2012 SAMSUNG ENGINEERING SUSTAINABILITY REPORT

SAMSUNG ENGINEERING

ABOUT THIS REPORT

This report is Samsung Engineering's second sustainability report. It was written to present Samsung Engineering's commitment to enhancing economic, environmental and social values and achievements comprehensively in accordance with the Global Reporting Initiative (GRI) G3.1 guidelines.

Reporting Period | This report covers Samsung Engineering's performances and activities from January through December 2012, and when necessary to provide time-series trends, data of the three most recent fiscal years (from January 2010 through December 2012) were utilized. As for some issues of significance, relevant data reported until September 2013 are included in this report.

Reporting Boundary and Scope | We aim to report all aspects of Samsung Engineering's domestic and overseas business areas (including project sites) and subsidiaries in principle, but in cases where data collection was not possible, the specific scope of the data was stated. We set a principle of not including suppliers within our reporting boundaries, however some of their activities are reported with separate notifications. The reporting boundaries and scope were based on recommendations of the GRI guidelines.

Reporting Contents | This report was prepared in accordance with Samsung Engineering's sustainability management system, and includes three categories. The Business for Sustainability section includes specific examples of how our sustainability policy was applied to actual business. The Commitment to Sustainability section presents our commitment to stakeholders' requirements and performances in the fields of ethics and compliance, environment, health and safety, employees and workplace, supply chain, and local community. The Performance Summary section provides major quantitative performance indices.

To ensure the objectivity and transparency of the content, we commissioned a third party without vested interests in the company to verify the accounts herein (Independent Assurance Statement p.96 - p.97). Samsung Engineering will continue to publish the Sustainability Report to share our sustainability management activities and performance as well as future goals with our stakeholders.

VISION **Creative Engineering Solution Provider**

MISSION **Creating and pursuing future value for clients through engineering excellence**

CORE VALUE

Continuous Challenge	Achieving higher goals with passion and persistence, undaunted by fear of failure.
Global Citizenship	Understanding and utilizing diversity to be a world-class player based on global competency.
Creative Convergence	Creative future values based on insight through communication and collaboration.

CODE OF CONDUCT

Continuous Challenge	**Tenacity**	Strive to do your best to live up to your standard.
	Execution Power	Accomplish your goal without giving up.
	Frontier Spirit	Challenge yourself to discover new markets, clients and products.
Global Citizenship	**Respect for Diversity**	Understand and utilize the merits of cultural diversity.
	Global Competency	Be equipped with the best capability to execute global business.
	Global Management	Upgrade the quality of management to global top-tier standard.
Creative Convergence	**Superior Insights**	Identify the essence of the problem from a new perspective.
	Synergy	Share our knowledge and experience, and collaborate with others.
	Value Creation	Create future values, going beyond our business fields.

CEO MESSAGE

"Our sustainability is founded on the basis of transparency,
respect for people and the environment, and the growth of our partners.
For us, this is the way of creating shared value for our stakeholders."

Dear Valued Stakeholders:

Samsung Engineering is a plant engineering company that has accumulated extensive capabilities and experience from domestic and overseas projects during its history of over 40 years. Our competence in hydrocarbon plant, power plant, and industrial infrastructure project is widely recognized by our clients around the world. We are committed to leading changes and enhancing values for humankind through our efficient knowledge management system, innovation activities, and investment in human resources and technology.

The changing global market environment and the increased interest in our company from stakeholders pose numerous new challenges as well as opportunities for Samsung Engineering. We are striving to respond to these challenges by fulfilling our responsibility as a global player and maximizing value for our clients and shareholders. At the same time, we will preemptively address issues arising in diverse business environments through shared growth with the local communities, deep respect for common values as a corporate citizen, and close cooperation with suppliers.

Innovating and Growing as a Global Top-tier Company

In 2012, despite the unfavorable external economic environment, we realized sound growth and produced numerous significant records. We penetrated the Kazakhstani, Bolivian, and Angolan markets, making power plant field one of our main pillars of growth. Sales surpassed KRW 10 trillion for the first time since the foundation of the company. We laid the groundwork for entering the offshore industry, identified as a future core business. We established a joint venture in partnership with a multinational offshore plant engineering company and recruited outstanding human resources. Samsung Engineering will continue efforts to make inroads into new markets and diversify the business portfolio in 2013. At the same time, we will focus our resources on securing quality orders, improving profitability, and enhancing productivity to grow sustainably on a long-term basis.

Ensuring Transparent and Clean Management

To manage ethics and compliance systematically, Samsung Engineering is conducting a compliance program which is a permanent and integrated legal risk management system. Moreover, we have put in place a Chief Compliance Officer and Compliance Control Standards. We also encourage fair business practices by ramping up training on ethics and compliance. Going forward, the company will continue to ensure compliance and fair trade by building a clean organizational culture and raising awareness of ethics throughout the company.

Generating Shared Value for People and the Environment

When it comes to the engineering industry, the leading sources of competitiveness are individual skills, efficient systems and an organizational strength that binds them. This is why Samsung Engineering emphasizes organizational transparency through a fair, performance-based personnel evaluation and remuneration system. We are also providing systematic training programs, encouraging self-motivated learning, and promoting a creative organizational culture. Since we highly value employees' safety during the operation of our business, we continue to strengthen the safety team and revise company guidelines following international standards. We remain committed to helping address global environmental issues such as climate change, biodiversity, and water scarcity as well as raising awareness on the environment of our future generation. Our leadership in environmental management will be enhanced by continuously focusing on energy-reducing engineering, eco-friendly procurement, and through environmental control at all construction sites.

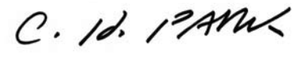
Growing in Tandem with Society

As companies grow, their influence on society and environment increases, which calls for greater corporate social responsibilities. Samsung Engineering is constantly searching for ways to meet the expectations of stakeholders in regions where we operate and to grow together with them. We are contributing to the development of the local economy by cooperating with local companies, hiring local employees, and providing vocational training to the people. Other activities reflecting the characteristics of our business include improving infrastructures in developing neighborhoods, building libraries to help people learn in countries where we do business, offering classes on the environment to children, and inviting international environmental events.

Samsung Engineering is committed to improving the transparency of its operations and enhancing value for its stakeholders through unceasing innovation. We are ready to listen to our stakeholders. I ask for your continuous support and interest.

Sincerely.

President & CEO **Choong Heum Park**



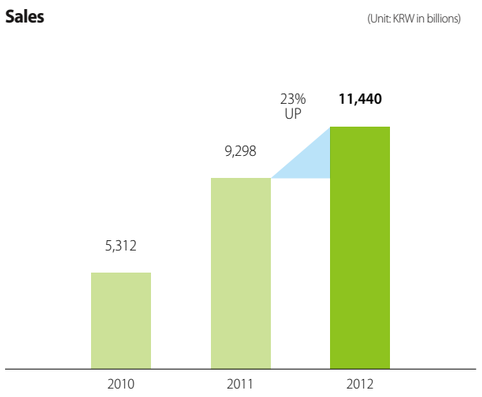
2012 HIGHLIGHTS

The year 2012 marked a significant milestone in the history of Samsung Engineering. Despite the global recession, we realized sound growth and laid the groundwork for future growth by successfully diversifying our business portfolio and market base. In 2013, we will further focus on ensuring internal stability the foundation for future growth by improving basic competence and management.

01 Continuing Robust Growth Trend

Samsung Engineering's sales in 2012 surpassed the KRW 10 trillion for the first time in its history with KRW 11.4 trillion, having exceeded KRW 1 trillion in 1996 and KRW 5 trillion in 2010. The annual average sales growth rate is 37% for the past 5 years since 2008.

Sales (Unit: KRW in billions)



New Orders (Unit: KRW in billions)

The solid growth trend of Samsung Engineering was recognized by the media at home and abroad. The Engineering News Record (ENR), a US-based construction magazine, ranked Samsung Engineering at 15th for overseas sales and 33rd for both domestic and overseas sales. And the Middle East Economic Digest (MEED) ranked Samsung Engineering 2nd for two consecutive years in terms of sales in oil and gas plant projects in the middle east region.

ENR Engineering News-Record — The overseas sales volume out of world's top 225 contractors	15th
MEED Middle East business intelligence since 1957 — The sales volume in the middle east in oil and gas projects	2nd

02 Winning more Orders for Power Plant Projects

Power Plant Contract in Saudi Arabia, December 19th

Samsung Engineering and consortium partners signed a USD 3 billion contract with Saline Water Conversion Corporation (SWCC) for the Yanbu Ⅲ power plant project in Saudi Arabia. This project is to build power plants with a total capacity of 3,100 MW for the supply of electricity to the Yanbu Industrial Complex, the largest industrial park in Southern Saudi Arabia. Samsung Engineering signed a USD 1.5 billion contract for the engineering, procurement, construction of auxiliary facilities including fuel supply equipment, and installation of core facilities such as boilers and turbine generators.

Mega Power Plant Project Contract in Kazakhstan, June 25th

We won a USD 2.08 billion (KRW 2.4 trillion) order from Balkhash Thermal Power Plant (BTPP) to build a mega thermal power plant with a total capacity of 1,320 MW in Ulken Village in Balkhash, which is the south of Kazakhstan. Samsung Engineering's scope of work includes engineering, procurement, construction, and commissioning on a lump-sum turnkey basis, and the plant will be completed in 2018.

03 Expanding Markets

Urea Fertilizer Plant Contract in Bolivia, September 13th

Samsung Engineering was awarded a USD 843 million contract for a urea fertilizer plant project by Yacimientos Petroliferos Fiscales Bolivianos (YPFB). This contract is a significant accomplishment for Samsung Engineering since this marks the first entry into South America. Upon completion, the fertilizer plant is expected to produce 2,100 tons of urea per day and play an important role in the development of the Bolivian economy.

2012 HIGHLIGHTS

04 Laying a Solid Foundation for Offshore Business

Acquisition of a 10% stake in Sungjin Geotec, January 5th

Samsung Engineering acquired over 5.2 million shares of Sungjin Geotec, an energy facility supplier and a POSCO affiliate, by investing KRW 56.7 billion. Such cooperation with Sungjin Geotec will contribute to strengthening our modularization technology, thereby enhancing our competitiveness in offshore business.

Contract for the Establishment of a Joint Venture Specializing in Offshore Engineering, October 24th

Samsung Engineering, Samsung Heavy Industries, and AMEC sealed a contract to set up a joint venture to carry out the design engineering for fixed and floating offshore platforms and subsea pipelines in Houston, US. The establishment of the joint venture, which will be operated under the name of AMEC Samsung Oil and Gas LLC (ASOG), will provide the foundation for advancing into the offshore plant business. We will leverage the joint venture for Front-End Engineering and Design (FEED) and the detailed design of the offshore production facilities to be ordered.

*AMEC is an engineering company that has provided Front-End Engineering and Design (FEED), detailed design, and project management services for various offshore development projects.

05 Reinforcing Global Operations

Expansion of Bangkok Office in Thailand, June 27th

The role of our Bangkok office, which was opened in 2004 as a supporting arm of the company, was further expanded by changing its name to Samsung Thai Engineering Co., Ltd. (STEC). STEC will serve as a global EPC business hub for Samsung Engineering in the future. Since it was awarded its first project in 1991, Samsung Engineering has successfully implemented 17 projects including 9 major contracts ordered by Petroleum Authority of Thailand (PTT). We will continue to develop new markets in Southeast Asia centering on Thailand and contribute to the economic development of the regions through diverse projects.

06 Shared Growth with Suppliers

"Partner's Day" Event with 275 Suppliers, June 25th

Samsung Engineering and 275 suppliers held a "Partner's Day" event at the Samsung Engineering Global Engineering Center in Seoul. Through the event, Samsung Engineering shared its business performance results, visions, and plans demonstrating its commitment to grow together and provide financial and technological support to our suppliers.

07 Moving into the GEC

Moving into the New Headquarters Building in Gangdong-gu, April 1st

The construction of Global Engineering Center (GEC) was completed in early 2012. The GEC is located in the Engineering Industry Complex, Gangdong-gu, Seoul, and has three buildings with total floor space of 180,000 m^2. The new headquarters building can accommodate 8,000 employees, and provides a pleasant working space with various amenities. Moreover, it is equipped with facilities including international conference room, video conference room, and high-speed information and communication infrastructures to enable employees to perform global operations. As a result, internal communication is expected to improve, creating a synergy effect.

08 Reestablishing the Organizational Culture and Value System

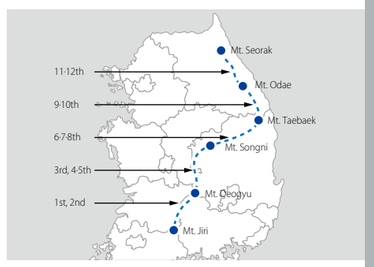
Announcement of a New Slogan "exceeding limits" Containing the Meaning of Creating Future Value beyond Our Limits and Client Expectations, April 25th

In the ceremony to celebrate the foundation day in April, Samsung Engineering announced its new slogan, core values, and code of conduct to become a centennial enterprise. The slogan "exceeding limits" and our three core values of "Continuous Challenge, Global Citizenship, and Creative Convergence" mirror our determination and commitment to achieve our objectives of emerging as a global top-tier company and generating future value.

09 Spreading the Culture of Effective Communication

Hiking Baekdudaegan Trek, April to June

Under the theme "Toward a Higher Place," 351 leaders of Samsung Engineering completed hiking on the 240 km Baekdudaegan trek from Mt. Jiri through Mt. Seorak. Through the activity, leaders had an opportunity to nurture a can-do spirit and reaffirm their commitment to promote effective communication between departments.



"Go Together" Event for Effective Communication within the Global Network, June

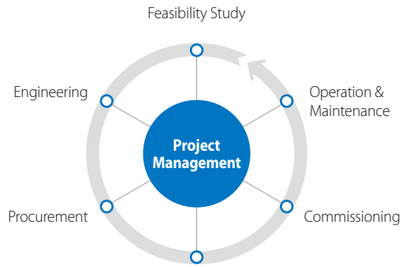
Samsung Engineering held a discussion meeting aimed at promoting effective communication among its headquarters, global offices, and project sites. Over 240 employees performing projects in India, US, UAE, Uzbekistan, and Saudi Arabia participated in the meeting and shared their challenge resulting from inefficient communication and solutions to address them.

COMPANY OVERVIEW

Samsung Engineering was founded in 1970 as a Korean first engineering company. Since then, it has accumulated 40 years of project expertise with an impressive track record worldwide. We are committed to writing new chapters for the Korean engineering industry by expanding our markets and securing technological capabilities.

Business Process

We provide a comprehensive plant engineering solution encompassing feasibility study, engineering, procurement, construction, commissioning, and operation and maintenance (O&M) services.



Project Management

Professional and systematic project management is a core competence of Samsung Engineering. We meet project schedules, ensure first-class quality, and execute projects safely by building an effective project management system that oversees all project processes.

Feasibility Study | We conduct the feasibility study to assess all aspects from optimal location conditions, harmony with the surrounding environments, resource utilization, material of supply, product selling and financing to O&M.

Engineering | We provide a comprehensive engineering service encompassing basic specifications decisions, equipment and systems selection, efficient utility systems construction, and optimum plot plan to meet process requirements.

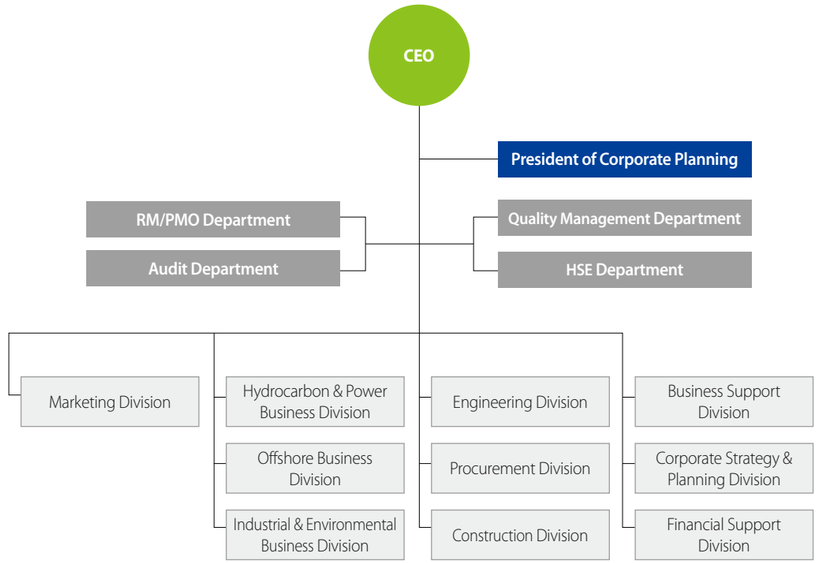
Procurement | We discover competitive suppliers, evaluate them regularly, and improve the quality of their products and services through our international procurement offices.

Construction | We set up a professional construction planning team to oversee the construction schedule and safety. We establish detailed action plans, develop new construction methods, and manage materials systematically.

Commissioning | Our commissioning service covers a comprehensive scope of activities from preparation to warranty startup. We use a host of technologies to analyze and check test runs, and have developed our own industry-specific techniques for particular plants.

Operation & Maintenance | We have experience in operation and maintenance of private-funded public infrastructure projects including sewage treatment facilities, landfills, and incineration facilities.

Organizational Chart



Business Areas

Samsung Engineering has implemented numerous large-scale projects to build hydrocarbon plants around the globe and its presence in new business domains such as industrial and environmental plants, and power and metallurgy plants are also growing significantly. We are carrying out projects of various sizes in the Middle East, Asia, Americas and even Europe.

• Hydrocarbon

Refinery

· CDU/VDU
· Heavy Oil Upgrading
· Aromatics, HDS

Gas

· Gas Processing
· LNG (Liquefaction, Terminal)
· GTC (Gas to Liquid)
· Air Separation
· Coal Gasification

Petrochemicals

· Ethylene
· EO/EG
· Fine Chemicals
· PDH
· Polymers
· Fertilizers

Hydrocarbon Upstream

· Offshore Platforms
· FPSO (FLNG)
· Pipeline
· GOSP

• Non-hydrocarbon

Power

· Thermal
(Coal/Oil/Gas Fired)

Metallurgy

· Steel Mills
· Non-Ferrous Plants
(Aluminum)

Industrial Facility

· IT Facilities
· Industrial Manufacturing Facilities
· BT Facilities

Water Treatment

· Sewage Treatment
· Wastewater Treatment
· Desalination
· Ultra-Pure/Reuse
· O&M

CORPORATE GOVERNANCE

We will protect the rights of various stakeholders including shareholders by conducting transparent and responsible management based on advanced corporate governance.

Board of Directors

BOD Composition | The Board of Directors (BOD) of Samsung Engineering consists of members with strong leadership, independence, and extensive knowledge and experience in business management. Samsung Engineering's President & CEO concurrently serves as chairperson of the board according to the BOD rules. To ensure objectivity and independence, the BOD has three inside and four outside directors. Directors are appointed during the annual shareholders' meeting after being selected by the BOD (inside directors) and the Outside Director Recommendation Committee.

Category	Name	Current Position	Duty
Inside Director	Choong Heum Park	President & CEO	BOD Chairman, responsible for corporate management
	Dong Woon Kim	Head of Engineering Division	Responsible for the engineering unit
	Byoung Mook Kim	Head of Business Support Division	Responsible for management support
Outside Director	Wan Seon Shin	Professor of Systems Management Engineering, Sungkyunkwan University	Participation in general management activities
	Sang Hoon Kim	Professor of Business Administration, Kwangwoon University	
	Ji Jong Chang	Vice President of External Relations, Hannam University	
	Young Se Kim	Professor of Economics, Yonsei University	

* As of September 2013

Independence of the BOD | The by-laws of the BOD guarantee for the outside directors the rights to receive information on management affairs and make decisions independently from the influence of the company, top management, and shareholders. Outside directors are selected from those who have extensive knowledge and experience in business management and relevant technologies. They are restricted from holding more than two external positions. To prevent conflicts of interests, those who are major shareholders of or in a special relationship with the company are ineligible to be appointed as outside directors.

BOD Meetings | In 2012, the BOD dealt with a total of 23 items by holding 9 meetings. Attendance rate of directors was 100%.

BOD Activities in 2012	
No. of BOD meetings held	**9**
No. of items laid and treated	**23**
Average BOD meeting attendance rate	**100**%

Date	Major resolutions in 2012	Remark
Jan. 05.	Participation in capital increase of Sungjin Geotec Co., Ltd.	Passed
Jan. 30	4 items including the 45th financial statements and business report	Passed
Feb. 24	Convocation of annual shareholders' meeting for FY2012 and items to be laid	Passed
Mar. 16	7 items including the appointment of a Chief Compliance Officer (CCO)	Passed
Apr. 16	Establishment of a local branch in Japan	Passed
Apr. 24	Large-sized internal transactions of products and services with subsidiaries	Passed
Jul. 18	2 items including the determination of transaction limit with the largest shareholders	Passed
Oct. 25	4 items including the determination of financial transaction limit according to the terms	Passed
Nov. 27	2 items including the enactment of regulations for executives compensation and benefit	Passed

Performance Evaluation and Compensation | Compensation for the directors and company executives are differentiated according to the result of regular and objective business target reviews and performance evaluation. To ensure the independence of outside directors, compensation resulting from performance evaluation is not provided, except wage and travel expense arising from BOD activities. The limit of compensation is annually approved by a resolution at the general shareholders' meeting. In 2012, the 2012 compensation limit was set at KRW 11 billion, and about KRW 4.93 billion was paid as remuneration for the BOD.

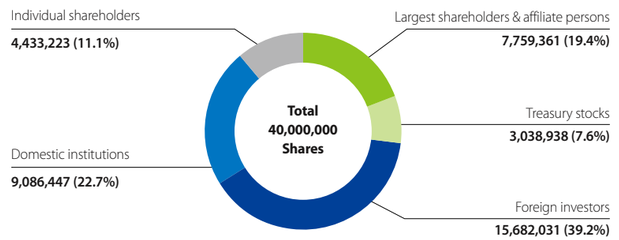
Composition and Roles of Committees | Samsung Engineering sets up the Management Committee, Audit Committee, and Outside Director Recommendation Committee under the BOD to take into account the opinions of stakeholders including shareholders, employees, and clients. The Management Committee deliberates and decides on matters and reports to the BOD as authorized by the BOD resolutions, by-laws, or operation rules to facilitate professional and efficient decision making on management issues. The Audit Committee consists exclusively of outside directors. The Outside Director Recommendation Committee nominates outside director candidates according to the relevant laws, by-laws of the company, and BOD rules.

Committee	Function	Composition	Directors*
Management Committee	Deliberate and decide on major management issues	3 inside directors	Choong Heum Park, Dong Woon Kim, Byoung Mook Kim
Audit Committee	Appoint accounting, performance, and external auditors	3 outside directors	Wan Seon Shin, Sang Hoon Kim, Ji Jong Chang
Outside Director Recommendation Committee	Recommend outside director candidates	2 inside directors 3 outside directors	Choong Heum Park, Dong Woon Kim, Wan Seon Shin, Sang Hoon Kim, Ji Jong Chang

* As of September 2013

Shares and Shareholders

Current Shareholder Structure | Samsung Engineering was established in 1970 and listed on the Korean Stock Exchange in 1996. As of the end of 2012, capital stock was KRW 200 billion, and 40 million common shares were issued. Cheil Industries Inc. is the largest shareholder with 13.1% stake, followed by National Pension Service with 9.1% and Samsung SDI Co., Ltd with 5.1%. Shareholders may directly participate in the decision making on major issues by exercising voting rights in general shareholders' meetings. Opinions presented by shareholders are reflected on management polices and operation after being reviewed and approved by the top management and the BOD.



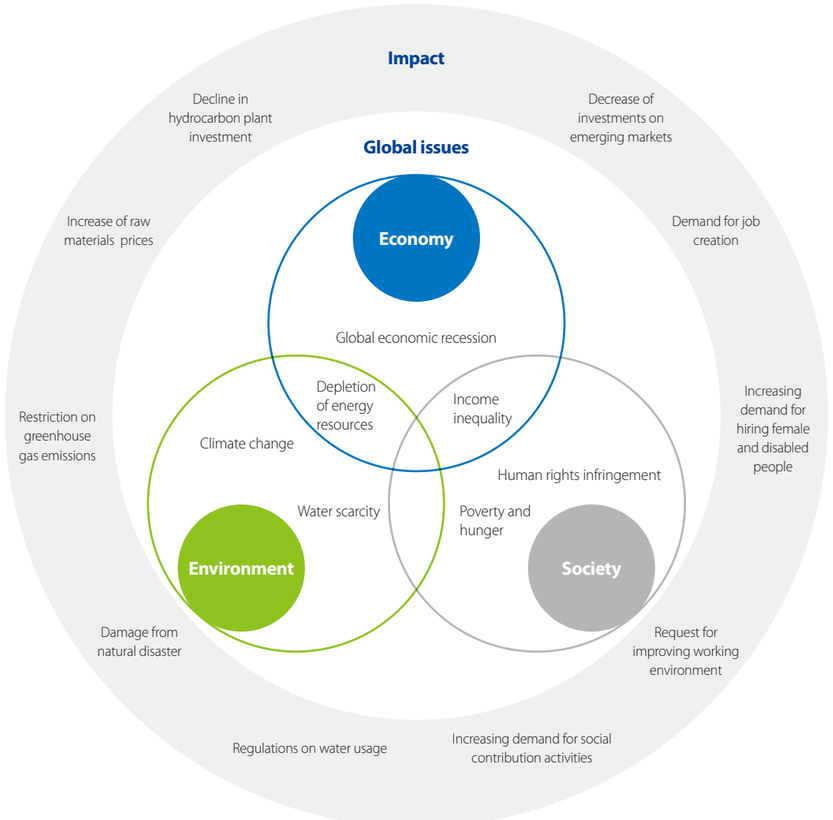
Minority Shareholders | We protect the rights of minority shareholders and reflect their opinions in the decision-making process. Minority shareholders are entitled to the right of representative action and the right to inspect the accounting records of the company pursuant to the Commercial Act. As of the end of 2012, minority shareholders had 21,296,114 shares which accounted for 53.2% of the total number of shares issued.

APPROACH TO SUSTAINABILITY

We are striving to enhance the sustainability of the enterprise as a whole. While driving economic growth at home and abroad, Samsung Engineering will continue to create shared value with all stakeholders.

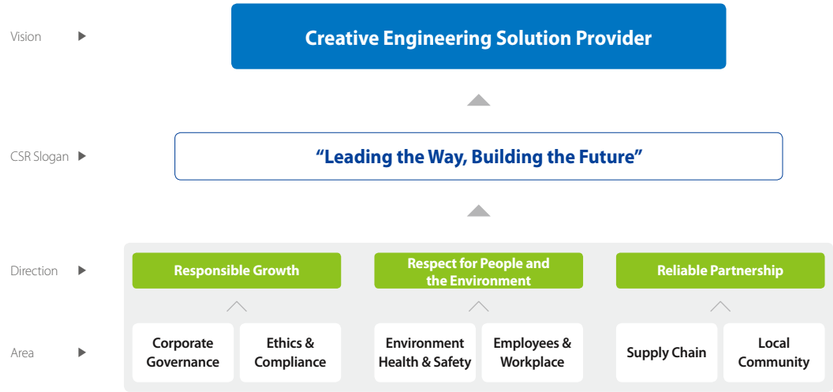
Global Issues and Challenges

Aside from the economic recession, the world is faced with income inequality, poverty, human rights infringement, resource depletion, climate change, water, and other social and environmental challenges. Samsung Engineering will take the lead in identifying these challenges and analyzing their impact on people and business to sustain its growth and fulfill its corporate responsibility as a global citizen.



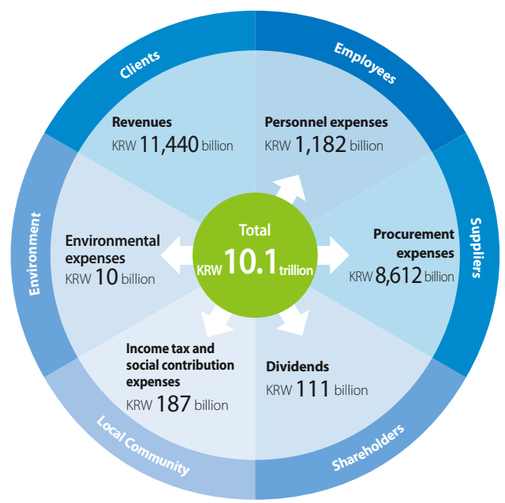
Approach to Sustainability

As a global player, we are implementing activities to tackle global issues in a systematic manner. First, we set the directions and scope of activities that are close to our business domains under the vision of "Creative Engineering Solution Provider". Second, we make sure the opinions of stakeholders are reflected when making business decisions. Third, we continue to make efforts to discover issues related to sustainability. By doing so, Samsung Engineering will grow with transparency and responsibility, respect human and environment, and realize shared growth with our partners.



Stakeholder Engagement

Distribution of Created Values | The stakeholders of Samsung Engineering are divided into clients, employees, suppliers, shareholders, local communities including governments and NGOs, and the environment and next-generations. We distribute the value created from our activities to our stakeholders and grow in tandem with them. The total amount of values distributed to employees, suppliers, shareholders, local communities, and environment was KRW 10.1 trillion, about 88.3% of total revenue in 2012.



1) Personnel expenses
Salaries, bonus payment, retirement benefit, and welfare benefit

2) Procurement expenses
Outsourcing expenses for engineering, equipments and materials, and construction

3) Income tax and social contribution expenses
Consolidated corporate tax and social contribution expenses

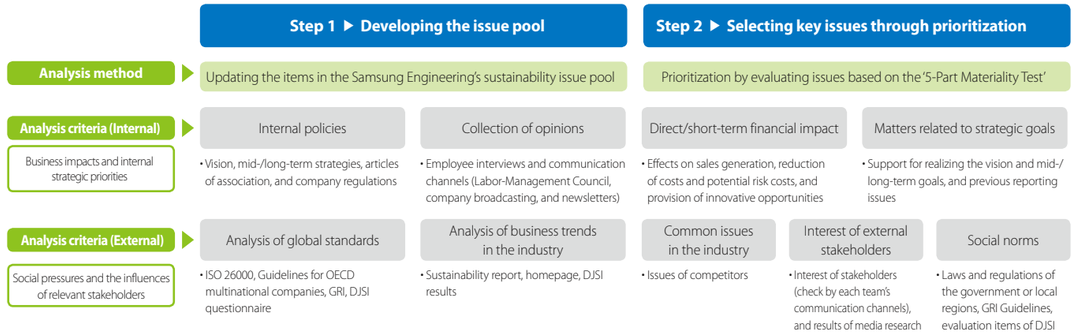
4) Environmental expenses
Environmental investment and management costs, and purchase of eco friendly products

Communication with Stakeholders | We are proactive in listening to and engaging stakeholders by leveraging diverse channels of communication. The opinions of stakeholders are reflected on our management policies, and the results are reported back to the stakeholders.

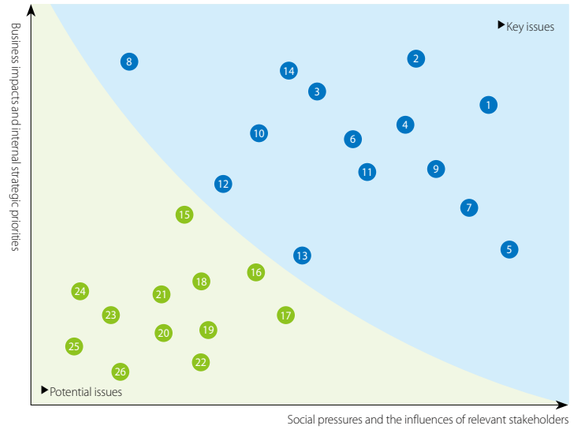
Communication Channel		Major Expectations in 2012	Applied to Management Policy
Clients	• The client portal • Marketing channels of each business unit • Customer Satisfaction Index (CSI) surveys • HSE satisfaction surveys	Enhance plant project quality	• Process to enhance capability of engineering review and verification • Establishment and operation of an independent body to verify engineering drawings
		Strengthen field safety and health programs	• Reinforcement of education on safety leadership for field supervisors • Improvement of field supervisor evaluation system • Mandatory safety training for employees to be dispatched to overseas work sites • Training to raise awareness on safety for leaders before dispatching to overseas worksites
		Employee and cultivate local people	• Joint operation of internship program with Skikda University of Algeria, and employment of the students • Expansion of local employment and cultivation of managers at the office in Saudi Arabia
		Contribute to local communities	• Donation of medical talent and various cultural events in Algeria • Opening the facilities of Saudi Arabia office to local people • Building libraries in Dahej, India
Employees	• Industrial Relations Council • Employee satisfaction survey • Intranet • Newsletter, campaign • Regular meetings	Improve the working environment	• Optimization of shuttle bus service routes • Facilities and cafeteria for multicultural employees • Expansion of maternity assistance facilities (nursery school and mom's room) • Various welfare facilities
		Promote a corporate culture for communication	• Operation of Facebook and Twitter • Events for further communication among employees working at the headquarters and local offices • Events for further communication between generations and departments
Suppliers	• Family Satisfaction Index (FSI) surveys • Meetings, training and support	Support overseas businesses	• Meetings to exchange information for suppliers that are preparing overseas businesses • Support for seeking the approval of overseas clients
		Support employment and training programs	• On-/offline education programs (construction, safety, quality, and technology, etc.) • Provision of programs to hire quality talent (joint job fair)
Shareholders	• General shareholders' meeting • IR activities • Public announcements	Enter into offshore business	• Acquisition of Sungjin Geotec shares for technological cooperation in offshore plant projects • Establishment of 'AMEC Samsung Oil & Gas, LLC', a joint venture for marine engineering business • Recruitment of a director responsible for offshore business
		Protect exchange rate risk from strong KRW	• Conservative application of exchange rate for cost estimation • Minimization of exchange rate risk through local procurement
Local Communities	• Official website • Press releases • Operation of global offices • Training regional specialists and market investigation • Social contributions to local communities	Participate in local communities where the headquarters is located	• Monthly sponsorship to students of low-income families • Volunteer works for local children centers and welfare centers
		Make public environmental and social information	• Publication of the first sustainability report • Response to demands on sustainability information disclosure from governmental organizations, NGO, institutional investors, and the press

Materiality Test

Materiality Test Processes | The materiality test starts with the process of making an issue pool by gathering internal opinions and analyzing global standard and industrial trends. Second, the issues are prioritized according to "direct or short-term financial impacts", "results form strategic targets", "common issues in similar industry", "interest of external stakeholders", and "social norms" based on the 5-Part Materiality Test of AA1000SES (2011). The issues are prioritized based on the five criteria weighted equally. The issues are classified into key issues and potential issues. The sustainability report covers performance and developments around the key issues.



Results of the Materiality Test | The materiality test revealed 14 issues of significance among a total of 26 in the pool. Safety and health improvement, project quality management, and global operation reinforcement have emerged as significant issues according to internal strategic prioritization. Moreover, issues related to partners were included as some of the major issues due to strengthened regulations and social interest. Meanwhile, the issue of institutionalization of ethics and compliance was reduced in materiality compared to 2012. This shows that our policy to build an organizational culture for ethical practice and compliance has begun to take effect.



Key issues	Materiality	Page
01 Enhancement of safety and health	↑	p 54-57
02 Project quality management	↑	p 20
03 Fair employment and cultivation of talents	–	p 58-61
04 Institutionalization of ethics and compliance	↓	p 38-39
05 Assurance of healthy workplace environment	–	p 61-62, 65-67
06 Realization of environment-friendly worksites	–	p 45-49
07 Contribution to local communities	–	p 78-79
08 Expansion of global operations	↑	p 21
09 Response to climate change	–	p 51-53
10 Entrance into new businesses and markets	–	p 18, 22-35
11 Fair selection of and evaluation on suppliers	↑	p 70-71
12 Respect for the human diversity	–	p 63-64
13 Support to and communication with suppliers	–	p 72-73
14 Risk management	↓	p 19-20

Potential issues									
15	Investment in future businesses	17	Expanding employees' volunteer works	19	Response to water scarcity	21	Promotion of suppliers' sustainability activities	23	Protection of biodiversity	25	Information security and protection
16	Establishment of sustainability management system	18	Transparent corporate governance	20	Safeguard for human rights	22	Fair transaction	24	Anti-corruption	26	Protection of shareholder rights

BUSINESS FOR SUSTAINABILITY

Samsung Engineering will strive to become an enterprise with sustainable growth through long-term perspective and responsible business practices.

Samsung Engineering: a Company with Sustainable Growth

Guided by the goal of becoming a "Creative Engineering Solution Provider," we will diversify our business portfolio and increase the percentage of non-hydrocarbon projects such as power and metallurgy plants. This will allow us to seize opportunities in emerging markets and resource-rich countries with high growth potential. In addition, we will solidify the foundation for sustainable growth by enhancing internal capabilities in project execution.

Diversification of Business Portfolio and Markets

Hydrocarbon-related projects (refinery, gas, and petrochemical plants) account for 66% of our total revenues and non-hydrocarbon projects (power, metallurgy and industrial plants, and water treatment facilities) hold the remaining 34%. In 2012, power plant business became one of the main pillars of our future growth by winning mega projects in Kazakhstan and Saudi Arabia. We will complete these projects successfully and also strengthen capabilities to perform offshore plant projects with a long-term perspective.

In 2012, we penetrated new markets such as Bolivia, Kazakhstan, and Angola. In 2013, we extend our reach to Commonwealth of Independent States (CIS) region including the Azerbaijan Republic and new markets in Latin America. In the Middle East, we will continue our efforts to enhance our market dominance. At the same time, we will thoroughly analyze the characteristics of new markets to build concrete strategies and tailored roadmaps to penetrates markets where we have not yet established our presence.

* CIS (Commonwealth of Independent States): Independent countries such as Kazakhstan and Uzbekistan which were formed during the breakup of the Soviet Union
** GCC (Gulf Cooperation Council): A political and economic union of the Arab states bordering the Persian Gulf including Saudi Arabia, UAE, and Bahrain
*** MENA (Middle East and North Africa): Middle Eastern and North African countries such as Algeria and Libya

Systematic Risk Management

The strategy to diversify markets and business portfolio has exposed us to various unexpected risks. Samsung Engineering established multi-faceted risk management system and processes to systematically respond to such risks, and manage financial and business risks efficiently.

Risk Reporting System | If a risk is anticipated or detected from our business, it is reported to a relevant department. Upon receiving the report, we make a response strategy immediately to prevent risks and put efforts not to spread the risks to other sectors. Risks that may impact the business at the enterprise level are reported to the CEO.

Financial Risk | Financial risk management is aimed at minimizing market, credit, and liquidity risks arising from our sales activities. Samsung Engineering has a financial risk management policy to closely monitor risk factors and respond to them. The risk management policy is governed by the Financial Support Division, which implements regular activities to measure, evaluate, and hedge financial risks. We also run a policy to manage the financial risks of global operations by dispatching finance inspectors to regional offices around the globe such as Saudi Arabia, Mexico, and UAE.

High-level Credit Ratings
AA- (Stable) for 3 years in a row
- Korea Investors Service
- Korea Ratings
- NICE Investors Service

Financial Risk Management Policy

Risk Factors		Definition	Risk Management Policy and Countermeasures
Market Risk	Foreign Exchange Risk	Gain and loss on foreign exchange in ordinary or monetary transactions	• Transactions by local currency • Same currency deposit and payment • Application of optimum exchange rate considering cash flow trend • Conclusion of futures contract for equipments to be ordered
	Stock Price Risk	Fluctuation of stock prices of investee companies	• Establishment and execution of countermeasures after the analysis of fluctuation sensitivity
	Interest Rate Risk	Change of cash flows related to the income and expenses of interest	• Preparation of global financing system and minimization of borrowings • Regular monitoring on interest rate trends and establishment of countermeasures
Credit Risk		Counterparty risk of failing to implement contracts	• Regular evaluation on financial status and credit • Receipt of bank guarantee over optimal credit ratings
Liquidity Risk		Risk of not keeping adequate liquidity	• Adequate liquidity estimation and management by regularly predicting earnings and expenses and considering the expiration of financial products and cash flow
Capital Risk		Increase of debt-to-equity	• Maintenance of sound financial structure by monitoring financial ratios such as debt-to-equity and net • borrowing ratio every month

* Debt-to-equity is the total liabilities divided by the total shareholders' equity, and the data are based on financial statements.

Business Risk | Samsung Engineering manages business risks by establishing and observing reasonable processes at each stage of marketing, proposal, and project execution. The results from each process are managed and monitored through respective checklists and systems.

	Marketing	Proposal	Project
Major Risk Factors	Market, product, customer, competitor, licensor, agenda, and internal capability, etc.	Construction period, exchange rate, tax, bid condition, estimated value, characteristics of client and product	Construction period, cost control, VOC, quality management, suppliers' capability in engineering, procurement and construction, safety, local regulations, and labor condition
Risk Management System	Global Marketing Intelligence System (GMIS)	Risk & Opportunity Management (ROM)	Risk & Opportunity Management (ROM)
Response to Risk	1) Hub & Spoke system and regional specialists 2) Checklist management 3) Compliance with process • Selection of regions • Preliminary assessment • 1st briefing session • Field survey • Establishment of action plans • 2nd briefing session	1) Inspection of new markets and countries 2) Preparation and management of proposal check-list 3) Compliance with process • Deliberation meeting • Strategic meeting for proposal • Implementation of proposal • Determination of and report on bid price (bid risk review meeting) • Report on new orders and results	1) Risk management workshop at the beginning of project execution 2) Evaluation and analysis of risks by using the risk mapping method 3) Regular monitoring of productivity and profit conditions 4) Compliance with process • Preparation of engineering, procurement and construction plans • Prospect of budget and profits • Inspection of executions • Report on project completion • Evaluation

Continuous Quality Management

Leveraging the outstanding human resources and technological competence, we provide our clients with satisfactory products and services and contribute to the well-being of humankind. We will ensure greater satisfaction for our clients by strengthening project quality management activities in 2013.

Quality Management System | Samsung Engineering's quality management system was designed to meet all the requirements of ISO 9001:2008 and KS Q ISO 9001:2009. All of our organizations and employees clearly grasp the system and quality control policy, and they strive to implement the policy properly. The quality targets include 1) improving client satisfaction with project execution, 2) attaining continuous improvement of work processes, and 3) improving project work quality. The quality management system is designed to promote the continuous improvement of business performance, and the operation of the system is documented and managed constantly.

COPQ Management | Quality issues at Samsung Engineering are also managed from the perspective of cost. All employees participate in the Cost of Poor Quality (COPQ) program to minimize cost increases. The program helps us define and categorize quality-related costs and find possible solutions to deal with specific issues.

Quality Audit | We are conducting internal and external audits for our projects in accordance with the quality management system. These audits are performed in various formats such as jointly with clients, exclusively in-house, or through a third party. They allow us to identify and correct major problems, helping reduce client concerns.

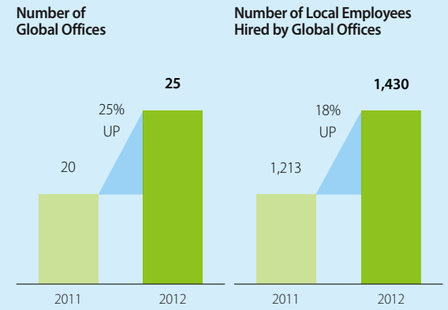
Client Satisfaction Survey | Samsung Engineering conducts the client satisfaction survey regularly to solve clients' complaints and improve our business processes. The results are managed as the Customer Satisfaction Index (CSI). The Quality Management Department is responsible for surveying the clients on their satisfaction at each stage of engineering, procurement, construction, and handover. The department analyzes the level of client satisfaction and complaints about a project and shares them with the person in charge of the project for improvement.

Strengthening Global Operation

Samsung Engineering has entered 40 countries around the globe. Overseas sales accounted for 80% of the total in 2012. We will continue to pursue strategy to strengthen global operation based on the understanding that utilizing local human resources is an essential element for boosting the competitiveness of the company.

Global Office Status in 2012 | A total of 25 global offices are operated around the world as of the end of 2012. The number of local employees working at our offices around the globe stands at 1,430 or 16.2% of the total employees of the company.

Expansion of Office in Thailand | Samsung Thai Engineering Company (STEC), former Thailand Office, was expanded to an EPC business office in June 2012. Through quantitative expansion and localization, STEC will increase its EPC capacity and explore new business opportunities in Southeast Asia. As of the end of 2012, STEC had 122 employees including 79 engineers and 22 employees for project management and construction.



Global HR Department | Since 2011, the newly created Global Operation Support Team has implemented various localization strategies by increasing local employment and expanding global outsourcing. In late 2012, the Global HR Department was established under the mission of securing outstanding human resources around the globe and utilizing and managing global employees.

Management of 7 Major Global Offices | Samsung Engineering selected 7 multi-functional offices around the globe and set goals for them. These global offices will strive to achieve 30% of the total engineering capacity as well as expand new orders and local workforce by 2020. To meet the target, they adopted the Management by Objective (MBO) program, under which they review the quarterly progress, draw issues for improvement, and make reports to the top management.

Major 7 Global Offices	Country	Role	Major MBO Items	No. of Local Employees	
				2012	2013(E)
Samsung Engineering India Private Ltd.	India	Engineering	• Detail design execution rate • Engineering work sharing with the HQ	672	675
Samsung Engineering America Inc.	US	Engineering	• Basic execution rate • Number of developed projects	115	118
Samsung Engineering Saudi Arabia Co., Ltd.	Saudi Arabia	Project execution support	• Project schedule management and achievement of zero accident • Number of IK-EPC projects	321	309
Samsung Engineering Co., Ltd. Abu Dhabi	UAE	Project execution support	• Project schedule management and achievement of zero accident • Establishment of workforce pool in the Middle East	63	59
Samsung Thai Engineering Co., Ltd.	Thailand	Project execution support (newly started in 2012)	• Project schedule management and achievement of zero accident • Secure capability for EPC projects	122	125
Grupo Samsung Ingenieria Mexico, S.A. De C.V.	Mexico	Project execution support in Latin America	• Project schedule management and achievement of zero accident • Number of developed project execution	43	47
Samsung Engineering Construction (Shanghai) Co., Ltd.	China	Procurement support	• Project schedule management and achievement of zero accident • Rate of secured vendors	50	75

REFINERY

Business Outlook and Strategy

Refining refers to the processes to transform crude oil into petroleum products such as gasoline, naphtha, kerosene, diesel oil, heavy oil, and asphalt. These products are used as fuel or materials for manufacturing various petrochemical products. The rise of emerging economies including China and India is expanding the demand for transportation fuel. This, together with the recent trend to strengthen environmental regulations, means that global demand for desulfurization facilities will continue to grow.

Samsung Engineering has established itself as a global top-tier company in the refinery plant market after winning a series of contracts from Saudi Arabian Oil Company (Saudi Aramco), Abu Dhabi National Oil Company (ADNOC), and other major multinational petroleum companies. Starting from the Diesel Hydro-Treater (DHT) project contract with Saudi Aramco, we have succeeded in winning large-scale projects worth over USD 1 billion in Saudi Arabia, UAE, and Algeria. Building on our track record, we aim to grow into an engineering company specializing in the refinery plant area with the capacity to deal with sophisticated refining facilities and refinery complex.

Performance Highlight in 2012

	Project	Client	Country	Significance
New Orders	Luberef Yanbu Refinery (LYR) Expansion	Luberef*	Saudi Arabia	Orders from existing clients
	Carbon Black & Delayed Coker	TAKREER	UAE	Orders from existing clients

* Luberef is a subsidiary of Saudi Aramco.

TAKREER RRE PACKAGE #3 OFFSITE & UTILITIES PROJECT

- Client: TAKREER, Abu Dhabi Oil Refining Company
- Location: Ruwais, UAE
- Period: 2009. 12 ~ 2014. 02

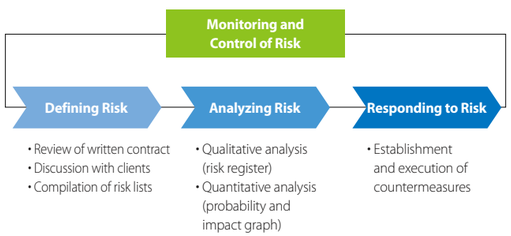
Capabilities to Manage Mega-Scale Projects

A USD 10 billion project is underway in Ruwais, 250 km south of Abu Dhabi, to build a refinery facility with daily capacity of 400,000 barrels. Samsung Engineering is responsible for constructing large-scale seawater intake facilities and utility supply facilities and managing interfaces to get the entire project successfully completed. We are leveraging our integrated project management system that oversees all project processes. This system enables us to manage schedule and workforce efficiently throughout the project execution. In addition, we set up a new organization to coordinate the work between facilities necessary for the successful completion of the entire refinery plant.

Systematic Project Risk Management

Once a contract is signed, we review the contract and redefine the risks that have been managed during the marketing and proposal stage. Such risks are assessed through our knowledge-based risk analysis. For this project, we conducted a schedule sensitivity and scenario analysis at an early stage, and have managed potential risks. Moreover, we monitor material market conditions in real time through the Global Procurement Market Intelligence (G-PMI) system to manage the unit cost effectively.

Project Risk Management System



Thorough Environmental Management

Our primary principle in executing projects is thorough environmental protection and management. We not only comply with the client's environmental standards but also voluntarily adopted an aggressive environment & safety management policy to minimize environmental impact. The client, TAKREER, a subsidiary of Abu Dhabi National Oil Company (ADNOC), requires us to follow their environmental regulations and the results of the Environmental Impact Assessment (EIA). They comprehensively define all possible areas where the project may have an impact: air quality, biodiversity, archeological relics, soil quality, road traffic, water collection, and solid waste. As such, we are committed to implementing the Construction Environment Management Plan (CEMP) we established, which includes ways to mitigate key findings from the EIA and other potential concerns.

BAPCO LUBE BASE OIL PROJECT

- Client: Nogaholdings, The Bahrain Petroleum Company
- Location: Sitra, Bahrain
- Period: 2008. 9 ~ 2011. 11

Continuous Quality Management

In May 2012, Samsung Engineering won the "Quality Awards for Projects 2012*" in oil and gas plant area from the Middle East Economic Digest (MEED) after building the BAPCO Lube Base Oil plant that produces 400,000 tons of lube base oil. Having completed in 2011, the plant is currently in commercial operation. The award is an official recognition that Samsung Engineering executed the project excellently and enhanced clients' satisfaction through continuous quality management despite unfavorable conditions with the project site located in coastal area right next to a 70-year-old plant.

* One of the most prestigious project awards that recognizes best practices in all areas of engineering, construction, project schedule, and safety among completed projects for the year in the GCC region.

GAS

PMI Award Winning for GSP No. 6 Project in Thailand

In December 2011, Samsung Engineering won the 2011 Distinguished Project Award from the Project Management Institute (PMI) in the US for its excellent work in Gas Separation Plant (GSP) No. 6 project in Thailand. The PMI award recognizes Samsung Engineering's superior performance in project management and core competency of plant construction. Project management refers to the successful integration of engineering, procurement, and construction processes and risk management to deliver projects safely, in a timely manner, and within the budget. The GSP-6 project won the award for the first time as a Korean EPC contractor for its successful completion of the project even under unfavorable circumstances.

* Project Management Institute (PMI), the world's leading non-profit association in the project management profession, establishes the standards for project management worldwide.

Business Outlook and Strategies

The gas plant industry is a business area for building facilities that produce, supply, and refine natural gas. It is a capital- and technology-intensive industry and is broadly divided into three areas: Gas Separation Plant (GSP) for removing impurities from natural gas; Gasification Plant for producing synthesis gas from organic materials containing CO_2, and; Gas-To-Liquid (GTL) Plant for synthesizing value-added diesel and gasoline from natural gas. From a long-term perspective, global gas demand is expected to rise 1.6% per annum between 2010 and 2035, and investment in gas facilities in North America will increase thanks to unconventional gas production represented by Shale Gas in the US. Furthermore, there are many hidden opportunities in new markets such as South America and CIS countries.

Samsung Engineering has successfully completed the construction of five gas plants ordered by the state-run PTT Public Company Ltd. in Thailand since 1994. In 2010, we successfully completed two world's biggest gas separation plants: Ethane Separation Plant (ESP) and Gas Plant Package-6 (GSP-6). Following such feat, Samsung Engineering signed the Shah gas field construction contract amounting to USD 1.5 billion from Abu Dhabi Gas Development Co., Ltd., in 2010 and won the package deal of multi-complex gas handling and gas and oil separation facilities amounting to USD 2.8 billion from Saudi Aramco in 2011. With all those projects underway in 2013, we plan to broaden our business presence in the increasingly expanding gas plant market by focusing on strengthening the competitiveness through human resources development, cost reduction, and process innovation.

Performance Highlight in 2012

	Project	Client	Country	Significance
New Orders	GASCO Nitrogen Generation & Injection (NGI)	Abu Dhabi Gas Industries Ltd. (GASCO)	UAE	Development of a new client
	PTT Power Generation & Heat Recovery (PHR3)	Petroleum Authority of Thailand (PTT)	Thailand	

SPECIAL FEATURE

01

Environment-friendly Project Execution

Stakeholders' demands for execution of projects focusing on eco-friendliness are widely increasing today. To respond to such demands, Samsung Engineering is committed to developing and conducting environment-friendly projects in the hydrocarbon area as well as water treatment.

CO_2 CAPTURE & INJECTION PLANT

- Client: Saudi Aramco, Saudi Arabian Oil Company
- Location: Hawiyah & Uthmaniyah, Saudi Arabia
- Period: 2011. 04 ~ 2013. 08

Recently, the world has been proactively engaged in reducing greenhouse gas (GHG) emissions to respond to climate change, and, in particular, Middle Eastern countries with high fossil fuel consumption have been focusing on developing technologies to reduce the emissions of CO_2 in keeping with the global push to mitigate emissions. As a huge amount of CO_2 is generated during the process of treating oil and gas, technologies to capture, transport, and store CO_2 are utilized to reduce and reuse them.

The CO_2 Capture and Injection Plant project refers to the process through which the CO_2 generated during the treatment of liquefied natural gas is extracted and collected in high density, and then forcibly injected into nearby oil fields. The enhanced oil recovery technology is applied to this project, which contributes to improving resource utilization by reducing GHG emissions and increasing oil recovery rate in the field.

This is the first-ever project for CO_2 capture and injection facilities for Saudi Aramco. This company has plans to apply this technology to its other plant projects and place additional orders. As the plant will capture 45 Million Standard Cubic Feet (MMSCF) of CO_2 upon the completion, it is expected to reduce the GHG emissions by 2,500 tons daily and by 825,000 tons yearly assuming 330 days of operation.

NITROGEN GENERATION & INJECTION PROJECT

- Client: GASCO, Abu Dhabi Gas Industries Ltd.
- Location: Habshan, UAE
- Period: 2011. 10 ~ 2014. 08

Recently, the hydrocarbon plant industry has steadily increased new orders to expand oil and natural gas production in existing oil and gas fields. This is called the Enhanced Oil Recovery (EOR) project, which injects surfactant, water, or inert gas into the existing oil and gas fields or supplies heat to the fields.

The Nitrogen Generation & Injection (NGI) project of Samsung Engineering does not use surfactants, water, and heat, which could have adverse impact on the environment. Instead, we increase oil production with the pressure from collecting nitrogen in high density and by injecting the gas into gas fields. It incurs higher construction costs and requires more sophisticated technologies compared to other enhanced recovery methods, but the number of new orders through the project is steadily rising in many countries since the project is eco-friendly and highly efficient. Samsung Engineering will strive to execute environment-friendly projects by attaining satisfactory results in NGI project.

PETROCHEMICALS

Business Outlook and Strategies

The petrochemical plant project is a business area for constructing facilities that produce petrochemical products such as olefins and aromatics from natural gas or naphtha. These products are also served as the materials for making synthetic resin, fiber, and rubber. The ethylene plant market seems to be shrinking for the time being, but the consumption of ethylene is expected to grow 3.5% between 2011 and 2025 due to gradually increasing demand for plastic product from emerging economies. This figure will be pretty similar to the global growth rate of Gross Domestic Product (GDP) during the same period. Meanwhile, the fertilizer plant market is predicted to maintain relatively steady growth, backed by increasing food production.

Samsung Engineering has conducted petrochemical plant projects on the global stage since 1990. Our major performances include the world's largest ethylene plant, ammonia plant, and PDH/PP plants in Saudi Arabia, and fertilizer plant, polypropylene plant, and EO/EG plants in Asia and Africa. Based on extensive experiences, Samsung Engineering has been exploring new markets. Following the US market in 2010 and the Uzbekistani market in 2011, we entered into the Bolivian market by winning a fertilizer plant order in 2012. The goal for 2013 is to enter the Central Asian market and solidify our leading position in the petrochemical plant area.

Performance Highlight in 2012

	Project	Client	Country	Significance
New Orders	YPFB Ammonia /Urea	Yacimientos Petroliferos Fiscales Bolivianos (YPFB)	Bolivia	First entrance into Bolivia among Korean construction companies
	SMP Polysilicon	SMP*	Korea	High-efficiency plant applied by Fluidized Bed Reactor (FBR), MEMC's next generation Polysilicon production method
	STC No.2 Aromatics	Samsung Total	Korea	
Completion	Honam HP CEM 2	Honam Petrochemicals	Korea	
	OPaL DFCU/ AU Plant	ONGC Petroadditions Ltd.	India	First Large-scale petrochemicals plant project for ONGC
	SOCC Aluminum Alkyls	SOCC**	Saudi Arabia	Orders from existing clients

* A joint venture company between Samsung Fine Chemicals and MEMC of the US
** A joint venture company between Saudi Arabia Basic Industries Corp. (SABIC) and Albemarle Corp.

YPFB AMMONIA/UREA PROJECT

- Client: YPFB, Yacimientos Petroliferos Fiscales Bolivianos
- Location: Cochabamba, Bolivia
- Period: 2012. 11 ~ 2015. 10

Executing the Largest Project in Bolivia

In September 2012, Samsung Engineering was awarded the USD 840 million contract to build ammonia and urea plants in Cochabamba, Bolivia by YPFB, the state-run oil and gas company. As the largest production facility in the history of Bolivia, it will produce 2,100 tons of urea every day; thus contributing greatly to the Bolivian economy. President Evo Morales attended the contract-signing ceremony and expressed his interest and expectations with regard to the contributions of the project to the local community and the country in terms of employment, infrastructure improvement, and export increase. The capacity of the plant is equivalent to increasing arable areas from 25 Mha to 105 Mha in Cochabamba, a level that can spark an agricultural revolution in Bolivia.

Contract Signing Ceremony of the fertilizer plants in Bolivia, September 2012

Contribution to the Local Economy through Local Procurement and Local Employment

The fertilizer plant project is expected to contribute not only to increasing production and exports in Bolivia but also to creating opportunities for local residents and improving infrastructure. An estimated 85% of the jobs created during the project will go to Bolivian people. Samsung Engineering plans to establish a vocational training center in Cochabamba and provide programs to help local people hone their competitive edge and enhance productivity. The topics of the training programs will include drawing, reading (based on quality of materials, sizes, types, and methods), quality control, safety management, and other knowledge-based skills as well as practical exercises such as plumbing, welding, and electrical instrument control.

Building Libraries in Bolivia

In partnership with UNICEF, Samsung Engineering made a commitment to investing part of its earnings from the project in building libraries in the state of Cochabamba. Currently, only 86% of children enter elementary schools in Bolivia, whereas only 56% complete high school education. In particular, in Cochabamba where the plant is being built, the development quotient (DQ) of youth stands at 0.62, which is the 4th highest in Bolivia, making it one of the most vulnerable states in the country. Less than 45% of the children in this region finish elementary education due to poverty. This exposes young children to violence, labor exploitation, trafficking, prostitution, and drug addiction.

Against this backdrop, we plan to build a library and provide basic education and information to the children in this region. The library will be our channel for providing continuous support for the children in Cochabamba to improve their quality of life and develop capabilities. Once completed, the library is expected to contribute to protecting local children and narrowing the information and income gap between the rich and the poor by providing internet access. About 200,000 local residents including teachers and students are expected to use the library.

POWER

Business Outlook and Strategies

The power plant industry is a business area for building facilities that produce electrical power. In most cases, projects are massive-scale investment orders by government agencies or private developers. The power demand is predicted to grow steadily at an average of 2.2% per annum between 2010 and 2035. Samsung Engineering's main expertise lies in middle- and large-scale thermal power plants. We have implemented numerous projects to build co-generation and district heat and cooling facilities since the 1990s. The combined cycle power plant project that we received from the Comision Federal de Electricidad (CFE) of Mexico in 2010 marked our first entry into the global power plant market. Since then, we won significant power plant projects from Saudi Aramco in 2011, followed by Yanbu III plant from Saudi Arabia and the Balkhash Thermal Power Plant (BTPP) project from Kazakhstan. Through the series of orders awarded to Samsung Engineering, power plant has rapidly grown into a main pillar of non-hydrocarbon business for the company.

To implement middle- and large-scale projects, we are building networks and cooperative relations with major companies and investors in the industry. In addition, we are focusing our resources on winning orders from government agencies and Independent Power Plant (IPP) operators. In the future, our power plant business portfolio will be extended to the IPP operation with financing capability as well as EPC projects. Furthermore, we will drastically increase professional human resources and strengthen cooperative networks with global major players in the industry. Through such efforts, the power plant business will be a pillar of future growth engines of Samsung Engineering.

Performance Highlight in 2012

	Project	Client	Country	Significance
New Orders	Balkhash Power Plant	Balkhash Thermal Power Plant Joint Stock Company (BTPP JSC)	Kazakhstan	Entrance into a new market and a large project amounting to USD 2.1 billion
	Yanbu Power Plant Ph.3	Saline Water Conversion Corporation (SWCC)	Saudi Arabia	A large project amounting to USD 3 billion (Half portion, USD 1.5 billion, for Samsung Engineering)
	Mexico Intergen SLP Power, Mexico Intergen ACS	Intergen	Mexico	Development of a new client

NORTE II COMBINED CYCLE POWER PROJECT

- Client: Commission Federal de Electricidad (CFE)
- Location : Chihuahua, Mexico
- Period: 2011. 01 ~ 2013. 08

First Korean Engineering Company in the Mexican Power Plant Market

In August 2010, Samsung Engineering was awarded an order to build the Norte II Combined Cycle Power Plant in Mexico in consortium with Korea Electric Power Corporation (KEPCO) and Samsung C&T Corporation. This is significant for us since it was the first power plant project that we implemented overseas as well as the first project performed by a Korean company in the Mexican power plant market. Furthermore, it is recognized as an exemplary private-public cooperation case wherein a Korean company executes all processes including business development, financing, engineering, procurement, construction, and operation. Through the project, we demonstrated our capability to complete a project and built the foundation for winning additional orders including the Intergen Power Plant project in Mexico and megawatt power plant projects in Saudi Arabia and Kazakhstan. Currently, the Norte II Combined Cycle Power project is in the commissioning stage.

Saving and Protecting Water Resources by Applying the ZLD System

The Norte II Combined Cycle Power Plant project site is located in the inland state of Chihuahua, Mexico. The water to be used in the power plant is sourced from a well 2,668 meters away from the project site, and securing a water resource is critical for the operation of the power plant in the region. The Zero Liquid Discharge (ZLD) system is leveraged to recycle the wastewater generated from the normal operation of the plant by removing dissolved solids from the wastewater and returning distilled water to the facility. By leveraging the ZLD system, Samsung Engineering minimizes environmental impact from wastewater effluents while helping the facility secure reliable water resources.

ZLD System

"Greenhouse Program" for Protecting Biodiversity

The Secretariat of Environment and Natural Resources (SEMARNAT) of Mexico made the flora relocation program as a prerequisite for the project. Under the name "Greenhouse Program," we identified flora that need to be protected in the Chihuahua desert and carried out activities to relocate them. The flora rescue & relocation program consisted of the following processes: 1) defining species and checking the location; 2) removing and transporting plants; 3) planting them in a new location, and; 4) performing monitoring and maintenance. At least 13 species of flora were identified as those requiring relocation in terms of ecological materiality, anthropological interest, and environmental analysis.

1, 2 Flora required to be moved
3, 4, 5, 6 Preservation activities of flora

HYDROCARBON UPSTREAM

Strategies for Entering the Offshore Plant Business

Samsung Engineering declared to become a major player in the offshore plant market which is expected to show constantly rapid growth and launched the Offshore Business Division at the end of 2012. Clients of the offshore market prioritize safety, verified technology, quality, and experience rather than price. As such, Samsung Engineering is making efforts to enhance engineering and management capabilities in offshore projects by leveraging AMEC Samsung Oil & Gas LLC(ASOG), which was established in October 2012 under the joint venture contract between AMEC, Samsung Heavy Industries and Samsung Engineering. We will continue to make efforts to become a major player in the offshore plant business through differentiated competence and thorough research and preparation activities.

INTERVIEW

"The offshore market is expanding in West Africa, North Sea, Southeast Asia, Middle East, Caspian Sea, and Australia, whereas new markets started to be born in East Africa, Mozambique, and Russia. At this critical time, expanding our market dominance is of vital importance. With about 30 years' experience in implementing offshore projects, I can apply an effective, practical approach to all processes needed for entering and operating in the offshore market. By doing so, I will contribute to diversifying the business portfolio and nurturing a new growth engine for Samsung Engineering."

Vice President Michel Laine
(Head of the Offshore Business Division)

Business Outlook and Strategies

The upstream plant industry is a business area for building facilities that manufacture oil and petroleum products as well as facilities that explore and transport crude oil. Major products in this business are the gas oil separate plant (GOSP), floating production, storage, and offloading (FPSO) plants, and offshore platforms. The global crude oil production volume is estimated to rise from 85 million barrels per day in 2011 to 97 million barrels per day by 2035. An estimated 46% of such increase will be attributable to ramping up oil production in Iraq.

Samsung Engineering penetrated the field of hydrocarbon upstream plant in 2010 by winning its first order of GOSP from PCSB (Petronas Carigali Sdn Bhd) in Malaysia. Since then, our involvement in this area has been boosted by winning a series of additional orders. In 2011 alone, we were awarded the Shaybah project in Saudi Arabia, Banyu project in Indonesia, and West Qurna project in Iraq. Going forward, we will strengthen our technological competence, accumulate experience, and build a comprehensive product portfolio in the field of offshore plant projects.

METALLURGY

Business Outlook and Strategies

The metallurgy plant industry is a business area for minimill* construction, integrated steel mills, direct reduction iron (DRI) plants, and other metallurgy production facilities. From the short-term perspective, the metallurgy market is predicted to slow down due to the current economic recession. Nonetheless, it is expected to establish a steadily growth trend in the long run. Samsung Engineering has accumulated track records from metallurgy plant projects such as POSCO utility project in Mexico, Hyundai Steel sintering plant and Hyundai Steel gas facility project in Korea, and Steel Authority of India Limited, India Iron & Steel Company (SAIL IISCO) steel mill in India. In 2010, we won the steel mill project in Bahrain, which is currently rolling out 1.3 million tons of section steel annually. Moreover, in the non-ferrous plant area, we are implementing four aluminum projects ordered by Ma'aden, the largest mineral development company in Saudi Arabia.

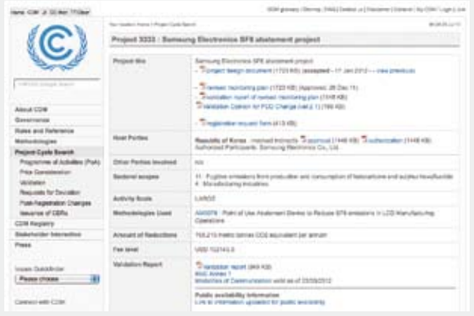
Samsung Engineering will continue to expand its markets in 2013 while staying focused on the Middle East. We are committed to expanding our business opportunities by leveraging cooperation with the relevant companies and creating synergy effects. Moreover, we will build an integrated project execution model covering the development of mineral resources to the operation of facilities. Meanwhile, we will start building up value chain capabilities in the metallurgy plant area encompassing the minimill, DRI, and integrated steel mill areas.

* Minimill is a method for fabricating molten metal in an electric furnace matte smelting using scrap metal instead of bituminous coal

INDUSTRIAL FACILITY

Earning CER Credits for SF_6 Decomposition Facilities

The LCD SF_6 decomposition project of Samsung Electronics was credited for Certified Emission Reduction (CER) according to UNFCCC's international standard in September 2012. The UN monitored the facility for reducing greenhouse gas emissions from LCD production processes for 130 days and issued 200,000 tons of CER credits. This feat will serve as a momentum for us to reduce greenhouse gas emissions further and promote green management. Moreover, we will lay the groundwork for entering new markets by building experience and networks in the green business area.



Business Outlook and Strategies

Industrial plants business is an area for building electrical and electronic equipment, civilian production plants, and other industrial infrastructure and utility facilities. This industry is sensitive to corporate facility investment, economic activities of other industries and governments' investment in social overhead capital. The industrial plant market is a promising area given the increasing demand for manufacturing facilities in China, Vietnam, the Middle East, and Africa. The IT business is one of the main focus areas for Samsung Engineering, which holds the global top-level technology in display assembly lines, semiconductor factories, extra-high voltage power facilities, and secondary cell plants. We secured expertise in the next-generation display project by completing Samsung Display's AMOLED assembly line. Likewise, we are obtaining tangible results in the secondary batteries for hybrid electrical cars, high-efficiency LED, and other low-carbon industries including renewable energy domain. In the future, Samsung Engineering plans to expand its business portfolio to photovoltaic, carbon fiber, pharmaceuticals, and other new product markets by leveraging its experience in the clean room business. Currently, we are implementing a strategy to seek new growth engines in the bio-business area.

In 2012, we penetrated the Angolan market by winning the rehabilitation textile plant project from Marubeni Corporation, a Japanese firm, and bagged Dong-A Pharmaceutical's bio project, which will be implemented based on our experience in the Biologics Edison Package 2 project. Our goal for 2013 is to penetrate new markets and secure new clients by building a system for immediately responding to the various needs of clients and enhancing competitiveness on the global stage based on accumulated expertise and capabilities.

Performance Highlight in 2012

	Project	Client	Country	Significance
New Orders	Rehabilitation of Textile Plant Ph.2, Ph.3	Marubeni Corporation	Angola	Entrance into a new market
	DM Bio Plant	Dong-A Pharmaceutical	Korea	Product diversification (Bio plant)
Completion	SMD A2 Project	Samsung Display	Korea	Shortening construction period

WATER TREATMENT

Wastewater Reuse- M Project in China

Samsung Engineering braces for the increase of water demand in an industrial complex by utilizing the wastewater reuse technology. In this Chinese project, a wastewater reuse technology (SEMBR®+R/O) is being leveraged to solve the water supply shortage issue in the semiconductor industry.

- **Client: Samsung Electronics**
- **Location: Shensi, China**
- **Period: 2012. 10 ~ 2013. 12**
- **Treatment Capacity: Wastewater Treatment: 25,000 m^3/day**
  Wastewater Reuse: 10,000 m^3/day
  Deionization: 10,000 m^3/day
  Roof Exhaust: 160,000 CMM

Business Outlook and Strategies

The environmental plant industry is a comprehensive business area ranging from engineering, procurement, to construction of environmental facilities for water supply and wastewater treatment to the operation of such facilities. The scope of activities in this industry continues to broaden. In particular, backed by tougher regulation and increase of investment in sustainable growth, the water supply and wastewater treatment market is expected to grow steadily. A UN report estimates that a 3-billion population will face shortage of fresh water by 2025, with an estimated 20% of countries around the globe to suffer from severe water shortage. The water scarcity issue provides us with business prospects as well as opportunities to fulfill our corporate social responsibilities.

Since it first dabbled in environmental plant projects in the 1970s, Samsung Engineering has completed the construction of numerous sewage treatment facilities. Our market share continues to increase in the deionization and wastewater reuse projects. As examples of private-funded projects, we built and started operating the Dongbu Sewage Treatment plant in Busan and Mansu Sewage Treatment plant in Songdo, Incheon. Since 2010, we have been engaged in the project of building 14 sewage treatment facilities in Yongin, the largest of its kind in Korea, on a Build-Transfer-Operate (BTO) basis. Globally, based on accumulated experiences and technologies for more than 40 years, we are currently operating the wastewater treatment plant in the ICAD industrial complex in Abu Dhabi, which was ordered in 2007. In 2011, Samsung Engineering won the order to build and operate for 24 years the Muharraq sewage treatment facility in Bahrain. We will continue to sharpen our competitive edge by diversifying water treatment plant projects and developing core technologies. At the same time, we will increase the share of BTO projects gradually and strive to expand our overseas markets.

Performance Highlight in 2012

	Project	Client	Country	Significance
New Orders	China M Project	Samsung Electronics	China	Our largest project in China

MUHARRAQ SEWAGE TREATMENT PLANT

- Client: Ministry of Works
- Location: Muharraq, Bahrain
- Period: 2011. 02 ~ 2014. 10(EPC) 2014 ~ 2037(O&M)

Korea's First Entrance into Overseas BOO Business

In February 2011, the Muharraq STP Company BSC, a joint venture led by Samsung Engineering, signed a contract with Bahrain's Ministry of Works to construct a sewage disposal plant in Muharraq, northeast of the capital city of Manama, Bahrain, on a Build-Own-Operate (BOO) basis. The contract stipulates our responsibilities such as engineering, procurement, and construction and the right to operate the facility for 24 years. The water treatment plant will include affiliate facilities such as a 20.9 km pipe conduit and a sludge incinerator and will treat 100,000 m^3 of sewage daily. Samsung Engineering will contribute to improving Bahrain's water environment by utilizing its extensive experience in project execution and its cutting-edge water treatment technology.

Successful Implementation of Micro-Tunneling Method

The project includes the construction of a 20.9 km pipe conduit. Nowadays, many pipe conduit projects take place in city centers; the existing excavation method raises concerns over water leak, ground sinking, noise and dust generation, and other environmental issues as well as traffic congestion. To address such concerns, Samsung Engineering applies the Micro-Tunneling method, which is effective in blocking water infiltration, enhancing the efficiency of sewage treatment, and removing traffic obstruction.

Engaging in Local Communities through Active Communications

Water treatment facilities are located near a city since they deal with one of the basic necessities of life. As for the Muharraq water treatment facility, we analyzed the environmental and social impact of the project and reflected the results on the construction plan to minimize the negative impacts on the environment. In April 2012, Samsung Engineering and the Ministry of Works of Bahrain held a public hearing with local residents to discuss problems arising from the project. We are making efforts to solve those problems. In addition, we carried out an environmental cleanup activity in May and held the "Local Residents' Night" event in October 2012. Through these activities, we minimize the negative impacts on the environment and communicate with the local residents.




1 Public Hearing with Local Residents, April 2012
2 Environmental Cleanup, May 2012
3,4 "Local Residents' Night" event in Muharraq, October 2012

SPECIAL FEATURE

02

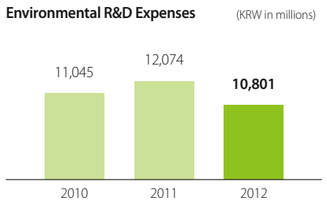
Developing Environment-friendly Technologies

Since the beginning of environmental business in the 1970s, Samsung Engineering has been leading the domestic water treatment plant market. We are building the capability to develop proprietary technologies for executing environment-friendly projects and mitigating the negative impacts of a project on the environment through the Environmental Technology Development Center. We are also focusing on obtaining and protecting intellectual properties to improve competitiveness and maximize values for our stakeholders.

Environmental Technology Development Center

The Environmental Technology Development Center is responsible for developing technologies in the fields of water treatment and atmosphere, focusing on sewage treatment, deionization, and other core technologies. It is at the forefront of Korea's technological development while enhancing the competence of Samsung Engineering in environmental facility projects. The development expenditure for the year 2012 stood at KRW 10.8 billion, down 10.5% year on year. The shrinking budget is attributable to the fact that the R&D for hydrocarbon and energy sectors was handed over to the Engineering Division to concentrate the resources of the center on environmental areas. We are committed to becoming a global leader by gradually reinforcing human resources and financial investment in the development of environmental technology.

Environmental R&D Expenses (KRW in millions)




Environmental Technology Development Center


Clean Room

Technology Development for Water Treatment

The Environmental Technology Development Center has set three directions for implementing R&D projects - "Securing Differentiated Technology," "Project Site Support," and "Applying Potential Technologies to Engineering Practices" - under the vision "Providing Competitive Environmental Technologies." Our activities at the center are focused on building capacity in the sewage and wastewater treatment and deionization processing fields. The developed technologies are analyzed for commercialization feasibility.

	New Environment-friendly Technology	Action Plans
Technology Development for Sewage & Wastewater Treatment	• Patent application for sewage and wastewater treatment technology • Air and water quality analysis • Unknown compounds, highly sophisticated analysis needed for enhancing efficiency • Technology development for wastewater reuse	• To secure reuse technology of wastewater generated from semiconductor production plant • To secure reuse technology of wastewater generated from display panel production plant • To develop reclaim water reuse technology
Technology Development for Deionization Processes	• Operation of deionization facility to produce 72 tons of de-ionized water daily • Verification of water quality through minimum-quantity ion and organic and inorganic matter analysis by utilizing a clean room facility	• To develop deionization processes • To strengthen de-ionized water analysis capability

COMMITMENT TO SUSTAINABILITY

We are committed to fulfilling our responsibilities as a corporate citizen by assessing the impacts of our businesses thoroughly in the economic, environmental, and social aspects, and responding to sustainability issues.

01 ETHICS & COMPLIANCE

Goals

- Prevention of legal risks
- Operation of real-time management system
- Implementation of the culture of ethics & compliance

Organizations in Charge

• Compliance Dept. • Legal Dept. • Audit Dept.

Management Principles

Today, legal governance is as critical as the ability to perform projects for a business to survive in the global competition. Even a minor mistake can damage the reputation of a whole company and threaten its survival. As such, preventing and minimizing risks through ethics and compliance management are no longer a matter of choice but a must.

Samsung Engineering has established a compliance control standard to promote lawful, fair, and transparent trade, secure sound growth, and win clients' trust. To raise awareness of employees on ethics and compliance, we provide various education programs.

Institutionalization of Compliance Management

The Compliance Program of Samsung Engineering was launched in 2011 under the vision "Build the platform for sustainable growth by establishing an integrated compliance management system at the enterprise level". In 2012, the Chief Compliance Officer (CCO) was appointed, and the Compliance Control Standard was established. These efforts demonstrate our commitment to spreading a culture of compliance within the organization and winning the trust of society and clients.

CEO Message on Compliance

In October 2012, the CEO of Samsung Engineering, released a message aimed at raising awareness of all employees on ethics and compliance management. In this message, the CEO stressed that all employees must observe laws and company rules amid the increasingly stricter regulations and intensifying competition at home and abroad.

Compliance Control Standard

Samsung Engineering strengthens compliance management through establishing the Compliance Control Standard, the highest compliance rule. It defines practices and other general matters related to compliance, and the detailed provisions and guidelines are followed. The detailed provisions of the Compliance Control Standard are designed to decide detailed matters for building and implementing the Compliance Program. Guidelines contain rules that must be followed by employees to avoid legal risks from their business conducts.

Operating the Compliance Program

Samsung Engineering's key measure to ensure legal governance is the Compliance Program, which enables a regular and integrated approach to prevent and minimize legal risks from employees' business practices.

Organizations in Charge

Samsung Engineering has been operating the Compliance Committee since 2011, which serves as the consultation body for making and implementing corporate policies regarding legal risks. In March 2012, the Chief Compliance Officer (CCO) was appointed through the resolution of the BOD. The CCO is responsible for the practice of compliance management and the operation of Compliance Program. In addition, each department and business unit has its own Compliance Officers (COs) and Compliance Managers (CMs) in charge of legal risk-related activities. CMs are heads of departments, acting under the supervision of the CCO.

Operation of Compliance Program

Samsung Engineering defines Legal Risk Activities* that may give rise to civil, criminal, or administrative liabilities or losses caused by contract invalidity due to employees' noncompliance with laws and regulations. The categorization is the basis for setting guidelines and providing education programs on compliance management. In addition, we continuously monitor and feedback the compliance of employees to prevent legal risks and improve compliance processes.

▶ Setting guidelines and improving sysgtems
▶ Reporting to the management and feedback
▶ Issuing warnings and drawing solutions for correction
▶ Evaluation and disciplinary actions

* Legal Risk Activities: Unfair trade, corruption, intellectual property infringement, violation of labor laws, and violation of HSE regulations

Raising Employees' Awareness of Ethics and Compliance Management

Samsung Engineering has established and operated various systems to improve the employees' understanding of ethics and compliance and train core ethical values.

Operation of the Compliance Website

We operate an online website on corporate ethics to assist employees in compliance-related activities. This website serves as a window of communication between the CCO/Compliance department and employees. Employees search for guidelines, laws and regulations, and other compliance management information. In addition, they can receive consultation service on the legal risks of their business practice and report irregularities through the website.

Vitalizing the System for Reporting Contact with Competitors

According to our guideline for collusion prevention, we prohibit our employees from contacting employees of a competing company. In inevitable cases, our employees are required to make a report before and after contacting employees of competitors to prevent potential collusion as well as such act from being misperceived as collusion.

Legal Support System

The Legal Department launched an online service to provide legal support to employees in April 2012 to respond to the increasing demand for legal services and minimize risks from invalid contract. Employees can download a standard contract form from the website dubbed "Legal Support System (LLS)" and request the Legal Department to review and provide advisory services regarding a contract.

Provision of Legal Consultation Service in 2012

Overseas	1,591 cases
Domestic	2,163 cases
Total	**3,754** cases

Training on Compliance and Corruption Prevention

Samsung Engineering incorporated compliance as part of the enterprise-level education and training programs such as the training programs for new recruits, core employees, and dispatched employees overseas. In addition, we provided special education programs tailored for each business unit such as marketing, engineering, procurement, and construction. At the global level, we made visits to 10 global offices and 32 project sites to provide compliance training. Domestically, we provided compliance training to 155 employees of subcontractors working in our projects sites through 4 educational sessions.

Education on Compliance and Corruption Prevention in 2012

	Compliance	Corruption Prevention
Offline	6,898* people	4,904 people
	7,106* hours	5,004 hours
Online	6,280 people	4,837 people

* The number of employees who participated in offline compliance training includes employees who completed the education repeatedly and one session for suppliers

Training Programs for Compliance and Corruption Prevention

Category	Program	Content	Target
Compliance	Understanding of the Compliance	• Importance of compliance management • Introduction of the company's Compliance Program	• New employees and suppliers' employees (special session)
	Compliance with the Fair Subcontract Transaction Act	• Major contents and examples of fair subcontract transaction act • Matters to be complied with	• Onsite supervisors and managers in charge of engineering, procurement and construction
	Corruption Prevention	• Anti-corruption laws and cases of major countries • Samsung Engineering guidelines	• Managers in charge of marketing and procurement
	Fair Trade (Collusion Prevention)	• Anti-collusion laws and cases of major countries • Samsung Engineering guidelines	• Managers in charge of marketing
	Information Protection	• Protection of private information and business secrets	• Managers in charge of private information
Corruption Prevention	Clean Organization	• Necessity of transparent and righteous management • Type of corruption and case study • Introduction of guidelines to employees	• All employees

Self-assessment of Compliance Awareness

Samsung Engineering conducted a self-assessment on compliance awareness by selecting sample groups of 600 people representing all business units in September 2012. As a result, employees scored high marks in term of the need and efforts for compliance management but garnered a relatively low grade in terms of their knowledge of legal risks and compliance guidelines.

Key Results of the Self-assessment on Compliance Awareness

Subjects	Date	Content	Major Results
600 employees (participation rate: 84%)	September 2012	10 questions related to compliance awareness • My level of awareness: level of awareness, recognition of need • My initiative: willing to observe, put into practice, or spread compliance management. • Company's operation: utilization, efficiency, significance	• All 9 questions for level of awareness received "fair or higher" marks. • Important factors of the Compliance Program were the training (39%) and willingness of top management (24%). • Individual awareness of legal compliance was high, but their knowledge of legal risks regarding their duties and the corporate Compliance Program was low.

Information Security Inspection

To strengthen security awareness of employees, prevent possible security accidents, and protect internal information, we perform night-time security inspection to check the storage of classified documents, locking devices, USB memory sticks, and other information devices. If negligence is detected, a warning message is issued to the responsible person.

Sharing of Business Principles at All Business Units and Project Sites

Business Principles are the guiding standards for our corporate management and the conducts of all employees. We share our Business Principles with all employees at home and abroad through means such as the company's broadcasting systems, company newspapers, campaigns, employee handbooks, and various other channels.

Samsung Engineering's Business Principles

1. **We comply with laws and ethical standards.**
   - 1-1 We respect the dignity and diversity of individuals.
   - 1-2 We compete fairly, complying with laws and business ethics.
   - 1-3 We maintain accounting transparency by keeping accurate records.
   - 1-4 We do not intervene in politics, and we maintain a neutral stance on all political issues.
2. **We maintain a clean organizational culture.**
   - 2-1 We draw a strict line between public and private affairs in all business activities.
   - 2-2 We protect and respect the intellectual property of the Company and of others'.
   - 2-3 We create a healthy organizational atmosphere.
3. **We respect customers, shareholders, and employees.**
   - 3-1 We value customer satisfaction the top priority in our business activities.
   - 3-2 We focus on shareholder value.
   - 3-3 We endeavor to improve employees' quality of life.
4. **We care for the environment, health, and safety.**
   - 4-1 We engage in environment-friendly management practices.
   - 4-2 We value human health and safety.
5. **We are a socially responsible corporate citizen.**
   - 5-1 We actively perform our duties as a corporate citizen.
   - 5-2 We respect the characteristics of local custom, culture, and society and strive to prosper together with local communities.
   - 5-3 We build win-win relationships with business partners.

02 ENVIRONMENT, HEALTH & SAFETY

Goals

- Reinforcement of eco-friendly engineering, procurement and construction management practices
- Improvement and supplement of HSE system
- Enhancement of the awareness about safety and environment

Organizations in Charge

- HSE Dept.

Management Principles

We have set our main environmental strategies as promoting green management, realizing eco-friendly project sites, and fostering a "culture of eco-awareness" and have established a management system for low-carbon, and green growth. Guided by our "people-first" principle, we ensure that the health and safety of our employees and project staff remain a top priority. We will continue to practice proper safety and environmental management throughout every business process, encompassing the engineering, procurement, and construction stages.

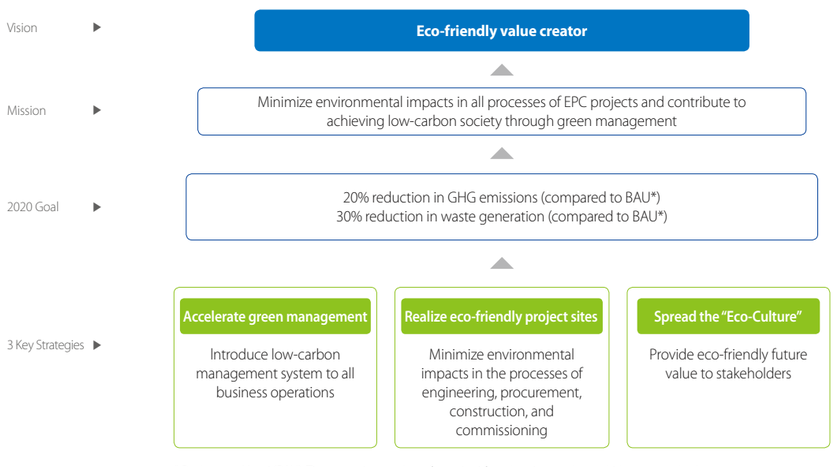
* Environmental data was collected from all project sites in principle. Some sites, however, were excluded from the data collection scope in accordance with Samsung Engineering's internal directives if they were deemed to have negligible environmental impacts given the project characteristics and size.

Accelerating Green Management

Green Management Strategy

Samsung Engineering is striving to spread green management activities into all business units based on enterprise-wide green management strategy and green management system which obtained the certification in November 2011.

Samsung Engineering established green management strategies to take a systematic approach to eco-friendly business management. Under the vision "Environment-friendly Value Creator", we set goals to decrease GHG emissions and waste by 2020 and made three action plans for achieving them.



* Business as Usual (BAU): The normal execution of standard functional operations within an organization

Green Management System

Samsung Engineering adopted the Environment Management System in accordance with the ISO 14001 standards for the first time in 1996, and it has gradually expanded its application to overseas offices. In 2011, we established the current Green Management System by incorporating energy, greenhouse gas, and corporate social responsibilities into the existing system according to the KS I 7001 environmental standards. The implementation of the Green Management System is reviewed through annual review and triennial renewal evaluation.

ISO 14001 (Environmental Management) — Obtained in March 1996

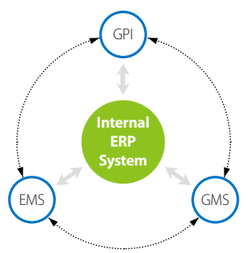
KS I 7001 (Green Management) — Obtained in November 2011

IT-based Environmental Management System

The environmental information of Samsung Engineering's domestic and overseas project sites is collected and evaluated monthly through the Sustainable Environmental Initiative System (SEIS.) The SEIS consists of three systems: Environmental Management System (EMS), Greenhouse gas Management System (GMS), and Green Performance Indicator (GPI). In 2012, an additional module for evaluating our environmental compliance level was developed. Through the new function, we build a database of environmental laws, regulations, and requirements from clients and monitor the compliance performance of project sites at home and abroad.

Structures of SEIS

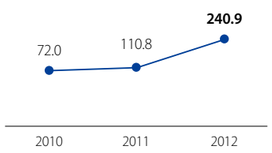
- **Environmental Management System (EMS)**
  A system for establishing environmental plans, managing project sites, and monitoring environmental performance based on the ISO 14001 standards
- **Greenhouse gas Management System (GMS)**
  A system for collecting data on GHG emissions
- **Green Performance Indicator (GPI)**
  A module for analyzing green management performance



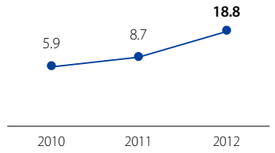
Green Management Performance Indicators

Samsung Engineering periodically assesses the performance of green management at the enterprise, business unit, and project levels and makes efforts to improve performance continuously. To manage the indicator, we set green management goals at the beginning of the year and manage all projects through the SEIS. The basis for calculating the green performance indicator is the monthly revenue of projects. The performance indicator shows the trends of energy use and generated waste volume vs. revenue.

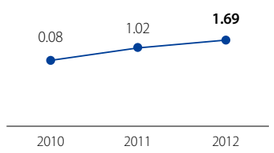
Energy Consumption (GJ/KRW in billions)
Energy consumption compared to revenue



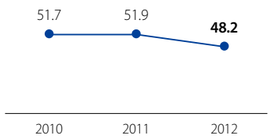
GHG Emissions (tCO_2e/KRW in billions)
Direct and indirect GHG emissions compared to revenue



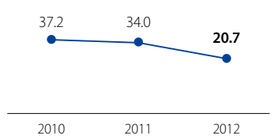
Environmental Training (hours/persons)
Environmental training hours compared to the annual average number of employees in headquarters



Waste Generation (tons/KRW in billions)
Waste generation compared to annual sales



Waste Recycling Rate (%)
Incineration and recycling rate compared to waste generation



Recent 3-year Trend

Green Management Performance

We won various awards from clients, government, and competitions sponsored by government agencies in 2012 in recognition of outstanding green management performances.

- June 28 — **Korea's Green Management Award**
  - Held by: Ministry of Knowledge Economy and Ministry of Environment
  - Award: Minister's Prize of the Ministry of Knowledge Economy in the environment-friendly contractors sector
- August 16 — **Environment-friendly Construction Site Certification**
  - Held by: Maekyung Safety and Environment Institute
  - Award: OLED Y-Project in Tangjeong Complex
- August 22 — **Best Environmental Practice Site**
  - Held by: Alcoa Ma'aden, a client
  - Award: Saudi Ma'aden Steam Plant Site
- October 25 — **Samsung Green Management Award**
  - Held by: Samsung Group
  - Award: Development of GHG reduction technology for electronics industry (domestic)
- November 23 — **8th Construction Environment Management Competition**
  - Held by: Construction Environment Association
  - Award: President's Prize of Environment & Labor Committee of National Assembly and Minister's Prize of the Ministry of Environment (OLED Y-Project in Tangjeong Complex and Metropolitan Landfill Site

Realize Eco-friendlier Project Sites

In keeping with its green management strategy, Samsung Engineering realizes efficient environmental management at all stages of business by identifying environmental issues, analyzing environmental requirements, devising measures for mitigating environmental impacts, and drawing the core management factors.

Attaining Environmental Efficiency at All Business Processes

Engineering
- Value engineering
  : Reduce cost and raise energy and resource efficiency through optimized engineering.
- Low-emission engineering
  : Reduce noise, vibration, and waste generation and pollutant emissions and other environmental loads.

Procurement
- Green purchase
  : Encourage the purchase of green products, shorten the logistics distance and optimize logistics, and ban the use of hazardous materials.
- Supply chain management
  : Select eco-friendlier suppliers through environmental assessments and provide underperforming suppliers with support for improvement.

Construction
- Environmental pollution mitigation
  : Improve construction methods that cause water, atmospheric, soil, and other pollution.
- Ecosystem protection
  : Minimize the project impact on the fauna and flora in the neighboring environment including water resources.
- GHG management
  : Minimize GHG emissions of construction equipment, vehicles, and offices.

Eco-friendly Engineering

The first considerations for our engineering practice include pollution mitigation, GHG emissions reduction, energy saving, and other green management issues. We refrain from using hazardous materials and replace them with environment-friendlier alternatives. Furthermore, we are aggressive in applying engineering methods that minimize risks affecting the health and safety of clients and the environment during operation on a long-term basis.

Eco-friendly Engineering Principles
- Apply the Best Available Techniques (BAT).
- Perform atmospheric diffusion modeling.
- Minimize power consumption and waste generation.
- Minimize landscape destruction, noise, and stench.
- Minimize water pollution and reuse industrial wastewater.
- Minimize GHG (CO_2, CH_4, N_2O, HFC, PFC, SF_6) generation.
- Minimize the use of ozone layer-depleting substances.
- Refrain from using asbestos.
- Shun activities that generate soil-polluting substances.
- Minimize the use of hazardous chemical substances.

Case #1

Applying the Best Available Techniques

Samsung Engineering is committed to reducing pollutant emissions through the Best Available Techniques (BAT) analysis. The BAT analysis seeks the best applicable techniques for mitigating pollution and environmental impact by considering not only the technological elements but also the economic and social aspects of a project. For example, the specifications of steam boilers are decided through the BAT analysis, which factors in economics and performance (NO_X, SO_2, CO, and PM generation). Performance is measured as pollutant emissions, whereas economics deals with the changes of Capital Expenditure (CAPEX) and Operating Expenditure (OPEX).

Optimized Design for Mat Slab and Footing

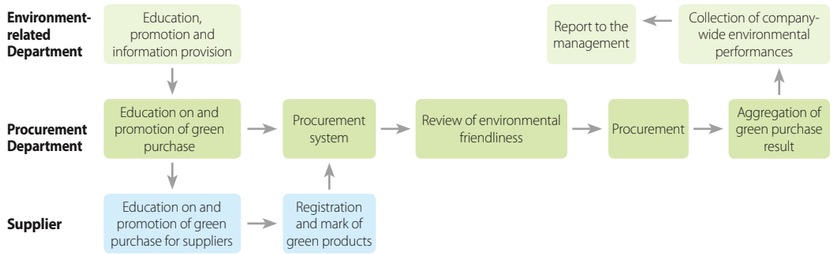
In the case of the Samsung Display Plant in Tangjeong Complex (OLED Y-Project), the mat slab and footing for the entire plant building were built through design optimization, which enhanced construction efficiency and cut down material cost. By downsizing the depth of the footing and strengthening high tensile reinforcing bar, we reduced the excavating depth, the required amount of concrete, and the number of excavation trenches. Through the optimized design of mat slab and reinforcing bar, we saved KRW 2.1 billion in cost and 30,000 m^3 in ready-mixed concrete, which translates into 10,365 tCO_2e.

Green Purchase

Environmental materials (products or services) are defined as high-quality materials or services that contribute to saving resources and which are less detrimental to human health and environment compared to other alternatives. Samsung Engineering assesses the environment-friendliness of a product and encourages its employees to purchase green materials or services. Samsung Engineering's principles for green purchasing are as follows:

Basic Principles for Green Purchasing

- Environment-friendly labeled products, highly energy-efficient tools and materials, and recycled products
- Products that do not contain the six substances subject to ROHS, asbestos, and other environmentally hazardous substances
- Waste-reduced products that are sold in minimum packaging and recoverable container
- Products that have received Green Certification (Type II and Type III) from the Korea Environmental Industry & Technology Institute
- Products with negligible impact on the ecosystem and human body and which discharge a negligible amount of toxic substance and pollutant into the atmosphere and the water system.
- Products that discharge a negligible amount of pollutants causing ozone depletion, acidification, and generation of photochemical oxides
- Products with negligible impact on energy consumption and global warming



Case #2

Expanding the Purchase of Eco-friendly MRO

As a corporate consumer, we are committed to spreading the culture of sustainable consumption and expanding the purchase of eco-friendly MRO*.

* Maintenance, Repair, and Operation (MRO): All consumables (stationeries, tools, and cleaning supplies) used for performing business activities excluding raw materials and large equipment

Environment-friendly Certification	Total Purchase (KRW)
Good Recycled (GR)	85,189,600
Environmental Mark	798,370
Eco-Label	23,200
Total	86,010,170

Environmental Risk Work Permit System

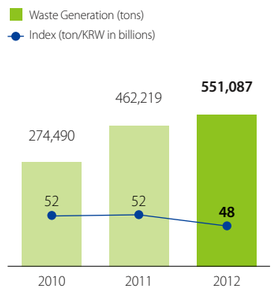
To prevent and minimize environmental risks from occurring during the construction processes, we operate the "Environmental Risk Work Permit System". Under the system, we select tasks that require special attention through the environmental assessment of all tasks of a project, and employees are required to establish measures to minimize the environmental risks for the selected tasks.

Check the weekly work plan	Analyze the environmental aspects	Fill out the Environmental Risk Work Permit Form	Inspect the implementation of the measures specified in the permit form
Through a weekly environment managers' meeting, a work plan is reviewed, and the areas for improvement are shared.	Analyze the environmental aspects of each task and conduct a risk assessment. Tasks are classified into more than 4 grades.	Obtain approval for the Environmental Risk Work Permit Form specifying the mitigation measure for Grade 4 or higher tasks.	Conduct site patrol to inspect the execution of the task included in the Environmental Risk Work Permit Form.

Waste Management

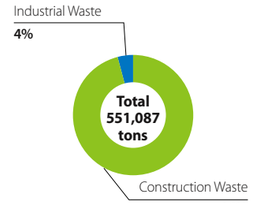
Construction waste varies in kind and gets released in the form of compounds. Some types of construction waste are non-inflammable, and they do not decompose biologically in landfills. Thus, building waste can have significant impact on the environment compared to non-industrial waste. To minimize environmental impact, Samsung Engineering operates a waste management scheme for each project based on the principle of 3R (Reduce, Reuse, and Recycle). The management scheme includes periodic monitoring and performance management of project execution.

Waste Generation



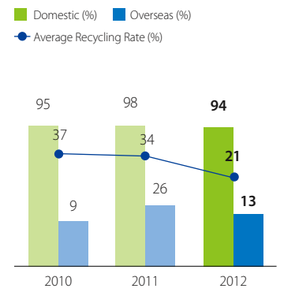
Waste generation has been steadily on the rise for 3 years, but it is on the decline relative to sales.

Waste Generation in 2012



The generated waste is controlled according to the laws and regulations of a country where our project is executed. For management purposes, we divide waste into construction and industrial waste that does not contain hazardous substances, and specified waste, which contains hazardous substances. The total specified waste generated was 0.04% in 2012.

Waste Recycling Rate



Domestically, 90% of waste is recycled due to continuous efforts to separate waste for recycling. In some countries, however, landfilling all types of waste generated from a construction project is mandatory. This, combined with the increase of overseas projects in 2012, dragged down Samsung Engineering's total recycling rate for the year.

Case #3

Waste Discharge Reduction through Mobile Recycling Bins

In the OLED Y-Project, six easily movable, accessible, and recognizable recycling bins were installed in different colors. As a result, the waste synthetic resin was slashed from 9,395 to 2,235 tons, and the mixed waste was reduced from 7,350 tons to zero.


Movable Recycling Bins at OLED Y-Project Site

Management of Waste Disposal Service Providers

In collaboration between the headquarters and project sites, we visit waste disposal service providers to evaluate and select outstanding disposal companies. We conclude a contract with qualified suppliers in terms of technological competence and unit bid price. In addition, we use a standard contract and conduct an inspection periodically.

Hazardous Substance Management

Through various monitoring systems, we collect and share data on environmental Near Misses* so that these near misses do not lead to actual accidents. The number of near misses concerning hazardous substances was 13 in 2012. Most of them were related to the leak of oil or wastewater. None of these leakages were more than 5 liters, and all cases were properly handled under our hazardous substance management plan; thus causing no significant impact on the environment.

* Near Miss: an event that did not result in an accident but had the potential to do so due to personal mistakes or other errors in a project site

Management of Construction Equipments and Vehicles

Construction managers review the equipment deployment plan in advance and engage in random or regular monitoring and maintenance activity according to the internal guidelines. We strive to prevent over-deployment of equipment and educate employees regularly to eliminate idling in an effort to minimize the emission of GHG and pollutants. Our overseas sites install maintenance and repair facilities for construction equipments and vehicles and detention ponds to protect water and soil from contamination.

Control of Scattering Dust, Noise, and Vibration

The scattering dust on a site floor and nearby roads is removed by using specially designed skid loader. This will contribute to protection of the health status of employees and welfare of local residents. To control noise, we measure the noise level in project sites every day and compare it against the noise standards. The efficiency of noise control is improved by drawing up a noise map.

Environmental Management during Commissioning

At the commissioning stage, we grasp all environmental factors throughout the process ranging from input through output and analyze risks in relation to such factors. The environmental risks identified through these processes are monitored and managed strictly to prevent environmental accidents. Considering handling of chemical substances at the commissioning stage, it is crucial to prevent contaminants from leaking to the environment and treat hazardous substances through a due process under the law.

Management of Construction Equipments and Vehicles

Control of Scattering Dust, Noise and Vibration

Environmental Management during Commissioning

SPECIAL FEATURE 03

Efficient Use of Resources

Samsung Engineering manages the raw materials by dividing them into six groups: concrete, recycled concrete, steel structure, machinery, pipes, and cables. At overseas sites, we recycle waste concrete and Pretensioned spun High strength Concrete (PHC) pile scraps by breaking them into pieces. The waste concrete is used as pavement of the road for heavy equipment at the project site. In 2012 alone, the recycled amount of waste concrete was 1,814 m^3, and the recycled concrete amounted to 78,060 m^3.

* Energy consumption and GHG emissions applied to construction sites. (Excluding the emissions from headquarters and including those from suppliers)

Spreading Eco-Culture

Samsung Engineering is providing employees and suppliers with various environmental educations and conducting environmental campaigns at construction sites to instill and diffuse the environment-friendly corporate culture.

Providing Environmental Education

We are providing our employees with various education programs to raise awareness of environmental issues and strengthen their capabilities to deal with environmental risks. An online education program on environmental management is a basic requirement for new recruits. Employees to be dispatched overseas and new recruits of subcontractors are also subject to an offline environmental education program. In addition, we share the environmental directions, policies, and best practices with the persons in charge of environmental management from each project site through meetings and workshops. In 2012, 496 participated in online environmental education classes, whereas 1,172 attended offline training programs.

Environmental Education Programs

Program	Content	Target
Online Environmental Education	Through the environmental management online education course, employees improved their awareness of environmental protection. This is a basic requirement for new recruits.	• All employees • New employees (compulsory)
Workshop for Environmental Managers	Through the first-half and second-half workshop for the environmental managers of the headquarters and project sites, participants discussed the environmental impact, best practices, and ways of improving systems continuously.	• Environment Managers at the headquarters and construction sites (semiannually)
Green Management Education for Dispatched Employees.	Employees who will be dispatched to overseas project sites learn about the international trends and main points of environmental management for the EPC business.	• Employees to be dispatched overseas
Monthly Environmental Theme Education	Monthly environmental education themes and materials are distributed to all employees and managers of subcontractors to raise awareness of environmental management.	• All employees • Managers and staff of subcontractors

Online Environmental Education

Workshop for Environmental Managers

Green Management Education for Dispatched Employees.

Spreading Green Management to Suppliers

To promote green management, Samsung Engineering is applying high environmental standards from the project bidding stage and rewarding exemplary partners in environmental management. Furthermore, we operate a wide range of systems to prevent environmental pollution and efficiently use resources in collaboration with vendors and subcontractors.

Vendor l We secure outstanding suppliers by evaluating the environmental management practices of a vendor prior to its registration as our partner. For example, potential vendors are required to possess environmental management certifications and programs for reducing energy consumption, materials, and GHG emissions. In addition, we encourage the green management of suppliers by evaluating the registered vendors periodically. The evaluation criteria for registered partners include records of using eco-friendly materials and activities for lowering the use of energy and resources and other environment-related performance. If a vendor gives rise to a social issue by causing an environmental or social problem, its partner status will be canceled.

Subcontractor l Prior to construction, subcontractors are required to write an environmental management plan to understand the environmental risk regarding their own work. Each subcontractor designates an environmental manager, who participates in the weekly environmental managers' meeting to maximize the efficiency of its environmental management activities. Moreover, subcontractors perform their respective analysis of environmental risk activities and establish mitigation plans and, by doing so, eliminate environmental risks prior to starting work.

Responses to Climate Change

Samsung Engineering is making an effort to efficiently respond to environment issues including climate change, water scarcity, and biodiversity. At the macro level, we analyze energy consumption change and market trends resulting from climate change and establish mid- to long-term strategy based on the analysis result. From the short-term perspective, we assess the influence of climate change on our project in terms of natural environment (climate, soil, etc.), living environment, and environmental laws and regulations.

Climate Change Energy Sensitivity Analysis

We conduct climate change sensitivity analysis to assess the financial impact and non-financial impact of climate change on our mid- to long-term business strategy. The potential risks of oil, CO_2, and electricity prices triggered by climate change are identified and estimated through three scenarios developed by International Energy Agency (IEA): Current Policies Scenario, New Policies Scenario, and 450 Scenario. The results are analyzed by our financial analysis tool for the prediction of operating cost changes.

Risk and Opportunity		Impact	Strategic Direction
Risks	• Energy price rise owing to the legislation of energy efficiency improvement laws • Typhoon, flooding, and other physical risks	• Additional operating costs by energy price increases • Potential costs by the introduction of carbon tax. • Increase of costs for environmental technology development • Increase of costs to maintain eco-friendly buildings and project site management • Insurance premium by extraordinary weather conditions	• Securing eco-friendly technology aimed at market opportunities • Establishing a mid- to long-term strategy based on the changing energy mix and the energy demand and supply scenario to determine the priority for selecting new markets and building capabilities
Opportunities	• Air Pollution Prevention Regulations • Changes in Precipitation and Drought	• Increasing demand for water reuse projects to solve water shortage caused by climate change • Increasing demand for projects to reduce GHG emissions	

→ Greenhouse Gas Emissions in 2012

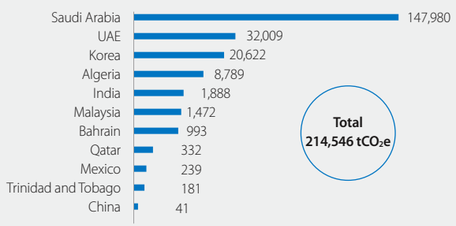
The amount of GHG emissions is calculated through the Greenhouse Gas Management System (GMS). When each site enters the kind of energy and the amount of consumption by emission source, the GMS automatically calculate the amount of GHG emissions.

GHG Emissions in 2012 (Unit: tCO_2e)

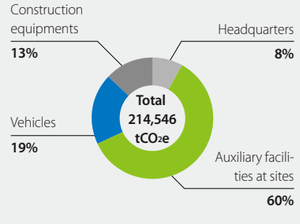
Category	Emissions
Direct/Indirect GHG	214,546
Direct GHG	196,956
Indirect GHG	17,590
Other indirect GHG	431,239

Direct and Indirect GHG Emissions I Direct and indirect emissions reached 214,546 tCO_2e in 2012, increasing compared to the previous year. Such rise is, attributable primarily to the increase of overseas projects located in places without electrical power supply networks, thereby raising the total energy consumption of the company. Second, the reinforcement of the relevant systems and standards improved the confidence and accuracy of emission inventory by reducing the number of emission source misses from the calculation. Third is the increase of construction equipment that we purchased or rented. Greenhouse gas emissions were highest in Saudi Arabia, where we operate the largest number of projects. Domestic emissions stood at 20,000 tCO_2e.

Direct/Indirect GHG Emissions by Region (Unit: tCO_2e)

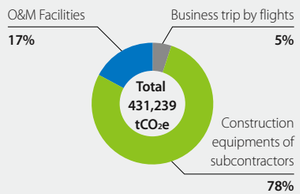


Direct/Indirect GHG Emissions by Source



Other Indirect GHG Emissions I Other indirect GHG emissions include the energy consumption by the rented stores owned by Samsung Engineering, commute buses, business trip by flight, construction equipments of subcontractors, and O&M facilities. The equipments of our subcontractors account for about 78% of total other indirect GHG emissions.

Other Indirect GHG Emissions by Source



GHG Reduction from Logistics

Samsung Engineering procures countless materials and equipment from all over the world. In 2012, the GHG emissions from the logistics activities recorded a total of 176,503 tCO_2e, calculated by the shipment of procurement items through ships (in bulk and containers), airplanes, and road transportation. We endeavor to lower GHG emissions by expanding local procurement, using ships less than 15 years old, minimizing the frequency of shipment by filling a container to the maximum level, and increasing the rate of shipment against air travel. As a result, we reduced CO_2 by 30,000 tons compared to 2010.

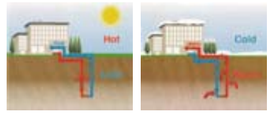
Case #4

Various Activities to Reduce GHG Emissions at Global Engineering Center

Samsung Global Engineering Center (GEC) is our new headquarters building as of April 2012. Its design boasts of a variety of environment-friendly features to enhance the efficiency of business activities and reduce GHG emissions.

Energy-Saving Design Features I The double skin structure of the west working space is an energy-saving feature that allows the use of natural ventilation and cavity space radiant heat. In addition, it has sun-shading effect and enhances the brightness of natural light. Most of the lights inside the building are LEDs. Moreover, part of the energy consumed in the building comes from the renewable energy produced in the building. Samsung GEC utilizes photovoltaic power and geothermal heat (maintained at 15℃ throughout the year) through geothermal heat exchanger and heat pumps to provide air conditioning. These renewable energy sources contribute to reducing GHG emissions by 666 tCO_2e (as of May ~ December 2012).

Principle of Geothermal Heat Exchanger in GEC building



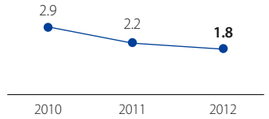
Summer:
The cooler captures and dissipates heat inside the building to the ground.

Winter:
The heater captures the heat from the ground and dissipates it inside the building.

Reduction of GHG Emissions by Revitalizing the Cyber Meeting Room I The "Cyber Meeting Room" program allows us to hold a real-time meeting between the headquarters and a project site and between project sites. The program supports video and voice conferencing as well as real-time document sharing functions. In 2012 alone, cyber conference was held 1,438 times through the program. This also contributed to reducing the number of business trips and GHG emissions. In Korean Won terms, about 38% worth of emissions decreased compared to 2010.

GHG Emissions from Business Trips by Flights vs. Sales

(Unit: tCO_2e/KRW 100 millions)



Responses to Water Risk

Samsung Engineering's project sites in Malaysia, Mexico, and UAE are located in coastal areas which are frequently affected by downpour, typhoon, and other extreme weather events stemming from climate change. These unpredictable weather conditions delay the transport of materials, affecting the construction schedule. They also undermine the efficiency of workers due to heat stress and destroyed construction equipments. To address these risk factors, we run a flooding simulation on project sites with high possibility of flooding. We analyze drain systems through slope analysis, flow accumulation analysis, and other analyses to calculate the outer discharge of flood water and establish a water disaster prevention measure. Another water-related risk is water scarcity in some countries. Samsung Engineering is engaged in water intake activities to provide the necessary water supply for its projects. However, almost every site uses tap water, and water collection has never been reported as affecting the surrounding environment in 2012. We continue to make efforts to enhance the efficiency of water use by recycling water through the purification of spent water or by collecting rain water.

Protection Biodiversity

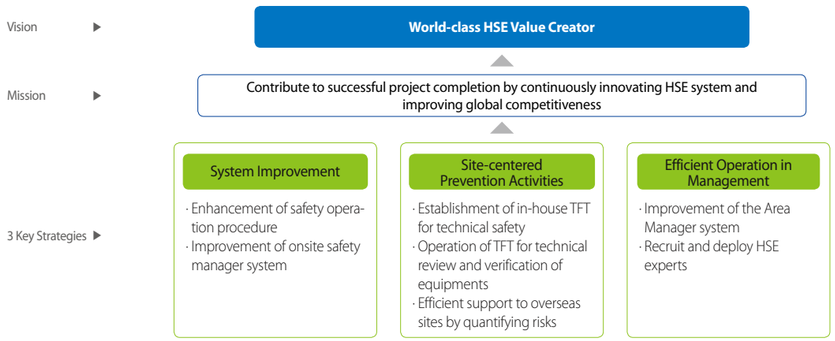
Once a project is started, we grasp the international standards and requirements of the country where our project is implemented, and we analyze the potential impact of our project on the local biodiversity. The direct and indirect impact of our project is assessed in terms of frequency and materiality. In case of material influence, we examine the possibility of removing the factor behind it and seek possible ways to avoid such impact. If it is unavoidable, we strive to find ways to mitigate the environmental impact of the project. We establish a biodiversity management plan for a specific project, make a list of major risks, and continuously monitor them to minimize the negative impact on the nearby environment.

Strengthening Safety and Health Management

Samsung Engineering places top priority on safety and health management. We are carrying out various programs aimed at providing a safe working environment to our employees and creating a pleasant living environment for local residents and other stakeholders.

Safety and Health Management Strategies

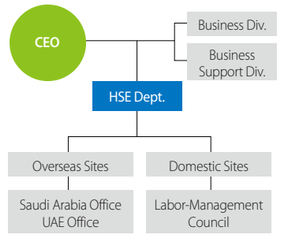
All employees of Samsung Engineering and its subcontractors are engaged in rigorous safety and health management activities under the goal, "Continuous Innovation of Safety and Health Management System and Improvement of Global Competitiveness". We implement three action plans to attain the goal: System Improvement, Site-centered Prevention Activities, and Efficient Operation in Management.



Safety and Health Management Structure

The HSE department of Samsung Engineering oversees the safety & health practices of the entire enterprise, and it is operating a labor and management consultation meeting on a regular basis to strengthen safety & health activities. In addition, it endeavors to prevent accidents and enhance the health status of employees. To prevent accidents and create client value in project sites overseas, HSE managers are dispatched to regional head offices such as those in Saudi Arabia and UAE.

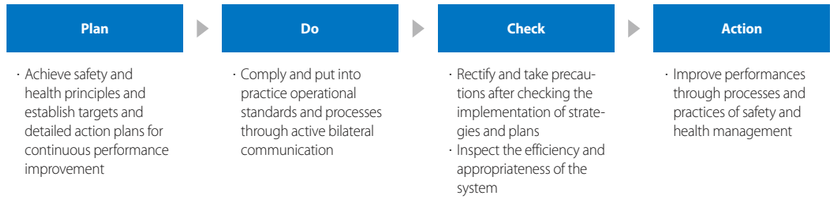
Safety and Health Management Structure



Safety and Health Management System

Samsung Engineering acquired OHSAS 18001 certification from TÜV for the first time in 2005. We updated it with the OHSAS 18001:2007 certification for all projects sites at home and abroad in 2007. In March 2012, we successfully completed a review by Lloyd's Register Quality Assurance Ltd. (LRQA) and improve the system continuously.

Safety and Health Management Process



KOSHA 18001 Health & Safety System Certification

In November 2012, Samsung Engineering acquired KOSHA 18001 Health & Safety Management System Certification. From a long-term perspective, we will invest in safety and health management as a means of protecting employees and reducing losses from accidents.

Results of the Establishment of KOSHA 18001 System

· Expanded participation in safety management
: Employees from site managers to task managers participated in risk assessment
: Operating the safety meeting and safety inspection activity organized by construction teams
· Improved safety standard by acquiring certification jointly with subcontractors
: We acquired certification jointly with a total of 4 subcontractors (Wonbang Tech, SB Tech, Bumhan Water System, Gaya ESC).

KOSHA18001 Certification Awarding Ceremony, February 2013

Corporatewide Safety Campaign

Samsung Engineering held a rally to adopt a resolution to implement ten safety procedures consisting of five DOs and five DON'Ts. In the event, we encouraged all employees and subcontractors to participate in safety activities. The performance of the procedures will be measured through regular monitoring of the five DOs and five DON'Ts.

10 Safety Regulations

Enterprise-Level Safety Conference

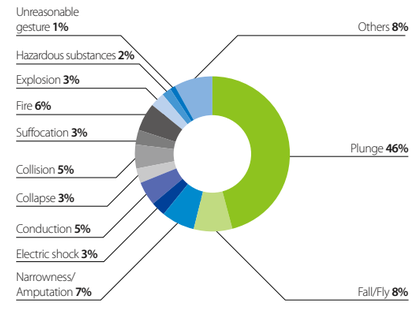
The top management of Samsung Engineering held a safety conference for all employees and project sites in October 2012. They stressed that all accidents are man-made disasters and encouraged all employees to become special safety agents who inspect and improve the safety status in projects sites. In addition, the top management requested the audience to abide by rules and processes relevant to their tasks and make safety management a corporate culture.


Enterprise-Level Safety Conference, October 2012

Operation of S-CAR

Safety-Corrective Action Request (S-CAR) was designed to take immediate action upon the detection of unsafe status or conducts. When S-CAR is issued, improvement actions are followed. Furthermore, S-CAR incidents are recorded in the database to be used for the assessment and prediction of risks. During a Tool Box Meeting (TBM), S-CAR incidents are shared with all employees to prevent accidents caused by negligence. As the result of S-CAR analysis, the number of corrective measures to plunge accident represented the biggest share with 46% in 2012.

The Result of S-CAR Analysis in 2012



Education and Training on Safety and Health

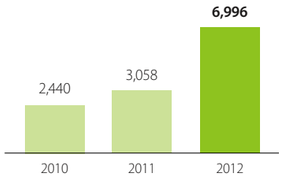
Samsung Engineering raises the awareness of safety-related risks and nurtures the culture of safety management for its employees and subcontractors through a variety of education and training programs. In 2012, the number of employees who completed the programs increased compared to the previous year due to more education sessions for the obtainment of KOSHA 18001 certification and dispatched employees.

Safety and Health Training Programs

Program	Content	Performance in 2012
Operation of the Safety Training Center in Saudi Arabia	• Operated two courses: offline training in a project site and for new recruits • Operated 20 hands-on training programs	• Offline training for 7,550 people
Safety Training for Dispatched Employees	• Provided on/offline training programs on safety & health principles and standards that should be followed by all employees	• Online training for 1,324 people • Offline training for 1,088 people
First Aid Classes	• A first-aid course is provided by the Korean National Red Cross. • Provided training on essential skills and knowledge needed for responding to accidents such as Emergency Code of Conduct, CPR*, and ways to use the automated external defibrillator	• Produced 133 First Aiders
Firefighting & Rescue Drill	• The drill is designed to help us grasp the types of potential accidents in advance and establish a proper emergency action plan.	• A Comprehensive Firefighting and Rescue Drill was held in Samsung GEC in October 2012. (A large number of policemen, firefighters, and military personnel participated.) • Onsite fire drill

* CPR : Cardiopulmonary Resuscitation

Participants in Safety and Health Education Programs (Unit: persons)

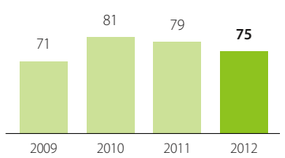


Safety Training Center in Saudi Arabia

Client HSE Satisfaction Survey

Samsung Engineering annually surveys overseas clients to see how they are satisfied with our HSE management. The survey motivates us to carry out HSE management activities consistently and correct any and all problems. The survey results of 2012 were utilized in drawing up the HSE action plan for 2013. Main areas of improvement from the 2012 survey include strengthening safety education for dispatched employees overseas and enhancing the HSE leadership and capabilities of site managers.

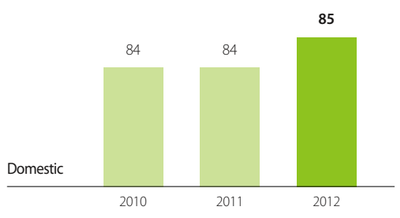
Results of HSE Satisfaction Surveys (Unit: points)



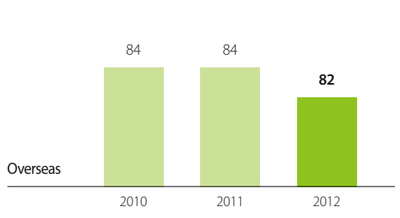
Safety Audit

We are conducting safety audit on each project regularly to enhance the safety standard in general, going beyond specific projects or regions. Through the audit, we draw improvement measures and select best practices, internally called B/P and Lessons Learned, to be distributed to all project sites.

Safety Level of Domestic and Overseas Sites (Unit: points)



(Unit: points)



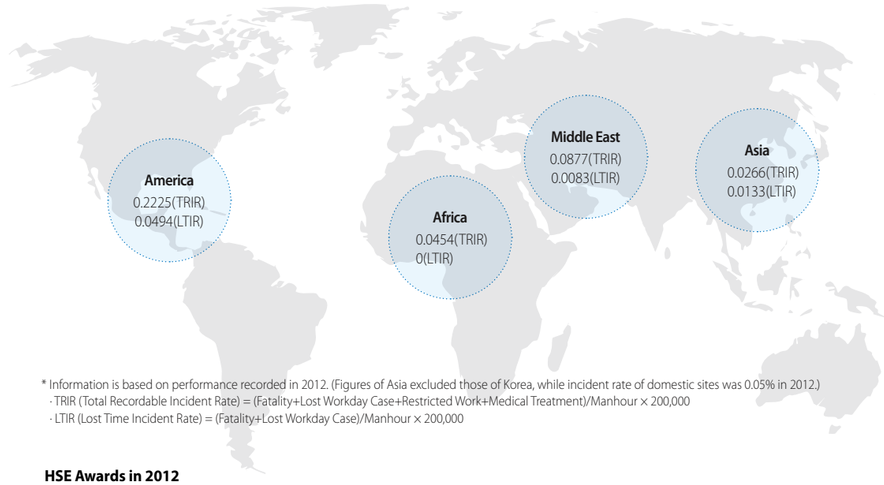
Performance of Safety and Health Management

Samsung Engineering recorded 267,232,513 Man Hours (MH) in 2012, which is twice the level of 2011 due to the expanded business scale. The company recorded 0.0090 in Lost Time Injury & Illness Rate (LTIR) in 2012. We recorded lots of safe MH without LTA in numerous projects including the 56 million MH without LTA in the Skikda refinery plant project in Algeria.

Incident rate by Region*

Total exposure work hours (Unit: MH)
267,232,513

LTIR
0.0090



* Information is based on performance recorded in 2012. (Figures of Asia excluded those of Korea, while incident rate of domestic sites was 0.05% in 2012.)
· TRIR (Total Recordable Incident Rate) = (Fatality+Lost Workday Case+Restricted Work+Medical Treatment)/Manhour × 200,000
· LTIR (Lost Time Incident Rate) = (Fatality+Lost Workday Case)/Manhour × 200,000

HSE Awards in 2012

Category	Project	Country	Award	Date
Achievement of safe MH without LTA (Lost Time Accident)	Skikda Refinery	Algeria	56 million MH without LTA	2012.12
	JERP #4 Delayed Coker	Saudi Arabia	20 million MH without LTA	2012.12
	JERP #3 Aromatic Units	Saudi Arabia	25 million MH without LTA	2012.11
	SAMCo Acrylic Acid	Saudi Arabia	24 million MH without LTA	2012.10
	Okjeong Sewage Treatment Facility	Korea	100% of MH target without LTA (KOSHA*)	2012.09
	OPaL DFCU & AU	India	29 million MH without LTA	2012.08
	Ma'aden Rolling Mill	Saudi Arabia	13 million MH without LTA	2012.08
	Shaybah #4	Saudi Arabia	8 million MH without LTA	2012.08
	Shah Gas U&O	UAE	10 million MH without LTA	2012.06
	SULB Steel Mill	Bahrain	8 million MH without LTA	2012.06
	OLED Y-Project in Tangjeong Complex	Korea	600% of MH target without LTA (KOSHA*)	2012.06
HSE Excellence		Korea	Won the Minister Award from the Ministry of Labor – Head of Safety Team (handling Cheonan & Asan offices)	2012.12

* KOSHA: Korea Occupational Safety and Health Agency

JERP #4 Delayed Coker Project in Saudi Arabia, December 2012

Shah Gas U&O Project in UAE, June 2012

SAMCo Acrylic Acid Project in Saudi Arabia, October 2012

JERP #3 Aromatic Units Project in Saudi Arabia, November 2012

03 EMPLOYEES & WORKPLACE

Goals

- Improvement of education and training programs for employees
- Fair and competitive compensation based on performance
- Implementation of corporate culture for effective communication and cooperation

Organizations in Charge

- HR Development Dept.
- Global HR Dept.
- HR Management Dept.
- Industrial Relations Council

Management Principles

Guided by its "People First" principle, Samsung Engineering puts its employees first and provides diverse opportunities to strengthen their competencies. These offerings will help them lead innovative activities in the global market, uphold social values, and adhere to ethical practices. Moreover, by providing employee benefits to maintain balance between personal value and organizational value, we develop successful global business leaders; we aim to become an even better company to work in by providing a better working environment.

* The employee benefits and training programs described in this report are mainly based on those offered at our headquarters in Korea. They may vary depending on the circumstances of each overseas office.

Fair Recruitment and Talent Development

Samsung Engineering spares no effort in recruiting talents and rewarding employees despite the global economic recession. We are offering a wide range of fair, competitive performance-based rewards to retain talented employees with strong capabilities and experiences and to provide appropriate incentives for outstanding performance.

Human Resource Philosophy

We are looking for people who thrive in challenges, who are flexible to change, and who want to be experts in their fields. Guided by this human resources management philosophy, we are seeking to develop talents who are passionate with thirst for challenge, multi-dimensional thinking, and creative imagination and who embrace cultural diversity and lead the business as global players. Furthermore, we want to cultivate talented employees who communicate and cooperate with others based on expertise and experiences in order to create customer value.

Transparent and Fair HR Recruitment

We recruit talented workforces through various channels and provide them with equal opportunities for employment to allow them to demonstrate their capabilities. Regular recruitment of entry-level/experienced staff runs parallel with frequent recruitment focusing on job skills and business areas. Moreover, we hold job fairs for college students and unspecified job seekers and provide recruitment information through various channels such as our company website and the recruitment webpage of the Samsung Group. In recognition of our efforts to provide equal employment opportunities and create jobs, we were ranked among the "Top 100 Job-Creating Companies in 2012" by the Ministry of Employment and Labor in January 2013.

Talent Development Strategies

We are seeking to run talent development programs that help our employees fulfill their potentials and promote thirst for challenge. To make this happen, 1) we have better understanding of engineering, procurement and construction, 2) we encourage our employees not only to enhance basic job skills but also to develop leadership and cultural abilities for higher organizational efficiency, 3) we enhance their conversation skills including advanced English proficiency, and 4) we expand globally based on our domestic capabilities to strengthen our global presence.

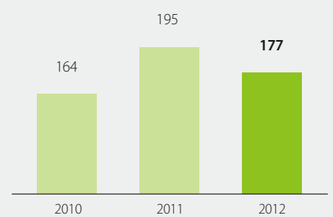
→ Employee Education Performance in 2012

Total training	**785,297** hours
Average annual training hours per employee*	**111** hours
Total training expenses	KRW **12.5** billion
Total training expenses to annual sales	**0.1** %

* The average training hours per employee are based on the average number of employees in the headquarters in Korea, with our overseas offices excluded.

Training expense per employee

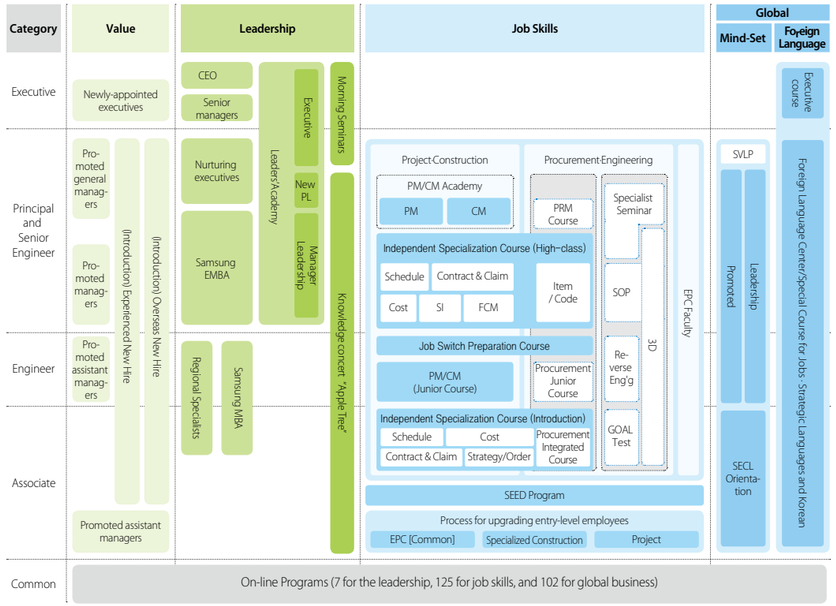
(Unit: KRW in 10 thousands)



Training hours and expenses in 2012 showed a slight decline. Training hours decreased due mainly to the following reasons: reduction of employment with experience, and discontinuity of the intensive English language course by hiring college graduates with verified English skills. The decrease of training expenses was attributable to the operation of internal education system and development of in-house courses instead of entrusted educations as well as the reduction of training hours. Samsung engineering is expanding in-house foreign language camp training programs to enhance employees' global competitiveness and striving to develop more efficient education systems and programs.

Training Framework

Samsung Engineering's training framework is divided into four segments: value, leadership, job skills, and global business. Value programs consist of the programs about how to work and communicate with other employees, as a fundamental and common value of the company and leadership programs mainly made up of mental training sessions designed to stimulate employees to develop cultural competences and act and think like leaders. Job skills programs are technical programs needed to lead future growth and are intended to develop experts at the company level. Lastly, global business programs are focused on helping employees become global players by honing their foreign language skills intensively.



Course			Goal and Content	Target
Leadership	Leaders' Academy		Improvement of awareness and behavior of leaders by providing them with opportunities to think about their belief and philosophy and solidify their determination to change and practice	All executives including team leaders
	Knowledge concert "Apple Tree"		Enhancement of employees' creativity and leadership by inviting external professionals	All employees
Job Skills	Process for upgrading entry-level employees		Securing basic job skills to implement responsible works as a member of a project	In 1st year employees
	PM/CM Academy		Cultivation of leaders for core jobs of projects and construction works (Junior, Leader)	Engineers to Principal engineers
	Independent specialization course		Independent course ranging from introduction level to high-class for project, procurement and construction	Associates to Senior engineers
	Job switch preparation course		Required course for job transferer	Corresponding Position
	EPC Faculty		Training on core jobs for marketing, project, engineering, procurement, and construction	All employees
	Procurement Academy		Specialized course to enhance capability in procurement procedure and project management	Corresponding Position
	Specialized engineering course		Specialized course to enhance capability in basic engineering such as 3D design, reverse engineering, GOAL Test, and specialist seminar	Associates to Principal engineers
Global	G-HRD		Enhancement of capabilities of overseas employees	Associates to Principal engineers
	Foreign Language	SECL Foreign language center	Improvement of English communication skills for businesses with foreign partners	Associates to Principal engineers
		Language course for jobs	Tailored language course to improve foreign language skills needed for jobs such as marketing, project, engineering, and construction	All employees
		Strategic language course	Enhancement of project execution capabilities at overseas sites	All employees

Strengthening Leadership Training

Under the CEO's management principle "Capabilities of leaders determine those of the organizations", Samsung Engineering is devising and running diverse and effective leadership training programs. The main purpose of our programs is to improve consciousness. By solidifying the basic consciousness needed to enhance our competitiveness, we aim to spread it throughout the company and develop diverse training programs on communication skills, coaching skills, empowerment, conflict resolution, and motivation, which can stimulate our reasoning and sensibility.

→ "Apple Tree", Leadership Development Training

In June 2012, we launched "Apple Tree", a leadership development training program in the form of a knowledge-sharing concert and a new brand of "self-motivated" training programs. "Apple Tree" consists of "seeds" implying the preparation and hope for a better future, "fruits" representing the valuable outcomes of training, and "tree" signifying a creative organization based on small and large values. Through a monthly training lecture, experts from all walks of life promote a culture of self-motivated learning based on openness, participation and communication, sharing, and expansion and suggest a new paradigm of learning with distinctive thoughts and practices.

Apple Tree, June 2012

A Lecture by Theresa Rah, CEO of Oratio, August 2012

A Lecture by Sung-Keun Kim, Manager of Goyang Wonders Pro Baseball Club, September 2012

Fair Evaluations and Rewards

We are offering annually determined salaries based on performance for all employees to retain competent, experienced talents and providing appropriate incentives for outstanding performance. The rewards are based on systematic performance evaluation. Our performance evaluation programs are based on competency and performance history. The evaluation results are directly linked to promotion and annual salary. In 2012, we implemented a compensation program that bases payment on previous evaluations to assess each employee's performance and competencies on a long-term basis. The program allows employees to receive more stable income by focusing on the longer history of their performance.

Employee Benefits

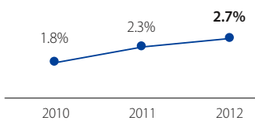
We are providing diverse fringe benefits, including support for leisure activities, health insurance, and financial support for family events to help our staff concentrate on their work better. In 2012, we standardized on-site accommodations to improve the quality of life and work productivity by helping them enhance their mental and physical health. By conducting a survey on such accommodations, we helped improve their work satisfaction and productivity by selecting essential facilities and standardizing their operation. Moreover, we expect to improve the cost effectiveness of field expense by selecting the welfare facilities considering the return on investment (ROI).

Benefit System	Detail
Leisure/Relaxation	Discount on fees of affiliated hotels, condominiums, theme parks, and sports centers, and operation of fitness club
Medical support	Regular comprehensive/general medical check, supports for employees' and their families' hospital expenses, and operation of in-house counseling center
Assistance for childbirth and maternity care	Operation of nursery schools and childbirth leave of male employees (5 days/2 days' unpaid leave)
Educational expenses	Assistance of educational expenses for children, brothers and sisters that employees have obligations to support (KRW 200 thousand per month for preschool students, actual expenses for middle school, high school, and university students, and special criteria for students studying abroad)
Financial support	Interest rate of around 4% a year and retirement pension
Selective benefits	Provision of benefits points
Others	Assistance of meal benefit, birthday gift for onsite employees, Support for the move and settlement of overseas workforce's families

Retirement Pension Plans

We are running a retirement pension plan to help our employees live on a stable income stream after retirement in accordance with Korea's Employee Retirement Benefit Security Act. We offer a defined benefit-type pension plan with accumulated capital of KRW 102.8 billion as of December 2012, managed by Samsung Life Insurance.

Retirement Rate

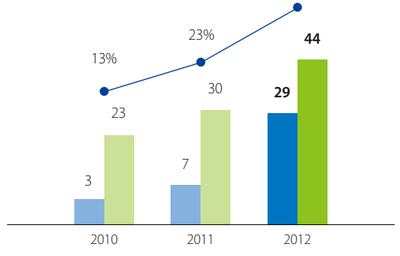


* Retirement rate is based on the annual average number of fulltime employees in the headquarters.

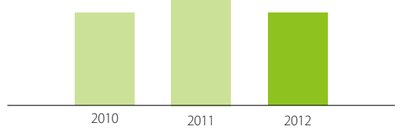
Maternity Care Support

We are striving to protect maternity care in many ways to help raise the low birth rate, one of today's hottest social issues in Korea, and allow female employees to maintain balance between work and family. If a female employee gets pregnant and reports it via our internal maternity protection system, her department manager will adjust what she has to do at work according to her conditions and make sure that she has regular prenatal tests. After she returns to work following a 90-day maternity leave (before and after childbirth), she can use an in-house Mom's Room, have priority in getting her child admitted to the company daycare center, and use a flexible work schedule.

Use of Childcare and Maternity Leave (Unit: case)



Average Childcare Leave Period (Unit: months)



Rate of Return after Childcare Leave

100 %

→ Protection of Maternity Care through "Mom's Room" and "Pink Necklace"

In the new Samsung GEC, there are 4 Mom's Rooms, for female employees during pregnancy and up to 1 year from a child birth. Furthermore, women wear a "pink necklace" during the maternity care period to promote a culture of supporting maternity care.

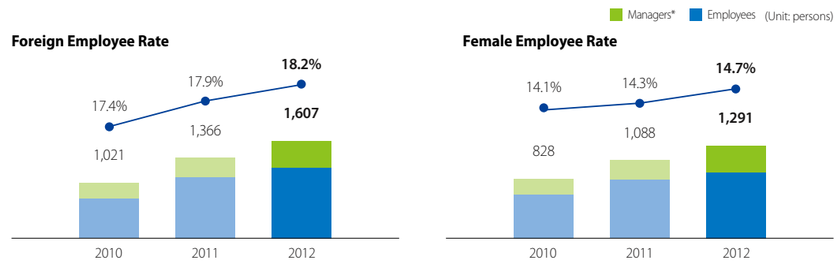
INTERVIEW

"I was able to take rest at Mom's Room between the first five to ten weeks of my pregnancy, when I became too tired or had severe headache. Thanks to Mom's Room, I was able to stay in good condition so that I could complete given tasks. In addition, many people offered a hand when they saw me wearing the pink necklace. I think the maternity care support program helped me build my future vision at the company with a long-term view."

Ji-Won Choi, Engineer at Procurement Planning Department

Strengthening Global Competency by Respecting Workforce Diversity

As a global company, we respect the human rights of minorities and are even encouraged to develop more foreign workforces. In particular, we are creating synergy effects in overseas business operation by employing excellent foreign employees and managing them at overseas office and sites effectively. We are also focusing on developing female engineers through consistent interest and investment in the development of female employees.



*Managers mean positions over the manager level.

Hiring Local Employees

Since 2012, we have been focusing on localization and reinforced capabilities in overseas offices and sites through extensive local recruitment. We recruit local employees via various channels such as online, newspapers, internship through industry-academia collaboration, headhunter, job fair, recruiting at local colleges, and recommendation by our employees. In particular, when implementing overseas projects, we are striving to contribute to the development of the local economy by employing as many local employees as possible.

Developing Local Employees

To hire and retain talented local employees, our overseas offices provide new recruits with entry-level training on the value system of the Samsung Group and corporate culture to boost their loyalty and sense of belonging in the company and offering a performance-based reward system in a transparent, and fair manner. In addition, we are running "Global Mobility," a staff rotation program between the headquarters and overseas offices. This program is divided into "virtuous cycle system" , designed to deploy employees to the headquarters or understaffed for 1 year or more, and "short-term dispatch system" to dispatch local staff to the headquarters at the request of the headquarters for 3 to 6 months.

→ Nurturing Local Leaders through the "Global Mobility" Program

We are running the "Global Mobility" program to dispatch local staff to the headquarters for a certain period of time with the aim of nurturing local staff of overseas offices as managers and promoting communication between the overseas offices and the headquarters. As of April 2013, the total of 13 local employees have been dispatched to the headquarters through the program.

INTERVIEW

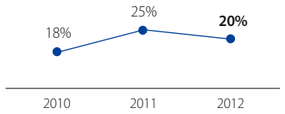
"I joined Samsung Engineering's office in India (SEI) in 2006. Since May 2012, I have been working at Global Support Department at HQ in Korea through "Global Mobility program". It's been a very enriching year. This program has given me the opportunity to learn the working culture and process of Samsung Engineering and to gain expert coaching on my functional part. I came back to SEI in May 2013 after completing the program, and I am very motivated to share and implement my learning with my colleagues and team in India. I look forward to adding value to my team in India with my HQ exposure."

Anil Bhatt, Assistant Manager at Samsung Engineering India

Employing Female Employees

As the number of female engineers increases, we are endeavoring to secure excellent female employees and help them demonstrate their capabilities. In 2012, the proportion of female workforce stood at 16%. Among newly hired employees, the proportion of women has been maintained at around 20% (18% in 2010, 25% in 2011, 20% in 2012).

Rate of Female Employees among New College Graduates



Developing the Female Workforce

We still have a small proportion of female workforce in the ranks of executives and general managers. Note, however, that we are raising the proportion of female talents steadily since those in the managerial level are showing outstanding performance beyond our expectation. Samsung Engineering will strive to develop the competencies of female employees and help them succeed in business activities by providing them with equal opportunities of diverse welfare programs and female leadership programs.

→ Strengthening Leadership Competencies of the Female Workforce

IRC for Women I Since 1998 when Industrial Relations Council (IRC) for Women of Samsung Engineering was launched, it has been a representative body of female employees taking the lead in creating a better workplace for females. In 2012, IRC for Women carried out activities based on three missions: improving emotional communications, strengthening female leadership and competencies, and helping working moms focus on work. By holding a monthly meeting and a mentoring system, we improved communications among female employees. Moreover, we are managing programs for maternity care targets and working moms and providing support systems to help concentrate on their Job.

Women's Leadership Conference I We annually hold the "Women's Leadership Conference" to share ideas on the desired roles of women as leaders and promote communication between female employees. In 2012, a female executive from Samsung affiliate gave a special lecture on female leadership, and we had an open discussion on utilizing the female workforce.


Women's Leadership Conference, June 2012

Lectures Targeting Female Management I We had a venue for open communications between male executives/team leaders and female managers. A lecture titled "Male/Female Management to improve business performance" was delivered to all participants who could improve mutual understanding, and the necessity of developing female leaders was emphasized.


Lectures for female managers, September 2012

Promoting Communication among Employees

With the expansion of a wide range of employees, communication among all employees has become more important than ever. We are conducting various activities in many ways to improve interpersonal communication based on mutual understanding among approx. 8,800 staffs.

Employee Satisfaction Survey

We are conducting an annual employee satisfaction survey as part of our efforts to establish a more dynamic organizational culture by making employees focus on work and to manage diversity in our workforce. In January 2013, about 70.6 percent of all employees at home and abroad participated in the survey on core value, organizational culture, and global mindset, and the overall satisfaction rate was 78.7. It revealed the need for us to do something to increase work efficiency, enhance system integration, and improve communication among team members. We will analyze the results of the survey and do what is needed to improve how we work by establishing mid- and long-term strategies.

Addressing Employees' Complaints

We have established online and offline processes to resolve complaints from employees. Any employee who finds unreasonable practices or inconveniences can ask for a meeting with the department leader or post an article via GRID-Q, the internal real-time reporting system, bulletin board, or anonymous reporting function within the website of IRC. If there are issues regarding human rights violations, personal worries, or matters that need to be kept confidential, we make sure that internal specialist counselors have private meetings with the reporter to address the issue. Our complaint resolution system is working effectively to help create a better working environment and build trust between the employees and the company.

Industrial Relations Council

Representatives of Industrial Relations Council (IRC) are elected by direct voting. As a representative of the employees, the council is helping pursue common value through close communication and build a cooperative, mutually beneficial corporate culture based on trust.

→ Major Activities of IRC in 2012

Publishing a Monthly Magazine

We have been publishing a Monthly Magazine since May 2011 to build consensus and diversify the communication channels among employees. The magazine covers the IRC activities, improvement in system and organization, and current affairs inside and outside the company.

Visiting Domestic and Overseas Construction Sites

We visited 24 domestic and 14 overseas construction sites and 2 global offices in new countries where we operate so as to listen to their complaints and provide customized counseling services.

Meeting among Employees

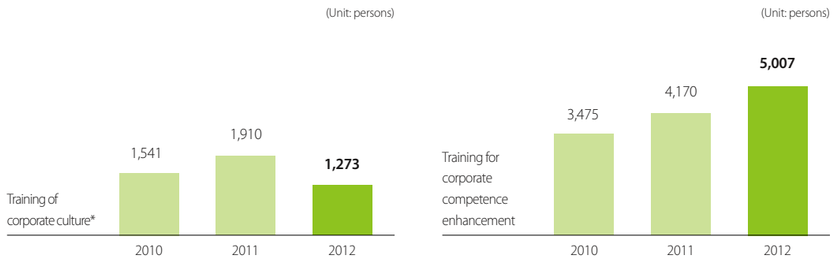
We are holding a meeting among employees every month to strengthen communication in the company. About 130 selected employees have participated in the meetings in 2012 for in-depth discussion.

Sharing the Corporate Culture

With our human resources becoming more diverse than ever, we provided trainings on corporate culture that pursues understanding diversity by extending the training course for entry-level/experienced staff into a four-hour required course under the theme "Understanding and Practicing the Corporate Culture Value System" in order to establish an innovative corporate culture.

In addition, we run the "Corporate Competence Enhancement Program" for current employees to overcome crisis caused by unstable external environment and transform the leadership paradigm. All employees are educated on gender equality and sexual harassment prevention every year, and they can file complaints via IRC for Women and counseling center if there are issues involving sexual discrimination or harassment. Samsung Engineering abides by international laws and regulation regarding human rights and labor issues and adopts a strict standard on its own. Accordingly, in 2012, there were no reported cases of forced labor or child labor.

Number of Participants in Corporate Culture Educations



* The education about the corporate culture includes classes focused on managing diversity and building communication to prevent discrimination regardless of gender, nationality, status and age.

Club Activities

We encourage our employees to join clubs -- at least one club per person -- as part of our efforts to promote internal communication and strengthen the corporate culture. Currently, there are over 40 clubs -- including basketball teams and bands -- involving 4,700 people. As our workforce increases in size, we are providing more assistance for club activities by adding more specific activities to the club list, paying 80 percent of the club bills, and simplifying the process of reimbursement.

1 Japanese fencing 2 Cello 3 Skin Scuba
4 Marathon 5 Base Ball 6 Football

Launching a Facebook Page

To ensure easier communication and share news among employees, Samsung Engineering has opened an official Facebook page in 2012 and delivered inside/outside news of the company. Through the page, we help all domestic and overseas employees feel a sense of belonging and take pride in being members of the company. In addition, the launch contributes significantly to raising the interest of outside stakeholders and company awareness among general public (3,100 Likes as of the end of 2012).

Running a "Compliment Blog"

We are running a "Compliment Blog" wherein all employees compliment others for their enthusiasm, good performance results, and hard work. This program prevents conflicts between each position by creating a culture of compliment and improving work efficiency through dynamic communication and gives positive influence on work productivity and efficiency. As of March 2013, a total of 16,500 compliments have been posted on the blog.

"EPC Passion Story"

For about 4 months from August to November 2012, we held "Passion Discussions" and "Passion Train" events to address pending issues between departments and side effects of the company's rapid growth, embrace workforce diversity, and strengthen our solidarity. About 417 employees from engineering, procurement, construction, project management, marketing, and business support departments participated in the events. They selected the major issues from among those suggested by each department and drew conclusions based on what they discussed regarding the issues. This program helped all participants understand the works of other departments and improve interdepartmental collaboration.

Passion Discussions, August 2012

"Go Together" Event

In September 2012, we held the "Go Together" event to expedite global business management by improving the effectiveness of global offices and to achieve the mid- to long-term management goals. A total of 237 employees including 149 engineers from the headquarters, India, and US, and 88 employees from overseas sites joined the event. They shared the management philosophy and core value of Samsung as well as participated in the IT system training connecting the headquarters, and overseas offices/sites. In addition, we had a special session for understanding difficulties in interpersonal communication between the overseas offices and headquarters.

1, 2, 3 "Go Together" event, September 2012

SPECIAL FEATURE

04

Moving into the Global Engineering Center (GEC)

In April 2012, Samsung Engineering opened the door of its new head office, the Global Engineering Center (GEC), in Sangil-dong, Gangdong-gu Seoul. We integrated all departments scattered throughout several buildings in Seoul into the GEC building. It will increase the synergy effect by enhancing interdepartmental communication and help us grow into a global top-tier engineering company. GEC is a highly efficient, eco-friendly, multifunctional business space symbolic of our corporate philosophy, vision, and commitment to green management. As a control tower of all global offices, it will be a new base in our leap forward to grow as a global top-tier company and maximize future values.

Scale: 15 floors above ground and 4 underground
Construction period: 2009. 09 ~ 2012. 03 (30 months)
Area: 27,604 m², 186,023 m² (total floor space)

Providing Optimal Work Environment to Maximize Work Efficiency

Under the slogan that "all building should be useful, convenient, and comfortable for users", we built the Samsung GEC building focusing on maximizing work efficiency and corporate capabilities from the perspectives of employees, clients, partners, and visitors.

Office

The head office is designed to respond efficiently to diverse work types, various characteristics of individuals, and organizational changes. Since Samsung Engineering implements many overseas projects, the headquarters building is furnished with communication facilities with international accessibility and interactivity on each floor. Moreover, a pleasant working space was secured through the floor air-conditioning system.

Meeting Zone

According to the types of users, usage, and scale, meeting zones are divided into reception area, inter-departmental meeting room, IR room, and driver's room. The reception zone is located on the 1st floor adjacent to the main entrance to provide easy access for visitors and meeting participants.

International Conference Hall

Boasting 654 seats including 7 seats for disabled people, the International Conference Hall is equipped with a control room and four simultaneous interpretation booths as raised rooms at the back. An information desk and an open hall are located at the entrance to the International Conference Hall.

Leaders Hall

Leaders Hall is a multi-purpose space serving as a task force office and space for management strategy meeting with 400 seating capacity depending on the seat arrangement. Affiliate facilities include a production room, a waiting room, a control room, an information desk, a cart storage place, and a preparation room.

Information Service Center

To allow all employees easy access to common internal information and data, we operate the Information Service Center. By installing the study room and personal computers, we maximize the work efficiency and boost their work performance.

Training Center

Aiming to provide various types of training programs, Samsung GEC has a range of classrooms such as large, middle, and small class rooms, multimedia room, and global labs. To improve the effectiveness of training, lounges and exhibition space are set up as well.

Engium (Public Relations Exhibition Hall)

Engium, Samsung Engineering Museum is designed to meet various purposes including marketing, training, and cultural events. By displaying management strategies, vision, business areas, and performance, it helps various stakeholders have a higher understanding about the company.

High-speed ICT Building

Samsung GEC obtained the High-speed Information and Communication Technology (ICT) Building Certification by the Korea Association for ICT Promotion. It is furnished with high-speed information infrastructure, which has the expandability and flexibility to accept the ICT services of the future.

Enhancing Employees' Welfare

Samsung Engineering is committed to improving the welfare of employees and their work-life balance by offering a wide range of amenities in the GEC.

Fitness Center

The Fitness Center is equipped with a group exercise (GX) room and a weight training room along with affiliate spaces such as locker room, shower room, lobby, reception room, and office. With the simultaneous exercise capacity of 340 people, the fitness center offers various programs such as GX programs, personal training schemes, and one-on-one consultation.

Child Care Center

The Child Care Center is located on the 1st floor in the southwest side considering accessibility during fire and other emergency situations. The number of children who use the center is limited to 100 ~ 120 in accordance with the recommendation of the children's welfare foundation.

Staff Cafeteria


몽골라면~ 베이컨 버거~ 여기 구내식당 맞아?

The 1,600-seater staff cafeteria provides up to 30 kinds of food per day - such as Chinese, Western, and Korean food including low-salt diet, salads, and snack food - to meet the diverse needs of individuals. In addition, there are separate dining rooms for special events of guests.

Sourced from a Dong-A Ilbo article titled "Respecting the Diverse Tastes of Employees" published on July 12, 2012

Environment-friendly Construction

The GEC is recognized for its cutting-edge construction technologies and its environment-friendly features. Samsung Engineering executed the project for building GEC by applying state-of-the-art, eco-friendly construction methods and facilities.

Introduction of the Energy Efficiency Improvement System I The Double Skin/Curtain Wall System was applied to the GEC. The double glass wall structure contains air bound between the inner and outer coverings and raises heating performance and circulation; thus contributing to energy saving and pleasant working environment. Moreover, Building Energy Management System (BEMS) will allow the optimal operation of the building by identifying energy saving factors in terms of communication, electrical, and physical elements of the building.

Environmental Certification I The GEC acquired Gold level certification from Leadership in Energy and Environmental Design (LEED), an international certification system dedicated to environment-friendly design. In addition, the head office building garnered the top grade in the Building Energy Efficiency Rating by the Korea Institute of Construction.

Category	LEED	Green Building	Energy Efficient Building
Certification	LEED (Leadership in Energy and Environmental Design)	KGBCC (Korea Green Building Certification Criteria)	Building Energy Rating Certification
Sponsored by	The U.S. Green Building Council (USGBC)	Ministry of Land, Transport and Maritime Affairs and Ministry of Environment	Ministry of Land, Transport and Maritime Affairs, Ministry of Knowledge Economy, and Korea Institute of Construction Technology
Level	GOLD	Very Best	First Grade
Content	The LEED is provided to high-performance green buildings and architectures and has 6 major assessment categories such as sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovative design.	The KGBCC certifies the environmental performances of buildings by assessing impacts on environment such as reduction of energy and resource consumption and pollutants, comfort, harmony with neighboring environment.	The Building Energy Rating Certification is provided by the government. Korea Institute of Construction Technology is engaging in evaluating the energy efficiency of buildings and certifying the level.

04 SUPPLY CHAIN

Goals

- Enhancement of our global partnership network
- Realization of fair purchasing practices
- Promotion of shared growth and communication

Organizations in Charge

- Engineering Support Dept.
- Construction Support Dept.
- Procurement Planning Dept.
- Corporate Partnership Office

Management Principles

We are strengthening our global network by discovering competent subcontractors in a steady manner. We also strive to contribute to win-win cooperation and community development by monitoring and assessing the sustainability of our subcontractors and offering them well-organized assistance.

Fair Selection and Assessment of Suppliers

Our suppliers include design companies for engineering design, vendors for procurement, and subcontractors for construction. Each department chooses and registers a company as a partner according to criteria such as expertise, overall competencies, environmental awareness, and ethical conduct. A company registered as a partner tends to have a long-term relationship with us.

Status of Suppliers

(As of the end of 2012)

	Supplier Pool	Number of Suppliers to be Managed
Design companies for engineering	145*	26 (Gisuhwe)
Vendors for procurement	3,062	257 (SEGA Global) 87 (Seongjohwe)
Subcontractors for construction	3,151	165 (Domestic) ** 112 (Overseas)

* Companies with semi-membership and full membership.
** Companies that have signed the agreement on shared growth with us in 2013

Design Companies for Engineering

Samsung Engineering annually assesses its suppliers and divides them into "Gisuhwe" (an association of design companies) and suppliers with full and semi-membership. The assessment criteria includes whether a partner acquires ISO 9001 certification and signs a shared growth agreement. In 2013, we plan to add quality control to the current assessment criteria based on the output to improve the quality of final products. We also intend to establish the Engineering Work Place (EWP) system to link the assessment of suppliers with the outsourcing contract system and reward outstanding suppliers.

Vendors for Procurement

We annually assess the project management capability, financial soundness, environment and quality control capability in order to designate superior vendors as Samsung Engineering Global Alliance (SEGA) member companies, and provide them with various incentives. SEGA consists of domestic and overseas outstanding vendors; we have run "Seongjohwe", an association of domestic vendors that outperform and contribute to our corporate growth. Environment control assessment criteria cover the following areas; holding certification related to environment and safety; use of environment-friendly materials; energy usage management; implementation of recycling program; implementation of and education on environment management program, and; hazardous materials and wastes control program.

Subcontractors for Construction

For domestic subcontractors, we give our subcontractors equal bidding opportunities through the bid rotation system, the automatic selection program for bidding, and implement a low-price bid control system. It prevents excessively low-priced bids and guarantees their stable corporate management and profit making. For overseas subcontractors, we conduct Prequalification (PQ) and on-site assessment for bidders and make a bidders' list to select the most appropriate subcontractor for on-site construction. Moreover, we conduct a regular assessment of sustainability twice a year to improve their corporate sustainability management. The assessment is aimed at ensuring their effective management of construction, quality and safety control, and environment protection, and subcontractors are given feedback on the assessment.

Running an "Internal Deliberative Committee on Subcontracting"

Purpose	To ensure fairness of contracting and pricing and legitimacy of the relevant laws such as Fair Subcontract Transactions Act and to carry out consideration and decision on the registration and cancellation of subcontractor
Composition	5 persons including chairman (those in charge of subcontracting including the head of construction division)
Performance in 2012	121 cases of deliberation

Establishing a Shared Growth System

Under the slogan of "Pursuing win-win growth by engaging in fair trade practices and win-win partnerships", Samsung Engineering is providing various programs to improve the competitiveness of suppliers and build reliable partnerships.

Financial Assistance

We gave a total of KRW 9.6 billion worth of loans with no interest for 6 months to 24 small and mid-sized, cash-strapped suppliers. We have also set up a shared growth fund worth KRW 38.4 billion and have lent a total of KRW 30.2 billion to 35 small and mid-sized suppliers with the rate of 1.65% lower than the market interest rates. Moreover, we make all payments to our suppliers in cash and within 10 days to keep them financially stable.

Support for Recruitment & Training

We are helping our suppliers improve their capabilities by operating diverse education and training programs. In 2012, we offered offline and online training courses on equipment maintenance, construction, safety, quality, and design to 2,843 employees of our suppliers. Moreover, to address the labor shortage of our suppliers, we held a recruitment event for shared growth with contractors jointly with Samsung affiliates at KINTEX on July 4, 2012, with our 3 supplier companies employing 4 talented persons successfully.

Technical Support

We put in place technical counseling and joint R&D program to help our suppliers improve their technological competitiveness. In the 2012 Technology Contest and Achievement Awarding for Concrete, Samsung Engineering and SEN Engineering Group were awarded by the Ministry of Knowledge Economy for developing the Prefabricated Steel Reinforced Concrete (PSRC) Construction Method, the highest award in the field of new technology development. Moreover, for the purpose of preventing core information leakage of suppliers, we have adopted the escrow system of technical data and supported 8 suppliers in storing 18 core technical data in the Large & Small Business Cooperation Foundation.

Expanding to Overseas with Suppliers

In the Family Satisfaction Index (FSI) survey, suppliers mentioned what aspects of support and cooperation are needed to build long-term win-win cooperation. Our suppliers expected us to help them enter into the overseas market together through a cooperative system for engaging in sales activities and winning new orders. In response, we are helping them move into foreign markets through a variety of programs.

Supporting Vendors for Approval from Overseas Clients I To help our vendors receive approval from overseas clients, Samsung Engineering conducts a preliminary check, sets up plans to develop and improve their business, and holds a vendor registration fair. Throughout all these processes, in 2012, Samil (Control) and SPX Korea (Machinery) obtained approval from Saudi Aramco, and Kangwon B&E (Machinery) and SungKwang Bend (pipe), from MCL (Mobil Cepu Limited), a subsidiary of Exxon Mobil Corporation.

Expanding to Overseas with Subcontractors for Construction I We help our Korean subcontractors make inroads into foreign markets with us if they want to. In October 2012, we hosted a fair to share information on how to penetrate overseas markets and presented the safety and quality standards for overseas construction. As a result, we helped 6 subcontractors win new contracts worth KRW 15.6 billion for overseas construction in 2012.

Information Exchange Meeting with Subcontractors for Overseas Business, June 2012

Education on Shared Growth, September 2012

Seongjohwe Event, October 2012

Promoting Communication with Suppliers

Samsung Engineering classifies suppliers by function for smoother and prompter communication with them and listens to their suggestions and difficulties. We are striving to provide them with optimum feedback through review and decision making in a fair and prompt manner.

Category	Communication Channel	Frequency	Result in 2012	Major Content
Design company	Section meetings by disciplines	Every quarter	4 times	Discuss current matters at section level and exchange information
Vendor	General meeting of SEGA Korea Seongjohwe	Once a year	once	Share operational organizations of SEGA Korea Seongjohwe, Meet with the CEO
	Section meeting of Seongjohwe	Any time	5 times	Share the performance results of each section
	Steering Committee of Seongjohwe	Four times a year	4 times	Discuss current matters of Seongjohwe and share the performance results of each section
	Onsite meetings with vendors	Any time	once	Understand the current situation of vendors for shared growth, Listen to VOC and promote mutual prosperity
Subcontractor	Family Satisfaction Index (FSI) survey	Any time	5 times	Visit subcontractors who completed projects Listen to subcontractors' voices about construction, quality, and safety management, and fair trade
	Meetings	Any time	9 times	Introduce support systems for subcontractors Discuss subcontractors' plans to improve cost competitiveness Listen to subcontractors' voices

→ "Partner's Day" for Shared Growth

On June 25, 2012, we invited 275 CEOs of suppliers in the construction and design fields and hosted the first "Partner's Day" for shared growth. On that occasion, we shared our management status and vision with our suppliers and released an execution plan for shared growth to provide assistance for financing, technology, and training. Throughout this plan, we will strive to build consensus on shared growth, promote communication, and build a foundation for win-win cooperation with our suppliers.

INTERVIEW

"Samsung Engineering is running a fair and transparent bidding system and taking the lead in communicating with suppliers by sharing its corporate management status on a regular basis. Through a shared growth implementation plan released on the first "Partner's Day", I could see the willingness of Samsung Engineering to pursue win-win cooperation proactively. I expect Samsung Engineering to extend the effective win-win system and spread it throughout the engineering industry."

Kyu-Suk Lee, CEO of Kerheung Industry, a Representative of Shared Growth Partners

05 LOCAL COMMUNITY

Goals

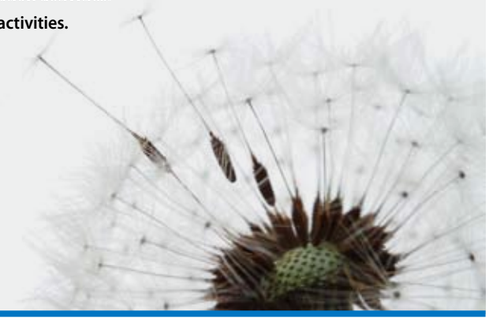
- Expansion of volunteer works
- Expansion of global social contribution activities
- Promotion of education for next generations

Organizations in Charge

- HR management Dept.
- IR Dept.

Management Principles

In the past, socially responsible management was optional for a corporation since it incurred expense in management. In today's global market, however, it is essential in management strategy and is considered as an investment for the company's better future. Samsung Engineering has reaffirmed its commitment to fulfilling its responsibilities as a global corporate citizen through economic contribution to local communities as well as global social contribution activities.
We will endeavor consistently to carry out professional and systematic CSR activities.



Systemization of Social Contribution Activities

We have set as our goal to engage in social contribution activities reflecting the business features and in cooperation with our global offices and diversify communication channels through various voluntary community services. To achieve this goal, we have set the direction of social contribution activities by promoting talent donation, providing voluntary community services associated with club activities, establishing the Creating Shared Value (CSV) system by building libraries, and promoting employees' pride in the company through Corporate Social Responsibility (CSR) involvement. Our roadmap for social contribution is to create future value for human society through social contribution activities.

Social Contribution Roadmap

Directions of Social Contribution Activities

Samsung Engineering has set the five directions of social contribution activities for more systematic and proactive communication with the local community. As a global corporate citizen, we endeavor to help the local communities we operate in to grow together by establishing diverse channels with the communities. Our approach to socially responsible management covers the establishment of corporate citizenship among employees, greater pride in the company, and more contribution activities in association with our business.

Promoting More Voluntary Services Participation | Under the goal of achieving 100% participation rate in 2013, the company will provide all employees with various voluntary service opportunities such as talent sharing and mentoring. In addition, we will increase social contribution organizations and expand their activities by appointing a managerial level employee as the leader for voluntary services.

Revitalizing Culture of Donation | The rate of employees' participation in donation was a mere 37% in 2012. The target rate for 2013 has been set at 90%. To accomplish this goal, diverse donation programs such as building sisterhood with children of developing countries, building a well of hope, and the "sharing 1% of income" campaign will be introduced together with raising awareness on a culture of donation.

Spurring Global Social Contribution Activities | We will saw the seed of sustainable development by investing in human resources in countries where we do business through activities such as building libraries, operating technical schools, and providing training programs.

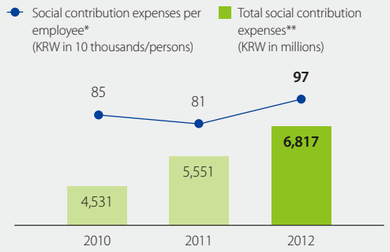
Engaging in Local Communities | Communication and win-win relationship with local communities will be promoted through various social contribution programs to help people in need in Gangdong-gu, Seoul, where our headquarters is located.

Expanding our Flagship Social Contribution "Eco-generation" | Samsung Engineering will raise awareness of our future generations about the importance of the environment by expanding the scope of "Eco-generation", which consists of educational contents for children and youth.

→ Key Figures in Social Contribution in 2012

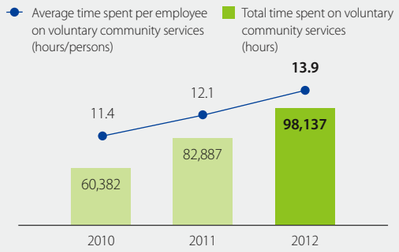
Most social contribution indices in 2012 increased significantly compared to the previous year.
- Total social contribution expenses: 23% ↑ , Social contribution expenses per employee: 20% ↑ , Total time Spent on voluntary community services: 18% ↑ , Average time spent per employee on voluntary community services: 15% ↑

Spending on Social Contributions



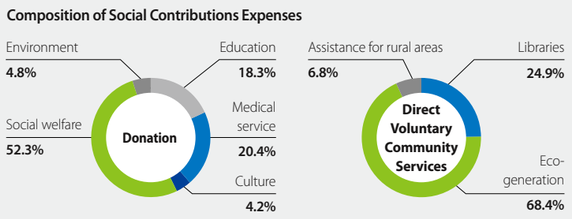
* Social contribution expenses per employee were based on annual average number of employees of the headquarters.
** Total amount of funds raised by employees, direct voluntary works, and donations

Time Spent on Voluntary Community Services



* Average time spent per employee on voluntary community services was based on annual average number of employees of the headquarters.

Composition of Social Contributions Expenses



Participants in voluntary community services

5,527 employees

Number of voluntary community service teams

40 teams

Expanding Employees' Vonteer Works

Samsung Engineering encourages employees to participate in social contribution activities through providing them with an opportunity to feel rewarded and proud. By doing so, we will contribute to building a culture of sharing and continue to communicate with the local communities.

Increasing Donations by Employees

As we run various donation programs with the participation of our employees such as "Water for Life", "Daddy-Long-Legs", and "SECL Fund", we share the information on the underprivileged in the local community and underdeveloped countries to continue to support them. Our employees experience the joy of giving through donation activities.

Employees Donation Programs

"Water for life" Supporting to build wells in water-scarce countries	We are building wells for residents in African countries with water scarcity. With donations from employees, we have built 7 wells in Kenya with donations worth KRW 73 million in 2012. We will expand the scope of the program with more donations.
"Daddy-Long-Legs" Maintaining close relations with children from developing countries	We are maintaining close one-to-one relations with needy children living in India, China, Vietnam, Cambodia, and Brazil. In 2012, we collected a total of KRW 114 million worth of donations and donated to 372 children each month. In 2013, we will encourage employees to participate in the company-wide donation campaign to benefit more children in need.
"SECL Fund" Supporting the underprivileged	SECL Fund targets students from low-income families and local welfare centers. In 2012, we donated KRW 150 million to support 42 students from low-income families and local welfare centers in Gangdong-gu, Seoul.

Sisterhood Relations with Rural Communities

As of January 2013, we have sisterhood relations with 9 villages in Korea. We help them with farm work, buy their agricultural products, invite local residents to take a tour in Seoul, offer assistance for village events, and do volunteer works.

Activity	Content
Sharing Kimchi	Provide low-income families and welfare centers with Kimchi made with ingredients grown in sister villages
Holding direct markets for agricultural products	Exhibit and buy agricultural products from the direct markets of 9 sister villages in need
Sharing Hope on New Year's Day	Visit local welfare centers as well as the underprivileged and donate daily necessities and food
Voluntary Community Services in Connection with Local Communities	Visit sister villages to give a hand on farming

Sharing Hope in Gangdong-gu

In cooperation with Gangdong-gu, Seoul where Global Engineering Center is located, we are sponsoring families and institutions in need on a regular basis. In 2012, we spent about KRW 24 million for the "Day for the Disabled" event and for children's support centers. In addition, we provided students from low-income families with scholarship of about KRW 124 million collected from employee donations.

CEO's Volunteer Works

In December 2012, the CEO of Samsung Engineering visited elders who live alone in Yongsan, Seoul, to provide them with daily necessities and warm encouragement. On December 24, 2012, the CEO invited two children suffering from cancer and their guardians, and gave them KRW 5 million and Christmas presents as part of the efforts to share love and hope with neighbors in need.

1 Sharing Kimchi
2, 3, 4 Voluntary Services for Rural Communities

Communicating with the Community

As a global corporate citizen, Samsung Engineering strives to invest in education and infrastructure in client nations for the purpose of creating future value.

Building Libraries in Developing Countries

Given the fact that engineering is a knowledge-based industry, we have remodeled decrepit schools and community centers in rural regions into new libraries for children in client countries. We spend KRW 100 million to build one library; we built 3 libraries in Dahej in India in 2012, and we aim to complete libraries in Iraq and Bolivia within 2013. Samsung Engineering will continue to remodel public facilities into new libraries for children and residents in poor regions. For each library, we have provided about 2,000 books, furniture, PCs, first aid medicine, school supplies, and soccer balls, and managed them in collaboration with local governments. Aside from libraries, we have supported the creation of children's choir in the local community to help children develop and seek self-realization.

Operating Technical Schools

In 2013, as part of our efforts to invest in human resources and create a better future in client nations, we are planning to build technical schools near overseas sites to nurture technicians such as welders and carpenters and help them work at the site after completing the training to train technical professionals in developing nations. We aim to train about 100 technicians in Bolivia in 2013.

Major Activities for Local Communities in 2012

Country	Program	Activities
India		
	Building Libraries	In March, the company built 3 libraries in Dahej, India for local students and residents. Each library has about 2,000 books recommended by experts in various fields and furniture and supplies made by local companies to revitalize the local economy. The libraries are also equipped with stationery, sports goods, and first aid medicines to help students do a variety of activities. We outsource the libraries' management to local communities to run them according to the respective local conditions.
Algeria		
	Internship Program	Since 2011, the company has built strong collaborative relations with Skikda University in Algeria and offered its students internships to develop human resources and also reduce the unemployment rate in the region. We have employed 55 participants in local offices as of January 2012.
	Medical donation	In May, the company offered medical services for local residents jointly with Sonatrach, Ministere de la Sante a Skikda, L'Hospital Skikda, suppliers, and NGOs. For about 2 weeks, more than 100 Algerians received medical treatment, and 28 patients underwent surgeries. The medical donation not only provides medical services but also passes on medical technology and know-how to local medical staff.
	Donation of funds and culture	The company donated appliances to a facility for the disabled in Skikda in May and offered necessities and musical performance to an orphanage in July. In addition, we invited local residents to the musical "I Solisti Roma" from Italy at the Skikda Culture Center to promote cultural exchange.
UAE		
	Blood Donation	In November, the company carried out bloodletting at the site of the Takreer U&O Project in the UAE jointly with Blood Bank, Abu Dhabi. Many employees participated in the drive.
	Attending the "Tree Festival"	In March, the company attended the annually held Tree Festival at Gayathi Western Region Parks and Recreation in Gayathi, UAE to help students and residents have better environmental awareness and understanding of engineering businesses.
Bahrain		
	"Local Residents' Night" event	The company held a carnival dubbed "Local Residents' Night" in association with the Muharraq local government in Bahrain. We hosted a variety of events such as entertainment programs as well as serving traditional foods and giving souvenirs and giveaways. We also gave a presentation on the Muharraq STP Project and engineering business to children and local residents.
	Cleanup of the community	About 50 employees participating in the Muharraq STP Project cleaned up the nearby beach park and surrounding areas.

Expanding the "Eco-generation" Environmental Education Program

"Eco-generation" was launched as part of the environmental education program for schools and voluntary community services in our neighborhood in 1996. We signed a memorandum of understanding with the Ministry of Education and Science Technology in Korea and the United Nations Environment Programme abroad. It aims at providing children around the world with diverse contents on the environment via the online platform as well as offline activities. As one of our major social contribution activities, it has enabled us to help raise environmental awareness for children.

Number of students participated in the "Eco-generation" in 2012

Domestic	approx. 1,550
Overseas	approx. 320
Total	approx. **1,870**

Integrated Online Education Site on Environmental Protection

Children can have access to a wide range of multimedia learning resources, such as flash content, video files games, stories, and quizzes about the environment on the Korean website (http://www.e-gen.co.kr). The website in English (http://www.Eco-generation.org) provides the online platform showing the environment protection activities carried out by children around the world.

Environment Reporter & Eco-generation Outreach Ambassador

The company started to select and nurture teenage Environment Reporters & Eco-generation Outreach Ambassadors, who report the local environment news through their own views, in 2008 abroad and 2010 in Korea. In 2012, we selected 80 teenagers to report 371 cases of domestic environmental news in Korea and 74 teenagers from 22 countries to report 754 cases of global environment news abroad.

Samsung Engineering Green Awards

Samsung Engineering hosted the first Samsung Engineering Green Awards jointly with the Korea Environmental Education Center as part of our efforts to support environmental club activities at school. We launched the competition in August 2012, and a total of 30 clubs have implemented environmental projects for three months. In November 2012, all students of each club gathered to deliver presentations on their projects. Through this event, the company selected proactive members to work for Eco-generation and posted the project results on the website to continue to hold the competition.

Global Youth for the Environment Forum

To provide high-quality environmental education through lectures by environmental experts, Eco-generation launched the Global Youth for the Environment Forum jointly with the Graduate School of Environmental Studies at Seoul National University and Korea Green Foundation. About 400 children and youths around the world gathered together to attend the lectures delivered by environmental experts and participated in various participatory classes on the environment. Foreign participants included students from Saudi Arabia, who received prizes in the Environment Essay Competitions, and global eco-leaders from India, Philippines, UAE, and Indonesia, who were awarded in the English Essay Competitions via Eco-generation.

"Eco-generation" Environment Reporter Launching Ceremony, July 2012

Samsung Engineering Green Awards, November 2012

Global Youth for the Environment Forum, February 2012

One-Day Teachers' Classes on Environmental Protection

Our employees hold specialized classes on the environment, such as water treatment and energy, to elementary and middle-school students. In addition, we operate activity programs for experiments and quiz competitions. In 2011, we began to manage a team of employee supporters and dispatched them to schools as one-day teachers to raise children's awareness of environmental protection. In 2012, they visited 18 schools in metropolitan areas and held a total of 24 classes for 966 students as well as classes for 150 students for the first time in India.

→ "Eco-generation School" in India

Samsung Engineering visited OM Foundation School in Noida, India to offer an environmental education class on September 14, 2012. The OM Foundation School provides free education to children living in poor neighborhood in the region, and our relationship with the school started when we donated computer and other devices.

The environmental education program is named "Eco-generation School", the program that we have been operating for 16 years. We launched the "Eco-generation School", in an attempt to spread our Eco-generation program to regional hubs worldwide. We selected India as the starting point as it is one of the most successful localization cases given that 97% of employees are local residents.

More than 40 employees took part in the "Eco-generation School" program for two days. After a thorough preparation of orientation classes, volunteers provided a high quality education classes to children. During the class, children watched a flash animation video about photovoltaic energy and assembled photovoltaic powered electric fans. Taking the India office as the starting point, Samsung Engineering will expand the Eco-generation class program to other regional hubs globally.

INTERVIEW

"I thank Samsung Engineering and Eco-generation program for making us part of the Tunza Eco-generation program. I loved making solar fans and learning about the website. I promise to participate actively in Tunza Eco-generation and express my ideas for a cleaner and greener environment."

Priyanka, 7th grader at OM Foundation School

"Tunza Eco-generation initiative helped me to do a bit for a clean and green future. We always think about being a part of such activities, and the reasons we don't do it are much more insignificant than the reasons we do it for. I was able to help, learn and have a lot of fun, all at the same time. All of us were left amazed by the creative and thoughtful ideas of the students. I really liked some of the essays written by them. I hope that they get inspired and contribute for a sustainable and clean environment."

Harpreet Singh Sutdhar, Employee Volunteer

SAMSUNG ENGINEERING WORLDWIDE

Samsung Engineering has set up a total of 25 overseas offices, through which the company contributes to the development of local communities by hiring local employees and making purchases from local firms.

Sales in 2012

KRW **11,440** billion

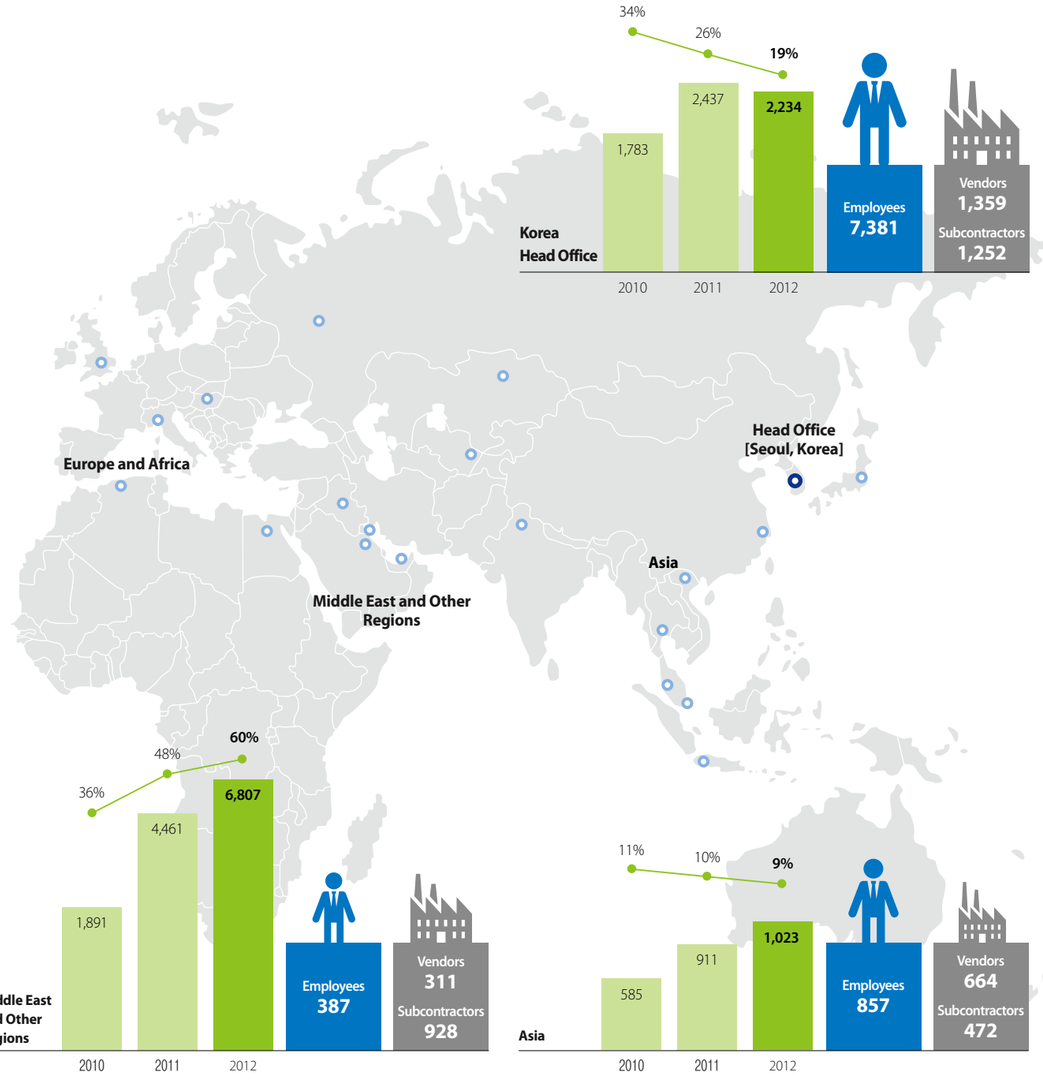
Number of Employees in 2012

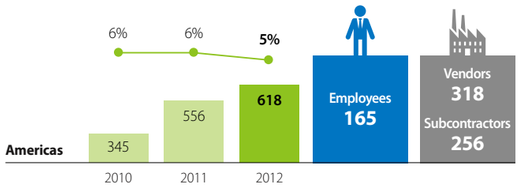
8,811 persons

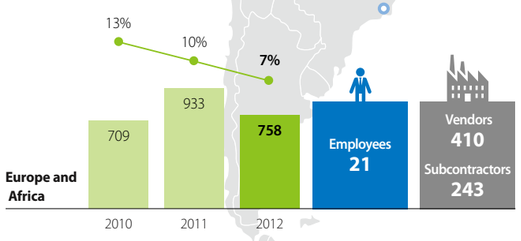
Number of Suppliers in 2012

Vendors **3,062** companies

Subcontractors **3,151** companies







Americas (5)	Country
Samsung Engineering America Inc.	US
Grupo Samsung Ingenieria Mexico, S.A. De C.V.	Mexico
Samsung Engineering Co., Ltd. Venezuela Office	Venezuela
Samsung Engineering America Do Sul	Brazil
Samsung Engineering Trinidad Co., Ltd.	Trinidad & Tobago

Europe and Africa (6)	Country
Samsung Engineering Co., Ltd. Milan Office	Italy
Samsung Engineering Magyarorszag KFT.	Hungary
Samsung Engineering Co., Ltd. UK Office	UK
Samsung Engineering Co., Ltd. Russia Office	Russia
Samsung Engineering Co., Ltd. Algeria Office	Algeria
Samsung Engineering Co., Ltd. Cairo Office	Egypt

Middle East and Other Regions (4)	Country
Samsung Engineering Saudi Arabia Co., Ltd.	Saudi Arabia
Samsung Engineering Co., Ltd. Abu Dhabi	UAE
Samsung Engineering Co., Ltd. Iraq	Iraq
Samsung Engineering Co., Ltd. Kuwait Office	Kuwait

Asia (10)	Country
Samsung Engineering India Private Ltd.	India
BUT. Samsung Engineering Indonesia	Indonesia
Samsung Engineering Co., Ltd. Singapore Representative Office	Singapore
Samsung Engineering(Malaysia) Sdn. Bhd.	Malaysia
Samsung Thai Engineering Co., Ltd.	Thailand
Samsung Engineering Co., Ltd. Hanoi Representative Office	Vietnam
Samsung Engineering Construction(Shanghai) Co., Ltd.	China
Samsung Engineering Tokyo Office	Japan
Samsung Engineering Co., Ltd. Tashkent Office	Uzbekistan
Samsung Engineering Kazakhstan LLP	Kazakhstan

Sales (KRW in billions) **Sales by Region** **Manpower Status in 2012** **Number of Suppliers in 2012**

2012 SAMSUNG ENGINEERING
SUSTAINABILITY REPORT

PERFORMANCE SUMMARY

ECONOMIC DATA

Income Statement*

(Unit: KRW in millions)

Category	2010	2011	2012
Revenue	5,312,262	9,298,184	11,440,157
- Domestic	1,779,922	2,437,309	2,234,303
- Overseas	3,532,340	6,860,875	9,205,854
Cost of sales	4,501,887	8,219,469	10,152,598
Gross profit	810,375	1,078,715	1,287,559
Administrative expenses	383,572	452,346	555,270
Operating profit**	426,803	626,369	732,289
Other operating income	185,695	326,355	258,476
Other operating expenses	200,245	235,458	271,681
Financial income	69,375	63,905	35,944
Financial costs	22,602	94,187	65,528
Gains on equity method, net	-	36	11,224
Profit before income tax	459,026	687,020	700,724
Income tax	122,403	172,494	179,649
Profit for the year	336,623	514,526	521,075

* These financial statements were prepared on a consolidated basis and in accordance with the K-IFRS.
** According to the amendment of K-IFRS, operating profits for three years were calculated by deducting administrative expenses from gross profit.

Financial Position*

(Unit: KRW in millions)

Category	2010	2011	2012
Total assets	3,534,863	5,188,615	5,673,553
Current assets	2,831,725	4,156,825	4,187,619
- Cash and cash equivalents	408,701	560,018	436,409
- Other current assets	2,423,024	3,596,807	3,751,210
Non-current assets	703,138	1,031,790	1,485,934
- Tangible and intangible assets	491,535	734,482	773,059
- Other non-current assets	211,603	297,308	712,875
Total liabilities	2,578,050	3,875,258	3,933,509
Current liabilities	2,404,525	3,644,841	3,554,082
Non-current liabilities	173,525	230,417	379,427
Total equity	956,813	1,313,357	1,740,044
Capital stock	200,000	200,000	200,000
Consolidated surplus	56,624	56,624	56,624
Retained earnings	937,816	1,358,353	1,771,202
Other reserves	△197,489	△264,338	△288,362
Non-controlling interest	△40,138	△37,282	580
Total liabilities and equity	3,534,863	5,188,615	5,673,553

* These financial statements were prepared on a consolidated basis and in accordance with the K-IFRS.

ENVIRONMENTAL DATA

Consumption & Emissions

Category	2010	2011	2012
Consumption of energy* (Unit: GJ)	**382,435**	**1,030,151**	**2,756,446**
Direct energy consumption	322,323	931,790	2,617,900
- Gasoline	59,116	92,314	179,690
- Diesel	218,889	793,285	2,394,743
- Kerosene	16,690	3,792	3,344
- Heavy oil	15	1,185	5,976
- LNG	26,495	39,081	33,127
- LPG	1,118	2,133	1,021
Indirect energy consumption	60,112	98,361	138,547
Consumption of water (Unit: tons)	**438,265**	**711,290**	**1,957,937**
- Tap water	378,097	396,250	1,138,316
- Underground water	12,788	192,725	585,776
- Surface water	4,500	23,413	77,147
- Recycled water	42,880	98,902	156,698
Greenhouse gas emissions** (Unit: tCO_2e, Scope 1 & 2)	**31,267**	**80,816**	**214,546**
Direct emissions (Scope 1)***	23,410	67,927	196,956
Indirect emissions (Scope 2)	7,857	12,889	17,590
Other emissions (Scope 3)	161,901	322,074	431,239
- Headquarters (rented stores, commute bus)****	-	-	780
- Business trip by flights*****	15,413	20,129	20,124
- Subcontractors (Construction equipments)	62,974	198,479	336,751
- O&M facilities******	83,515	103,465	73,583
Amount of waste produced (Unit: tons)	**274,490**	**482,219**	**551,087**
- Construction waste	232,213	475,244	529,676
- Industrial waste	30,071	3,430	21,170
- Specified waste	12,206	3,545	241
Amount of waste treated (Unit: tons)	**274,490**	**482,219**	**551,087**
- Land-filled	172,416	318,322	436,962
- Burned	42,720	52,241	38,558
- Recycled	59,354	111,654	75,468
- Discharged to the sea	0	2	99

※ The greenhouse gas emissions are calculated down to three decimal places. There can be differences within ±1 tCO_2e due to rounding off to the nearest integer for the purpose of reporting.

* Consumption of energy is based on net caloric value.

** The greenhouse gas emissions are a total amount including direct emissions (Scope 1) and indirect emissions (Scope 2).

*** Emissions in 2010 and 2011 are changed by revising the emission factors of gasoline-fueled vehicles.

**** Emissions from commute buses are increased due to the movement into our new headquarters building in April 2012.

***** Emissions from business trip by flights are newly included in Scope 3.

****** Emissions from O&M facilities include sewage and waste water treatment plant and waste incineration plant, and the amount of emissions in 2010 and 2011 are changed by the adjustment of boundary setup.

ENVIRONMENTAL DATA

Health and Safety

Category	2010	2011	2012
Total time of exposure to work (Unit: MH)	58,797,318	131,385,271*	267,232,513
Industrial accident rate: domestic-converted industrial accident rate** (Unit: %)	0.12	0.16***	0.05
Industrial accident rate: overseas-LTIR****	0.0034	0.0046*	0.009
- Middle East	0	0.007	0.0083
- Asia	0.0139	0	0.0133
- Africa	0	0	0
- America	0	0	0.0494

* Total time of exposure to work in 2011 changed from 132,163,393 to 131, 385,271 due to errors in the aggregation at some sites. Therefore, LTIR in 2011 has been changed from 0.0045 to 0.0046.

** Converted industrial accident rate (%) = Number of converted industrial accident victims / number of regular workers X 100
Number of converted accident victims: weighted by the deaths (10 times that of those who were injured in industrial accidents)
Number of regular workers: (Annual sales value for domestic construction projects X Labor cost rate) / (Average monthly salary of the construction industry X 12)

*** The domestic industrial accident rate is released on June 30 in the following year by the Ministry of Employment and Labor. (The figure in 2011 was the final data)

**** LTIR (Lost Time Incident Rate) = (Fatality + Lost Workday Case) / Manhour X 200,000

HSE Communication & Investment

Category	2010	2011	2012
Value of spending on the environment (Unit: KRW in millions)	6,287	9,111	10,192
- Investment in the environment*	2,800	2,600	1,923
- Spending on the environment**	3,487	6,425	8,183
- Purchase of environmental products (MRO)	-	86	86
Number of participants in education about the environment*** (Unit: persons)	7,616	60,555	102,039
Number of participants in education about safety (Unit: persons)	676,153	1,196,727	1,314,179

* Investment in the environment: money spent on research and development for environmentally-friendly purposes

** Spending on the environment: money spent on the efforts to protect the environment, treat waste and obtain environment-related certifications

*** Education about the environment: onsite education targeting employees of the company and suppliers

SOCIAL DATA

Workforce Status

Category	2010	2011	2012
Total number of employees* (Unit: persons)	5,882	7,620	8,811
Gender			
- Male	5,054	6,532	7,520
- Female	828	1,088	1,291
Region of birth			
- Korea	4,831	6,184	7,134
- Asia Pacific (excl. Korea)	888	1,175	1,342
- Americas	109	172	221
- Middle East Asia	11	44	63
- Europe	23	24	26
- Africa	20	21	25
Employment status			
- Permanent	3,791	4,645	5,331
- Fixed-term	1,224	1,762	2,050
- Overseas offices	867	1,213	1,430
Position			
- Executives	88	107	111
- Managers	2,200	2,799	3,275
- Staff	3,594	4,714	5,425
Percentage of foreign employees (Unit: %)	17.4	17.9	18.2
Percentage of locally-hired managers (Unit: %)	18.0	17.0	20.2
Percentage of female employees (Unit: %)	14.1	14.3	14.7
Percentage of female employees among new recruits (Unit: %)	18	25	20
Percentage of handicapped employees** (Unit: %)	1.0	1.1	1.3

* The total number of employees refers to all employees in the headquarters and overseas offices as of December of each year.
** Percentage of handicapped employees does not include workforce at overseas offices.

Employee Welfare

Category	2010	2011	2012
Ratio of entry-level employees' wages to the official minimum wage* (Unit: %)	191.8	191.7	211.4
Wage tables for men and women	Same	Same	Same
Turnover rate (Unit: %)	1.8	2.3	2.7
Amount of accumulated retirement pension (Unit: KRW in billions)	72.7	86.7	102.8

* The ratio of entry-level employees' wages to the official minimum wage is based on the data from the headquarters in Korea. Our overseas offices pay more than what is required by local laws.
** Turnover rate is based on the annual average number of full-time employees in headquarters

SOCIAL DATA

Training & Career Development

Category	2010	2011	2012
Total training hours** (Unit: hours)	800,265	927,770	785,297
- Value	154,722	291,852	320,360
- Job	393,617	312,459	241,026
- Leadership	89,101	53,241	80,724
- Global business	162,825	270,218	143,187
Average training hours per employees* (Unit: hours)	151	135	111
Total training expenses (Unit: KRW in millions)	87	135	125
Training expense per employee* (Unit: KRW in thousands)	169	197	177
Percentage of annual performance assessment (Unit: %)	100	100	100

* The average training hours and training expense per employee are based on the average annual training time in the headquarters in Korea, excluding data from overseas offices.

Ethics & Compliance Training

Category	2010	2011	2012
Hours of training about ethics and compliance (Unit: hours)	4,740	6,201	12,110
- Corruption prevention	4,740	1,828	5,004
- Compliance	-	4,373	7,106
Number of participants in offline training about ethics and compliance (Unit: persons)	4,458	4,518	11,802
- Corruption prevention	4,458	1,475	4,904
- Compliance	-	3,043	6,898
Number of participants in online training about ethics and compliance (Unit: persons)	3,518	8,412	11,117
- Corruption prevention	-	4,045	4,837
- Compliance	3,518	4,367	6,280

SOCIAL DATA

Social Contribution

Category	2010	2011	2012
Total value of spending on social contributions (Unit: KRW in millions)	4,531	5,551	6,817
Donations	4,155	4,688	5,962
- Educational Institutions	65	1,822	1,091
- Medical Institutions	1,501	1,390	1,218
- Culture	2,000	780	250
- Environmental Institutions	185	282	284
- Social welfare	120	151	3,119
- Others	284	263	0
Direct public services	303	753	502
- Libraries	0	150	125
- 'Eco-generation'	100	430	343
- Assistance for Rural Areas	122	150	34
- Others	81	23	0
Fund-raising by employees	73	110	353
Value of spending on social contributions per employee* (KRW in ten thousands)	85	81	97
Total hours spent on participating in voluntary services (Unit: hours)	60,382	82,887	98,137
Average hours spent per person on participating in voluntary services* (Unit: hours)	11.4	12.1	13.9

* The average hours spent per employee on participating in voluntary services is based on the average number of employees in the headquarters in Korea, with our overseas offices excluded.

Supply Chain

Category	2010	2011	2012
Number of suppliers we helped to obtain ISO certification (Unit: Companies)	-	28	-
Volume of the win-win fund (Unit: KRW in billions)	-	106	384
Percentage of SEGA order value (Unit: %)	32	23	34

GRI INDEX

● Reported ◐ Partially Reported ○ Not Reported

Indicator	Description	Page	Status	Remarks
1. Strategy and Analysis				
1.1	Statement from most senior decision-maker in organization	2-3	●	
1.2	Description of key impacts, risks, and opportunities	22, 24, 26, 28, 30, 31, 32, 33	●	
2. Organizational Profile				
2.1	Name of organization	-	●	Samsung Engineering Co., Ltd.
2.2	Primary brands, products, and/or services	9	●	
2.3	Operational structure	9	●	
2.4	Location of organization's headquarters	83	●	
2.5	Location of overseas branch offices and sites	82-83	●	
2.6	Nature of ownership and legal form	11	●	
2.7	Markets served	82-83	●	
2.8	Scale of the reporting organization	11, 85	●	
2.9	Significant changes during reporting period regarding size, structure, or ownership	-	●	No major change affecting decisions made by stakeholders during the reporting period
2.10	Awards received in reporting period	99	●	
3. Report Parameters				
3.1	Reporting period	Inside the cover	●	January to December 2012
3.2	Date of most recent previous report (if any)	-	●	July 2012
3.3	Reporting cycle (annual, biennial, etc.)	Inside the cover	●	Every year
3.4	Contact point for questions regarding the report or its contents	Back cover	●	
3.5	Process for defining report content	12-15	●	
3.6	Boundaries of report	Inside the cover	●	
3.7	State any specific limitations on the scope or boundary of report	Inside the cover	●	All domestic and overseas workplaces (including project sites) and subsidiaries
3.8	Basis for reporting on comparability from period to period and/or between organizations	Inside the cover	●	
3.9	Data measurement techniques and bases of calculations for data, including performance index	-	●	Comment separately if special attention is needed for a basis of measuring and calculating data
3.10	Explanation of the effects of & reasons for any re-statements of information provided in earlier reports	-	●	Comment separately if special attention is needed
3.11	Significant changes from previous reporting periods applied in the report	Inside the cover	●	Included subsidiaries to reporting scope
3.12	Table identifying the location of the Standard Disclosures in the report	91-94	●	
3.13	Policy and current practices with regard to seeking external assurances for the report	Inside the cover, 96-97	●	
4. Governance, Commitments, and Engagement				
4.1	Governance of organization	10-11	●	
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	10	●	
4.3	Number of members of highest governance body that are independent and/or non-executive members	10	●	
4.4	Mechanisms for shareholders and employees to provide recommendations or directions to highest governance body	11, 13-14	●	
4.5	Compensation for members of highest governance body, senior managers, and executives	10	●	
4.6	Processes in place for highest governance body to ensure conflicts of interest are avoided	10-11	●	
4.7	Process for determining the qualifications and expertise of the members of the highest governance body	10-13	●	
4.8	Internally developed statements of mission or values, codes of conduct, and principles	Inside the cover	●	
4.9	Procedures of highest governance body for management of economic, environmental, and social performances	10-13	●	
4.10	Processes for evaluating highest governance body's own performance	10-13	●	
4.11	Whether and how the precautionary approach or principle is addressed by the organization	12	●	
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives	99	●	
4.13	Membership in associations and/or national/international advocacy organizations	99	●	
4.14	List of stakeholder groups engaged by the organization	12-15	●	

GRI INDEX

● Reported ◐ Partially Reported ○ Not Reported

Indicator	Description	Page	Status	Remarks
4.15	Bases for identification and selection of stakeholders with whom to engage	12-15	●	
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and stakeholder group	12-15	●	
4.17	Key topics and concerns raised through stakeholder engagement, and responses to them	12-15	●	
Economic Performance Indicators				
Disclosure on Management Approach		18		
EC1	Direct economic value generated and distributed	85	●	
EC2	Financial implications and other risks and opportunities for organization's activities due to climate change	51	●	
EC3	Coverage of organization's defined benefit plan obligations	62	●	
EC4	Significant financial assistance received from governments	-	●	No financial assistance
EC5	Range of ratios of standard entry-level wages compared to local minimum wage at significant locations of operation	88	●	
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	27, 82-83	●	
EC7	Process of hiring local workers preferably and percentages of locally-hired high-ranking managers	27, 63	●	
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	74-81	●	
EC9	Understanding and describing significant indirect economic impacts	13	●	
Environmental Performance Indicators				
Disclosure on Management Approach		43		
EN1	Materials used by weight or volume	48	●	
EN2	Percentage of materials used that are recycled input materials	49	●	
EN3	Direct energy consumption by primary energy source	52, 86	●	
EN4	Indirect energy consumption by primary source	52, 86	●	
EN5	Energy saved due to conservation and efficiency improvements	45, 53	●	
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives or services more widely used	45	◐	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved	53	●	
EN8	Total water withdrawal by source	48, 86	●	
EN9	Water sources significantly affected by withdrawal of water	29	●	No water sources that are significantly affected are found
EN10	Percentage and total volume of water recycled and reused	49	●	
EN11	Location and size of land owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity managed by us	29, 53	●	No case except for the Norte Ⅱ Combined Cycle Power Plant project in Mexico
EN12	Description of significant impacts of activities, products, and services on biodiversity biological diversity	23, 29, 53	●	
EN13	Habitats protected or restored	29	●	
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	29	●	
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk and the government and living in the areas affected by our business activities	-	●	There was no case as a result of clients' environmental impact assessments because most project sites were located in desert or industrial complex. If there is any case, we will manage it in accordance with our biodiversity protection guidelines.
EN16	Total direct and indirect greenhouse gas emissions by weight	52, 96	●	
EN17	Other relevant indirect greenhouse gas emissions by weight	52, 86	●	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	25, 51-53	●	
EN19	Emissions of ozone-depleting substances by weight	-	◐	We are not gathering this data as the emissions are very little in the characteristic of the industry, while planning to conduct gathering the data of the head office building in the future.
EN20	NOx, SOx, and other significant air emissions by type and weight	23	◐	Practices of managing air pollutants are partially reported.
EN21	Total water discharge by quality and destination	33, 35	◐	
EN22	Total weight of waste by type and disposal method	49, 86	●	
EN23	Total number and volume of significant spills	47	●	Prevented any major leakages from occurring by using toxic substance management guidelines for each project and no significant accident was occurred in 2011.
EN24	Weight of transported, imported, exported, or treated wastes deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII Annex of Basel Convention	47	●	No case of transportation, import and export, treatment of wastes specified in provisions I,II,III,IV of the Annex of Basel Convention has occurred.
EN25	Name of water bodies significantly affected by the reporting organization's discharges of water and runoff protection states, protection levels and biological diversity value of related habitats	-	●	There was no case as a result of clients' environmental impact assessments because most project sites were located in desert or industrial complex. If there is any case, we will manage it in accordance with our 'biodiversity protection guidelines.'
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	44, 86	●	
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	-	●	No packages were used.
EN28	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations	-	●	No case of violation other than a fine for environmental damage has occurred during the reporting period. There was one case of an imposed fine.
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations and transporting members of the workforce	52-53	●	
EN30	Total environmental protection expenditures and investments by type	87	●	
Labor Practices and Decent Work Performance Indicators				
Disclosure on Management Approach		43, 59		
LA1	Total workforce by employment type, employment contract, and region	88	●	
LA2	Total number and rate of employee turnover by age group, gender, and region	62, 88	●	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees	61	●	
LA4	Percentage of employees covered by collective bargaining agreements	65	◐	Collect requests and opinions of employees through the Industrial Relations Council.
LA5	Minimum notice period(s) regarding significant operational changes	65	◐	The notification is done via official channels, such as the Industrial Relations Council.
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees	-	◐	The Health and Safety Committee is run for each project.
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	57, 87	●	
LA8	Education, training, prevention, and risk-control programs to assist workforce members, their families, or community members family members and local residents deal with serious diseases	56	●	
LA9	Health and safety topics covered in formal agreements with labor unions	-	◐	Health and safety issues are discussed through the HSE Department.
LA10	Average hours of training per year per employee	59, 89	●	
LA11	Programs for skills management and lifelong learning for continued employability and managing career endings	60, 62	●	Conducting employee education programs and retirees support programs
LA12	Percentage of employees receiving regular performance and career development reviews	-	●	100%
LA13	Composition of governance bodies and breakdown of employees per category by indicators of diversity	10, 88	●	
LA14	Ratio of basic salary of men to women by employee category	88	●	
LA15	Return to work and retention rates after parental leave	62	●	100%
Human Rights Performance Indicators				
Disclosure on Management Approach		59		
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	-	●	0%. We do not have an official process to check about human rights protection when we determine whether to make an investment in our subsidiaries and joint ventures.
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights	-	◐	Self-evaluation on CSR activities of suppliers and our inspection on them have been conducted since 2013. The results will be announced through our next sustainability report.
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including percentage of employees trained	66	●	
HR4	Total number of incidents of discrimination, and actions taken	66	●	
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk	65	●	
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken	66	●	
HR7	Operations identified as having significant risk for incidents of forced labor, and measures taken	66	●	
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning human rights relevant to operations	-	◐	Partners are responsible for facility security and security managers are trained about human rights and ethics in accordance with internal ethics regulations.
HR9	Total number of incidents of violations involving rights of indigenous peoples, and actions taken	34, 66	◐	
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments	14, 65	◐	The working environment and possible discrimination elements were identified through the grievance procedure channels.
HR11	Number of complaints related human rights that are filed, dealt with, and resolved through the official complaint registration channel	65	◐	

GRI INDEX

● Reported ◐ Partially Reported ○ Not Reported

Indicator	Description	Page	Status	Remarks
Society Performance Indicators				
Disclosure on Management Approach		39, 71		
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	19-20, 23	●	This can be checked through the regional specialist system and market survey.
SO2	Percentage and total number of business units analyzed for risks related to corruption	-	●	No case related to corruption
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures	40	●	None
SO4	Actions taken in response to incidents of corruption	-	○	No reported
SO5	Public policy positions and participation in public policy development and lobbying	-	●	The Code of Ethics stipulates that the company is prevented from participating in politics.
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions, by country	-	●	The Code of Ethics stipulates that the company is prevented from participating in politics.
SO7	Total number of legal actions for anti-competitive behavior and monopoly practices, and outcomes	-	●	No case. There have been no legal actions in connection with unfair competition and monopoly behavior.
SO8	Monetary value of significant fines, and total number of non-monetary sanctions for non-compliance with laws and regulations	-	●	No case
SO9	Operations with significant potential or actual negative impacts on local communities	-	●	This is checked through the environmental impact evaluation at the beginning of project execution. No workplaces have been found to have a seriously negative impact on local communities.
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities	27, 34	●	No workplaces have been found to have a seriously negative impact on local communities. Meanwhile, we conducted local purchase from local companies and local job creation to contribute to local communities as well as public hearing as a precaution.
Product Responsibility Performance Indicators				
Disclosure on Management Approach		20		
PR1	Life cycle stages in which health and safety impacts of products and services are assessed, and percentage of significant products and services subject to such procedures	56	●	Safety elements are checked through the pre-evaluation of hazards during the project execution.
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	-	○	Not applicable due to the nature of our business
PR3	Type of product and service information required by procedures, and percentage of products and services subject to such information requirements	-	○	Not applicable due to the nature of our business
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling	-	○	Not applicable due to the nature of our business
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	20, 56	●	
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications	-	●	Product marketing communication complying with marketing-related laws and targeting people randomly is not conducted.
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications	-	●	No case
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	-	●	No case
PR9	Monetary value of significant fines for noncompliance with laws and regulations concerning provision of products and services	-	●	No case
Additional Indicators of Construction and Real Estate Industries				
CRE1	Building energy use intensity	48-49, 52, 86	●	13.4 GJ/KRW in billions (Energy use of head office building compared to total sales)
CRE2	Building water use intensity	48-49, 52, 86	●	12.4 m^3/KRW in billions (Water use of head office building compared to total sales)
CRE3	Greenhouse gas emission intensity from buildings	48-49, 52, 86	●	1.4 tCO_2e/KRW in billions (GHG emissions of head office building compared to total sales)
CRE4	Greenhouse gas emission intensity from new construction and redevelopment activity	48-49, 52, 86	●	17.2 tCO_2e/KRW in billions (GHG emissions of sites compared to total sales)
CRE5	Status of polluted, restored, and potential contamination areas in construction sites	29	●	No leakage and significant pollution
CRE6	Workforce composition by each site that obtained certifications related to HSE system	55	●	100%. All project processes obtained OHSAS 18001 and KOSHA 18001 certification.
CRE7	Countermeasures to moves of local residents caused by project development	34	●	No case
CRE8	Type and number of sustainability certification, rating and labeling schemes for new construction, management, occupation, and redevelopment	69	●	Samsung Engineering is a company specializing in plant engineering and construction. Meanwhile, head office building obtained LEED Gold level, best eco-friendly building certification, and 1st grade of building energy efficiency.

'2012 Samsung Engineering Sustainability Report' used the Global Reporting Initiatives (GRI) G3.1 Sustainability Reporting Guidelines. Accordingly, Samsung Engineering makes a self-declaration that the Report meets the requirements for GRI's Application Level A+. A third party, Korea Productivity Center, confirmed that the Report meets the requirements for GRI's Application Level A+.

2012 SAMSUNG ENGINEERING
SUSTAINABILITY REPORT

APPENDIX

INDEPENDENT ASSURANCE STATEMENT

The Korea Productivity Center (hereinafter referred to as "the Assurer") was commissioned by SAMSUNG ENGINEERING to provide an independent 3rd party assurance on the verification and validation of the 2012 SAMSUNG ENGINEERING Sustainability Report (further referred to as "the Report").

Responsibility and Independence

The Assurer holds the responsibility for providing assurance on the Report on the technical details about the data enclosed and performs an independent verification and validation on the reliability of information. The accuracy of the information and opinions in the Report are solely responsible of Samsung Engineering. As an independent assurance agency, the Assurer was neither involved in the process of preparing the Report with Samsung Engineering, nor in any conflicts of interest that may undermine the Assurer's independence.

Assurance Standard and Objectives

The assurance was undertaken in accordance with the AA1000AS (2008) Assurance Standard to provide Type 2 moderate level assurance performed by the Assurer and was achieved through the evaluation of the organization's adherence to the AA1000APS (2008) AccountAbility Principles of Inclusivity, Materiality, and Responsiveness. Additionally, the assurance was performed to ascertain the organization's adherence to the Global Reporting Initiative (GRI) G3.1 Guidelines as well as the Construction and Real Estate Sector Supplement (CRESS) in preparing and presenting disclosure requirements in the Standard Disclosures to meet the requirements for the GRI Application level A.

Scope and Assurance Limitations

Based on the aforementioned assurance standards, the Assurer performed verification and validation of the organization's sustainability performance in the Report for 2012 and also verification was conducted for the last three years of sustainable management of non-financial performance. The scope of our procedures did not involve verification of the reliability of data related to Samsung Engineering's financial statements or performance and the environmental performance (including GHG emissions) data verification was conducted by a separate independent agency. Site inspection was performed at Samsung Engineering's Head Office in Seoul, Republic of Korea and production sites overseas were not included in the scope of our site inspection. Therefore, the Assurer clearly states that any additional verification conducted in the future may issue varied results.

Assurance Methodology

The assurance was undertaken following the methodology specified below:

1. The main topics covered in the Report of the selection and technical adequacy of the contents have been verified.
2. Content of the information contained in the Report was verified and analyzed in comparison with other sources.
3. Each of the indicators of the GRI G3.1 Guideline and the CRESS sector supplement has been verified for the quality of the Report in principle to determine compliance.
4. Verified if the Report satisfies requirements for GRI Application level A by reviewing the coverage rate of and presentation method for economic, environmental and social indicators.
5. Conducted Type II Engagement and provided assurance on data reliability in the Report by the following:
   - Samsung Engineering's activities during the reporting period and the data collection process to determine progress by the CSR Office and HSE management team by conducting interviews of four departments.
   - Data collection procedures have been confirmed by examining the reliability of water, waste, safety and accident data, performance data and technical information including the 87 validation point for documentation of internal processes and systems.

Findings and Conclusion

It is the Assurer's opinion that the Report presented in the sustainability efforts and performance of Samsung Engineering in a fair and accurate way. Also, the assurance verified that the self-declared requirements claimed by Samsung Engineering for the GRI Application level A have been met. The following is the Assurer's findings and recommendations based on the AA1000AS (2008) Principles of Inclusivity, Materiality and Responsiveness.

1. Principle of Inclusivity: Stakeholder Engagement

The principle of inclusivity articulates that organizations should include stakeholders in the development and achievement of accountable and strategic responses to sustainability. Based on the findings of these assurance efforts, it is evident that Samsung Engineering defined major stakeholders and presented communications with each stakeholder group such as employees, suppliers, shareholders and investors, government, NGOs, including the community, and future generations (Environment) to adhere to the principle of inclusivity. Samsung Engineering's employee portal, labor-management relations, regional council meetings and training, market research experts, partners, including meeting with stakeholders attribute the communication process while also conducting satisfaction surveys for plant, HSE, employees, partners and stakeholders for raising awareness for Samsung Engineering's management activities and periodically making improvements. Going forward, the Assurer recommends Samsung SDI to further enhance stakeholder engagement initiatives by managing the issues collected through stakeholder communication channels (Inclusivity) more comprehensively and incorporating them into broader areas of its business operations.

2. Principle of Materiality: Selection of and Reporting on Material Issues

The principle of materiality articulates that organizations should focus on issues relevant and material to both the organization and its major stakeholders. The Assurer found that Samsung Engineering successfully identified issues relevant and material to the Company and its major stakeholders through a wide range of methods such as assessment and evaluation of sustainability management (Materiality test) and areas of importance through enhanced safety, quality of project management, and fair employment and training. Samsung Engineering also identified material areas and key issues and prioritized them by weighting evaluation criteria more heavily in the analysis process. Samsung Engineering has identified fourteen (14) key issues in the Report and presented these material issues in a fairly balanced manner.

3. Principle of Responsiveness: Organizational Response to Issues

The principle of responsiveness articulates that organizations should be responsive to issues that may have impacts on stakeholders' performance. The Assurer found that Samsung Engineering successfully identified key management areas and corporate vision based on promotion of sustainability and strategic direction of CSR activities lead by the CEO, HSE team, management assessment team, and quality management team. The Assurer commends Samsung Engineering for reflecting stakeholder concerns on sustainability management initiatives with a strong emphasis on major issues on the economic, environmental and social areas. The Assurer recommends Samsung Engineering to establish specific strategies and targets in connection with business operations to achieve substantive and coherent sustainable management and systematic management of relevant performances.

4. Reliability of Performance Indicator

The reliability of performance indicator articulates that a set of quantifiable measures are used to gauge or compare performance in terms of meeting strategic and operational goals. The Assurer commends Samsung Engineering on the sustainability performance data based on data collection prioritizing technology through a computerized data calculation system to collect environmental data on materials, water, waste, and greenhouse gas emissions and other data on a monthly basis. Environmental data collection and systematic collection procedures were established and carried out by the CSR Secretariat. Verification of information based on the results of the data gathering process and to determine which data presented may undermine the credibility of the information.

Recommendations

The Assurer commends Samsung Engineering for making a variety of efforts to improve sustainability, resulting performances, and presents the following recommendations to enhance future sustainability reports and sustainability management.

1. The Assurer recommends that Samsung Engineering include an effective management system for internal and external stakeholders and thereby converging on key issues in order to develop a system to identify the scope and level of stakeholders. Through such a system, Samsung Engineering will be able to manage enterprise sustainability data and increase the quality of its sustainability reports as well as sustainability management.
2. It is recommended to establish basic policies that can be managed by each department to participate in sustainable management regularly in regards to economic, environmental and social issues. In particular, the Board of Directors should address and place sustainability issues on the agenda for future board meetings.
3. The Assurer recommends to excel in the area of environment stability, Samsung Engineering institute a comprehensive and detailed data management system of Key Performance Indicators (KPI) for managing, monitoring, and measuring the level of important issues for sustainable management.

The Sustainability Management Center of the Korea Productivity Center is an assurance agency officially certified by AccountAbility, which established AA1000, the international standards for stakeholder participation and verification, and has qualifications to perform independent assurance engagements. Our Assurance Committee is also comprised of competent experts who have in-depth experience in sustainability management consulting and assurance and completed the relevant professional training.

May 2013

Hong Jin

Chairman & CEO

Korea Productivity Center

kpc 한국생산성본부 AA1000 Licensed Assurance Provider 000-81

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GHG ASSURANCE STATEMENT

No.: AS_PRJC-458596-2013--CCS-KOR_K

DNV ASSURANCE STATEMENT

SAMSUNG ENGINEERING

Introduction

DNV Certification, Ltd. ("DNV") was commissioned by Samsung Engineering Co., Ltd. ("Samsung Engineering") to verify the Samsung Engineering's Greenhouse Gas Inventory Report for the calendar year 2012 ("the Report") based upon a limited level of assurance. Samsung Engineering is responsible for the preparation of the GHG emissions data on the basis set out within the WRI/WBCSD GHG protocol: 2004 and the principles set out in ISO 14064-1:2006. Our responsibility in performing this work is to the management of Samsung Engineering only and in accordance with terms of reference agreed with them. DNV expressly disclaims any liability or responsibility for any decisions, whether investment or otherwise, based upon this assurance statement.

Scope of Assurance

The emissions data covered by our examination comprise Direct emissions (Scope 1 emissions), Energy indirect emissions (Scope 2 emissions) and Other indirect emissions (Scope 3 emissions)[1] :

- Reporting period under verification : Calendar Year 2012
- Organizational boundary for reporting: Samsung Engineering Co., Ltd.

Organizational Boundaries	Year 2012	Verification activity
Buildings	11 buildings (including headquarter)	Desk Review, Site visit, Process & data verification
Domestic construction sites [2]	37 construction sites in Korea	Desk Review, Site visit, Process & data verification
Overseas construction sites	Overseas 27 construction sites	Desk Review, Process & data verification
Operation & Maintenance sites [3]	6 sites for Operation & Maintenance	Desk Review, Site visit, Process & data verification
Business trip	Overseas Air travel	Desk Review, Process & data verification

Verification Approach

The verification has been conducted by DNV from 4rd April through 8th May 2013 and performed in accordance with the verification principles and tasks outlined in ISO 14064-3:2006. We planned and performed our work so as to obtain all the information and explanations deemed necessary to provide us with sufficient evidence to provide a limited verification opinion concerning the completeness of the emission inventory as well as the reported emission figures in ton CO_2 equivalent. As part of the verification process:

- We have reviewed and verified the Samsung Engineering's Greenhouse gas Management System
- We have reviewed the GHG inventory Report dated on 7th May 2013.
- We have reviewed and verified the process to generate, aggregate and report the emissions data

The verification team carried out the desk review on the GHG emissions report as well as the relevant evidences and conducted the site visits on the Head office and 2 project sites as parts of the verification activities.

Conclusions

As a result of the work described above, in our opinion nothing has come to our attention that would cause us to believe that the GHG emissions data set out in Samsung Engineering's Report are not fairly stated. It was noticed that other indirect emissions may be overestimated because the emissions quantification methodology applied is based on the fuel consumption per operation hour of construction equipment as addressed in Standard estimation of manpower and material for unit construction work due to the difficulty in measuring the accurate fuel consumption by the construction equipment at project. The GHG Emissions of Samsung Engineering for the year 2012 were confirmed as below;

Greenhouse Gas Emissions of Samsung Engineering Co., Ltd. from Yr. 2012

(Unit: ton-CO_2 equivalent.)

Operational Boundary (Period)	Direct emissions (Scope 1)	Energy Indirect emissions (Scope 2)	Other indirect emissions (Scope3)	Total emissions
year 2012	196,956	17,590	431,239	645,785

※ In order to report the GHG emissions as an integer, the rounded number on the statement might be different from the number on the system with ± 1 tCO_2.

※ Total emissions = Scope 1 + Scope 2 + Scope 3

9th May 2013

Byoung-Wook Park
Lead Verifier

In-Kyoon Ahn
Country Manager
DNV Certification, Ltd

1) The quantification methodology for emissions from construction equipment's operated by subcontractors is developed by Samsung Engineering, based on 'Standard estimation of manpower and material for unit construction work'
2) As for joint venture, the projects led by Samsung Engineering were only considered.
3) O&M site GHG emission is considered only direct, indirect energy use for utility operation.

AWARDS AND MEMBERSHIP OF ASSOCIATIONS

External Evaluations in 2012

Category	Award	Description
Overseas	ENR Top International Contractor (Overseas – Ranked 15th)	Ranked by ENR, a professional magazine on the US construction business, based on overseas sales
Overseas	ENR Top International Contractor (Global – Ranked 33rd)	Ranked by ENR, a professional magazine on the US construction business, based on domestic and overseas sales
Overseas	ENR Top Contractor by Region and Market (Middle East – 3rd) (Petrochemicals – 5th)	Ranked by ENR, a professional magazine on the US construction business, based on sales by region and market
Overseas	MEED Oil & Gas Sector, Sales in the Middle East (2nd)	Ranked by MEED, a professional magazine on the Middle East economy, based on sales volume in the Middle East
Overseas	Euromoney corporate management (Best in Asia) (Infrastructure Sector Best Company in Korea)	Ranked by Euromoney, a professional magazine for stock investors, based on a survey of 800 investors and analysts
Overseas	Arabian Oil and Gas Upstream EPC Contractor (3rd)	Ranked by Oil & Gas, a professional magazine on the petrochemical business in the Middle East. Received new orders in the oil and gas sectors
Overseas	BCG ECS Value Creation (1st)	Ranked by Boston Consulting Group (BCG), based on rate of return to shareholders of ECS companies
Overseas	BCG ECS Sales Growth Rate (3rd)	Ranked by Boston Consulting Group (BCG), based on sales growth rate of ECS companies
Domestic	Maekyung's Top 1000 Large Companies in Sales (59th)	Ranked by Maeil Business Newspaper, based on sales volume
Domestic	Construction Capability Evaluation by Construction Association of Korea (15th)	Decided ranking by comprehensively evaluating construction performance, financial status, operating capability, and technological ability of general contractors

Awards in 2012

Category	Award	Description
Overseas	MEED Quality Award for Project 2012	BAPCO Lube Base Oil Plant Project Quality Evaluation
Overseas	LACP Spotlight Awards - Gold	League of American Communications Professionals (LACP), Sustainability Report Evaluation
Overseas	Middle East Water/PPP" Deals of the Year 2011	Project Finance, Water/PPP" Deals of the Year
Overseas	EMEA Finance Achievement Awards 2011	EMEA, Best PPP Deal
Overseas	Best Green Initiative, Ma'aden Steam Plant Project	Ma'aden Alcoa JV, Best Green Initiative Evaluation
Overseas	Certificate of Environmental Achievement – Environmental Champion	Saudi Arabia Jubail Export Refinery Project for Outstanding Environmental Performance by SATORP
Domestic	Chosunllbo Environmental Award	Sponsored by the Ministry of Environment and Chosunllbo, Eco-generation (Grand Prize in Environmental Education)
Domestic	Samsung Social Contribution Award	Sponsored by Samsung Group, Eco-generation (Volunteer Group)
Domestic	Korea's Green Management Award – Government Prize (Company Sector), and Minister's Prize of Knowledge Economy	Sponsored by the Ministry of Knowledge Economy and the Ministry of Environment, Green Management Evaluation
Domestic	Samsung Green Management Award	Sponsored by Samsung Group, Development of GHG emission reduction technologies
Domestic	Construction Environment Management Competition – Chairman's Award of Environment and Labor Committee	Sponsored by the Ministry of Knowledge Economy and the Ministry of Environment, Evaluation on Environment Management at Plant Construction Site in Tangjeong Complex
Domestic	Construction Environment Management Competition – Minister's Award of Environment	Sponsored by the Ministry of Knowledge Economy and the Ministry of Environment, Evaluation on Metropolitan Area Landfill Site
Domestic	Samsung Compliance Conference – Best Award in Best Practice Sector	Sponsored by Samsung Group, Best Practice in Compliance Education

Membership of Associations

Construction Safety Manager Committee	The Federation of Korean Industries	The Korea International Trade Association	Korea Electric Engineers Association
Construction Environment Association	The American Chamber of Commerce in Korea	Korea Industrial Technology Association	Korea Information Communication Contractors Association
Construction Outsourcing Association	Korea Business Council for Sustainability Development (KBCSD)	Korea Fire Facility Association	Korea Plant Industries Association
International Water Association (IWA)	The Construction Management Association of Korea	Korean Society of Fire Protection Professional Engineers	Korea Plant Engineering Association
Seoul Chapter, The Construction Association of Korea	Korea Construction Engineers Association	Fire Safety Association	Korea Institute of Plant Engineering & Construction
Maekyung SEL Club	Korea Economic Research Institute	Korea Engineering & Consulting Association	International Contractors Association of Korea
Seoul Chamber of Commerce	Korea Professional Engineers Association	Korea Carbon Capture and Storage Association	Korea Green Foundation
A Chapter of Korea Institute of Registered Architects Seoul	Korea Management Association	Korea Electrical Contractors Association	

* The above list of our membership was updated at the end of 2012. The principles regarding corporate social responsibility or support for external initiatives are under internal consideration.

GLOSSARY

Terms	Description
AA1000AS	This is a principle regarding obligations to explain sustainability management, specified by the company. The international standard includes three principles: inclusivity, materiality and responsiveness.
Carbon Capture and Storage (CCS)	This refers to all technologies that remove carbon dioxide from fossil fuels by capturing and storing the gas. This technology allows you to collect in high density, take away and store carbon dioxide before it is emitted into the air. Research is under way to make this technology available as an alternative technology for preventing global warming.
Clean Development Mechanism (CDM)	In this system, which is stipulated in Article 12 of the Kyoto Protocol, an advanced nation can be considered to have reduced greenhouse gases in its region by investing in a developing nation to reduce greenhouse gas emissions in the region.
Carbon Disclosure Project (CDP)	This refers to a global project carried out by international financial or investment organizations to conduct a survey asking major businesses in each country what strategies they have to respond to climate change and how much carbon they release into the air.
CO_2 Recovery	This technology allows you to increase efficiency, reduce emissions of or reuse CO_2 in processes to treat byproducts, such as methanol and urea, or ancillary materials by recycling CO_2 generated in consuming fuel in a petrochemical plant.
Engineering	This refers to collecting and integrating technologies from various fields and completing projects.
EPC	This is a combination of the initials of engineering, procurement and construction and refers to the scope of work of an engineering project.
Front End Engineering Design (FEED)	This indicates the entire engineering process starting from the design basis to the process the design package to the completed of the basic design package.
Green House Gas	This refers to a gas causing a greenhouse effect. Greenhouse gases specified by the WRI/WBSCD are CO_2, CH_4, N_2O, PFCs, HFCs and SF_6.
Gas Oil Separation Plant (GOSP)	This indicates a plant that separates oil and gas before treating them. Oil and gas are mixed when they are extracted from oil wells and separated to be made into products.
Global Reporting Initiative (GRI)	This is an independent international non-profit organization that created international standards for the sustainability report. This organization provides standardized reporting indices for the sustainability report. The current version is G3.1. In accordance with the international trends towards integrated reporting, the organization is developing G4, a new framework for the sustainability report, including existing financial reports, and will announce it in 2013.
Invitation to Bid (ITB)	This refers to the client requesting contractors to propose price, delivery date, and other conditions in relation to the construction of a plant or purchase of equipment.
Lump Sum Turn Key (LSTK)	This refers to a package deal, where a plant construction agreement is signed based on the estimated construction volume and amount while design is still incomplete. The contractor provides all services, including financing, land purchase, design, construction, and test operation, and delivers the facility to the client in a complete form.
Materiality Test	This refers to a technique of identifying opportunities and risks a company faces and determining what is more important than others by considering both stakeholders' interests and business issues based on communication with stakeholders.
Offshore	In the dictionary, this means a part of sea which is near the coast. This also indicates all facilities and activities for drilling oil and natural gas from the sea and transporting them through pipes to the shores.
Para-Xylene	This refers to a colorless, transparent and volatile liquid smelling of aromatic odor, which is one of xylene isomers with two methyl groups attached to benzene.
Plant	This refers to a combination of industrial facilities, machine, electricity, construction, and communication, and is used to indicate facilities and factories.
Pre-Qualification (PQ)	This refers to evaluating qualifications of bidders when the client requests that they submit a bidding or proposal.
Reverse Engineering	This refers to disassembling and examining, or analyzing a finished product in detail to discover its design or production process.
Social Responsibility (SR)	This refers to responsibilities that the government, companies, institutions and organizations should fulfill. For businesses, this may be called "corporate sustainability". Responsibilities are applied to various fields, such as human rights, the environment, labor practices and organizational governance. The international standard for social responsibility (ISO 26000) came into effect in 2010.
Urea	This refers to organic compounds ($CO(NH_2)_2$) with crystalline materials and no color. They are final compounds in the protein metabolism of mammals and certain fish (AA1000AS).
Upstream	This refers to a process from oil exploration, mining to the production of petrochemical products. On the contrary, the sales process, including marketing, transportation and distribution, is called downstream.
Value Engineering	All activities, such as design criteria, specification, suppliers and construction methods, can be improved to meet requirements of quality, construction period, and stability in each section of EPC at minimum cost.

Task Force for 2012 Samsung Engineering Sustainability Report

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Dow Jones Sustainability Indexes
Member 2012/13

Samsung Engineering Co., Ltd. was selected as a component of the Dow Jones Sustainability Index (DJSI). The DJSI is a benchmark index for global sustainability management.

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This report was printed on environment-friendly paper using soy ink.