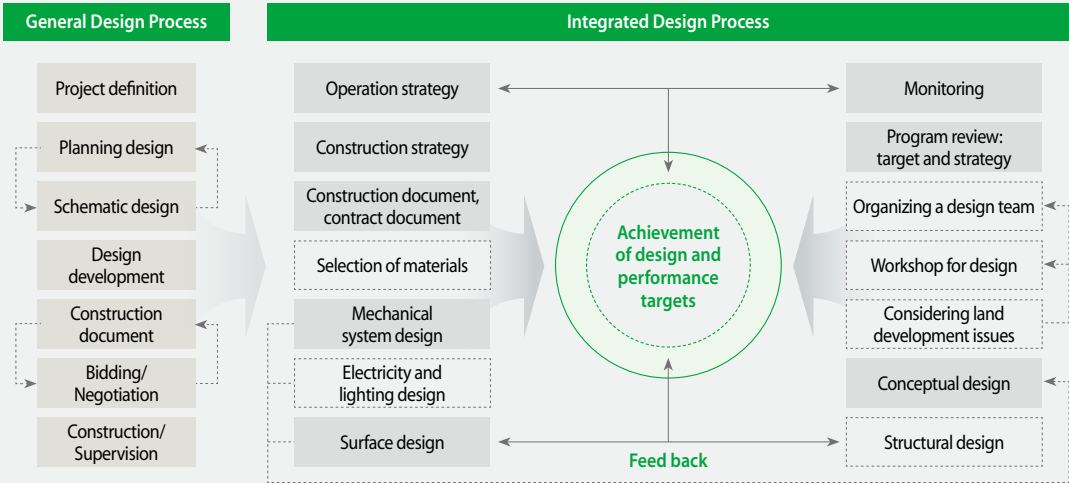
Eco-friendly Design and Technology Applied to the POSCO Green Building

The POSCO Green Building is our experimental complex building in which 106 eco-friendly technologies have been applied. This building was a preemptive response to the government policy to promote green buildings and create eco-friendly spaces, as a resolution to creating new demands and businesses in our economy. The POSCO Green Building uses 52.5% less energy compared to other buildings constructed with general materials.



Integrated Design Process

The POSCO Green Building represents today’s cutting-edge eco-friendly building with innovative materials and technologies based on the integrated design process. This is a process encompassing the proposition of integrated performance improvement plans and goals considering problems that can occur throughout the life cycle of a building and continuous research and analysis of engineering plans to achieve them.



Eco-friendly Elements and Technologies

To improve the thermal insulation performance function of the building, we have applied various passive elements such as high insulation steel curtain wall, prefab outer wall system, and all-in-one external insulation panel. As a result, this has reduced overall energy costs and GHG emissions of the building. We are increasing our positioning as an eco-friendly company in the market by enhancing the utilization of new and renewable energy such as geothermal heat, photovoltaic, solar-heat and wind energy. We are at the forefront in recycling of various resources through using eco-friendly concrete ‘poscrete’ made of blast-furnace slag, byproduct of steel.



POSCO Green Building



Green wall



Photovoltaic power generation

Strengthening Waste Management System

Direction and System

POSCO E&C strictly separates and manages wastes based on types of resources to be recycled. As a part of these efforts, we manage waste through the resource circulation pilot project with the Ministry of Environment. We are now developing various technologies for upcycling beyond just reuse of waste. In addition, during the process of waste discharge, transportation and disposal at all domestic project sites, we register the amount of waste produced and disposed on the government’s ‘Allbaro System’ in real time. Based on data credibility and relevant regulations, we also periodically analyze waste type and volume. We will thrive to be one of the leaders in waste recycling by restraining waste discharge and elevate recycling rate at all project sites.

Key Activities and Performances

Enhancing Waste Recycling Management

Our waste management pursues the cycle of resources by focusing on recycling wastes from our project sites. We do not incinerate recyclable wastes, but instead recycle them into usable materials. To this end, we are strengthening the system that monitors waste separation at project sites. Finding and managing specialized companies in waste recycle is also promoted to support new project sites.

Waste Management in Overseas Project Sites

In overseas project sites, we strictly manage storage, transportation and disposal of waste in compliance with local laws and regulations. In case of the CSP integrated steel plant project site in Brazil, wastes are divided based on type and color for precise selection and separation. We increased the efficiency of our waste management that can be visually checked.

Raw Materials

Classification	Unit	2011	2012	2013
Non-renewable raw materials consumption	Steel reinforcement	163,091	219,508	203,518
	Cement	170,051	114,966	197,175
	Ascon	100,832	187,722	166,600
	Ready-mixed concrete	1,581,160	1,711,000	1,739,909
	Sand	2,189,467	115,552	70,798
	Gravel	6,574,584	138,077	70,151

Waste and Wastewater

Classification	Unit	2011	2012	2013
Wastewater discharge	Tons	365,854	292,683	276,897
Waste generation		946,035	610,312	688,740
Waste recycling rate	%	53	76	73
Waste treatment expenses	KRW in millions	16,201	81,916	11,841

- Wastewater is entirely treated through wastewater treatment facilities.
- 503,958 tons of waste out of 688,740 tons in 2013 was recycled and the remaining 9,974 tons and 174,808 tons were incinerated and buried in landfill sites, respectively. There was no recycling of waste to be buried in landfill sites.
- 688,740 tons of waste in 2013 can be broken down to 240 tons of designated waste, 33,832 tons of onsite waste, and remaining construction waste, respectively.

Water and Recycled Water

Classification	Unit	2011	2012	2013
Water consumption	Watersupply	725,943	617,051	675,248
	Underground water	299,161	269,244	186,554
	Recycled water	17,122	19,222	25,154
	Total consumption	1,042,226	905,517	886,956
Percentage of recycled water use	%	1.60	2.10	2.80

Future Plans

We plan to promote the upcycling of wastes beyond just recycling them to utilize as fuel. We will strictly separate waste woods at project sites and utilize them for producing recycled wood board such as MDF* and PB* instead of heat sources.

* MDF (Medium Density Fiberboard)
** PB (Particle Board): Engineered wood product manufactured from wood chips, shavings, or sawdust which are compressed and extruded at a high temperature and high pressure

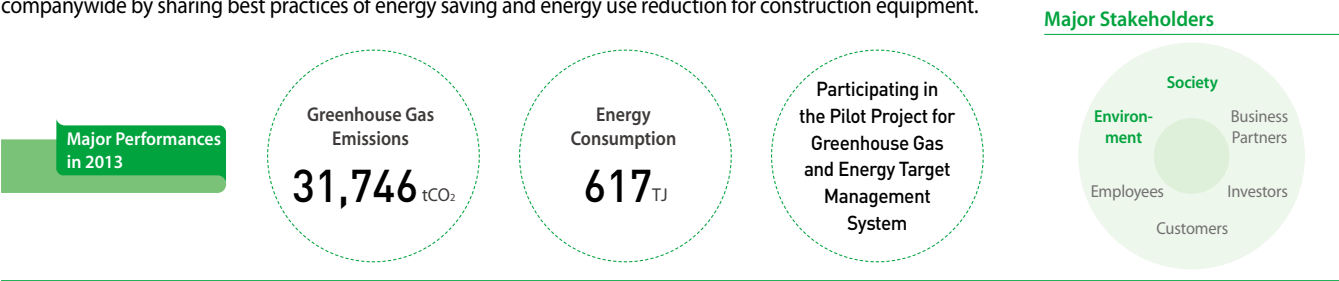
Case Study

Agreement on Waste Resource Recycling Pilot Project

In December 2013, POSCO E&C signed an agreement with the Ministry of Environment and Korea Wood Recycling Association to participate in a pilot project to prevent waste wood from project sites to increase recycling practice and cut waste disposal costs. According to this, we not only offer information on the generation and recycling of waste wood at project sites, but also jointly promote the improvement of waste wood recycling policies with the Ministry of Environment. Those policies include expanding free disposal areas of waste wood, activating recycling of waste wood, and recognizing efforts to reduce carbon emission in case of recycling waste wood.

Response to Climate Change

POSCO E&C was one of the eight construction companies to participate in a pilot project for the government’s GHG and Energy Target Management System which was prepared to introduce the guideline of GHG calculation criteria and identify the system’s propriety and improvements before it was officially conducted. During this period, we were able to enhance the internal data processing system for an efficient and completed verification process of GHG emission quantity and calculation standard. We are currently putting in efforts to raise the awareness of response to climate change companywide by sharing best practices of energy saving and energy use reduction for construction equipment.



- Key Issues for Response to Climate Change
- Air pollutant management

Energy consumption management

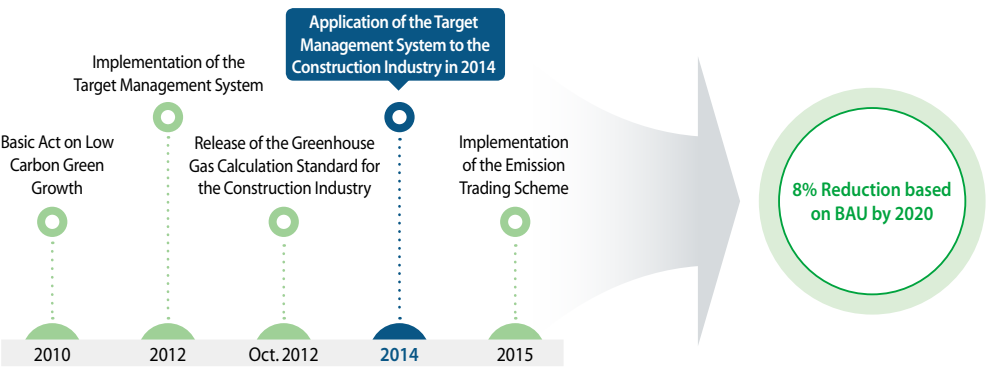
EU countries set goals to reduce GHG emission and energy use by 20 % and increase renewable energy use by 20 % until 2020 in the architecture business. The US also plans to develop and commercialize buildings that can internally generate energy by 2025. In Korea, as the GHG and Energy Target Management System for the construction industry will take effect from 2014, climate change response which requires submitting GHG receipt and plan, along with negotiating and implementing goals, is a growing issue.

Response to the GHG and Energy Target Management System

Direction and System

According to the enforcement of the GHG and Energy Target Management System from 2014, construction companies with annual GHG emissions of 50,000 tons or more need to set up reduction goals and implement them from 2015. POSCO E&C decided to reduce GHG emissions by 1 % annually compared to 2012 and a total of 8 % by 2020. We have set and implemented an aggressive GHG emission reduction target to take the lead in responding to climate change in the industry.

Responses to Greenhouse Gas and Energy Target Management System



* POSCO E&C established a plan to reduce GHG emissions by 1% every year from 2012 (8% reduction until 2020) to meet the government’s target of 7.1% for the construction industry. We set 2012 as the basic year for calculating GHG emissions but it is subject to availability in accordance with relevant regulations in the future.
* BAU: Business As Usual

Key Activities and Performances

Energy Saving of Construction Equipment

To enhance the management of construction equipment representing the largest part of energy use in construction, we established a GHG and energy management data processing system and revised guidelines for business partners. We investigate energy usage in construction equipment of business partners every month, and also plan to encourage them to replace deteriorated equipment by comparing and analyzing types and years and distribute manuals for energy reduction control to each project site.

Response to GHG Regulations of the Construction Industry

For more accurate GHG calculation and reduction, POSCO E&C continuously updates computer systems for GHG management by establishing GHG inventory. In addition, we participated in pilot project for GHG-Energy Target Management and secured credibility of our data through emission record and a third-party assurance. Our research analysis on GHG missions will enable us to proactively respond to the system with the best applicable approach.



Agreement on the Greenhouse Gas and Energy Target Management pilot project for the construction industry

Energy Consumption and Intensity in 2013

Workplace	Annual Energy Consumption (TJ)				Intensity (TJ/person)
	Fuel	Electricity	Steam	Total	
Songdo Office Building	13.608	81.488	15.777	110.874	-
Pohang Headquarters	5.475	7.279	-	12.753	0.044
Pohang ENG Center	4.858	10.840	-	15.698	0.039
Pohang Dormitory (Yanghak Town)	0.790	4.305	-	5.095	0.019
Pohang Steel Structure Plant	0	2.021	-	2.021	-
Gwangyang Office	0.622	1.049	-	1.671	0.048
R&D Center	0	0.630	0.372	1.002	-
Domestic Project Sites (121 sites)	66.061 ¹ (945.634)	402.024 ¹ (200.275)	-	468.085 ¹ (1,145.909)	-
Total	91.414 ¹ (1,037.048)	509.636 ¹ (709.911)	16.149	617.199 ¹ (1,763.108)	-

¹ Including Scope3
* Total energy consumption intensity was 0.0097TJ/KRW 100 million based on domestic sales.

Greenhouse Gas Emissions in 2013

Workplace	Annual GHG Emissions (tCO ₂ e)			
	Direct Emissions (Scope1)	Indirect Emissions (Scope2)	Other Indirect Emissions (Scope3)	Total
Songdo Office Building	860.164	4,902.770	-	5,762.929
Pohang Headquarters	325.533	353.511	-	679.044
Pohang ENG Center	246.513	526.471	-	772.984
Pohang Dormitory (Yanghak Town)	40.075	209.101	-	249.176
Pohang Steel Structure Plant	0.000	98.149	-	98.149
Gwangyang Office	32.007	50.950	-	82.957
R&D Center	0.000	52.901	-	52.901
Domestic Project Sites (121 sites)	4,523.046	19,525.417	¹ (76,370.244)	24,048.463 ¹ (100,418.707)
Total	6,027.338	25,719.265	76,370.244	31,746.603 ¹ (108,116.847)

¹ Including Scope3
* Total GHG emission intensity was 0.4988 tCO₂e based on Scope 1 & 2 and domestic sales.

Greenhouse Gas Emission Intensity in 2013

Workplace	Intensity (tCO ₂ e/person)	
	Scope1	Scope2
Pohang Headquarters	1.12	1.22
Pohang ENG Center	0.62	1.32
Pohang Dormitory (Yanghak Town)	0.15	0.77
Gwangyang Office	0.91	1.46

Greenhouse Gas Emissions for 3 Years

Classification	Unit	2011	2012	2013
Scope 1	tCO ₂	8,421	7,725	6,027
Scope 2		26,757	27,281	25,719
Scope 3		8,947 ¹	107,364 ²	76,370

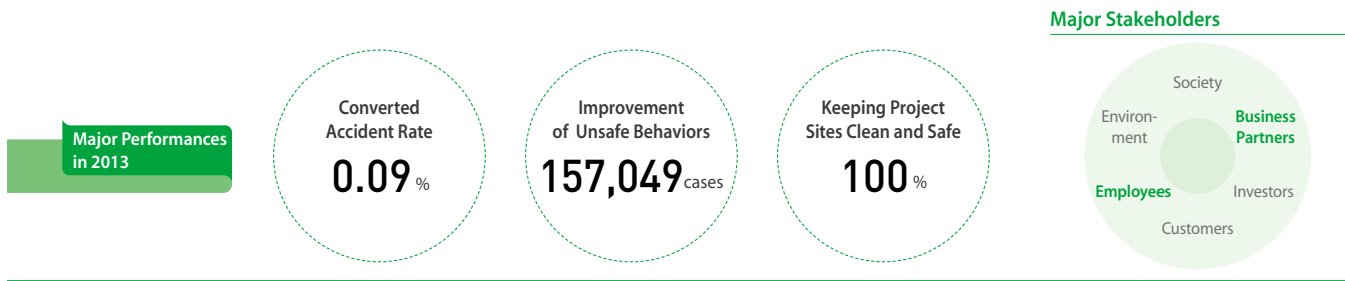
¹ This figure represents the amount of other indirect emissions for a month in December 2012 when the calculation system started.
² This figure represents the amount of annual other indirect emissions estimated by verified emissions for a month in December 2012. (Annual emissions = verified emissions for a month *12)

Future Plans

As the target sites and managers are frequently changed in construction industry, continuous training and management on GHG reduction are essential. POSCO E&C provides onsite managers with regular training on GHG management and evaluates the level of GHG reporting. At POSCO E&C, we aim to expand energy reduction activities and increase awareness at all project sites and encourage our employees to proactively participate in this movement by giving incentives to the best project sites.

Safety and Health at Project Sites

POSCO E&C set a vision for safety and health as “Global E&C Company That Leads the Advanced Safety Culture to Respect Human Life.” We strive to improve behavior and consciousness under the goal of accomplishing zero accident in all project sites. Behavior improvement refers to eliminating unsafe behavior at project sites and consciousness improvement signifies reinforcing awareness of safety and health by the Keeping Project Sites Clean and Safe. POSCO E&C strives to achieve zero accident in all project sites through enhancing behavior and awareness.



Key Issues for Safety and Health at Project Sites

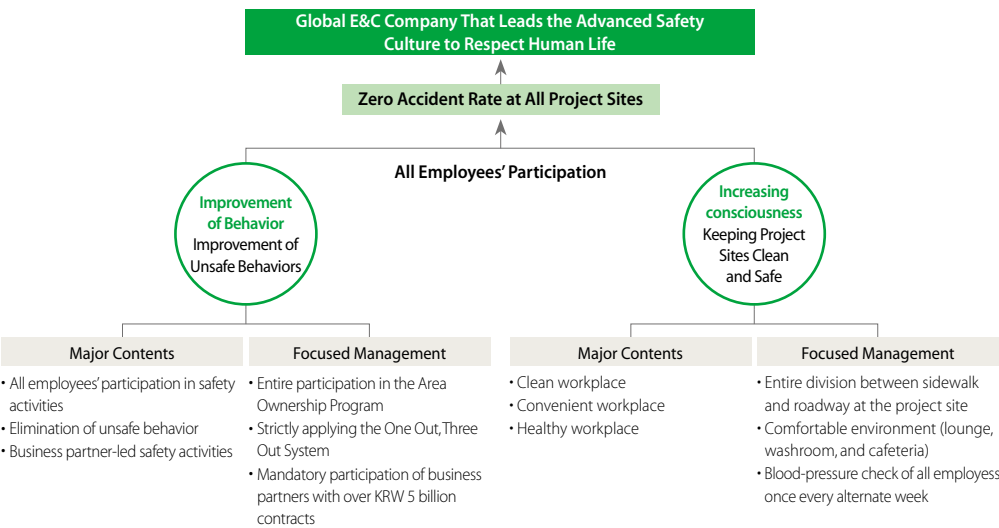
Enhancement of onsite safety and health management system

Each year, fatal accidents in most industries are decreasing, while those in the construction industry are increasing. In 2013, the top 50 construction companies reported 99 fatal accidents, an increase of 24 cases compared to 75 in 2012, which showed the requirement of stricter measures and approaches to secure occupational safety. The government took action to suspend projects when fatal accidents occurred at project sites and enforced sanctions in the case of a large number of accidents. Along with stricter legal regulation, economic regulations are limiting orders from construction companies with poor safety management. Now, social responsibility is a crucial factor during the bidding process along with the price and construction techniques.

Pursuing Zero Accident through Safety and Health Reinforcement

Direction and System

POSCO E&C pursues zero accident at all project sites through human-focused operation which considers the health and safety of employees as priority. To this end, we focus on improving site employees' behaviors and consciousness by involving them in various activities such as creating pleasant project sites, managing them with respect, and integrating risk predictions as part of the regular work process. Business partners as well as our employees are requested to do their best in this matter by implementing safety and health management regulations. In all cases, they also need to evaluate risks and establish solutions before implementing any project.



Key Activities and Performances

Eliminating Unsafe Behavior at Project Sites

Prompt Improvement System

All our project sites enforce the Prompt Improvement System to ensure the effectiveness of safety plans and rapid elimination of risk factors. We provide safety training when employees do not comply with safety standards with immediate stoppage of work. In addition, the approval of safety plans is mandatory before starting dangerous work.

Executives' Initiative for Safety Activities

Our executives are the vanguards of safety management. In practice, the CEO visits project sites once a month, checking whether the safety programs are well integrated and the safety facilities are working well. The CEO also strives to raise site workers' awareness of safety through trainings and meetings. We also operate the Safety Responsibility Executive System which provides field inspection and training by an executive in charge of construction once every two months. The Q-HSE Executive Meeting is also held to discuss management policy and key issues on quality, health, safety, and environment.



Q-HSE Executive Meeting

Autonomous Safety Program

Every employee working on project sites is provided with safety ownership program by area, facility, and time to prevent unsafe behavior that can occur unexpectedly. We prohibit behaviors that give potential causes for accident such as not wearing protective gear or dismantling safety facilities, and violators are expelled from the site. Other violations are regulated by the One Out, Three Out System.

Autonomous Safety Measures of Business Partners

We hold regular meetings to review onsite safety and health issues of our business partners and discuss approaches to raise their awareness of these issues. The executives of business partners need to participate in these meetings once a month and 97 % participation rate was achieved in 2013. Business partners with contract amount exceeding KRW 5 billion are enforced to assign exclusive safety managers to enhance autonomous safety execution capabilities.



Safety and health consultative group meetings with business partners

Keeping Project Sites Clean and Safe

Clean, Comfortable and Healthy Workplaces

Without autonomous safety management of employees, it is difficult to create a safe workplace. POSCO E&C is carrying out the “Keeping Project Sites Clean and Safe” campaign to encourage employees to correct wrong habits. This campaign pursues clean workplace by regular arrangement, pleasant workplace to ensure relaxation and emotional stability, and healthy workplace to support medical consultation and training.



Keeping Project Sites Clean and Safe – convenient and comfortable rest area

Certification on Safety and Health Management System

Grounded on the CEO's safety and health management policy, we are repeating a series of process for safety management. We are reinforcing the safety management system by using the website to plan, implement, evaluate and take action towards safety. As a result, we attained the OHSAS18001 and KOSHA18001 safety and health management system certifications in 2003, and were awarded the grand prize at the Safety Management Awards hosted by the Ministry of Employment and Labor in 2007 for the first time in the industry.

Future Plans

POSCO E&C has maintained a stable accident rate for many years. We will strive to build a culture of safety and health based on the principle and standard of accomplishing zero accident rate at all project sites. We will also implement safety and health at a practical level by enhancing capabilities for safety and health and improve the infrastructure to inspire all site workers to voluntarily participate in safety and health activities.

Case Study

Operation of an Integrated Safety Control Center

We opened the Integrated Safety Control Center in November 2012 to take measures towards prevention of unsafe behavior and facilities. A total of 70 CCTVs were installed at 35 project sites and control tower monitors from 7 a.m. to 6 p.m. all year-round with the support of safety controllers at the headquarters. When safety controllers find dangerous project sites and status, alerts are passed on to onsite Managers and Safety Managers. At project sites, they report the results of proper action on violators, improvement of unsafe facilities and implementation of safety training to the control tower. These actions are stored in the DB, which enables prediction of future safety and health risks, and tells us how to operate and improve safety management. We prevented a total of 4,835 instances of unsafe behavior which included 1,402 executions of work at unsafe facilities, 967 non-compliance with wearing protective gear, and 435 disuses of safety passageway. A total of 2,409 cases of unsafe facilities such as inadequacy of sidewalks and insufficient equipment arrangement were also improved.



Integrated Safety Control Center

Special Story

Expanding Business Partners' Environmental Management

Introduction

When it comes to small and medium sized business partners, it is not easy to promote environmental management due mainly to the lack of awareness on environment and small scale business. At POSCO E&C, we intend to support our SME partners to activate environmental pollution prevention, GHG reduction, cost reduction and encourage green business opportunities.

Supporting Project Period

From August 2010 to November 2013

The construction industry requires cooperation with various business partners in different sectors in the process of design, materials, equipment, transportation, construction and landscaping. Therefore, if we encourage business partners to practice environmental management, it is expected to create a ripple effect in other industries as well as the construction industry. Since 2010, we have made a concerted effort to expand environmental management to our business partners, contributing to the enhancement of eco-friendliness throughout the industry.

Yearly Environmental Management Expansion Activities

Supporting for the expansion of business partners' environmental management has been promoted based on yearly action plans. In the first year, the focus was to raise consciousness of environmental management. We analyzed the status of our business partners' environmental management practices, setting strategy plans for different companies and implementing environment campaigns. The second year activities included establishing environmental management related processes such as fostering responsible human resources, making standard documents, and building eco-friendly design systems. The plan in the third year was to activate eco-friendly businesses by helping them develop eco-friendly products and marketing activities. To this end, we applied the eco-friendly handrail bar with LED which was developed by one of our business partners, to the CANALWALK project site, and eco-friendly wall of our business partners, to the POSCO Green Building. Moreover, our support was extended to publishing their environmental reports, helping them activate PR and marketing activities based on environmental activities.

1st year



Establishing Green Culture

2nd year



Activation of Green Business

3rd year

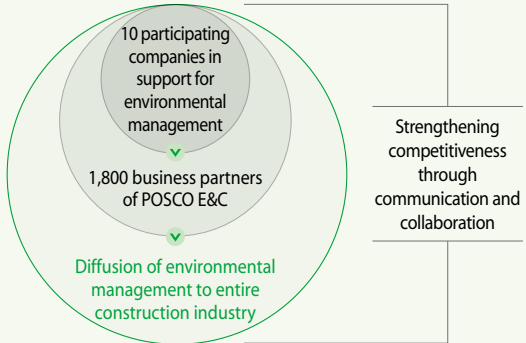


Establishment of the Green Process

Performance in the area of Supporting Business Partners' Environmental Management

Our support for environmental management led to the reduction of costs, GHG emission, and waste. The compliance with our environmental standards and construction guidelines reduced rates of defects and reconstruction, saving a total of KRW 2.57 billion. In addition, the establishment of standards for operating vehicles and equipment and a decrease in fuel use driven by dwindled reconstruction brought reduction effects of approximately 2,341 tons of GHG emissions. Moreover, waste recycling rate increased by 3% by enhancing ready-mixed concrete dust collection facilities and 2,720 tons of waste were reduced by decreasing waste wood and developing a guideline for waste scrap management.

Roadmap for Spreading Business Partners' Environmental Management Performance



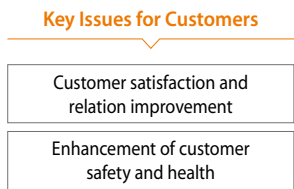
Improving Social Value



Customers	58
Employees	62
Local Communities	68
Supply Chain	72

Customers

POSCO E&C is committed to enhancing customer value by efficiently managing customer satisfaction, enhancing product safety and health, and protecting personal information. With the system for customer satisfaction management, we also strive to preemptively respond to customer complaints and deliver high quality products and services to secure the satisfaction of our current and potential customers.



Customers expect companies to reflect their demands on the products and services for their convenience, and this is a vital factor in customer selection. We acknowledge that not only such requirements but also safety and health aspects have critical effects on customers' behavior in selecting a brand or a company. As a result of this, we are proactive and preemptive in customer satisfaction management beyond just dealing with complaints at later stages.

Strengthening Infrastructure for Customer Satisfaction

Direction and System

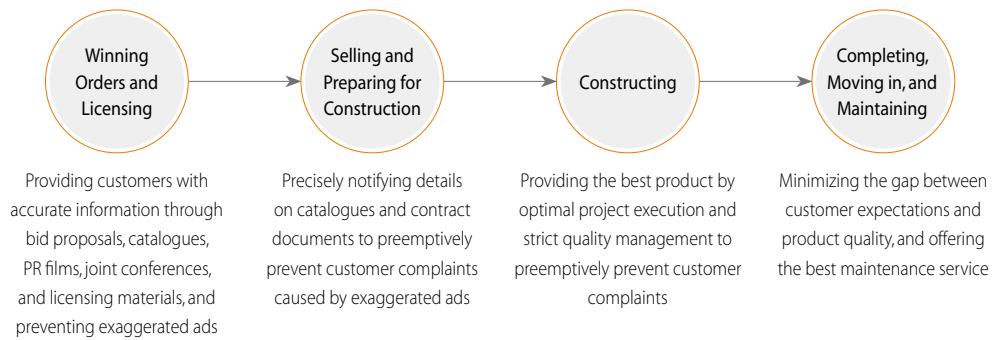
POSCO E&C implements various activities for customer satisfaction core values that contain "Best Efforts, Warm Heart, and Always On". We are continuously strengthening the Customer Centered Management (CCM) and received the recertification on the CCM in 2013. Through the CCM, we prevent customer complaints in advance and reflect customers' opinions in our management activities. The infrastructure for customer satisfaction management was further enhanced by trainings about the CCM and the establishment of IT system.

Key Activities and Performances

Prevention Activities and Process to Reflect Customers' Requests

Prevention Activities

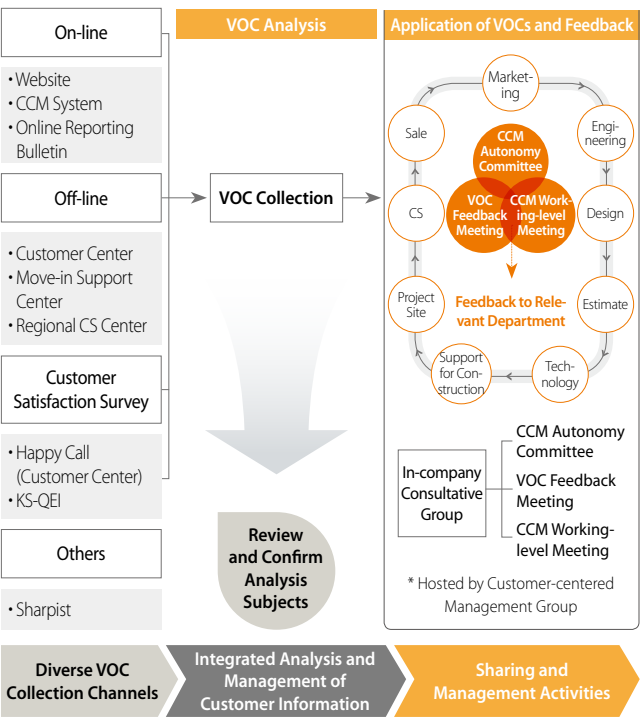
POSCO E&C is proactive in enhancing customer satisfaction by preemptively managing their complaints in four stages of our business process as shown below.



Process to Reflect Customers' Demands

Our management activities reflect customers' needs in order to provide high-quality products and services. Opinions of customers are collected through either online VOC channel such as corporate website and CCM system, or offline VOC channel such as customer care center and move-in support center. We conduct integrated analysis on detailed customer information through daily, weekly, and monthly analysis, and discuss the use of gathered VOC in CCM Autonomy Committee, VOC Feedback Meeting, and CCM Working-level Meeting. Our efforts lead to discussing prevention measures in relevant departments and finding immediate solutions to customers' complaints, so that we do not receive the same complaints again in the future.

Process to Collect and Adopt Customer Opinions



Strengthening Infrastructure

Online Education on CCM

At POSCO E&C, we provide regular online and offline CCM education to our employees and request their active participation in order to prevent customer complaints, infuse customer-focused mindset, and ensure rapid feedback. This education is also offered to business partners in construction and after service, Customer Centers, and CCM members who have direct communication and regular contacts with customers.



Online education on CCM

CCM Mobile System

As an extended part of the Integrated Customer Support System, we introduced the CCM mobile system. This system made it possible to promptly inspect and give feedback on status at the time of complete survey by housewives, occupants' pre-inspection, and confirmation check before service stage. We also established an IT system to allow our employees and business partners to check and correct any defect in real time in the after service stage.

Recertification on the CCM

We strive to identify customer complaints in advance and systematically manage VOCs via regular meetings to review design and blueprints. Such efforts have led to receiving recertification of the CCM in December 2013, which proved our commitment to expanding customer-oriented management culture and enhancing customer value once again.

Guidebook for Serving Customers

POSCO E&C published a guidebook for serving customers in accordance with opinions that a manual is needed for practical customer services which were raised by employees during the CCM education in 2012. This Guidebook includes six categories of CCM Mind, Onmaum Service, Phone Response Manual, manual for Visiting Tenants, and Customer Response Technique. It can be found in an e-book format on the company intranet for sharing and active utilization.



Guidebook for serving customers

Key Performance in Customer Satisfaction Management

We are continuously managing performance in customer satisfaction since implementing the CCM. After the introduction of the CCM in 2011, customer complaint management indices have improved and the number of complaints has also decreased. In addition, we ranked the first in Quality Management diagnosis for the POSCO Family and won the best prize at the “Greatest Livable Apartment Awards” hosted by the Maeil Newspaper group.

Future Plans

We will enhance customer satisfaction through diversifying customer services and preparing specialized plans for customer satisfaction from the initial stage of moving into the buildings. We will provide residents with timely information and services by introducing the “Concierge Service” and appoint Managers responsible for each apartment zone. Any default raised by residents will be responded to within 24 hours through instant check services. If the default requires specialized equipment that is no longer available, we will connect residents with appropriate specialized business partners to resolve the problem.

Case Study

Ranked 1st in KS-QEI for Five Years in a Row

The KS-QEI had been a product-focused quality evaluation system to award companies with excellent customer satisfaction level, but it has expanded its target to not only products but also services since 2013. For five consecutive years, we have ranked first in the KS-QEI as a result of evaluation by the Korean Standards Association and The Korean Society for Quality Management, reconfirmed our excellence in quality.



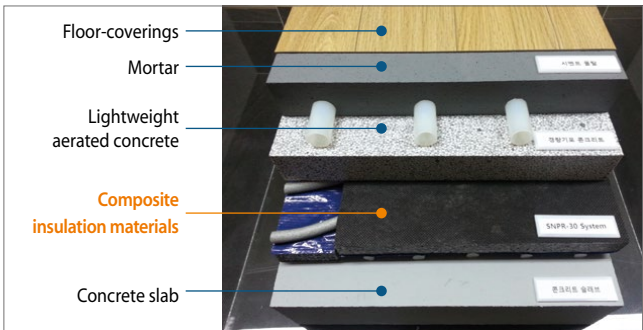
KS-QEI Certification Ceremony

Supplying Products Considering Customer Safety and Health

Key Activities and Performances

Improving Floor Insulation to Reduce Noise

We developed “composite insulation materials” to reduce floor impact noise which is usually the main issue in apartment building. We utilized an elastic material with low dynamic elastic modulus (a coefficient that measures how much energy the product absorbs when weight is given, viewed from its elasticity) and structured polyethylene pole in a ripple shape, so that the upper floor impact reduces the floor vibration. Applying this method in the POSCO Green Building and the Sharp Green Walk, it was found that the heavy-weighted floor impact was second grade and the noise level lower than the common floors by 5dB.



Composite insulation materials to reduce floor impact noise

Improving Interior Air Quality

POSCO E&C applies eco-friendly materials to eliminate “Sick House Syndrome” and improve the interior air quality. A health-oriented housing construction standard was applied to the 3rd Esiapolis (Daegu, Korea) to prevent the sick house syndrome and for the residents to enjoy a healthy life. In the design phase, we considered eco-friendly materials and built-in furniture and, in the construction phase, we applied pollution reduction construction methods such as adhesive usage management.

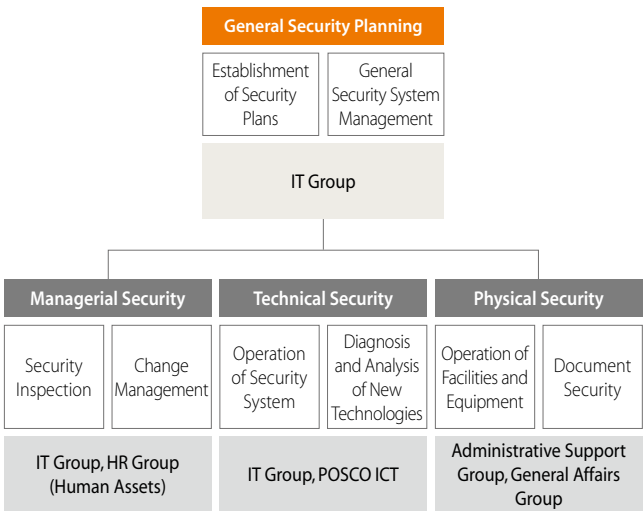
Improving Heat Insulation Property

POSCO E&C adopts higher standards in designing doors and windows, than those for eco-friendly housing construction to help customers reduce energy use. We intensified the insulation level of the top ceiling and bottom floors to reduce any disparity of energy use among the housing units. We also apply reinforced insulation material to prevent condensation.

Reinforcement of Personal Information Security System

Direction and System

POSCO E&C is doing its best to protect customers’ personal information. We established an organization to ensure customers’ personal information security and classified security management areas into three; managerial, technical, and physical security. We have also allocated responsible and managerial teams for each classified security area to enhance the practical level of protecting personal information.



Key Activities and Performances

Reinforcing Personal Information Protection

Check and Raising Awareness

POSCO E&C is eliminating the possible risk factors through monitoring the status of personal information protection. Indicating the importance of this issue to the responsible departments, sub contracted parties, and sales offices, we required to take actions for coding personal information and collecting personal information access records. In addition, responsible departments and the IT group check the management status of sub contracted parties regularly to minimize risks. To raise the awareness of personal information protection, we distributed a guideline on how to respond to and recover from personal information attacks and we are providing regular training on the accident reporting process, prevention of additional leakage and other related information needed.

Inspecting and Improving Faults on the Website

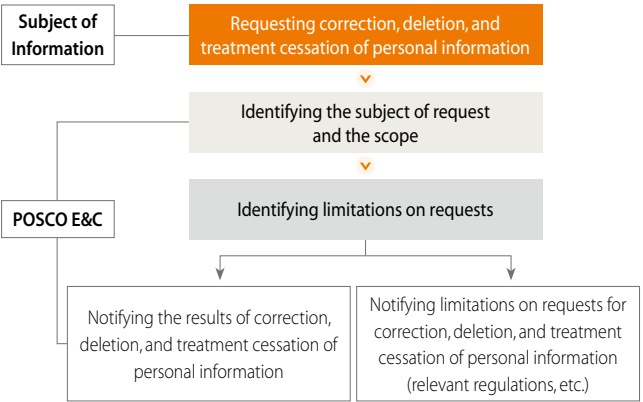
We are operating a pilot hacking test on our 19 websites to manage personal information on sales, employment, and the Sharp brand. We are

trying in advance to analyze the patterns of cyber-attacks on hacking personal information to prevent these attacks from happening. We are also checking whether we have flaw routes on our company website that provides access to our intranet system.

Enhancing Personal Information Management

For safe management of personal information, we introduced the i-PIN identification which can replace coding of Personal Identification Number when joining the website. We first induce the use of the i-PIN identification and, as the second phase, require the creation of Personal Identification Number instead of using registration number. We have also set a personal information validity period to minimize the storage of useless information.

Personal Information Destruction Process



Future Plans

To advance the credibility of our Information Protection Management system, we plan to obtain the ISO 27001 certification for the International Information Protection management System. To this end, we will conduct advanced preparation, risk evaluation, information security, and inspection on the certification, and consequently establish a system grounded on an international standard. The PC scan tool will also be introduced to prevent the leakage of personal information. In addition, POSCO E&C will identify the status of each department’s personal information possession and delete data if not used for a long period.

Employees

POSCO E&C operates a systematic HR management process ranging from recruitment to capability development and performance evaluation. Our recruitment and performance evaluation are fairly conducted and diverse benefit programs ensure the harmonization between work and life. Customized training sessions are also provided to employees based on their positions and duties, to make the most of their abilities. We will continue to enhance our employee value through performance-oriented HRD system.



- Key Issues for Employees
- Recruitment and retention of talents

Fair evaluation and compensation

HR development

Development of multiple communication channel for employees

Harmonization between work and life

A company's competitiveness is hugely affected by securing and retaining talent. Frequent talent drain leads to loss of corporate resources and may decrease market value in the long term. In particular, it is a key success factor for the construction industry to secure and cultivate talent considering business complexity and the importance of management.

Fair Recruitment and Evaluation System

Direction and System

POSCO E&C recruits employees using the concept of SMART (Specialty, Morality, Activeness, Revolution, Top performance) those who desire positive thinking, promising attitude, change and innovation. We are fostering talents to achieve the SMART concept through a fair and transparent HRM system.



Key Activities and Performances

Recruitment Process

We recruit new and experienced employees through fair and transparent processes.

- New and Experienced Employees: We hire fresh college graduates once a year through an open and public recruitment event. The process includes document screening and two rounds of interviews. The first round is a working-level blind interview which verifies the applicant's genuine capacity and potential, regardless of sex and age. We also hire a certain ratio of graduates from the rural areas. For experienced recruitment, 3R (Right Time, Right Position, Right People) method is applied to the process and we hire when certain positions are vacant.
- Challenge Internship Program: This program began in 2013. The program has two tracks to assess passion and creativity of applicants. For the passion track, we ask the applicants to provide personal background information. However, for the creativity track, we screen the applicants only through their self-introduction letters to assess their challenging spirit, creativity, value, and logical power. Through this program, a total of 116 talented persons were recruited.

Regular Performance Management System

We operate a Regular Performance Management System to ensure fairness and transparency of evaluation. This system has a six-month performance management cycle for an objective evaluation on the performance of each employee and requires receiving feedback from supervisors every quarter to jointly check their goals and achievements. The evaluation results are used as the basis for consistently improving performance beyond just determining promotion or compensation, contributing to maximizing the capability of our organization and each employee. This system is recognized for its credibility, as we are seeing a rise in the propriety index of HR management and the number of promoted persons among employees.

Fairness Evaluation Index System

The Fairness Evaluation Index System is used to support the Regular Performance Management System. The index has items to monitor compliance with fair process, faithfulness of content, and evaluators' capabilities. The analysis, monitoring and survey results of each item are made into indices and these help upgrade evaluators' capabilities and guarantee fair evaluation.

Composition of the Workforce

Classification		Unit	2013
Total employees			4,262
Employment type	Full-time		3,679
	Contract		583
Gender	Male		4,023
	Female		239
Age	Under 30	Persons	677
	30 to 50		2,978
	Over 50		607
Executives			78
Total workforce			4,340
New employees			281
Retirees			78
Rate of new employees		%	6.6
Turnover rate			2.1

Percentage of Employees Receiving Regular Performance Review

Classification	Unit	2011	2012	2013
Male employees	%	-	81.1	79.8
Female employees		-	79.3	82.8
Full-time job		91.0	96.7	92.6
Contract job		61.1	60.0	69.1

Future Plans

Based on the belief that employees are a company's future assets, we will focus on securing talent. We will also initiate a field training program to provide graduate applicants with practical knowledge and guide them to choose an appropriate career path.

Cultivation of Global Talent

Direction and System

POSCO E&C is cultivating global construction leaders who can lead future changes and create values to accomplish our vision to be the Global Top 10 E&C Company by 2020. We will systematically develop and cultivate employees' capabilities by focusing on three areas of Leadership, Duty and Global Competence.



Key Activities and Performances

Leadership Capability Enhancement

We support employees to improve their leadership ability necessary for senior positions, so that they play leading roles when they get there. In particular, we encourage key promising employees like Group Leaders to undergo diverse education through e-learning system, leadership certification examination, and strategic tasks based on action learning method in order to be equipped with necessary capabilities in advance.

Fostering Job Experts

It is important to strengthen job skills in order to respond to rapidly changing business environment. POSCO E&C has developed diverse training programs for employees, through which they can acquire knowledge and know-how needed for their jobs and positions in accordance with their growth stage. We also foster global leaders by supporting superior talent to study or receive professional training abroad to learn advanced technology.

Training Global Business Experts

Our global expansion requires more employees with global perspective and excellent language skills. We offer not only English and Second Language conversation classes, but also specialized skills training programs for global business. In addition, we arrange for intense training for employees to be sent to overseas project sites, so that they settle down quickly in the new environment.

Case Study

Training Employees to be Dispatched to Overseas Project Sites

Successful localization is essential for a global E&C company which conducts projects in various countries to achieve business success in the global market. Thus, resident employees are required to fully understand global standards and local business environment. We train employees to be sent to overseas project sites to acquire business process and etiquette for collaborating with foreign business partners based on global standards as well as basic information and working environment of the client country. We also provide them with training on business ethics and FCPA (Foreign Corrupt Practices Act) to raise awareness on the importance of performing ethical business overseas.



Training of employees to be dispatched to overseas project sites

Training Hours and Expenditure

Classification	Unit	2011	2012	2013
Average training hours per employee	Hours	76	85	43
Average training expenditure per employee	KRW in millions	1.2	1.4	1.0

Future Plans

POSCO E&C aims to advance its personnel training system with the purpose of strengthening execution capabilities of global projects. As construction projects have the nature of being large and complicated, the role of Project Managers who can control all parts of EPC processes is getting ever more important. To this end, we will strive to foster Project Managers who can successfully manage and operate global EPC projects. POSCO E&C will continue to invest in training programs to cultivate talent in persons who can achieve the company vision, in future.

Training New Employees to Enhance Practical Skills

New employees receive intense training for six months to develop their capabilities to quickly adapt to the new working environment and be independent in proceeding with their work. We train them on POSCO E&C’s core values and cultivate the corporate’s unique perspective. In addition, we advance their practical skills by providing a learning experience based on PBL (Project Based Learning). Through this approach, new employees get familiar with project site practices, theories, and challenges associated with construction projects.

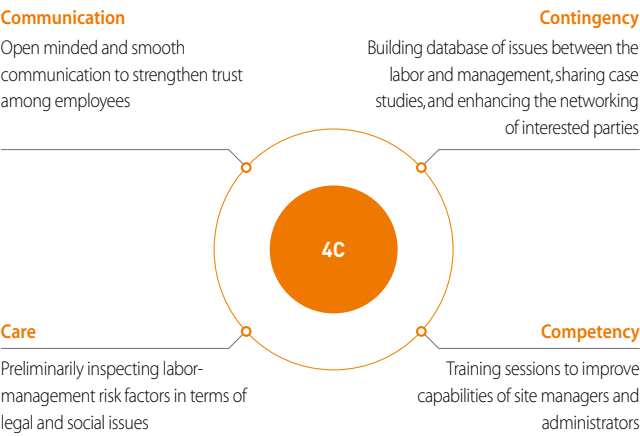


Training of new employees to enhance their onsite job capabilities

Respect for Human Rights and Labor-Management Relations

Direction and System

POSCO E&C has established and maintained a stable labor-management relationship under the themes of “Care (Pre-inspection), Communication, Competency (Labor-management capabilities), and Contingency (Crisis Management).” We have active and frequent channels to communicate with employees in addition to legal processes such as the Labor-Management Council and grievance treatment.



Key Activities and Performances

Collecting Employee Opinions

Regarding corporate management, we explain the details of the issues to the employee representatives in the Labor-Management Council meetings. For issues that closely relate to employees’ working environment, we discuss them with the Labor-Management Council and the Labor Union. We gather employee opinions through employee representatives every month, which is more than the legal requirement.

- Joint visits to project sites: The labor and management jointly visit employees particularly those who work in difficult and remote project sites as well as places where employees cannot afford holidays, to listen to their opinions.
- JJoint events: For years, we have launched various events to bring an energetic and open communication environment to our employees. (Table Tennis in 2010, Foot Volleyball and Dance Festival in 2012, and Open Flea Market in 2013)
- JInternal pseudonym bulletin board: To hear various opinions and thoughts from our employees, we operate an internal bulletin board which we regularly monitor to give quick responses.



The Labor-Management Council

Collective Bargaining Application Rate

Classification	Unit	2011	2012	2013
Collective bargaining application rate	%	100	100	100

* Executives are not the subject of collective bargaining.

Sexual Harassment Prohibition

POSCO E&C has strict rules and regulations regarding sexual harassment within the company, and this is clearly indicated in our Ethics Act. When any sexual harassment incident is reported in our workplace, the Audit Group reviews the incident and delivers the name of the assaulter to the Human Resource Council. Within the last three years, there have been three sexual harassment incidents, where heavy punishments were imposed on all of the assaulters, from dismissal to suspension from the company for a period of time, depending on the degree of their misconduct. The victim’s identity is fully protected and we help them to settle down to the working environment again, and if necessary, we allow victims to change to other department or teams.

Education on Sexual Harassment Prevention and Number of Incidents

Classification	Unit	2011	2012	2013
Participants	Persons	5,154	5,327	5,070
Education hours	Hours	5,887	9,643	9,176

Classification	Unit	2011	2012	2013
Number of Sexual Harassment Incidents	Cases	1	-	2

Future Plans

We will continue to promote an energetic culture and enhance our policy to maintain healthy and stable Labor-Management relations. We hope to maintain open and proactive communication, for example through the CEO letter, so that we engage passionately with our employees.

Harmonization between Work and Life

Direction and System

POSCO E&C provides employees with various welfare benefits to ensure stable lives. We support them through payment of children's tuition fees, medical expenses and other expenditure for family events. Other benefit programs include: a flexible working system, family care leave, in-company Nursery facility, recreational facilities and Fitness Centers, which contribute to increasing employee satisfaction.

Providing Employees with World-class Welfare Benefits to Ensure Their Valuable and Stable Life

We are operating diverse programs to help employees develop themselves, meet needs for childcare, and pursue harmonization between work and life

Welfare Benefit Programs	Work System	Other Support
<ul style="list-style-type: none">• Educational expenses for children• Optional benefits• Living assistance• Medical expenses• Family events, funeral expenses• Compensation during leave of absence due to injury or disease• Compensation for non-business accidents	<ul style="list-style-type: none">• Working hour reduction during parenting period• Flexible working• Half day leave• Core working hours• Family care leave• Survey of Happiness Index• Events for families of overseas employees	<ul style="list-style-type: none">• Support for medical checks• Leisure facilities/Fitness Centers• Discount on railroad fee• Workplace Nursery/Infant Nursing/Breast-feeding room• In-company Wedding Hall/Theater• Social contribution activities• Birthday present for spouses

Key Activities and Performances

Employee Welfare Benefit Program

Support for Family Events

We provide financial support to our employees when various family events and bereavements occur. This is one way of our showing respect and gratitude to our employees. We present monetary gifts on employees' weddings as well as sister or brother's and on parents' 60th birthdays, and condolence money in case of death.

Working Hour Policy

Flexible Working Hours

We operate a flexible working hour system and provide half day off system, so that employees can choose from five working hour options to ease the burden of child care of working parents. For parents with a child under six, we provide an option to work reduced hours instead of the parental leave.

Details of Flexible Working Hours System

No.	System	Details
1	Flexible working hours	Selection one set of working hours among five different time zones
2	Half day off	• Deduction of half day from annual vacations when using the half day leave • Two time zones (8:30 ~ 12:00 and 13:00~17:30)
3	Core working hours	• Implementing the core working hour system by each division or office to raise work efficiency

Best Family Friendly Management

In December 2013, we were selected as the “Best Family Friendly Management” by the Ministry of Gender Equality and Family's Best Family Friendly Management Certification Scheme. This scheme grants certification to companies with respectable family-friendly programs and policies for employees. Since 2013, we have expanded the system to enable family members to accompany employees on overseas project sites as well as overseas subsidiaries, branches and offices.

Rate of Return to Work after Childcare Leave and Retention (Female)

Classification	Unit	2011	2012	2013
No. of employees with parental leave rights		25	34	47
No. of employees who used parental leave		11	15	12
No. of employees who returned to work after parental leave	Persons	5	14	13
No. of employees to return to work after parental leave		6	14	13
No. of employees with 1 year plus retention after return to work		4	5	13
Rate of use		44	44	25
Rate of return	%	83	100	100
Rate of retention		100	100	92

* Rate of return in 2011 is different from that of the previous year's report due to the recalculation of the number of employees to return to work.

Family Care Leave Program

Any employee can apply for the Family Care Leave Program when he or she has to take care of family members due to their illness, accident, or old age. The program gives employees a maximum of 90 days that can be used in divided units of more than 30 days to support their parents, spouse, children and spouses' parents.

Flexible Work Environment

We established the mobile web system that allows employees to use the intranet through their mobile devices anytime anywhere. We also provide senior employees with smartphones so that they utilize the mobile web system conveniently, and built smart working centers in key regions for all employees working outside the office to enhance their work efficiency and convenience.

* Smart Working Center: Office equipped with IT infrastructure for remote working

Supports for Flexible Working Environment

No.	System	Details
1	Mobile web	Setup of a mobile-version intranet
2	Offering smartphone	Providing employees in high positions with smartphones for convenient use of mobile web
3	Smart working center	Working environment for employees with a lot of outside work

Other Support

Health Care

We provide a Nursing and Infant-feeding room within the office and invite Medical Specialists to the office for regular Medical Checkups of employees. We also run Counseling Programs for employees with stress and depression, supporting them to be resilient again. Other programs include Annual Comprehensive Medical Checkup, the Non-Smoking Campaign, operation of a Fitness Center, and free vaccinations for all employees.

Onsite Health Care Program

POSCO E&C provides health care service to employees at project sites through visits by medical specialists. The project sites are selected considering their location, distances from the city and project periods. In 2013, this service was offered to employees working at 10 project sites including the National Road 77 project site of Sihwa Stage 2, Yeongdeok-Osan Road extension and Yeosu Thermal Power Plant unit 1 construction project sites. Important medical check-ups including blood pressure, blood sugar level, cholesterol level were performed for the employees and health care consulting and training was also provided. We conducted a survey of the satisfaction level of employees to improve the efficiency of this service.

For POSCO E&C Kidsvill

We operate the “For POSCO E&C Kidsvill” in the office building in Songdo for parents with 1-5 year old children this facility operates till 8 p.m. and high quality professional Nursery teachers take care of the children. This significantly reduces the burden of working parents who are always concerned with child care on weekdays.



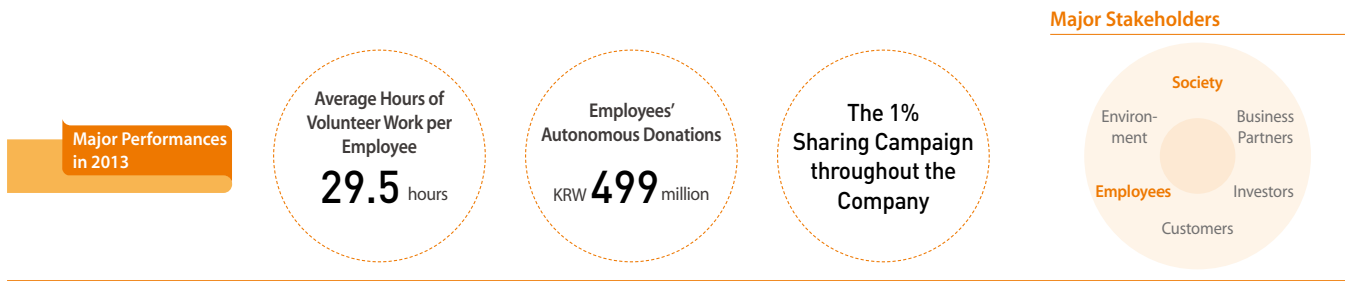
For POSCO E&C Kidsvill

Future Plans

We aim to focus on bringing in a happy working environment and leveling up employees' satisfaction by introducing individual and family care welfare system. As part of this system, it is planned to run a Counselling Program and introduce support for literary activity and maternity. In addition, we will arrange events for employees and their families working overseas and support children's graduation and enrollment in schools. From 2014, we plan to provide medical checkups for employees' spouses once every two years, with no age limit, as requested by the Labor-Management Council.

Local Communities

We have been systematically conducting various Social Contribution Programs through the POSCO E&C Volunteer Corps, in which employees from project sites, subsidiaries and branch offices at home and abroad as well as university students participate. By performing strategic social contribution program through leveraging the characteristics of the construction industry, we particularly support the local areas near project sites, and strive to create shared values with people in need through Public-Private Partnerships programs with major institutions.



Key Issues for Local Communities

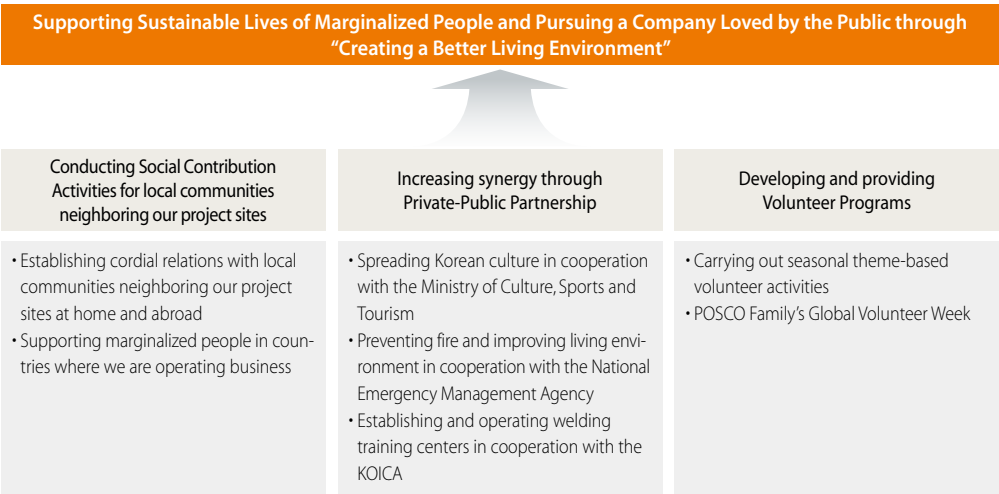
Contribution to the development of local communities

The corporate role and responsibility requested by local communities have been changing in conjunction with different stages of economic development. Recently, Corporate Social Responsibility beyond just economic responsibility is becoming one of the key expectations that businesses need to address and carry out. Companies that have lost the trust of the community are facing criticism and their impact on business is ever more evident. Therefore, most companies strive to run management- sharing policy and believe in strengthening the relationship with local communities.

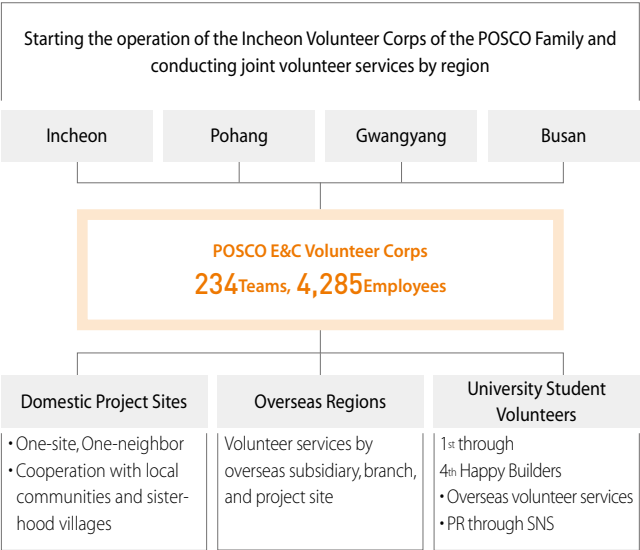
Social Contribution Focused on Sharing and Communicating

Direction and System

POSCO E&C has been promoting Social Contribution Activities in all project sites and offices to go beyond thriving for economic benefit but to fulfil Corporate Social Responsibility of the establishment. The POSCO E&C Volunteer Corps, founded in December 2004, implements social contribution activities every month on a regular basis, in which a total of 234 teams from all departments, project sites, branches, and overseas subsidiaries are participating. In 2010, we established the Social Contribution Team (changed to CSR Group in 2012) to form a social contribution system. Taking advantage of the characteristics of the construction business, we will develop and conduct social contribution activities to create a better living environment for people in need, in Korea and abroad.



POSCO E&C Volunteer Corps



Flagship Social Contribution Activities

Supporting Local Children's Centers (One & One)

We support 50 local Children's Centers in Incheon to help children dream for their future and thrive for a better world. In October 2010, we signed a MOU with Incheon Metropolitan City and Child Fund Korea Incheon and then forged one-to-one sisterhood relations between 50 local Children's Centers and 50 departments of POSCO E&C. Our employees visit the centers 2 or 3 times every month for five years to teach academic curriculum and share cultural experiences with the children. As part of our efforts, we also hold a Choir Competition for children to help them build memories during their childhood.



Supporting local Children's Centers (One & One)

Improving Living Environment

Since 2009, POSCO E&C has aided in papering walls and ceilings, and repairing floors by taking the advantage of the characteristics of construction business. Particularly, in 2013, we founded the "Hope House Community Service Team" together with the National Emergency Agency in order to protect underprivileged people from fire risk and provide a safe living environment. This effort led to our winning the Minister Award from the Ministry of Security and Public Administration in December 2013.



Fire prevention and living environment improvement activities

Supporting Educational Facilities in Poor Regions Abroad

We are helping the underprivileged children and teenagers in the regions near our overseas project sites by constructing Kindergartens, supporting educational facilities and renovating schools. In 2013, we improved the facilities of the schools in poor regions of Laos, Kazakhstan, and Ecuador, and provided various educational and cultural programs for children.

Key Activities and Performances

Spreading Korean Culture Abroad through Public-Private Partnerships

Founded in 2011, POSCO E&C Volunteer Corps "Happy Builder," signed a MOU with the Ministry of Culture, Sports and Tourism in 2012 to promote Korean culture as well as improve educational environments. In 2013, we built multimedia spaces in schools in Laos, Ecuador and Kazakhstan and held events to introduce Korean culture such as Nanta performance and K-POP dance to the local people. We plan to further strengthen social contribution activities in the world through the MOU with the Ministry of Foreign Affairs in 2014.



① Supporting education facilities and cultural exchange event in Kazakhstan ② Opening ceremony of Welder Training Center in Vietnam ③ Building a multimedia room in Ecuador

Welder Training Center in Vietnam

In December 2012, we were selected by the KOICA to participate in its global CSR program and formed a partnership in January 2013. POSCO E&C and KOICA together built the Welder Training Center for Youth in DongNai Province of Vietnam. POSCO E&C Vietnam signed a MOU with the local government to effectively operate the school, and the school was officially opened in November 2013. This project contributes to regional economic development through training young professionals and leading them to become a part of an excellent workforce after graduation.

Expanding the campaign to share 1% of salary by the POSCO Family

POSCO E&C practices various autonomous social contribution activities. Each year, we distribute a saving box to all of our employees to collect coins and money to be delivered to local communities. Other donation programs include ethical funds raised from parts of outside lectures and rewards and the campaign to share 1% of salary by the POSCO Family. In particular, the 1% Sharing Campaign started in 2011 to fulfill social responsibility at the group level, in which all executives participated. However, since 2013, all of our employees have voluntarily participated in this activity. POSCO E&C also donates the same amount of annual

funds raised by employees to create a matching grant fund. Foundation of the campaign to share 1% of salary by the POSCO Family was established for efficient fund operation and a subcommittee collects employees’ opinions on the usage of this fund. This fund is mainly used for helping multicultural families, building social welfare facilities and supporting marginalized people at home and abroad.

Supporting Multicultural Family

POSCO E&C has been supporting multicultural families in Incheon through various social contribution activities. In 2013, we developed business to reinforce job capabilities for helping multicultural families settled down in Korea and secure economic independence. In practice, we provided better learning facilities and ran training courses such as nail art, hotel room attendant, and school qualification exam, so that members of the multicultural families can get meaningful jobs in Korea without too much difficulty. In addition, our website to support them to get driver’s license which had been launched in 2011, was upgraded to offer multilingual services and the mobile web was also opened. In May 2013, the “Café OASIA” a social cooperatives sponsored by POSCO group, was opened in head office building of POSCO E&C. As part of social contribution activities, POSCO E&C helps to operate this café without receiving operating and rental costs and hires multicultural family members as employees of this café.

Donating Necessities to Marginalized people in Abroad

In 2012, POSCO E&C signed a MOU with the Korea Disaster Relief Association to provide help to local underprivileged people surrounding our overseas project sites. Since 2011, we have delivered daily necessities to local communities in Vietnam, Peru, and Chile. In 2013, we provided 6,500 relief goods such as blankets, shoes and others to needy people in Laos.

Major Social Contribution Activities

Classification	Unit	2011	2012	2013
Volunteer service hours per employee	hours	32.6	33.6	29.5
Investment in social contribution	KRW in millions	2,275	2,866	9,931
Employees’ autonomous donations	millions	209	343	499
Improvement of living environment	Households	74	63	52
No. of MOUs for better social contribution	Cases	1	4	2

※ Investment in social contribution in 2013 sharply increased compared to the previous year due to donations of goods.

Future Plans

We plan to further expand our global social contribution activities centered on countries where we are conducting projects. To this end, cooperation with various governmental organizations such as the Ministry of Foreign Affairs will be consistently promoted, which will help us enhance professionalism and synergy and implement creative global social contribution activities. We intend to focus on activities through POSCO E&C Volunteer Corps Incheon by collaborating with subsidiaries of the POSCO Family including POSCO Engineering and Daewoo International which will relocate head offices to Incheon. In addition, we will proactively participate in the campaign to share 1% of salary by the POSCO Family to support the underprivileged at home and abroad. POSCO E&C intends to contribute in solving current and future problems of local communities and strive to implement CSV (Creating Shared Value) activity to pursue co-prosperity with them.

Interview



Team Manager of the Child Fund Korea Incheon, Tae-Won Kang

“I hope POSCO E&C’s Social Contribution Activities for children will take root at home and abroad.”

I believe that Social Contribution Activities have to be carried out consistently on the basis of sincerity beyond just a short-term event. In this way, POSCO E&C’s One & One Support activity, jointly started with us in 2010, has well represented your sincerity to support local children to grow healthily. Protection of children after school is an important social issue these days, thus your effort to offer better benefits and services to children at local welfare centers has set an example for social contribution for local communities. I hope POSCO E&C’s One & One Support will take root at home and abroad and stand as a flagship global social contribution activity to benefit many children around the world.

Supply Chain

POSCO E&C recognizes that the growth of business partners leads to enhancing its competitive edge. Therefore, we are making continuous efforts to help business partners acquire technological competitiveness and to maintain long-term partnership with them. We also plan to enhance value of shared growth in entire supply chain by pursuing mutual collaboration with SMEs with a win-win growth program.



Key Issues for Supply Chain

Enhancement of co-prosperity and communication with business partners

The paradigm of world economy is shifting from competition between individual company to competition between supply chains due to the trends of industrial convergence and integration. Thus, share growth activities to strengthen competitiveness of supply chain became essential business strategy for global corporations.

Win-win Growth and Virtuous Cycle Partnership

Direction and System

We are focusing on supporting our business partners to secure long-term competitiveness beyond just temporary and short-term aids. Giving priority for temporary contract to partners might be helpful, but does not guarantee long-term growth. POSCO E&C is operating a Win-Win Growth Program to ensure long-term and fundamental support such as joint development of source technology, technology transfer, and manufacturing innovation. At POSCO E&C, win-win growth is promoted under the following four directions:“Fair Trade”to create a culture of fair and transparent trade,“Financial Support”to ensure financial soundness,“Technical Support”to secure long-term competitiveness, and“Managerial Support”to help stable management.

Strategic Direction	Detailed Plans
Fair Trade	100% electronic bidding / standard subcontract agreement / 4 guidelines for fair trade
Financial Support	100% cash payment to SMEs / Win-win Growth Fund (KRW 52 billion) / exemption of surety commission
Technical Support	Joint entrance into overseas markets / promotion of performance sharing / new product development with conditional purchase option / joint application to patent and technical support
Managerial Support	Operation of the Win-win Growth Supporters / education on SME consortium / business ethics and safety training / Industry Innovation Movement 3.0

Key Activities and Performances

Industry Innovation Movement 3.0

The Industry Innovation Movement 3.0 is a support program for SMEs under the Ministry of Trade, Industry & Energy to share performance through innovation of partners’ management, environment, and process. POSCO E&C agreed to invest a total of KRW 1.6 billion, KRW 320 million annually for 5 years, and provides customized consulting for SMEs in innovating manufacturing sites and others. We supported 10 business partners in 2013, and plan to extend number of targets to more than 11 by 2017. In particular, our unique QSS Innovation Consulting will create SMEs great place to work and also improve their competitiveness.

“Excellent” Grade in Win-win Growth Index for 3 Consecutive Years

POSCO E&C has won the “Excellent” grade in win-win growth index announced by the National Commission for Corporate Partnership for 3 consecutive years. The Fair Trade Commission assesses contract contents for fair trade and win-win growth and execution level, while The National Commission for Corporate Partnership evaluates satisfaction level of partners in the field business, and they comprehensively calculate the overall research.

Benefit-sharing Network Information System

We introduced the Benefit-sharing System in 2010, and distributes outcome created by joint operation, based on the contract. Considering the features of our business, it is mainly promoted in the field of improving construction methods. When we achieve cost reduction backed by improvement of design and methods, we share the amount with our business partners depending on the contract. In case of success in jointly developing new materials, we allow our business partners to use them in our project sites.

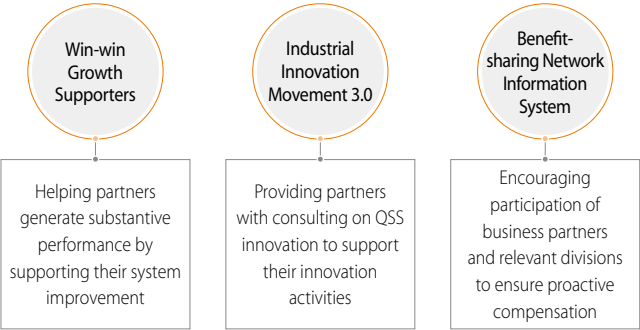
Win-win Growth Supporters

The Win-win Growth Supporters provide management consulting services to our business partners and help to solve problems in diversely difficult situations. We listen to their opinions in the planning stage to offer practical support. Our executives visit SMEs once a month to provide consulting about improving organizational culture and technology development. It makes SMEs enhance their capabilities.

Future Plans

POSCO E&C will continue to improve technology and management support programs to strengthen business partners’ competitiveness. We will also reinforce supporting partners’ innovation activities which include task support of project level and QSS innovation consulting.

Top Priority Programs in 2014



Sustainability Management of Supply Chain

Status of Business Partners

As of 2013, we have 1,851 business partners, which consist of 682 in construction, 734 in equipment, and 435 in materials. About 260 partners are newly included through an evaluation process including CSR aspects. In the domestic construction site, 65 % of site workers are employees of business partners.

Distribution Map of Partners

About 56 % of our business partners are located in metropolitan areas (Seoul, Incheon, and Gyeonggi Province) and 18% are located in Pohang and Gwangyang where POSCO Steelworks are located. In 2013, our business purchase in regions other than the metropolitan area recorded 42% of overall purchase, and the local purchase in Pohang and Gwangyang was 19%, which is the second largest amount.

Performance Management System

POSCO E&C runs the Performance Management System for business partners to reinforce the competitiveness of the supply chain, through quarterly and integrated assessments. Quarterly assessment evaluates on the items of outcome, cooperation, quality, and safety in on-going or completed projects, while integrated assessment evaluates on capability, credibility, quality, and financial soundness with the results of quarterly assessment. We further select ‘outstanding’ companies in different fields (facility, construction, and materials) according to overall result.

Regular Monitoring System for Social Responsibility

POSCO E&C frequently monitors business partners’ social responsibility issues such as overdue wages, unethical behavior, quality and safety. We enforce them to publish payment bonds to prevent future possibilities of over dues in wages, facilities and material costs. For companies with overdue wages, we label them with a warning sign and limit their participation the bidding process. To lower accident rates and promote safety, we fortify sanctions on business partners that have accidents while adding extra points to those with excellence in safety.

Special Story

Human Rights Specified in Contracts

Background & Objective

As human rights are globally issued, POSCO E&C also underlines the importance of human rights in all business operations. We fully understand that human rights policies and regulations are essential for our business, as we employ a large number of external workforces at project sites around the world. POSCO E&C, therefore, includes articles regarding human rights protection in contracts with its business partners.

Target Companies

POSCO E&C has established the human rights protection articles with reference to various global standards such as the Universal Declaration of Human Rights, Guideline for Business and Human Rights, ILO, and ISO 26000. With thorough review on the effectiveness and appropriateness of human rights contents, we decided to apply articles of human rights in all contracts with business partners in domestic and overseas projects including equipment, construction, service, and materials. This has evenly put in action since August 2013 in all overseas subsidiaries, branches, and offices of POSCO E&C.

Human Rights Related Articles

Article 00. Protection of Human Rights

Except as otherwise required or prohibited by law, the subcontractor shall comply with sub-clauses for protection of human rights as follows :

- 1. Unfair discrimination shall be prohibited in terms of any kind such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status
- 2. Any child labor causing either physical or emotional impairment to the development of child shall not be exploited, without fail under any given circumstances that any tasks shall be in a reasonable way carried out by child labor.
- 3. Forced or compulsory labor, including all work or service which might be executed by any persons under the menace of any penalties and in which the said person has not offered himself voluntarily, shall be prohibited.
- 4. Everyone has the right of freedom with regard to expressing opinion freely.
- 5. Every employee shall be paid at least the minimum wage and can ask for the prevailing wage in the industry.
- 6. No corporal punishment, mental, physical, sexual or verbal abuse, cruel or abusive disciplinary practices will be allowed in the workplace.

Expected Effect

We look forward to creating a culture of human rights management by including articles for human rights in contracts with business partners. Furthermore, we will prevent any potential risk that could violate human rights, and engage in global efforts for preserving human rights.

Number and Percentage of Important Investment Contracts Containing Human Rights Articles or Conducting Human Rights Inspection

Classification	Unit	2013
No. of agreements or contracts with significance in the aspects of volume and strategy	Cases	3,241
No. of contracts conducting human rights inspection or containing human rights articles		1,096
Percentage	%	33.8

* Agreements and contracts concluded since August 2013

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POSCO E&C Songdo Office, Incheon

Financial Information

Consolidated Statement of Financial Position

(Unit: KRW)		
Item	2013	2012
Current assets	6,709,778,205,609	7,431,661,572,870
Cash and cash equivalents	1,021,637,150,821	954,069,813,437
Account receivables	1,834,813,198,062	1,868,336,452,908
Other financial assets	529,600,229,206	555,632,254,290
Unclaimed construction property	1,300,544,788,799	1,892,632,960,196
Inventories	1,124,817,872,500	1,260,848,092,450
Current income tax assets	13,923,523,918	6,260,207,822
Other current assets	884,441,442,303	893,881,791,767
Non-current assets	1,931,843,181,998	1,769,101,788,882
Investments in associates	117,876,566,517	113,714,140,312
Non-current Account receivables	3,287,389,213	1,419,986,358
Other non-current financial assets	454,162,477,047	441,633,530,096
Tangible assets	439,046,779,354	400,014,289,351
Investments in real estate	265,186,808,866	272,281,713,952
Intangible assets	310,540,415,687	306,145,086,192
Deferred income tax assets	302,469,191,939	223,388,521,482
Other non-current assets	39,273,553,375	10,504,521,139
Total assets	8,641,621,387,607	9,200,763,361,752
Current liabilities	4,735,004,281,122	4,969,750,155,983
Account payables	1,047,492,876,800	1,502,717,886,352
Borrowings	776,137,902,605	547,986,048,104
Other financial liabilities	709,883,828,175	542,438,364,463
Prepaid construction property	811,189,530,794	372,479,969,414
Current income tax liabilities	98,930,254,577	82,583,178,959
Other current liabilities	1,246,607,809,746	1,895,725,651,777
Provisions	44,762,078,425	25,819,056,914
Non-current liabilities	960,138,162,532	1,402,228,592,030
Non-current account payables	558,676,585	-
Non-current borrowings	542,811,665,744	914,712,373,583
Other non-current financial liabilities	29,770,976,405	54,708,041,242
Net defined benefit liabilities	67,864,942,364	45,047,660,616
Other non-current liabilities	201,432,067,200	312,668,425,952
Provisions	101,133,905,334	61,160,580,973
Deferred income tax liabilities	16,565,928,900	13,931,509,664
Total liabilities	5,695,142,443,654	6,371,978,748,013
Equity attributable to the owner of the parent	2,894,059,135,717	2,786,432,584,408
Issued capital	183,615,000,000	183,615,000,000
Capital surplus	757,934,439,797	761,864,652,020
Reserves	-48,307,688,274	-45,724,310,781
Retained earnings	2,000,817,384,194	1,886,677,243,169
Non-current interests	52,419,808,236	42,352,029,331
Total equity	2,946,478,943,953	2,828,784,613,739

Consolidated Statements of Comprehensive Income

(Unit: KRW)		
Item	2013	2012
Sales	10,155,225,408,692	8,637,326,947,677
Cost of sales	-9,273,663,928,571	-7,881,269,967,883
Gross profit	881,561,480,121	756,056,979,794
Selling and administrative expenses	-433,180,061,531	-430,500,633,607
Administrative expenses	-388,861,725,422	-370,997,584,252
Selling and logistics expenses	-44,318,336,109	-59,503,049,355
Operating profit	448,381,418,590	325,556,346,187
Gain (loss) on investments in associates, net	-11,376,675,031	-33,340,149,910
Financial income (loss), net	-71,051,377,753	77,739,782,679
Financial income	286,002,575,115	349,142,533,238
Financial costs	-357,053,952,868	-271,402,750,559
Other non-operating income (loss), net	-123,921,291,313	14,053,297,723
Other non-operating income	48,045,715,199	62,999,672,770
Other non-operating costs	-171,967,006,512	-48,946,375,047
Profit before income tax	242,032,074,493	384,009,276,679
Income tax expense	-94,865,078,741	-104,476,476,303
Net income for the year	147,166,995,752	279,532,800,376
Other comprehensive income (loss), net	-2,816,715,735	-37,671,110,705
1. Items that will not be reclassified to profit or loss	-289,650,910	-9,222,852,636
Actuarial gains(losses) on post defined benefit pension plans	-289,650,910	-9,222,852,636
2. Items that will be reclassified to profit or loss	-2,527,064,825	-28,448,258,069
Net gain (loss) on available-for-sale financial investments	-4,112,709,377	-5,559,366,545
Net income reclassification adjustment	21,020,741,139	551,534,969
Equity adjustments in equity method	-80,751,177	-3,618,817,374
Exchange differences on translation of foreign operations	-19,354,345,410	-19,821,609,119
Total comprehensive income for the year	144,350,280,017	241,861,689,671
Net income attributable to:	147,166,995,752	279,532,800,376
The owner of the parent	143,416,083,317	289,260,849,854
Non-controlling interests	3,750,912,435	-9,728,049,478
Total comprehensive income attributable to:	144,350,280,017	241,861,689,671
The owner of the parent	140,574,269,148	253,741,712,852
Non-controlling interests	3,776,010,869	-11,880,023,181
Earnings per share of the owner of the parent		
Basic and diluted earnings per share	3,905	7,877

Awards & Association Membership

Awards in 2013

Date	Award Title/Description	Awarded by
March	Grand Prize in Quality Management Sector, POSCO Family	POSCO
	Red-dot design award 2013 winner (General Electric Product)	Reddot design award
	Grand Prize in Overseas Construction Competition (Pioneer Sector)	Money Today
	2012 Respectable Company of the Year Award (Social and Construction Safety Sector)	Korea NGO Association
July	Grand Prize in Environmentally Friendly Sector, 1H 2013 Hankyung Housing Culture Competition (The Sharp Lake Park in Sejong)	The Korea Economic Daily
August	Grand Prize, 2013 Luxury Housing Competition of Korea	Ministry of Land, Infrastructure, and Transport
September	Ranked 1st in KS-QEI for 5 Consecutive Years	Korean Standards Association
	Grand Prize in the New and Renewable Energy Sector, 2013 Korea Environmental Friendliness Awards (7 Consecutive Years)	Korea Environmental Award Committee
	Grand Prize, 2013 Good Design Competition (Exterior prototype design of The Sharp model house)	Ministry of Trade, Industry & Energy Korea Institute of Design Promotion
	Grand Prize, 2013 Good Design Competition (Building exterior design of The Sharp Lake Park in Sejong)	Ministry of Trade, Industry & Energy Korea Institute of Design Promotion
October	Presidential Citation, National Environmental Award (Highest Award for Corporation)	Ministry of Security and Public Administration
November	Excellent Award, BMI Construction Award 2014 (BIM application case for the Legal Research and Training Institute)	Building Smart Korea
	Excellent Award in BIM Implementation Sector, BIM Conference 2013 (Development of cloud computing for vitalization of construction site BIM)	Building Smart Korea
	Grand Prize, 2013 Korea's Flagship Apartment Awards (Minister's Prize of the Ministry of Land, Infrastructure, and Transport in Ecofriendly Sector)	The Korea Economic TV
	Technology Award, 2013 BIM Symposium (Development of BIM based building environment performance analyzing integrated module)	Korea Institute of Building Information Modeling
December	Grand Prize in Outstanding Innovation Group, POSCO Family	POSCO
	Certification of Merit, VE Conference 2013	Korea Construction Value Engineering Research Institute
	Minister's Citation of the Ministry of Security and Public Administration, 2013 Fire Prevention and Housing Environment Improvement for Socially Disadvantage Group	Ministry of Security and Public Administration

Association Membership

Stake at Concern	Organization	Reason for Joining
Customer	Korea Construction Quality Research Center	To exchange information with fellow E&C companies.
	Korea Management Association	To collect information and consult on quality management area
	Korea Standards Association	To obtain information on standards applicable to the construction industry (standardization and quality assurance).
Labor Relations	Korean Professional Engineer Association	To promote HR related research and trade information with head of HR department in construction companies
	East Local of Kyongbuk Employer's Association	To exchange information on labor unions and relations in the construction industry.
Safety and Health	Construction Safety Managers Association	To promote exchange among safety managers at the 100 largest construction companies.
	Construction Safety Management Council	To promote exchange among the heads of safety departments at the 100 largest construction companies.
	KOSHA 18001 Council	To promote exchange of information among the KOSHA18001-certified construction companies.
	Construction Safety Officer Council	To promote exchange of information and policy suggestions among large construction companies regarding safety issues.
Ethics Management	Maekyung Safety & Environment Institute	To obtain information on safety, environmental policies and other
	The Institute of Internal Auditors	To understand trends in internal auditing and promote networking among auditors.
Local Community	Gwangyang Police Administration Advancement Committee	To obtain information on local society and maintain cooperation with the police stations within the jurisdiction.
	Gwangyang Self-Administration Forum	To contribute to local development and promote mutual understanding.
	Nakdong Industry Economy Forum	To obtain business order information and promote economic development of Gaegu and Gyeongbuk region
	Saeul Foundation of Culture	To maintain relations with opinion leaders of Incheon.
	Pohang Penitentiary Correctional Conference	To strengthen relation with Pohang Supreme Prosecutors' Office and collect information on various social class
	Pohang Local Development Council	To maintain relations and information infrastructure with leaders of Pohang.
Partnering Companies	South Pohang Police Administration Advancement Committee	To enhance corporate image and lead local teenagers
	Construction Outsourcing Association	To enhance mutual cooperation, trade information, and solidarity cooperation with outsourcing manager
Environment	Construction Environment Association	To exchange information on environmental technologies and regulations.
	Korean GEO-Environmental Society	To secure geo-environment engineering technology and strengthen order obtainment capability
	Korean Society on Water Environment	To exchange information on water quality control, waterworks, sewage, etc.
	Korean Society of Environmental Engineers	To exchange information on the latest environmental engineering technology and environmental preservation measures.
	Korea New & Renewable Energy Association	To exchange information and relations on new and renewable energy projects.

Statement of Third-Party Assurance

LRQA Assurance Statement Relating to POSCO Engineering & Construction Co., Ltd.'s Sustainability Report for the calendar year 2013

This Assurance Statement has been prepared for POSCO Engineering & Construction Co., Ltd. in accordance with our contract but is intended for the readers of this Report.

Terms of Engagement

Lloyd's Register Quality Assurance Ltd. (LRQA) was commissioned by POSCO Engineering & Construction Co., Ltd. (POSCO E&C) to provide independent assurance on its Sustainability Report for the calendar year 2013 ("the Report") against the assurance criteria below to a limited level of assurance using LRQA's verification procedure. LRQA's verification procedure is based on current best practise and uses the principles of AA1000AS (2008) - Inclusivity, Materiality, Responsiveness and Reliability of performance data and processes defined in ISAE3000.

Our assurance engagement covered POSCO E&C's operations and activities in Korea and specifically the following requirements:

- Confirming that the Report is in accordance with:
 - GRI G4's Reporting Guidelines and core option
 - GRI G4's Sector Disclosure - Construction and Real Estate Sector
- Evaluating the accuracy and reliability of data and information for only the selected indicators listed below:
 - Economic : economic performance (EC1) and market presence (EC5)
 - Environmental : energy (EN3, EN5, EN6, EN7), emissions (EN15, EN16, EN17, EN18, EN19), effluents and waste (EN23), products and services (EN27), compliance (EN29)
 - Social : employment (LA1, LA2), occupational health and safety (LA6), training and education (LA9, LA10, LA11), local communities (SO1), anti-corruption (SO3, SO4, SO5), customer health and safety (PR1), product and service labelling (PR5)
 - Sector Disclosure : building energy intensity (CRE1), greenhouse gas emissions intensity from buildings (CRE3), percentage of the organization operating in verified compliance with an internationally recognised health and safety management system (CRE6), type and number of sustainability certification, rating and labelling schemes for new construction, management, occupation and redevelopment (CRE8).

Our assurance engagement excluded the data and information of POSCO E&C's suppliers, contractors and any third-parties mentioned in the Report.

LRQA's responsibility is only to POSCO E&C. LRQA disclaims any liability or responsibility to others as explained in the end footnote. POSCO E&C's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the Report and for maintaining effective internal controls over the systems from which the Report is derived. Ultimately, the Report has been approved by, and remains the responsibility of POSCO E&C.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that POSCO E&C has not:

- Met the requirements above
- Disclosed accurate and reliable performance data and information as no errors or omissions were detected
- Covered all the issues that are important to the stakeholders and readers of this Report.
- The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the Verifier.

* Note: The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites.

LRQA's Approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing POSCO E&C's approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. We did this through

- reviewing documents and associated records.
- Reviewing POSCO E&C's process for identifying and determining material issues to confirm that the right issues were included in their Report. We did this by benchmarking reports written by POSCO E&C and its peers to ensure that sector specific issues were included for comparability. We also tested the filters used in determining material issues to evaluate whether POSCO E&C makes informed business decisions that may create opportunities that contribute towards sustainable development.
- Auditing POSCO E&C's data management systems to confirm that there were no significant errors, omissions or mis-statements in the Report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification. We also spoke with those key people responsible for compiling the data and drafting the Report.
- Reviewing additional evidence made available by POSCO E&C at their head office in Song-do dong, Incheon.
- Interviewing relevant personnel at two construction sites to confirm that POSCO E&C's CSR processes are implemented at site level located at 17-3 and 18-6, Song-do dong, Incheon.

Observations

Further observations and findings, made during the assurance engagement, are:

Stakeholder Inclusivity:

We are not aware of any key stakeholder groups that have been excluded from POSCO E&C's stakeholder engagement process. POSCO E&C emphasized the importance of the stakeholder engagement in the Report through addressing the stakeholder interviews.

Materiality:

We are not aware of any material issues concerning POSCO E&C's sustainability performance that have been excluded from the Report. It should be noted that POSCO E&C has established extensive criteria for determining material issues/aspects and that these criteria are not biased to POSCO E&C's management.

Responsiveness:

We are not aware that POSCO E&C has not provided a detailed respond to its relevant stakeholders. However, POSCO E&C should consider establishing sustainability targets, monitoring their performance against them and reporting the progress in future Reports.

Reliability:

We are not aware that data management systems are not considered to be well defined and the implementation of the systems is not robust at site level by using POSCO Environmental Management System.

LRQA's Competence and Independence

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LRQA is POSCO E&C's certification body for ISO 9001, ISO 14001, and OHSAS 18001. We also provide POSCO E&C with a range of training services related to Management Systems. The verification and certification assessments, together with the training, are the only work undertaken by LRQA for POSCO E&C and as such does not compromise our independence or impartiality.



On behalf of Lloyd's Register Quality Assurance Limited
17th Floor, Sinsong Building, 67 Yeouinaru-ro, Yeongdeungpo-gu, Seoul, Korea
LRQA Reference: SEO6020386

09 July 2014
LRQA Lead Verifier **Hee-Jeong Yim**

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Statement of Assurance Report of Greenhouse Gas Emissions

Introduction

Korean Foundation for Quality (hereinafter ‘KFQ’) has been engaged by POSCO E&C (hereinafter the ‘Company’) to independently verify its 2013 Report on Quantity of emitted Greenhouse Gas from places of business nationwide (hereinafter ‘Inventory Report’). It is the responsibility of the Company’s management to compile the Inventory Report and the emission quantity report by “Greenhouse Gas and Energy Target Management Scheme” run by the government of Korea and KFQ’s responsibility is provision of opinions on the Inventory Report after verification according to ISO 14064-3 and national scheme.

Verification Scope

KFQ’s verification was focused on all of the greenhouse gas emission sources (direct emission and indirect emission) controlled by the Company’s places of business nationwide.

Conclusion/Opinion

Based on verification process according to the ISO 14064-3, KFQ obtained reasonable basis to express the following conclusion on the greenhouse gas emission data in the Inventory Report.

- 1) The Company’s 2013 Report on Quantity of emitted Greenhouse Gas was documented in accordance with “Greenhouse Gas and Energy Target Management Scheme” run by the government. In case of Scope 3, it was verified Company’s “Construction Site GHG Management Guideline(Ver. 01) and it includes the construction site emissions from the usage of construction equipments, electricity and city gas by cooperative enterprises.
- 2) According to materiality assessment on quantity of greenhouse gas emitted from every Company’s places of business nationwide in 2013, material discrepancy is less than the criteria of 5.0% for an organization that emits under 500,000 tCO₂_eq in accordance with “Greenhouse Gas and Energy Target Management Scheme”
- 3) According to the information and data regarding greenhouse gas emission in the Inventory Report, no unreliable significant error, omission, or impropriety were found. Therefore, KFQ conclude and confirm its verification with total material discrepancy of less than 5.0%.

[Unit: ton CO₂_eq]

Report Year	SCOPE 1	SCOPE 2	SUB TOTAL	SCOPE 3	TOTAL
2013.1.1.~2013.12.31	6,027	25,719	31,746	77,718	109,464

※ Note: SCOPE 3 was verified by Company’s Construction Site GHG Management Guideline (Ver 01). SCOPE 3 includes the construction site emissions from the usage of construction equipments, electricity and city gas by cooperative enterprises.

June 25th, 2014



CEO Dae-Hyun Nam
Korean Foundation for Quality (KFQ)

UN Global Compact

POSCO E&C has made public its commitment and resolution to observing 10 principles of social responsibilities by joining UN Global Compact. We will make our best effort to reveal whether we abide by principles of Global Compact through our yearly sustainable report.

Classification	Principle	POSCO E&C’s major activities	GRI G4
Human Rights	1. We support and respect internationally declared human rights.	• Observance of 10 principles of UN Global Compact • Observance of ILO rules	HR1~6, 10
	2. We do not engage in infringement of human rights.	• New clause of protection of human rights in the contract • Implementation of educations on the prevention of sexual harassment and ethical management	
Labor	3. We acknowledge rights to freedom of association and collective bargaining.	• Observance of Labor Standard Act • Operation of labor union • Operation of labor-management council	HR4, G4-11, LA4
	4. We abolish all kinds of forced labors.	• Observance of Labor Standard Act and ILO rules	HR6
	5. We effectively abolish children’s labor.	• Observance of collective agreements	HR5
	6. We abolish discrimination both on employment and at work.	• Operating a regular performance management system • Recruiting more people from regional areas	HR3, LA1, 9, 12, 13
Environment	7. We support preventative approach to environmental issues.	• Observance of environmental laws • Environmental petition support system • Self-environment enhancement activity	G4-14
	8. We take the lead in taking bigger environmental responsibilities.	• Check reliability of greenhouse gas data • Energy saving management on construction equipment • Responding to greenhouse gas regulation on construction industry • Excavating and reporting excellent energy saving cases	EN12, 13, 19, 22, 23, 27, 31
	9. We support environmentally-friendly technology development and its diffusion.	• Ecofriendly engineering • Ecofriendly material development • Support business to expand environmental management into business partners	EN6~7, 10~19, 27
Anti-corruption	10. We strive to eradicate all kinds of corruption including unjust enrichment and bribe	• Spread of ethical management to business partner companies • Employee ethics education • Evaluation of level of ethics practice on each department	SO3~5

GRI G4 Index

This report has been written under core option of GRI (Global Reporting Initiative) G4 guideline.

General Standard Disclosures

● Complete● Partially○ Non-disclosure

Category	Index	Description	Page	Reporting Status	External Assurance
Strategy and Analysis	G4-1	CEO Message	4~5	●	78~79
Organizational Profile	G4-3	Name of the organization	2	●	78~79
	G4-4	Primary brands, products, and services	6~7	●	78~79
	G4-5	Location of the organization's headquarters	7	●	78~79
	G4-6	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	18~19	●	78~79
	G4-7	Nature of ownership and legal form	9	●	78~79
	G4-8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	6~7, 18~19	●	78~79
	G4-9	Scale of the organization	7, 63	●	78~79
	G4-10	Status of employment type, contract, and region	7, 63, 73	●	78~79
	G4-11	Percentage of total employees covered by collective bargaining agreements	65	●	78~79
	G4-12	Organization's supply chain	73	●	78~79
	G4-13	Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	7~9, 18~19	●	78~79
	G4-14	Precautionary approach or principle is addressed by the organization	12	●	78~79
	G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	81	●	78~79
	G4-16	Memberships of associations (such as industry associations) and national or international advocacy organizations	77	●	78~79
Identified Material Aspects and Boundaries	G4-17	List of all entities including the organization's consolidated financial statements or equivalent documents	19	●	78~79
	G4-18	Process for defining the report content and the Aspect Boundaries	14~17	●	78~79
	G4-19	Material Aspects identified in the process for defining report content	17	●	78~79
	G4-20	Aspect Boundary within the organization	17	●	78~79
	G4-21	Aspect Boundary outside the organization	17	●	78~79
	G4-22	Effect of any restatements of information provided in previous reports, and the reasons for such restatements	66	●	78~79
	G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	2	●	78~79
Stakeholder Engagement	G4-24	List of stakeholder groups engaged by the organization	14~15	●	78~79
	G4-25	Basis for identification and selection of stakeholders with whom to engage	14~15	●	78~79
	G4-26	Organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	14~15	●	78~79
	G4-27	Key topics and concerns that have been raised through stakeholder engagement and how the organization has responded to those key topics and concerns	16~17	●	78~79
Report Profile	G4-28	Reporting period (such as fiscal or calendar year) for information provided	2	●	78~79
	G4-29	Date of most recent previous report	2	●	78~79
	G4-30	Reporting cycle	2	●	78~79
	G4-31	Contact point for questions regarding the report or its contents	2	●	78~79
	G4-32	GRI G4 INDEX	82~85	●	78~79
	G4-33	Organization's policy and current practice with regard to seeking external assurance for the report	78~79	●	78~79
Governance	G4-34	Governance structure of the organization	9	●	78~79
Ethics and Integrity	G4-56	Internally arranged mission, core value, code of conduct, and principles regarding economic, environmental, and social performance and activities	10~11	●	78~79

● Complete● Partially○ Non-disclosure

Category	Sub-category	Aspect	Index	Description	Page	Reporting Status	Omissions	External Assurance
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			EC1	Direct economic value generated and distributed	76	●		78~79
		Market Presence	Generic DMA		18	●		78~79
			EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	24, 26	●		78~79
Environmental	Environmental	Energy	Generic DMA & Aspect-specific DMA		50	●		78~79
			EN3	Energy consumption within the organization	51	●		78~79
			EN5	Energy intensity	51	●		78~79
			EN6	Reduction of energy consumption	50~51	●	Energy usage reduction quantity	78~79
			EN7	Reductions in energy requirements of products and services	50~51	●	Product energy reduction quantity	78~79
			CRE1	Building energy intensity	51	●		78~79
		Emissions	Generic DMA		50	●		78~79
			EN15	Direct greenhouse gas (GHG) emissions (scope 1)	50~51	●		78~79
			EN16	Energy indirect greenhouse gas (GHG) emissions (scope 2)	50~51	●		78~79
			EN17	Other indirect greenhouse gas (GHG) emissions (scope 3)	50~51	●	GHG emission quantity for each subsection (Scope 3)	78~79
			EN18	Greenhouse gas (GHG) emissions intensity	50~51	●		78~79
			EN19	Reduction of greenhouse gas (GHG) emissions	47, 50~51	●		78~79
			CRE3	Building greenhouse gas emission intensity	50~51	●		78~79
		Effluents and Waste	Generic DMA		44, 49	●		78~79
			EN23	Total weight of waste by type and disposal method	49	●		78~79
		Products and Services	Generic DMA		44, 50	●		78~79
			EN27	Extent of impact mitigation of environmental impacts of products and services	44~51	●		78~79
		Compliance	Generic DMA		44, 45	●		78~79
			EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	45	●		78~79
			Generic DMA & Aspect-specific DMA		62	●		78~79
Social	Labor Practices and Decent Work	Employment	LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	63	●	Data on retirement rate per age group	78~79
			LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	66~67	●		78~79
			Generic DMA & Aspect-specific DMA		52	●		78~79
		Occupational Health and Safety	Generic DMA & Aspect-specific DMA					

GRI G4 Index

Specific Standard Disclosures

● Complete● Partially○ Non-disclosure

Category	Sub-category	Aspect	Index	Description	Page	Reporting Status	Omissions	External Assurance
Social	Labor Practices and Decent Work	Occupational Health and Safety	LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	52	●		78~79
			CRE6	Percentage of the organization operating in verified compliance with an internationally recognized health and safety management system	54	●		78~79
		Training and Education	Generic DMA		62, 63	●		78~79
			LA9	Average hours of training per year per employee by gender, and by employee category	64	●	Training hours by gender	78~79
			LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	63~64	●		78~79
			LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	63	●		78~79
	Society	Local Communities	Generic DMA & Aspect-specific DMA		68	●		78~79
			SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	68	●		78~79
		Anti-corruption	Generic DMA & Aspect-specific DMA		10	●		78~79
			SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	10~11	●		78~79
			SO4	Communication and training on anti-corruption policies and procedures	10~11	●	Education hours by position	78~79
	Product Responsibility	Customer Health and Safety	Generic DMA & Aspect-specific DMA		58	●		78~79
			PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	60	●		78~79
		Product and Service Labeling	Generic DMA & Aspect-specific DMA		58	●		78~79
			PR5	Results of surveys measuring customer satisfaction	58	●		78~79
			CRE8	Type and number of sustainability certification, rating and labeling schemes for new construction, management, occupation and redevelopment	47	●		78~79

* Environmental data for the GRI guideline were partially reported as some indices have not been managed. We plan to manage them from the next year. Labor and social indices were also partially reported due to confidential treatment in the aspect of corporate policy.

In Accordance' Criteria with the G4 Guidelines

		G4 - Core	G4 - Comprehensive
General Standard Disclosures	Strategy and Analysis	G4-1	G4-1, G4-2
	Organizational Profile	G4-3 ~ G4-16	G4-3 ~ G4-16
	Identified Material Aspects and Boundaries	G4-17 ~ G4-23	G4-17 ~ G4-23
	Stakeholder Engagement	G4-24 ~ G4-27	G4-24 ~ G4-27
	Report Profile	G4-28 ~ G4-33	G4-28 ~ G4-33
	Governance	G4-34	G4-34 G4-35 ~ G4-55(*)
	Ethics and Integrity	G4-56	G4-56 G4-57 ~ G4-58(*)
Specific Standard Disclosures	General Standard Disclosures for Sectors	Required, if available for the organization's sector(*)	Required, if available for the organization's sector(*)
	Generic Disclosures on Management Approach	For material Aspects only(*)	For material Aspects only(*)
	Indicators	At least one Indicator related to each identified material Aspect(*)	All Indicators related to each identified material Aspect(*)
	Specific Standard Disclosures for Sectors	Required, if available for the organization's sector and if material(*)	Required, if available for the organization's sector and if material(*)

* For Standard Disclosures with (*), reasons for omission may apply in exceptional cases.

POSCO E&C Sustainability Report 2013

For more detailed information on our sustainability report, please visit our web site, where you can download a PDF version.

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