Value Creation Process in Sustainability Trends

G4-12

TREND	Science and Technology Innovation / Convergence Urbanization	Changes in Population Structure / Material Resource Scarcity Lack of Energy	Global Environment Change Climate Change	Development of the Internet / The Pursuit of Quality of Life Globalization	Growth of Global Community Sentiment Expanding Global Networks	
INPUT	**Linkage to GS E&C's Sustainability System**	Great Challenge		Great Innovation	Great Partnership	
	GS E&C's Responses	Respond to Infra Scarcity	Eco-Friendly, and Low-carbon Technology Developments	Renewable Energy and Low-carbon High-efficiency Technology Developments	Reinforcement of Employee Expertise	Reinforcement of Partnerships
	Six Major Value Creation Areas	Financial Value Creation		Financial Value Creation		
		Industrial Value Creation	Intellectual Value Creation	Environmental Value Creation	Employee Value Creation	Social and Relationship Value Creation
	Commitment Elements	Business Strategy	New Technology	Natural Resources	Expertise	Social and Relationship Capital
	Materiality Test	**Anti-corruption transparent management, Restrictions on unfair transactions, Sanctions on violation of laws and regulations**		**Anti-corruption transparent management, Restrictions on unfair transactions, Sanctions on violation of laws and regulations**		
		Economic Performance	Development and distribution of eco-friendly technologies	Compliance with environmental regulations Wastewater and waste management	Employee safety & health / Customer safety & health / Enhancement of customer satisfaction and sustainability certification /Protection of customer privacy / Human rights grievance mechanisms at domestic and overseas project sites / Investments in employee training and education / Diversity and Equal opportunities / Employee job security / Amicable labor-management relation	Compliance with business regulations Shared growth with suppliers Prohibition of child labor and forced labor
BUSINESS MODEL	Establishment of Business Foundation Strategy establishment New technology development / HR hiring Securing suppliers Corporate Community Involvement	Marketing New market surveys Financial procurement Securing resources	Quotation & Bidding Review of new technologies and new methods of construction Securing excellent vendors & subcontractors Efforts to reduce costs	Project Implementation Stable procurement and quality management Enhanced collaboration with partners (pre-con work) / Management of impact caused by construction	Completion & Trial Operations Activities to enhance customer satisfaction (customer service and repair & maintenance) Project settlement·value distribution	
	GRI G4 Guideline, ISO 26000, UN Global Compact, Sustainable Development Goals		GRI G4 Guideline , ISO 26000, UN Global Compact, Sustainable Development Goals			
OUTPUT	**Outcome**	Turnover KRW 10.5 tr Contracts KRW 13.4 tr Credit Rating A Overseas Contract Rate 56.7 % Cost Reduction KRW 73.08 bn	Development of eco-friendly technologies 40 cases	Reduction in water consumption by 19.2 % Increases in green product purchases by 30 %	Employee training hours per person 94 Hours Employee satisfaction 62.2 % Union membership 39.9 % Industrial accident rate 0.32 %	No. of suppliers 956 Amount toward CCI KRW 6.9 bn Customer satisfaction 86 %
	Link to report	Major Financial Indices 37p. / Enhancement of Overseas Market Competitiveness 43p. / Enhancement of Business Competency 44p.	Development of new technologies 49p. / Development of eco-friendly technologies 50p.	Efforts to respond to climate change 56p. / Efficient use of resources 57p.	Development of employee expertise 59p. / Admired company 60p. / Labor-management relations 62p. / Safety & health 63p.	Shared growth with suppliers 67p. / Activities to boost customer satisfaction 70p. / Corporate community involvement (CCI) 72p.

- Employees
- The Media
- Government Organizations
- Shareholders and Investors
- Suppliers
- Customers
- Local Community

◀ Ilsan Xi
Rainbow Gate (Korea)

GS E&C Industrial Capital Value Creation

SUSTAINABILITY CONTEXT

Amidst a protracted global economic slowdown, competition for new contracts is becoming severe while large contractors from the developed world and new international contractors from emerging economies are increasing their market shares significantly. Thus a number of major companies in the industry are striving to enhance their competitiveness at home and abroad and find new growth engines for their long-term sustainable corporate growth.

OUR STRATEGY & COMMITMENT

GS E&C seeks to reinforce its global competitiveness to create economic values. It also works hard to optimize its portfolio for different work processes through the development of high value-added products and discovery of new growth businesses. It also continues to diversify its markets. In addition, it endeavors to further enhance its competitiveness to secure new contracts through company-wide efforts to continue to make cost innovations.

OUR PROGRESS & NEXT STEP

GS E&C has boosted its competitiveness for overseas projects through the enhancement of its project implementation competitiveness and its capability to secure new contracts through expansion of its global project execution, enhancement of its close local support, and selective participation in bids. In the Middle East, GS E&C has acquired profitable projects through strategic alliances with diverse partners. Through its careful project evaluation process, the company managed to make inroads into new overseas markets in 2015. In addition, GS E&C has made cost innovations through cost reductions and efficiency improvements while optimizing all the relevant processes.
GS E&C plans to further shore up its construction and management capabilities. In the process, GS E&C will continue to promote market diversification, particularly into regions with a high level of growth potential and profitability. At the same time, the company will strive to grow out of its focus on traditional projects and make inroads into new growth engine businesses and high value-added markets in a bid to continue to expand its future corporate values.

THE VALUE CREATED in 2015

New Overseas Orders
56.7%
among the company's new contracts secured in 2015

The proportion of new overseas orders
17.6%
among the top ten local contractors

Advance Into New Overseas Markets
3 countries

Cost Innovation Activities
64 sites
73.08 bn(KRW) reduced

Enhancement of Overseas Market Competitiveness

In the midst of a protracted domestic economic slowdown, GS E&C has continued its efforts to expand its presence in overseas markets. However, intensifying competition in the global market drove down the proportion of the company' overseas business by 22.4% and 56.7% in sales and new orders, respectively in 2015. The company is striving to acquire only excellent contracts while trying to further enhance its competitiveness in project implementation.

Enhancement of Bidding Competitiveness

To heighten its success rate in global bids and win lucrative contracts, GS E&C participates in bidding selectively and strives to maximize its profits.

Strategies to strengthen bidding competitiveness by business sector

Architecture
Enhancement of the company's marketing capability in targeted areas and selective participation in bids launched by highly recognized clients

Plant
Enhanced participation in bids for projects inflexible to business environmental changes in the areas of refinery and petrochemicals

Infrastructure
Active participation in bids in the Middle East in areas where the company has secured global strengths

Power
Power: Enhancement of pre-marketing activities centered in Asia & Africa

Power control: Placing focus on ODA projects with its existing infrastructure

The proportion of new overseas contracts among the top ten local contractors 17.6% (▲5.4% YoY)

Enhancement of Project Implementation Competitiveness

Expansion of Global Implementation System

To enhance its project implementation capabilities, GS E&C has expanded its global project implementation system and strengthened its on-site project implementation competencies. The company has established design firms in Delhi and Mumbai, India and Manila, the Philippines to shore up its overseas project design capabilities. To reinforce its on-site project execution power capabilities, GS E&C enhanced its global networking including the execution of an agreement to share technologies with ARUP Group in the UK and Decision Science Institute (DSI) in the United States, established a collaboration system between the headquarters and overseas subsidiaries, and hired high-caliber talent in the area of global project execution.

Enhancement of Efficiency in Project Support and Operations

To enhance its competency to execute overseas projects most effectively, GS E&C has posted its highly qualified executives and technical staffs in its key overseas business hubs. It runs its own Plant School that trains its technical staff, particularly so that they can immediately function most efficiently in overseas project sites. It continues to increase the proportion of its 'global staff' in order to execute its overseas projects most successfully. For more consistent personnel management, the company has established an integrated global personnel management system that applies to all its employees around the world.

Enhancement of Business Competency

Create New Growth Engines & Establish High Value-Added Businesses

To cope with market changes in the wake of the global financial crisis and increasing competition in overseas markets including the challenge of emerging low-cost rivals, GS E&C has striven to consolidate its competitiveness in its key business areas while focusing on the cultivation of new growth engines and the expansion of its value chain.

Investments in and Cultivation of New Growth Platforms

The company continues to raise its competency in its key business areas such as LNG liquefaction, ethane cracker, and coal-based electricity generation. The company strives to discover new growth fields of engineering by taking into account its past project execution experiences, challenges in securing necessary competency, and market attractiveness. Once selected, the engineering fields are fully supported so they can develop to a world-class level. In 2015, through a cross-sector collaboration with the plant sector, the company won the contract for the construction of an LNG import terminal in Bahrain, which will build LNG liquefaction facilities and supply the gas produced in them through overland and undersea gas pipelines.

Promotion of Property Development Projects

GS E&C is actively seeking chances to carry out 'developer-type projects' for which it takes full responsibility for investment, development, EPC and operations instead of traditional construction-centered project models. The company has established cooperative relations with competent 'developers' in key areas while building strategic alliances with world-class manufacturers to shore up its competitiveness in relevant fields.

In 2015, GS E&C carried out a water treatment concession project through GS INIMA, its subsidiary. It also implemented integrated sewerage management projects in Spain, Brazil and Algeria. In line with increases in IPP initiated projects, the company plans to focus on sole source contracts in Asia and Africa, where continuous growth is expected.

Advance into Global Markets with High Value-added Technologies

GS E&C seeks to make inroads into domestic and overseas markets through the support of technical areas where it can build up technology barriers by incorporating the results of its R&D in new construction technologies into the projects that it is going to carry out. For super-long span bridge projects, the company runs an exclusive organization equipped with core technologies and advances into the global market including the Middle East through alliances with global leaders in the industry. For deep underground traffic network projects, GS E&C is exploring business opportunities in countries where it is currently doing business, including Singapore and Qatar, based on the TBM expertise it gained while working in those countries. For port projects, the company is striving to participate in the projects in the Middle East by building a network with leading companies and subcontractors based its work experiences and highly qualified workforce following the completion of RRE#7 Project in the UAE.

Core Infrastructure Projects and Investment Strategies

To further enhance the competitiveness of its core business, GS E&C has established the 'full potential' strategy and continued to make operational resources investments. The company seeks mid- to long-term opportunities, secures next-generation growth engines, and advances into high value-added businesses through its strategies tailored to three types of investments such as strategic resources investment, operational resources investment, and SEED investment.

Business Portfolio Strategies

New Growth Business

- LNG Liquefaction
- Ethane Cracker
- Coal Thermal Power Generation

Developer Type Business

- The Electronic Power Generation IPP
- Environment Concession
- Housing Lease Business

Core Infrastructure Products

- Special Long-spanning Bridge
- Deep underground traffic network
- Port

Technical and High Value-added Products

- Oil/Gas/Electronic Power Plant
- Traffic/Transport/ Infrastructure
- Architecture/Housing

Adjusting to Diversification of Markets

At GS E&C, we are exploring new market opportunities with region-specific networking strategies while diversifying the market. In the Middle East and Asian regions where the markets are vast with a number of projects being issued, we mainly focus on our flagship market while exploring ways to make inroads into additional markets with great potential. We are also expanding our sales network to such prospective markets as South and Central America, CIS, and Africa, where there is an abundance of resources, high population, and strong potential for growth.

Results of New Market Development Efforts

In the plant sector, the company won a project in Venezuela for the first time in South America in January 2015. In December, it won a contract for a refinery plant in Oman along with Mitsui & Co., Japan. In the power plant sector, GS E&C made inroads into Ghana through a transmission line installation project. It continues to strive to diversify its overseas markets with a focus on high profitability.

Efforts to Diversify Markets

At GS E&C, we are diversifying our efforts in making inroads into developed markets based on our superior expertise and experience in the field. With a focus on MENA, we are exploring our opportunities in North America where there are an increasing number of projects available due to a change in the energy paradigm in the plant sector, which is vulnerable to volatility risks. To achieve this, we continuously implemented pre-con marketing activities that propose projects by exploring the needs of major clients, including IOC and IPC. Meanwhile, we are making systematic preparations, such as reinforcing our partnerships with global leading companies. At the same time, we are seeking opportunities in civil engineering projects as the infrastructure in developed countries becomes outdated.

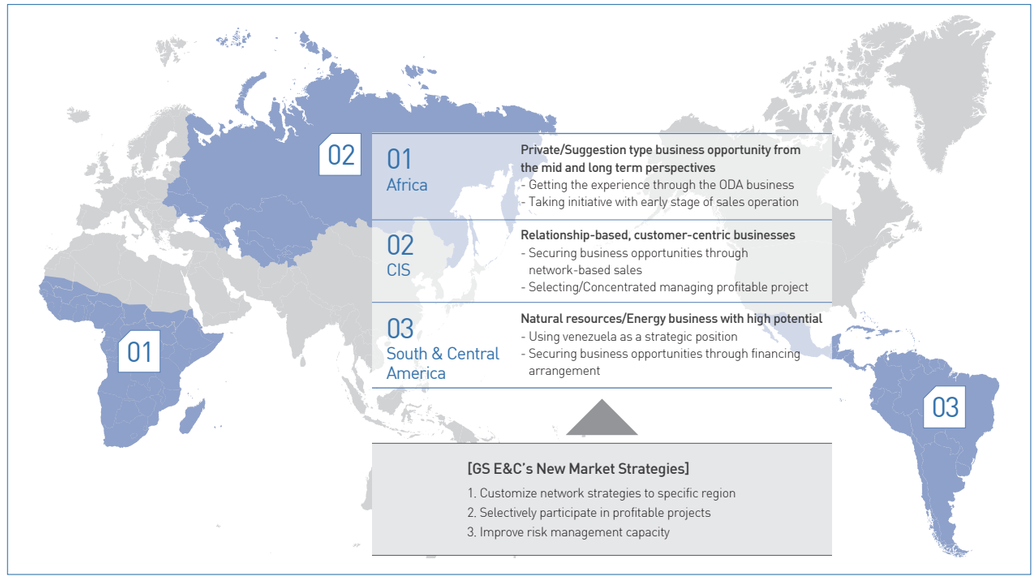
2015 New Representative Market Sites

Bolivarian Republic of Venezuela
PDVSA Gas Mega Pirital Proj.
(2015.01~)

Oman
LPIC-3 Proj.
(2015.12~2019.09)

Ghana
Kumasi 330kV Proj.
(2015.09~2017.08)

Successful Advance into New Overseas Markets in 2015



Cost Innovation

In 2015, GS E&C went a step further from its existing cost innovation efforts based on action plans drafted by each business unit and undertook cost innovation activities tailored for each project and promoted by collaborative bodies established between field offices at sites and support divisions at headquarters.

Cost Innovation Efforts prior to Project Commencement

To ensure proactive cost management, we eliminated risk factors prior to undertaking projects and explored opportunities for cost innovation through existing VE cases by applying lessons learned in practice. In consideration of the fact that there are more opportunities to reduce costs at the early stages of a project, we applied proactive cost control measures and organized a consultative group for cost innovation at all our new sites. In addition, we established a system for change order control and VE performance management to minimize disputes arising from order change, and to leverage success/failure cases.

* Change Order: Work that is added to or changed from the original scope of construction work between a client and a contractor.

Cost Innovation Efforts following Project Commencement

After completing each project, we engaged in profit and loss improvement activities by organizing a consultative group to review the budget spending and generating new ideas for cost reduction. In addition, 12 action tasks are defined to focus on their internalization while monthly performance is monitored. For successful completion of the tasks, goals are assigned to the champion and the implementation organization, respectively, for each task. Monitoring and self-evaluation are regularly made for each task under the guidance of Control Tower, a company-wide organization. Results are shared across the board to further invigorate the company's cost innovation endeavors.

Cost Innovation Process

Select target sites of cost reduction

Plan cost reduction for each consultative body

Big room meeting for cost innovation

Finalize cost reduction plan

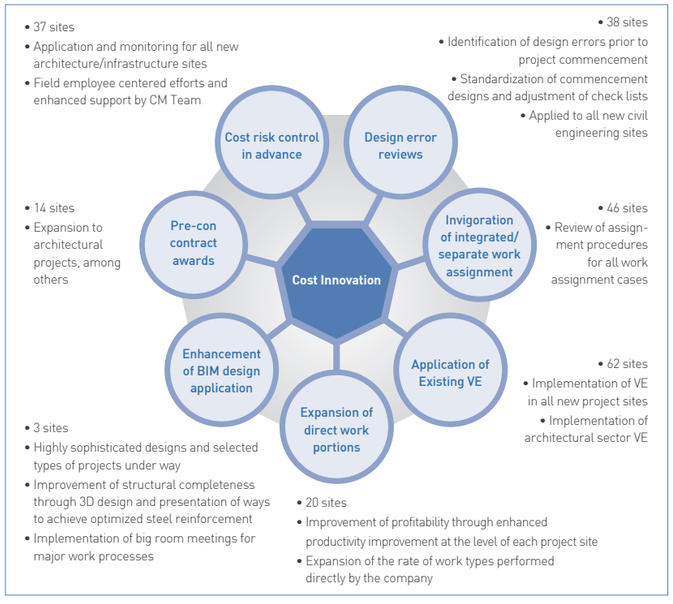
Track the progress

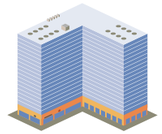
Cost Reduction

64 Project Sites

73.08 billion (KRW)

Result of Cost Innovation in 2015





Pre-construction Service(Pre-con)

GS E&C has introduced Pre-Con that leads to cost reductions through collaboration between the client, the engineering firm and the contractor in design. Pre-con, an innovative construction process, resolves interference between different processes at the same structure prior to groundbreaking and improves the location of each facility as well as the overall workflow. The introduction of the service enables the company to enhance its competitiveness to acquire new contracts and realize cost reductions.

2015 Cost Innovation Example

Hana Finance Group Integrated Data Center

PCS Period: Sep 2014 - June 2015 (Amount: KRW 2.29 billion)
Project Period: Jun 2015 - May 2017 (Amount: KRW 198.5 billion)
Contribution: Cost reduction of KRW 63.4 billion
* The contract secured through PCS

Hana Dream Town

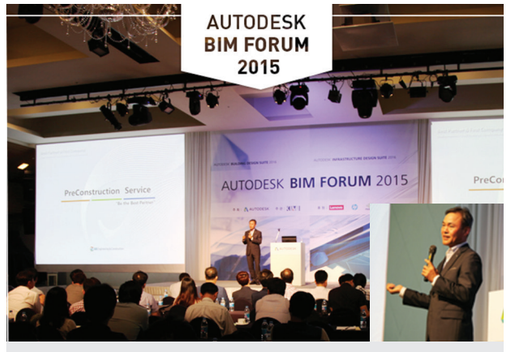
PCS Period: July 2015 - May 2016 (Amount: KRW 1.05 billion)
* The PCS contract awarded through another PCS. Prequalified bidders are to be invited to the main project bid.

2015 Outcome of PRE-CON Services

Unit : Cases

Media coverage	Seminar & symposium presentations	Special articles	Interviews	Customers' thank-you notes	Sales PT	External visits	Total
56	14	5	6	1	33	1	116

The Chosun Ilbo "KRW 10 billion Saved in Construction Costs through 'Pre-Con'" (Feb 3, 2015)



AUTODESK BIM FORUM 2015
(July 16, 2015)

- Employees
- The Media
- Government Organizations
- Shareholders and Investors
- Suppliers
- Customers
- Local Community

◀ Dangjin Thermal Plant(Korea)

GS E&C Intellectual Capital Value Creation

SUSTAINABILITY CONTEXT

In the construction industry, the technological difference between global leaders has narrowed and their technological strategies have become increasingly similar. To secure competitiveness through differentiation of technological values has become a critical element in their performance on the world stage. Thus GS E&C strives to enhance its existing core technologies and cultivate or hire top-notch experts in various fields to continue to boost its global competitiveness.

OUR STRATEGY & COMMITMENT

To equip itself with competitiveness in the global market through increased differentiation of its technological values, the Technology Division of GS E&C set its three operation directions and selected four major tasks to promote in 2015.

Operation Directions	Intensify and expand R&D particularly in the company's core technologies and features	Establish a cost/safety technology support system concentrated on the company's global projects and project sites directly run by the company	Establish short- to mid-term strategic directions for the Technology Division	
Major Tasks	Cost innovations & differentiated technology development	Upgrade of cost/safety based technological support	Establishment of an implementation system to enhance its global competencies	Cultivation of global leaders

OUR PROGRESS & NEXT STEP

GS E&C has achieved its management goals and acquired technological development achievements through its efforts in keeping with the operations directions and major tasks to promote. In 2015, the Technology Division contributed more than it had planned at the beginning of the year through its R&D activities. The division also secured 41 cases of intellectual properties including 35 green building certificates through the technological achievements of its R&D efforts in 2015. GS E&C will strive to enhance its global competitiveness by enhancing its capabilities to identify future directions of industrial development and beefing up its global network with technological leaders in the industry in addition to its current efforts to differentiate its technological values and foster highly qualified technical staff.

THE VALUE CREATED in 2015

Intellectual Properties
41 cases
· 37 patents
· 2 new technology designations
· 2 green technology certificates

Green Buildings
35

Usage of Green Concrete
Reduced
5.16 billion (KRW)
63tCO_2-e carbon emissions

113% in profit contributions
177% in new order contributions
165% in sales contributions

Technological Development Outcome and Strategies

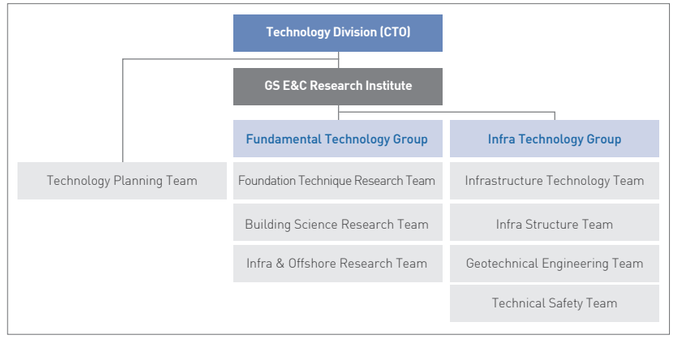
SDG 8

GS E&C is promoting technological development under the leadership of the Technology Division, which carries out its R&D according to its own management goals and promotion strategies. The company reduces GHG emissions and boosts energy conservation through the development of green technologies and new environmental technologies.

Technological Development Infrastructure

CTO

The Technology Division of GS E&C makes investments in technological development and makes an all-out effort to foster global talents with the ultimate goal of staffing itself with unrivaled global competitiveness. In 2015, its R&D budget amounted to KRW 44.9 billion, or 0.42% of its annual sales. It carried out 26 national R&D projects and 29 joint/independent R&D projects with a total of 98 technical staff. The division runs Research Institute. In a bid to enhance the expertise of its staff, the division has divided its staff into R&D and technical assistance departments.



Research Institute

The Research Institute is equipped with world-class technological prowess as a result of its efforts to enhance the company's technological competitiveness. The institute is equipped with various lab facilities such as Clean Room Lab, Housing Environment Lab, Material Research Lab, Environment Research Center and Analysis and Testing Lab. Through careful planning, it carries out various tests of new technologies such as geothermal heat pumps, solar energy generating systems, and rainwater harvesting systems. It will reaffirm the validity of the new technologies through careful tests and trial operations, taking appropriate complementary actions, before they are distributed to the company's project sites and applied to field work.

Management Goals and Outcome

The management goals of the Technology Division for 2015 were KRW 60 billion in profit contributions, KRW 9.8 billion in new order contributions, and KRW 5.2 billion in sales contributions. However, through cost innovations, the development of differentiated technologies, and the upgrade of cost/safety-based technological support, the division achieved better management results - KRW 67.6 billion (113%) in profit contributions, KRW 17.3 billion (177%) in new order contributions, and KRW 8.6 billion (165%) in sales contributions.

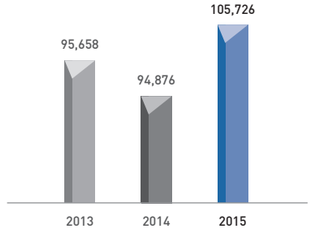
Profit contributions = Site cost reductions + cost increase prevention amount + engineering fee
New order contributions = Reduced bidding price + bidding price rise prevention amount
Sales contributions = Additional contract sum due to change orders

DJSI

	GS E&C▼	Industry Average	Best Score
Resource Conservation and Resource Efficiency	100	60	

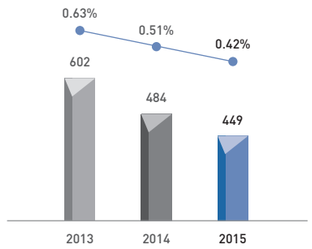
Sales

Unit: hundred millions of KRW



Research & Development Investment

Unit: hundred millions of KRW
R&D Investment Rate



2015 Management Goal and Outcome of the Technology Division

Unit: hundred millions of KRW