Sustainable Value Chain

SCG Sustainable Value Chain

- SD upstream Supply Chain: Make Supplier and Contractor proficient toward sustainable development
- World Class Operation: Green Manufacturing
- SD downstream Supply Chain: Create added value and environment friendliness to sustainably serve customer's demand
- Collaboration: Promote sustainable development to all parties including those without direct relationship

Regarding an overview of business direction, SCG focuses on strengthening and maintaining leadership in the country through business competitions to provide value to stakeholders in compliance with Value-base competition. SCG employs business advantages from operating our business covering the value chain and completing with resources throughout the process to create growth for SCG. Meanwhile, SCG enters the ASEAN Market proactively with investment plans and strives to conduct new businesses on a global scale.

### Sustainable Value toward Suppliers

SCG has expanded our businesses continuously in accordance with the sustainable development approach applying to a whole value chain. The SCG Supplier Development for Sustainability Committee and relevant divisions within SCG level and business level are responsible for mitigating potential risks from the procurement of raw materials and the main materials with oligopoly suppliers and supplier conflicts on environment and safety laws. These risks can affect the business sustainability and inhibit SCG’s progress. In addition, it is to prepare to respond competitively and to expand businesses under limitations. According to potential risks, competitiveness advantage with our sustainable value chain is considered as a key strategy to be implemented strictly to create value in economic, environmental and social aspects for stakeholders in every process, from upstream such as contractors and suppliers, to downstream such as customers and business partners.

In value chain management, SCG has expanded the sustainable development approach, Total Quality Management, and Total Proactive Maintenance, based on moral and ethics to apply throughout upstream and downstream from selection, operation determination, assessment to development and leverage of suppliers in order to enhance their competencies to professional level, and to grow together with SCG both in Thailand and in other countries in ASEAN, for example.

### Green Procurement

SCG has initiated policies on green procurement and environmental management leveraging our suppliers concretely since 2004, beginning from office supply and general items and extending to procurement of raw materials, spare parts and supply materials. SCG considers registering products that comply with green label or SCG green procurement criteria, improving environmental management for suppliers under the Greening the Supply Chain Project, improving safety standards for contractors under SCG Contractor Safety Certification System Project, enhancing professional skills of fleet centers, and encouraging suppliers to comply with the SCG Supplier Code of Conduct.

### SCG Contractor Safety Certification System

SCG Contractor Safety Certification System (SCS) was developed in 2006 to enhance effectiveness in safety to prevent and to reduce accidents of contractors. SCG conducts supporting activities for contractors by educating, advising, enhancing professional skills of fleet carriers, and encouraging suppliers to comply with the SCG Supplier Code of Conduct.

### Green Procurement Product Status

<table>
<thead>
<tr>
<th>Category</th>
<th>Products</th>
<th>Brands</th>
<th>Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office and General Items</td>
<td>29</td>
<td>79</td>
<td>499</td>
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<tr>
<td>Raw Materials</td>
<td>21</td>
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<tr>
<td>Supply Materials</td>
<td>18</td>
<td>48</td>
<td>818</td>
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<tr>
<td>Spare parts</td>
<td>4</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>72</strong></td>
<td><strong>209</strong></td>
<td><strong>724</strong></td>
</tr>
</tbody>
</table>
Spending Analysis

SCG adopts the spend analysis process to assess products and services procurement which affects the production process directly and indirectly, to identify diverse suppliers management strategies appropriately and to find development an approach together in order to enhance efficiency and reduce potential risks from the supply chain.

SCG Pride, a Role Model of Green Industry Level 5: Green Network

Efforts in expanding the sustainable development approach to suppliers in continuity result in the successes of The Siam Cement (Lampang) Co., Ltd. and Map Ta Phut Olefins Co., Ltd., receiving Green Industry Level 5 : Green Network Awards from Ministry of Industry. The Awards are to encourage our company to support suppliers in conducting green businesses with corporate social responsibility resulting in 92 suppliers participate in the Green Network Project.

Expansion of the sustainable development approach to all suppliers is a key challenge of SCG since it has more than 8,000 suppliers at present and most of them are small and medium enterprises which have limitations in finance, human resources and knowledge that inhibit the corporate changes in compliance with laws and regulations throughout the competitive competency leverage in balancing the triple bottom line.

SCG has determined strategies in supplier management by prioritizing significant impacts on business, such as purchasing volume, bargaining power, and potential risks in finance, environment, labor, safety and society, to identify appropriately supplier development approach.

Supplier Segmentation and Strategic Approach

Strategic Supplier is a group of significant suppliers that are ready to grow their business together. SCG has long term development plans in form of co-creation to establish mutual business opportunities.

General Supplier is a group of all suppliers who are manufacturers, traders or contractors.

• All suppliers shall commit to compliance with SCG Supplier Code of Conduct identifying ethics in business, labor and human rights, occupational health and safety, environment, and applicable laws and regulations.

• All contractors in the production process shall be assessed and certified under SCG Contractor Safety Certification System.

• All suppliers that provide products and services regarding the green procurement criteria shall be assessed and registered on the green procurement list.

In order to create prototypes and case studies for suppliers to adopt sustainable development approach concretely, SCG has chosen 21 suppliers to participate in the supplier development for sustainability project. SCG provides consultation in development and creates a learning process by applying problem solving concept (QC Story) as a tool to develop suppliers and selects significant projects which impact the business directly, such as waste reduction, energy consumption reduction and management, water consumption reduction, quality problem solving, productivity improvement, and inventory and logistics system development projects.

“Aukaradej Vassara
Chairman
The SCG Supplier Development for Sustainability Committee

Supplier Segmentation and Strategic Approach
Supplier Development
Process for Sustainability

Prototype Projects
Productivity Improvement by LEAN Approach Project
Pallet Maker Group Co., Ltd.

The supplier needs to increase productivity; therefore, it adopts a lean approach to improve its productivity by balancing production lines, reducing work in process to increase production speed, and improving process flow. This approach has increased its productivity by approximately 40%.

Waste Reduction from Septic Tank Production
Entech Co., Ltd.

This supplier needs to reduce waste generated from its septic tank production. Therefore, SCG advises the supplier to collect and analyze their data system to find out causes of waste by creating plans, standards and an appropriate production controlling point. The approach reduced waste from septic tank production to zero waste.

Process Optimization Project and Quality Control
Chalermchaichan Co., Ltd.

The supplier needs to solve color distortion in ink that cause color remixing. Data collecting and analysis are used for design new process and new quality control. This approach has reduced 25% of color remixing, and save color content 110 Kilogram per year.

Process Productivity Improvement in Safety Shoe Manufacturing
Pangolin Safety Products Co., Ltd.

The supplier needs to increase productivity due to high sale. The supplier could not produce enough to keep pace with demand. Work-in-process material is also excess its stock area. LEAN was introduced in productivity improvement, for example Value streaming mapping analysis to balance the process, reduce work-in-process material and re-layout the process. By this project, productivity increases 30%.

This engagement approach in the support of supplier development is only a part of the value chain; however, strengthening business requires customers’ needs to connect and develop from upstream to downstream. It is another challenge for SCG to commit in the research and development process to produce products and services that meet actual customers’ needs and maintain its leadership in the market.

Sustainable Value toward Customers

High competitive market situations are rooted in development of competitors with potential to produce varied products, and price competition. Therefore, differentiation in the market depends on the accessibility of real customers’ needs that are interested in products and services which improve a quality of life and care for the environment. Besides, distribution channels are considered essential in delivering value of products and services to customers. Therefore, SCG emphasizes distribution channels as business advantages and risks by setting up its strategic foundation to drive business under competitive situation and sustainable growth. This strategic foundation comprises products and services development in response to customers’ needs and distribution channels to serve our customers.

Product and Service Development to Meet Customer Needs

High Value Added Products and Services (HVA)

SCG committed to the research and development of high value added products and services differentiated from basic products and services such as better quality including service development to fulfill customers’ needs or solution providers by intending to increase its business and the number of researchers continually. In 2014, SCG had 1,474 researchers comprised of 92 researchers holding Ph.D. with a budget of 2.71 billion Baht. That results in the increase of high value added products and services sales to 35 percent of revenue from sales while SCG aims to gain 50 percent of revenue from sales in 2015.

Green Products and Services

SCG is the first Thai company that sets a self-declared environmental label for environmentally friendly products and services under “SCG eco value” label, started in 2009, by adopting ISO 14021: Environmental Labels and Declarations-Self Declared Environmental Claims standard together with stakeholders’ needs and product life cycle assessment. In 2014, SCG had 86 ‘SCG eco value’ products and services certified, contributing to 31 percent of revenue from sales, while the target of ‘SCG eco value’ sales is one third of revenue from sales in 2015.
**Value based Products and Services**

According to the strategy of value-based competition and market expansion toward downstream which are high value added products and services, SCG emphasizes product and service development to meet the needs of each customer group, from real estate developer, retailer, and consumer. SCG is ready to invest in response to those customer demands.

- Precast concrete: Using precast concrete for building and residence construction provides solutions to reduce construction time, to leverage quality standard of construction parts and to handle skill labor shortage.
- The NEST (The Next Eco-Sustainable Technology for Home): The prototype of Smart Eco-Care house for sustainability is appropriate for living in a tropical zone, combined technology of house with Smart, Eco and Care. The NEST fits with the world’s living trend, considering the convenient, safe and environmentally friendly habituation of people of all ages. Various Technologies is integrated to achieve higher energy efficiency houses, ‘The 1st Energy Plus House in ASEAN’.
- SCG HEIM: The Ultimate of Living, an innovation in building modular house using the most advanced in-plant manufacturing and assembly robotic technology in Asia Pacific. SCG HEIM brings happiness to residence through an ultimate quality of living using the Air Tightness System, in working together with the Air Factory System that brings high quality, allergy-free fresh air from outside with noise reduction. Therefore, SCG HEIM is really a house for the farsighted who looks for a comfort and high quality of living.
- Pyrolytic Stone, under ‘GEOLUXE’, brand is the forming material which looks like natural stone with higher durability properties and it is able to meet the needs of customers that require something different in line with natural resource conservation.

**Comprehensive Distribution Channels with Accessing to Customers**

In 2014, SCG has set up a clear management strategy in distribution channels by considering different behaviors and needs together with designing supply chain models for each distribution channel, including solution sales and retail sales.

- SCG HOME SOLUTION is a distribution channel to meet the needs of home owners and installers in the form of complete consultation and sales cycle in line with one stop solutions offered by experts in all major house components. In 2014, SCG provided home services through 33 branches of SCG HOME SOLUTION. Customer satisfaction is 95% according to our assessment.
- SCG Experience is a communication channel, specifically targeted at home owners, interior designers and architects and offers ideas and knowledge through advanced technologies along with consulting services from the architect team (Dream Driver) with free of charge.
- Global House Integration is an SCG building material retail center is considered the first step in retail center expansion in form of warehouse store in Thailand and toward ASEAN by taking advantage of SCG’s market leadership and ASEAN networks.

**Strengthening Distribution Channels**

Channel capability enhancement is one of strategies continuously executed through various projects such as:

- Dealer Integration: The exchange of information with dealers will help SCG understand real customer demands, and increase accuracy in production planning and inventory management for both SCG and dealers. In 2014, 278 dealers participated in the project, accounting for 83% of revenue from sales through dealer channel.
- SCG Retail & Service Academy is set up as a learning center to develop various skills of dealers’ staff, including sales and services, detailed design, installation and consultation skill. It also provides trainings to dealers’ staff with free of charge. In 2014, 3,308 distribution outlet employees participated in the training.
- Development of Real Estate Developers is to build up collaborative engagement in joint development by providing advices, exchanging practices for real estate developer to improve their organizations, and initiating collaborative projects, with SCG offering value added services, such as special transportation, and precise production planning and delivery.

**Product and Service Liability**

SCG focuses on quality assurance to build up trust among customers that use our products and services under SCG brands, and sets up quality assurance systems to ensure product safety in alignment with Product Liability Standards. SCG has been implementing and developing the quality assurance system since 2009 to comply with both current products and newly developed products by SCG.

In 2014, SCG has been monitoring and assessing companies in all business units through assessment programs in compliance with a product liability standard conducted by SCG corporate offices. The assessment has been performed continuously since 2013. This year, 2014, SCG has monitored and assessed 19 companies and 1 function. Besides, SCG assessment program was extended into company level to conduct self-audit by providing courses for internal auditors from companies in order to prepare them to become consultants and internal auditors in accordance with Product Liability Management Standards. In 2014, SCG conducted training programs to develop 1,152 internal auditors from 56 companies and 1 function.

According to the 2015 Plan, SCG has been developing internal auditors at company level and planning to leverage internal control systems implemented by the area owner more systematically. In addition, SCG increases awareness on product liability management standards among employees through case studies to control implementation of product safety measures efficiently and effectively, enabling delivery of safe products for use and to build trust among SCG customers and product users.

Even though the leverage of SCG value chain is targeted to meet the stakeholders’ needs, is considered as a continuing business direction, the next step to be developed in order to strengthen SCG value chain is that working collaboratively within our supply chain to create agility in business adaptation under harsh competition, to benefit from data accessing technology which leads to product and service development, meeting customers’ actual needs, to extend the scope of cooperation within value chain for solutions and to create innovations to build up value for stakeholders.