

2013年度

## デミング賞 受賞報告講演要旨

SCG Logistics Management Company Limited

## TQM Practices of SCG Logistics Management Co., Ltd.

### 1. Introduction

#### 1.1 Overview of SCG Logistics Management Co., Ltd. (SCG-L)

##### (1) Introduction to SCG-L

The Siam Cement Group (SCG) is one of Thailand's largest conglomerates of business operation. Since its founding, SCG has grown continually and diversified into five core businesses, namely SCG Chemicals, SCG Paper, SCG Cement, SCG Building Materials, and SCG Distribution.

Prior to economic crisis in 1997, logistics operation was only a supporting function responsible for transportation. After SCG restructuring, SCG-L company was established in 1999 as a subsidiary of SCG Distribution, which was merged with SCG Cement and SCG Building materials into one unit called SCG Cement-Building Materials in 2013, as shown in Figure 1-1.

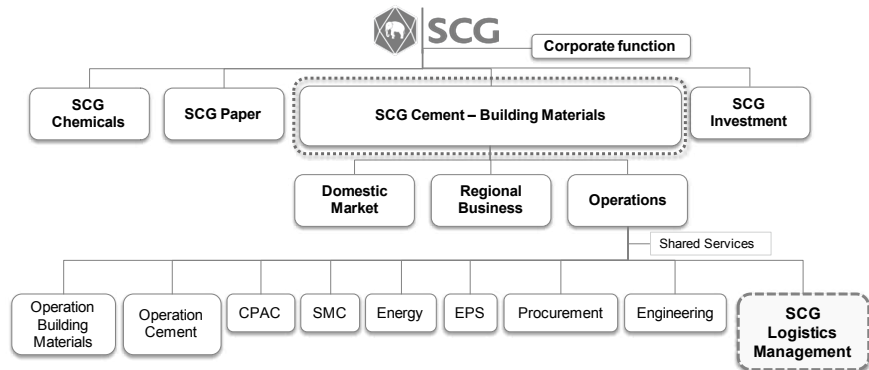


Figure 1-1: SCG Organization

Since then, it has been acknowledged among SCG's affiliated companies that our services were no longer compulsory. The company must improve its performance and compete with other providers by creating the value in terms of cost and service quality. Although many challenges were faced in such a competitive environment, SCG-L was able to grow its revenue more than 5 times from 2,300 MB in 2000 to 12,850 MB in 2012.

##### (2) Business Model

Logistics business model can be classified as 1PL, 2PL, 3PL and 4PL. SCG-L adopts the Third Party Logistics Provider (3PL) business model, providing one stop services for B2B and B2b customers. It strives to create value for its customers and carriers. With its asset-right model, most of logistics asset are outsourced, the company selectively invests and owns strategic asset which are crucial for the business future growth such as ICT systems and strategic facilities. SCG-L business model is shown in Figure 1-2.

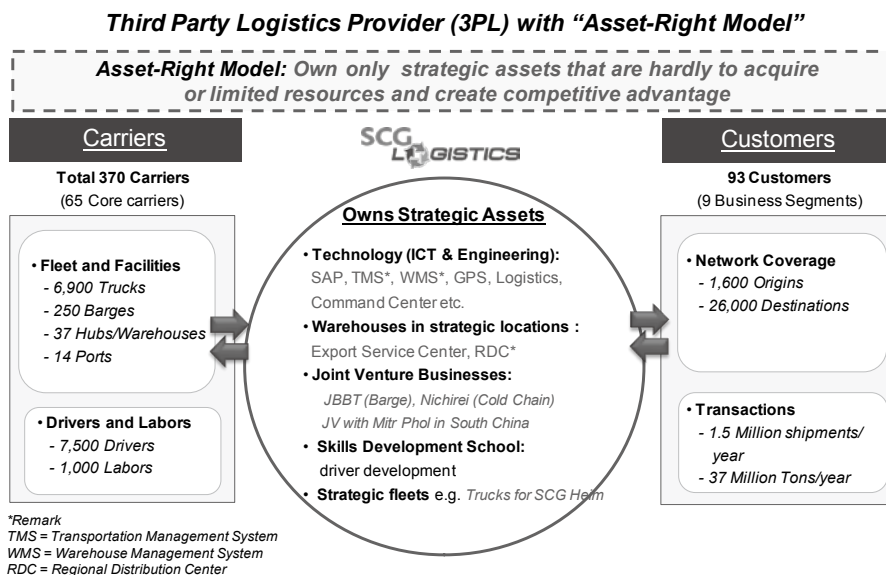


Figure 1-2: SCG-L Business Model

## 1.2 Overview of Logistics Industry

### (1) Market Size

In 2012, Thailand's total value of logistics spending in transportation and warehousing areas was approximately 30 Billion USD. With the outsourced logistics as percentage of overall logistics expenditure ranging from 30% - 80%, various sources estimated the market size of Logistics Service Providers (LSPs) in 2012 between 14 Billion – 16 Billion USD with the average growth rate of 13% - 15% per year driven by the economic growth and increasing trend towards outsourced logistics function.

For SCG-L focused market segment in Cement-Building Materials, Paper, Chemicals, Agriculture, and Food and Beverage, the total market size was approximately 3.3 Billion USD.

### (2) Nature of the Business

The Logistics industry remains highly fragmented with 7,500 players in the market while the 10 largest providers represent less than 10% of the total market size. The existing service providers in the market could be classified into 2 groups, which are small local companies and international companies. Historically, smaller companies were relatively slower at adopting and implementing outsourcing as a strategic solution.

SCG-L Market Share in Focused Businesses

Focused businesses	% Share
• Cement	44%
• Paper	28%
• Building Materials	19%
• Chemicals	6%
• F&B and Agriculture	5%
<b>Total market share</b>	<b>13%</b>

SCG-L Revenue Breakdown in Focused Businesses



By contrast, the international providers have penetrated the Thailand market by providing total logistics solution. In 2012, SCG-L has the highest revenue of 430 Million USD and holds the market share of 13% in focused industry. SCG-L market share and revenue in focused businesses can be illustrated in Figure 1-3.

Figure 1-3: Logistics Market and SCG-L's Customers

### 1.3 Service Scope

The company provides a variety of logistics services covering transportation, warehousing, and importing and exporting functions. SCG-L has customers belonging to a variety of business groups, handling products approximately 30,000 SKUs under the 3 service categories Bulk, Full Truck load, and Consolidate as shown in Figure 1-4.

With the ability to provide variety of services, SCG-L can meet complexity of customer's requirements.

Services coverage is mainly in the domestic market (96%), however, SCG-L is currently expanding its presence into overseas markets including Cambodia, Myanmar, Laos, Vietnam and South China by leveraging its expertise as well as customer and carrier networks.

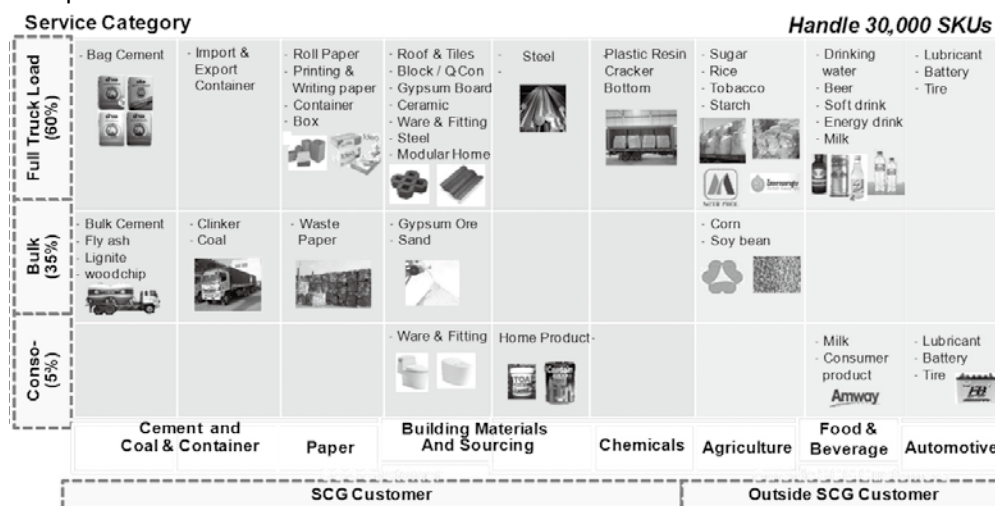


Figure 1-4: Service Scope

## 1.4 Distribution Process

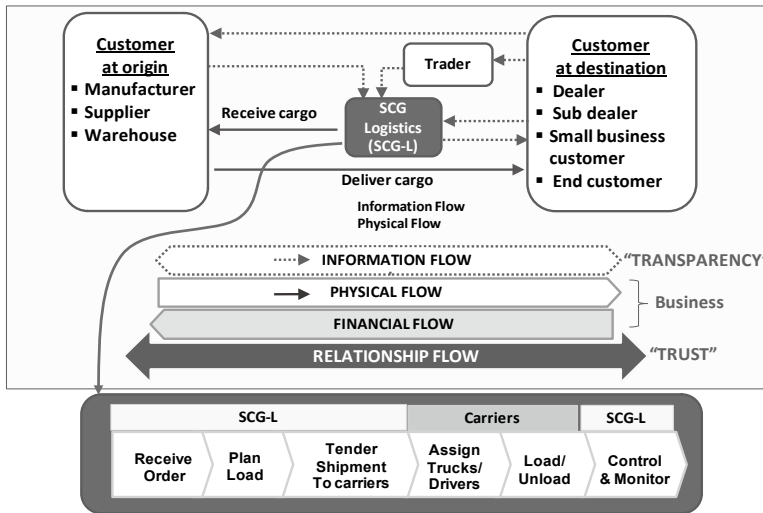


Figure 1-5: Conceptual Distribution Flow

As the distribution process in Figure 1-5, supply chain consists of physical flow, information flow and financial flow. The information flow is very important as it represents visibility and transparency along the supply chain. Acting as a third party logistics provider, relationship flow is also essential in running business for SCGL. Our commitment in doing business is to create trust along the supply chain which in this case, with carriers.

## 1.5 Key Challenges and Difficulties

Because there are many stakeholders involved in the supply chain with each representing unique sets of requirements in terms of delivery, cost, speed, satisfaction, environment and safety, the key challenges and difficulties in doing business lie upon how to manage and balance all requirements to serve all stakeholders which could be summarized as follows;

- (1) Customer diversity with different, apparent and latent needs, which required a lot of observations in real workplaces
- (2) Difficulties in translating customers' needs to design logistics service solutions to match with each specific needs
- (3) Operation complexity with service flexibility required such as multi-types of trucks, port, warehouse etc.
- (4) A large number of subcontract carriers and drivers with various performance standards
- (5) Low visibility due to many work operations outside the SCG-L's visible area

## 1.6 Salient Features of Our Business

### (1) SCG-L's Five Core Competencies together with Carriers' Capabilities:

With systematic working process, between SCG-L and carriers network, the company can provide service excellence to the customers in terms of Quality, Cost, and Delivery (QCD).

**(2) Asset-Right Model:** SCG-L shifted its investment philosophy from "assets-light" towards "assets-right" model. Because most of logistics assets are outsourced, the company selectively invests and owns only the strategic assets which are hardly to acquire or limited resource such as ICT system, Distribution Center in strategic locations etc.

**(3) Work as One Team & Customer Centric Organization:** Starting from 2011, SCG-L changed its organization model to focus more on each customer segment and strengthen cross-functional by introducing Work As One Team (WAOT). By doing this, SCG-L can collaborate and understand more on customers' requirements and expectations so as to ensure the best service quality to the customers.

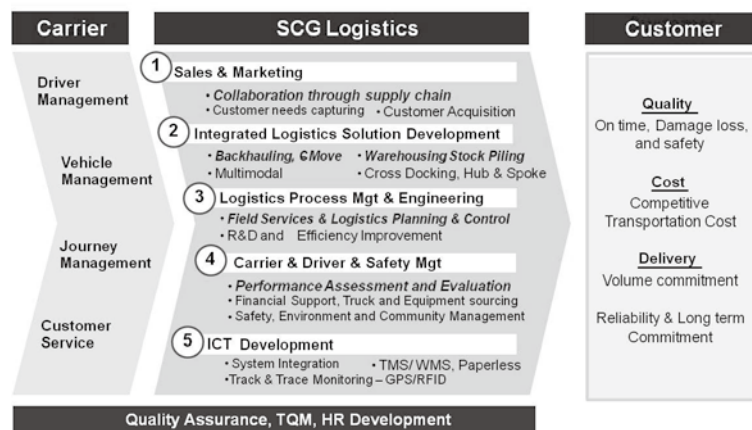


Figure 1-6: SCG-L's Five Core Competencies

## 1.7 The Organization

SCG-L's organization structure and functions are designed to accommodate customer's needs and ensure efficient operation and sustainable achievement of business goals. SCG-L also utilizes human resource and accounting functions provided by the shared service business unit so as to exploit their core competency on these particular tasks. The way of work and the span of control also cover our carrier, driver, carrier's staff, as well as the customers. The organization chart is as shown in Figure 1-7.

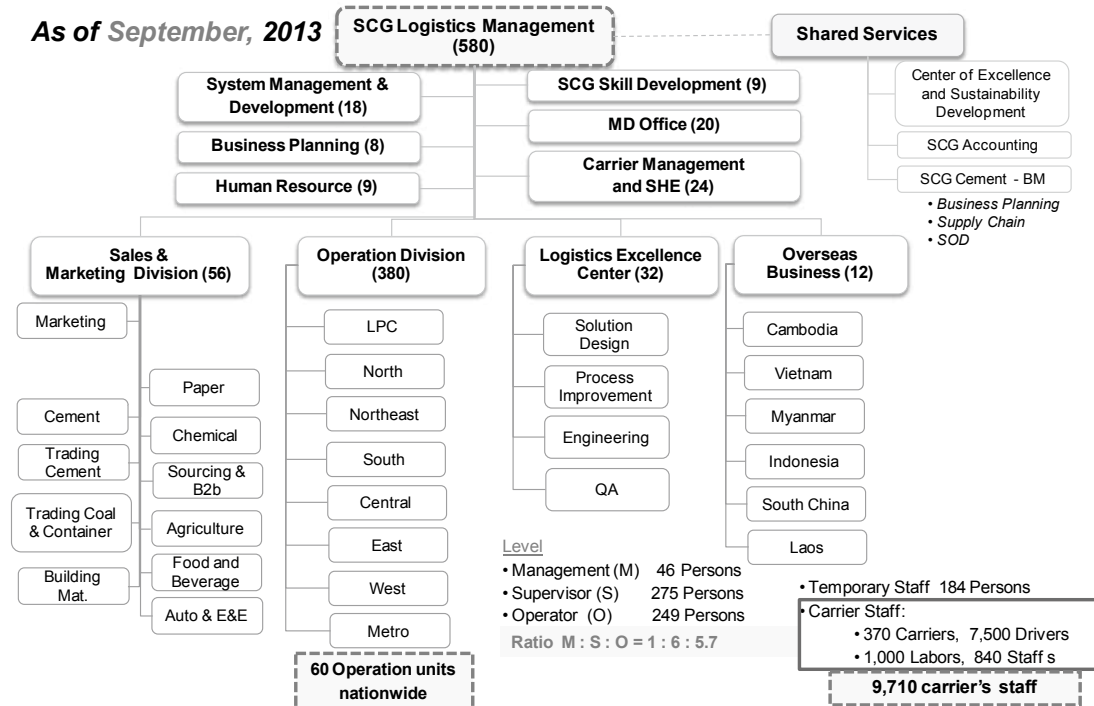


Figure 1-7: SCG-L's Organization

## 2. SCG-L's Strategic Direction and TQM Promotion

### 2.1 Background

Since ASEAN economic crisis in 1997, domestic demand for construction materials dropped by 40% (Figure 2-1), as a result, SCG needed to increase sales volume by focusing more on export market. To serve SCG's direction and, at the same time, survive in this crisis period, SCG-L swiftly deployed 2 key strategies;

- (1) Gain volume by satisfying SCG's requirements: SCG-L focused on serving bulk cement export volume by providing appropriate fleets and facilities.
- (2) Reduce logistics cost and sustain committed service performance by utilizing resources to an optimum level: SCG-L re-evaluated the number of depots, strategically selected potential carriers, and redesigned its working process.

Not only did these strategies allow SCG-L and its key stakeholders to survive under the crisis, but they also elevated SCG-L to be one of the core businesses for SCG.

During the year 2000, SCG-L's objectives and strategies can be classified into two periods

- **Before 2008: Strengthen Operation by Process Improvement and Standardization**

*To grow business with SCG BUs and reduce admin cost on net sales*

- **2008 Onwards: Pursue Sustainable Growth**

*To be a dominant third party logistics provider in focused businesses*

Cement Domestic Demand -40%

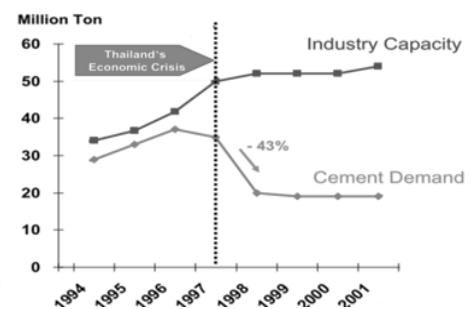


Figure 2-1 : Cement domestic demand

## 2.2 Before 2008: Strengthen Operation by Process Improvement and Standardization Period

### (1) Situation and Business Environment

After the economic crisis, the cement domestic demand had been recovered in 2001, increasing from 19 Million Tons to 29 Million Tons while the export volume remained at high level. The key challenge for SCG-L was to effectively build up the logistics capacity in response with this rapid demand change without significant reinvestment and reduce the logistics cost to ensure the competitive position of SCG product in the market. To cope with this challenge, SCG-L established the business objective to grow with Cement and Building Materials segment and reduce administration cost by standardized process and ICT (Information and Communication Technology) enhancement.

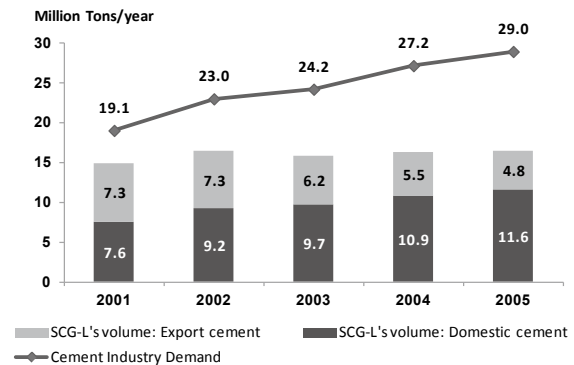


Figure 2-2 SCG-L's Domestic and Export cement volume

### (2) Key Strategies

#### (A) Grow with SCG Cement and Building Materials:

- Set up Service Level Agreements (SLA) to make a clear and mutual agreement on Key Performance Indicators (KPIs) between SCG-L and customers.
- Collaboratively planned (Sales and Operation Planning – S&OP) and worked with SCG Cement and Building Materials to ensure that the company clearly had an insight about customers' requirements.

#### (B) Expand capacity and Reduce Admin Cost by:

- Expanded capacity of trucks, barges and warehouses to serve demand surge of SCG Cement for both domestic and export markets.
- Improve operating efficiency by developing new logistics model such as backhaul matching model, multi-modal transportation and prepared logistics capacity to match with customers' demands.
- Implemented Transportation Management System (TMS) and centralized logistics planning function to support high growth of business without increasing administration cost on net sales.

#### (C) Improve Quality by Standardize Process:

- Created standard procedures to ensure reliable processes and sustainable performance by applying proactive monitoring process such as truck tracking and monitoring system.
- Acquired ISO 9001 Certificate
- Applied basic TQM concepts e.g., PDCA, 5S, Suggestion and QCC activities

## 2.3 Pursue Sustainable Growth Period (2008 Onwards)

### (1) Situation and Business Environment

Great demand growth has opened up an opportunity for SCG-L to expand its business in SCG Paper and SCG Chemicals where SCG-L still has low transportation share and opportunity to penetrate new segments outside SCG. Given the growth of Thai economic, logistics industry has shown the average growth of 13%-15% per year, driven by Automotive, Retail and Food & Beverage manufacturing segments.

However, competitive environment has become increasingly intense in this period, mainly from International Logistics Providers with high service standard level. These require SCG-L to pursue its business expansion and enhance its competitiveness by increasing operational efficiency, and improve service level to meet with global standard.

Moreover, SCG's policy of becoming a regional market leader in 2015 and the AEC's 'single market' aspiration would create greater opportunities for logistics business in this region. As a result, SCG-L can take advantages and gain several benefits from expanding its businesses into the regional market.



## (2) Business Objective

With plenty of growth opportunities in the logistics market, SCG-L need to be focused by selecting the high value segment that SCG-L can leverage the existing expertise. The company has established business objective to become the Dominant Third Party Logistics Provider and paid attention in having a strong position in three major areas which are:

- High market share
- High coverage of logistics network
- High level of customer satisfaction

## (3) Key Strategies

In order to realize the business objective, SCG-L has developed following strategies;

### (A) Domestic Market Expansion

SCG-L aims to expand business in Thailand by acquiring new customers in SCG businesses including Paper and Chemicals (2008) and moving towards high growth and high profitability outside SCG including Agriculture and Food and Beverage (2011) (Figure 2-3). To achieve this challenging strategy, SCG-L has 3 sub-strategies as follows;

#### (A1) Apply market-in to grow with strategic customers and expand services to new businesses

Apply collaborative approach to capture new needs and to acquire new customers focusing on Agriculture, Food & Beverage segment and start to penetrate Cold Chain and Automotive while maintaining existing customers.

#### (A2) Shift towards new solution and value added services

Develop new solutions to improve services in existing customers and attract new customers.

#### (A3) Manage operation for excellence

Expand network coverage and continually improve truck utilization by using backhaul matching model for strengthening cost competitiveness and acquiring more growth opportunities.

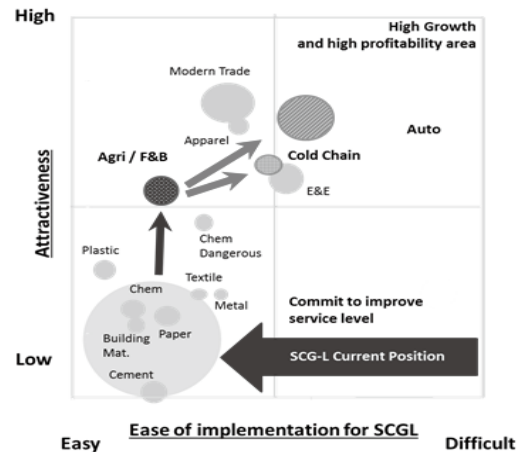


Figure 2-3 SCG-L Growth Path

## (B) Overseas Market Development: Coping with ASEAN Economic Community Challenges and prospects

For overseas market, SCG-L aims to become one of the leading Third Party Logistics Providers in the region by capturing ASEAN Economic Community (AEC) growth opportunity in ASEAN. By applying our competencies from Thailand as shown in figure 2-4, SCG-L can establish logistics network in Great Mekong Sub-Regions countries, enhance operation efficiency by synergizing logistics network, and building up logistics connectivity among countries in the region.

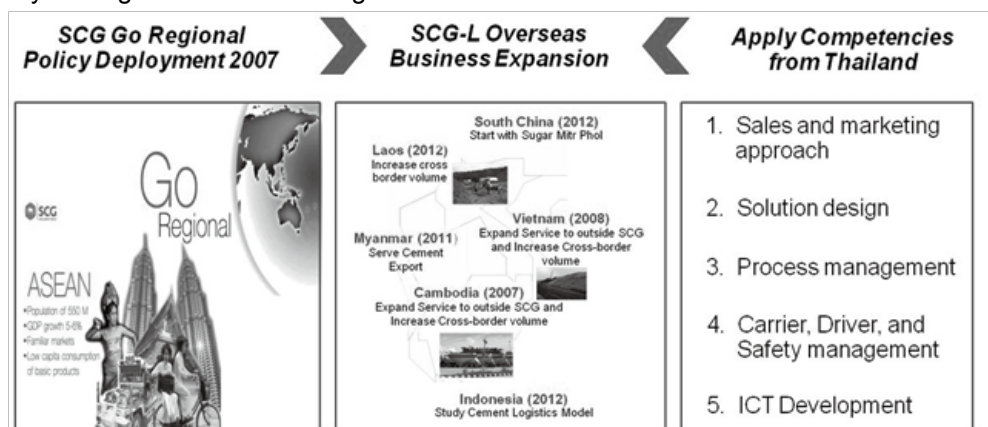


Figure 2-4 SCG-L Overseas Business Expansion

### (C) Infrastructure Strengthening

Apart from the strategies to expand its business to both domestic and overseas markets, SCG-L attempted to promote sustainability into the business through the Win-Win-Win concept with key stakeholders along the supply chain.

The Win-Win-Win concept can be described as a situation where the Customers, the Community, and the Carriers and SCG-L gain benefits from the actions or activities which have been done to improve existing process or operation. The Win-Win-Win strategy focuses on balancing in three major areas (Figure 2-5);

- Revenue growth and Profit for SCG-L and Carriers
- Service Quality Assurance for Customer
- Safety & Environment for Community

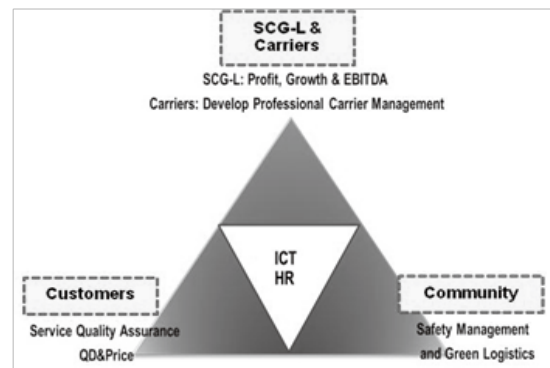


Figure 2-5 Tri-lemma Diagram

Base on the Win-Win-Win concept, the infrastructure strategies have been developed to increase “TRANSPARENCY” and ensure “TRUST” among different related parties within the supply chain. There are five major infrastructure strategies as follows;

#### (C1) Proactive Quality Assurance System

#### (C2) Professional Carrier Management

#### (C3) Safety Management and Green logistics

#### (C4) Strategic ICT Management

#### (C5) Proactive Human Resources Management

Moreover, to realize its business objectives and effectively execute both challenging and infrastructure strengthening strategies, three major aspects have been developed:

- Promote customer-centric mindset through Work As One Team (WAOT)
- Full involvement of employees to ensure company-wide effort through Bottom up Activities called Community of Practices (CoPs)
- Investment in strategic assets

## 2.4 TQM Promotion

TQM is widely-acknowledged as the best managerial tool for enhancing SCG-L’s competitiveness in value creation and also encouraging collaboration for smooth operation among all members in a supply chain. This competitiveness includes, but not limited to, staff competency development which could lead to effective work improvement.

### (1) TQM Framework

SCG-L’s TQM Framework has been developed to be aligned with the company’s operations and business direction based on “Dr.Kano’s House of TQM” as shown in figure 2-6. The Key Features of SCG-L’s TQM Framework are :

- Market In
- Partnership with customer & Carriers
- Cross-functional Policy Management
- Proactive Daily Management
- Employee Initiatives Activities (CoPs)



Figure 2-6 SCG-L’s House of TQM



## (2) TQM Implementation

Table 2-1 TQM Implementation History

Period	Before 2008 Enhance Process Improvement and standardization for strengthening operation	2008 Onwards Strengthen Policy Management and Daily Management for Pursuing Sustainable Growth
Business Direction	Serve SCG Cement and Building materials and started to expand into Paper and Chemical business	Expand SCG-L's growth into new businesses outside SCG and overseas markets
Organization Transformation	<b>Product Centric</b> Manage by Product Segmentation (Bulk , Full Truck Load , Consolidated)	<b>Customer Centric : Apply Market In</b> Manage by Customer Segmentation (Matrix organization by Work As One Team)
TQM Aims	<b>Built up TQM Base</b> Use TQM to standardize work processes and increase efficiency	<b>TQM for Business : Apply Partnership</b> Use TQM to support business direction by Supply chain collaboration with Win-Win-Win concept
TQM Activities	- Policy Management by function  - Implement ISO to standardized operation working process and Establish SLA and KPIs - Implement 5S , Suggestion and QCC Activities	- Adding <b>Cross-functional Policy Management</b> through WAOT & Carriers - <b>Pro Active Daily Management</b> by monitoring In-Process Control (KPIs) and develop ICT system for operation visibility - Implement <b>Community of Practices (CoPs)</b> and Innovation Awards

The History of SCG-L's TQM Implementation to support Business Direction can be summarized and shown in Table 2-1

## (3) Key Improvements on TQM Promotion

### (A) Improving Cross-functional Policy Deployment

The difficulty of Policy Management at SCG-L is to achieve the challenging target of revenue growth from both existing customers and new businesses expansion under diversity of customer needs, shortage of truck supply and drivers, and increasing uncertain environment. Starting from developing the right strategic direction and strategies, effective implementation through collaboration among related functions including carriers with the quick PDCA cycle has become more and more crucial.

Based on SCG-L's Customer Centric Organization which has been managed in The Matrix Organization called "Work As One Team, WAOT", manager and staff from each function are assigned to be members of each WAOT. The team members have worked together covering the PDCA process starting from formulating an action plan to performing corrective actions. (Figure 2-7: Policy Management Mechanism)

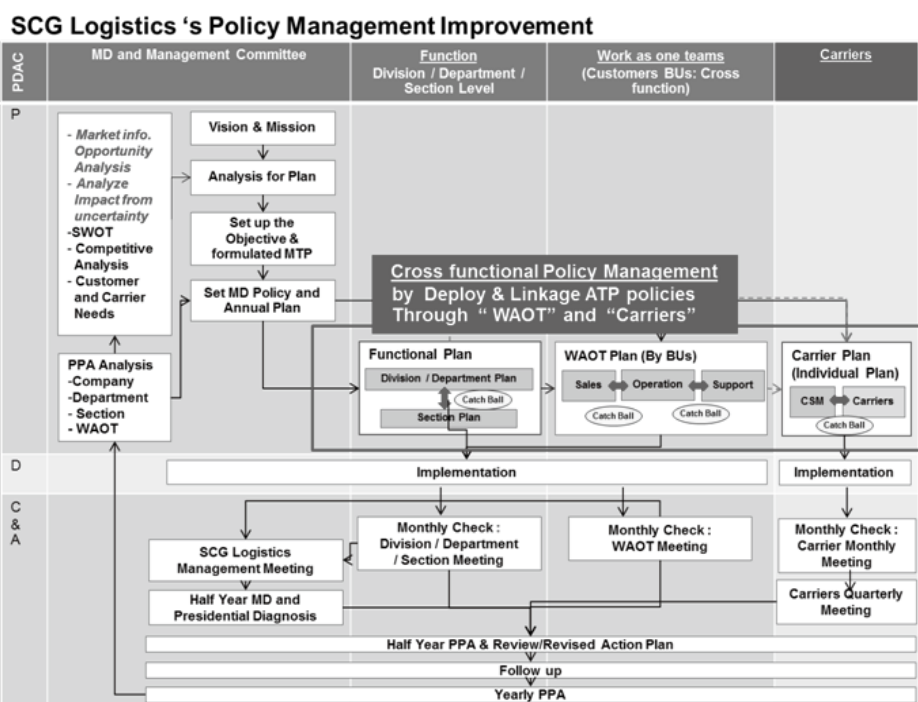


Figure 2-7 Policy Management Mechanism

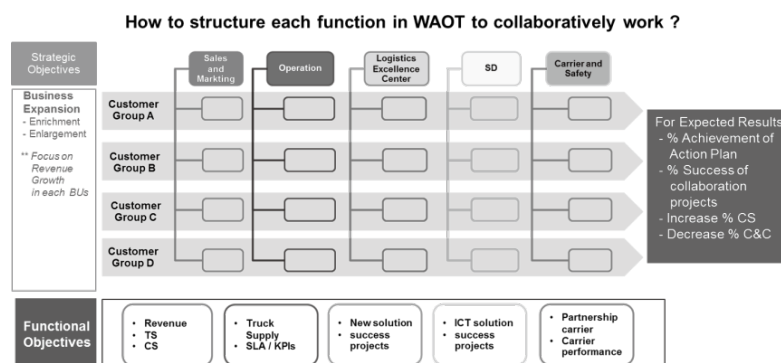


Figure 2-8 Work As One Team Organization

The Challenges in deployment of the action plan and management through Work As One Team are:

- 1) Alignment between the strategic objective and functional objective
- 2) Manage each function in WAOT to work smoothly together under the same goal
- 3) Motivate and facilitate all members in WAOT to work with full involvement & responsibilities (Work as One Team Organization as shown in Figure 2-8)

Besides deploying policy through Work As One Team, SCG-L has deployed the policy to its key carriers to develop “Carrier’s Individual Plan” with support from Carrier Management function. After formulating and implementing the plan, the carriers have to closely monitor and evaluated their performance on monthly and quarterly basis. After a period of deploying the action plan and PDCA cycle through Work As One Team and Key Carriers, we have found that, in some cases, it was difficult to convince carriers to cooperate and follow the plan as we desired, especially, when requesting them to invest more in acquiring new trucks.

### (B) Encouraging employee involvement to ensure company-wide effort

SCG-L not only established “Work As One Team”, which is cross functional team to collaborate and understand more on customers’ requirements and expectations, but also encouraged employees to exercise initiatives in improving their jobs via the Community of Practices (CoPs).

CoPs allow employees sharing their common interests or problems faced whether working in the same or different area to do activities and share knowledge to solve the problem base one TQM approach. In addition, interesting issues or best practices from CoPs groups would be chosen to apply for the Innovation Awards at the company level, then SCG Distribution level and ultimately at the SCG Corporate level. Now SCG-L begins to expand the initiative activities to carriers by sharing the best practices among its carriers.

## 3. Strategic Execution to become Dominant Third Party Logistics Provider

### 3.1 Domestic Market Expansion

#### (1) Introduction

To become a dominant third party logistics provider under the circumstances of highly competitive logistics market, SCG-L stems its strategy to accelerate growth in domestic market. In particular, in order to successfully penetrate into new business segments as well as gain market share with existing and new strategic customers, understanding a variety and in-depth of customers’ needs throughout the customer supply chain is crucial for the company’s success. This strategy can be deployed by **applying the market-in** conceptual model together with supply chain collaboration among related parties. To impressively fulfill diversified and complicated needs of customers, several logistics processes have been integrated including **new logistics solutions** developed to create new high value added services.

Moreover, **managing operation for excellence** is also considered an important strategy to ensure SCG-L's high level of competitiveness and service quality under dynamic business environment, uncertainty and complicated operation.

Three strategies are formulated to leverage company's capabilities to successfully expand SCG-L's business in the domestic market as illustrated in figure 3.1-1.

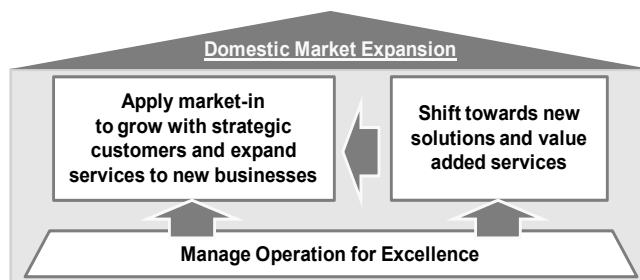


Figure 3.1-1 : Domestic Market Expansion Framework

## (2) Apply market-in to grow with strategic customers and expand services to new businesses

### (A) Background

According to the 2007 MTP to double company's revenues within 5 years, the management decided to apply TQM in order to understand more insights into customers and gain their targeted sales volume. We started acquiring new customers in new businesses since 2003 but been lack of understanding in these businesses.

SCG-L collaborated with SCG Cement, our key customer, to expand logistics service to their bagged-cement customers, focusing on Northeastern (N/E). To gain competitive cost and support business expansion direction, we acquired agricultural products as backhauling products.

Customer-M was the first customer acquired in this project. As a result, SCG-L could help SCG Cement to increase its market share to satisfactory level in 2010 while SCG-L's transportation share could increase to nearly 100%. However, it was evidenced in Figure 3.1-2 that improving cost efficient solely cannot help SCG-L maintain transportation share at Customer-M. In other words, efforts are still required in different aspects to recover such transportation share.

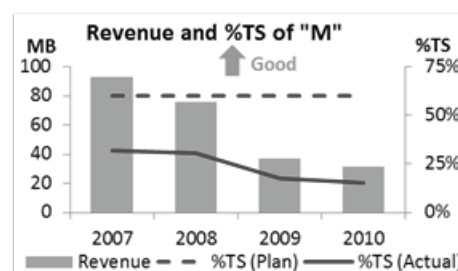


Figure3.1-2 : SCG-L revenue and performance at customer-M in 2007-2010

### (B) Focused Activities

Table 3.1-1: Focused activities since 2011

Problems/Concerns	Focused Activity
<ul style="list-style-type: none"> <li>Single "Service Standard" offering with cost efficiency could not help SCG-L maintain transportation share in Agriculture business</li> <li>Selling process: Product-out approach</li> <li>Existing process could not capture customers' needs and insights to serve their business strategy and growth</li> </ul>	<ol style="list-style-type: none"> <li>Restructure <b>Strategic Customer Development system</b> to build "Win-Win" relationship with strategic customers</li> <li>Transform organization to be customer centric</li> </ol>

## (C) Application Case: Regain and grow with Customer-M by Improving Strategic Customer Development System

### (C1) Step 1 - 2: Understanding the Policies of the seniors and Set Up the Task

SCG-L had served only Customer-M export transportation; we not only could not gain more, but also lost our share (Figure 3.1-3). Offering "Business Service Standard" to meet basic SLAs could not answer business-specific requirements of the customer. Customer-M expressed unsatisfaction on unreliable truck supply.

Since Customer-M efficiently fit with SCG-L, the “sweet” project, was launched in H2-2010. To serve fluctuating export demand, the quick-win solution was to increase truck supply by 30%. SCG-L regained transportation share in H1-2011. However, it was a hardship success. SCG-L remained unable to serve demand at peak period (Figure 3.1-3). Carriers’ actual trucks utilization was lower than planned (Figure 3.1-4) and the evaluation given by Customer-M was shown unsatisfied. Problems were not only about truck supply but also others such as billing on-time as well.

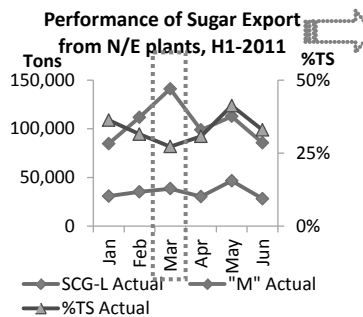


Figure 3.1-3 : Customer-M and SCG-L performance of export from N/E plants in H1-2011

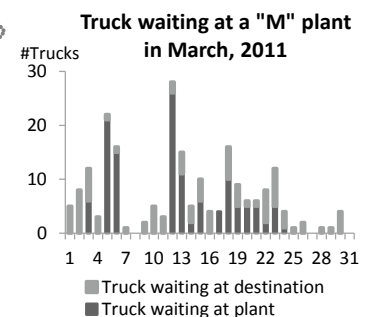


Figure 3.1-4 : Number of trucks waiting at plant and export warehouse in March, 2011

H1-2011 results reflected that one-sided, transportation-focused improvement could not create sustainable, Win-Win success. The systematic change, especially customer need identification and collaboration, was required.

Task: Restructuring Customer Need Identification process and applying supply chain approach to create Win-Win-Win logistics flexibility

### (C2) Step 3: Explore and Implement the Supply Chain Approach

Table 3.1-1 : Task to be realized, Countermeasure, and Key beyond-transportation-scope findings

Tasks to be realized	Difficulties / Concerns	Countermeasures
1.Convince customers for collaboration and information sharing	- Customer-M is unconfident if SCG-L will continuously focus on them -Information confidentiality -Many relevant key people/functions needed to be involved	Top executive and executive meeting to get top-down direction and get key stakeholders involvement
2.Build SCG-L capability to be more customer centric	-Not-well customer understanding -Internal misalignment / conflict in both Customer-M and SCG-L	-Improve Customer Analysis process -Reorganization for better customer focus and alignment within SCG-L
3.Increase logistics flexibility	-Limited scope of focus (transportation only) -High demand inaccuracy -Trucks should not be stuck more than 6 hours at any node in the backhauling loop (Bagged cement – Bagged sugar)	-Expand the scope to total Customer-M supply chain -Improve truck efficiency by Proactively monitor truck waiting time and closely communicate to the customers at every node -Provide export warehouse to increase capacity

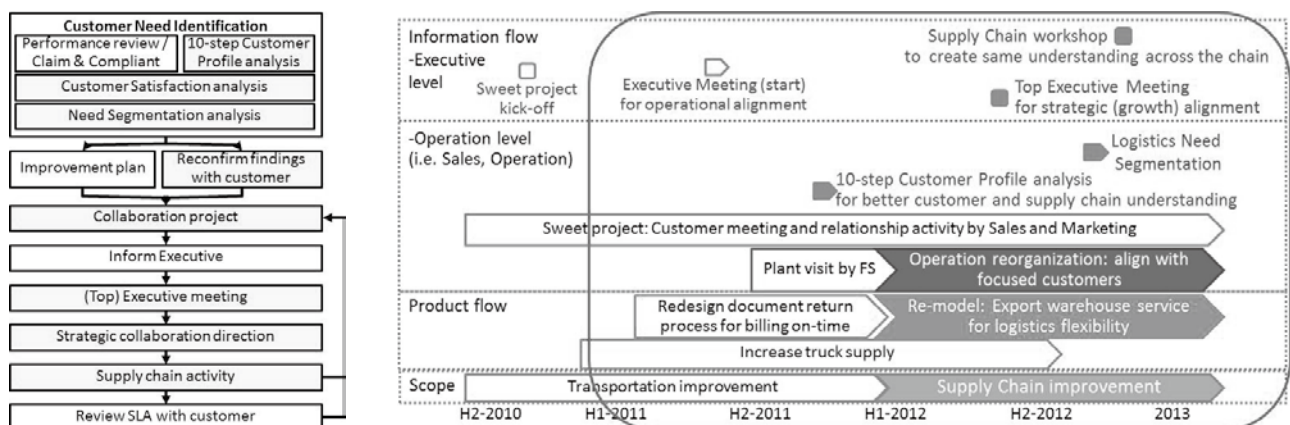


Figure 3.1-5: The change in Customer Need Identification process and Development of Supply Chain approach with “M” customer

Based on implementation of the supply chain approach including closely working with Solution Design and Operation through WAOT, customer's specific needs beyond transportation scope including latent needs were explored, leading to several proactive improvement activities in the company (Figure 3.1-5). As a result, intimated relationship and positive collaboration of both sides has been increased (Figure 3.1-5).

### (C3) Step 4: Confirm the effects

#### 1) Benefits to Customer-M:

1-1) Improve customer satisfaction indicated from the increase in % of top-3 rating from 2010 to 2012, while maintaining 100% satisfaction (% of top-5) for three years straight

1-2) Improve SLA KPI achievement of N/E plants from 2011 to 2012 on billing On-time and truck supply of bagged sugar

1-3) More logistics flexibility helps Customer-M reduce sales opportunity loss by better achieving their export quota in 2012

2) Benefits to Carriers: Trucks utilization is improved from less truck waiting problem, leading to higher revenue.

3) Benefits to SCG-L: Beside the increase in revenue, efficiency of SCG-L's network has also been improved reflected by the increase in %backhaul matching in Northeastern region.

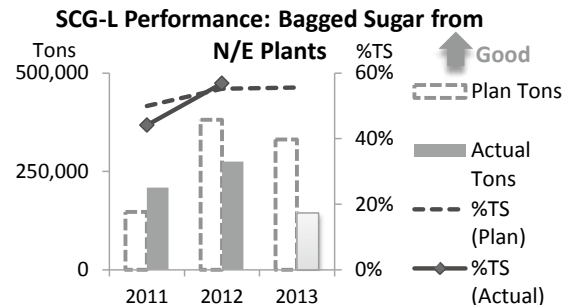


Figure 3.1-6 : SCG-L transportation share of Customer-M from N/E plants in 2011-2013

### (C4) Step 5 - 6: Transfer to daily operation and Future Plans

More trust from Customer-M toward SCG-L, reflected by more collaboration projects both in Thailand and South China. Further, SCG-L becomes co-brand partner with and logistics consultation of a new business of Customer-M.

### (3) Shift towards new solutions and value added services

#### (A) Evolution of New Solution Development

##### (A1) Before 2008: Strengthen Operation

Several logistics models were launched to meet customer SLAs and demand and escalate operational efficiency to reduce logistics cost. However, as the competition became more intense, separated logistics services (transportation and warehousing) were inadequate to maintain existing customers and penetrate new customers.

##### (A2) 2008 onwards: Pursue Sustainable Growth

SCG-L focuses more on creating and providing value to customers by integrating logistics models and services as well as speeding up the solution development process so that the company can create value added and increase customer responsiveness.

This would differentiate company's value proposition and elevate its competitiveness over other logistics providers. The logistics solution consists of three key elements: logistics models, logistics processes, and ICT as illustrated in Figure 3.1-7



Figure 3.1-7 : Logistics Solution framework



## (B) Implementation History of New Solution Development

As shown in figure 3.1-8, new logistics solutions were implemented since 2000. After 2008, Number of New solution has been increased for responsiveness while our margin from new solution increased gradually. From 2000-2007 average margin on commodity segment was about 9.7% whereas after 2008, it was double to 18%.

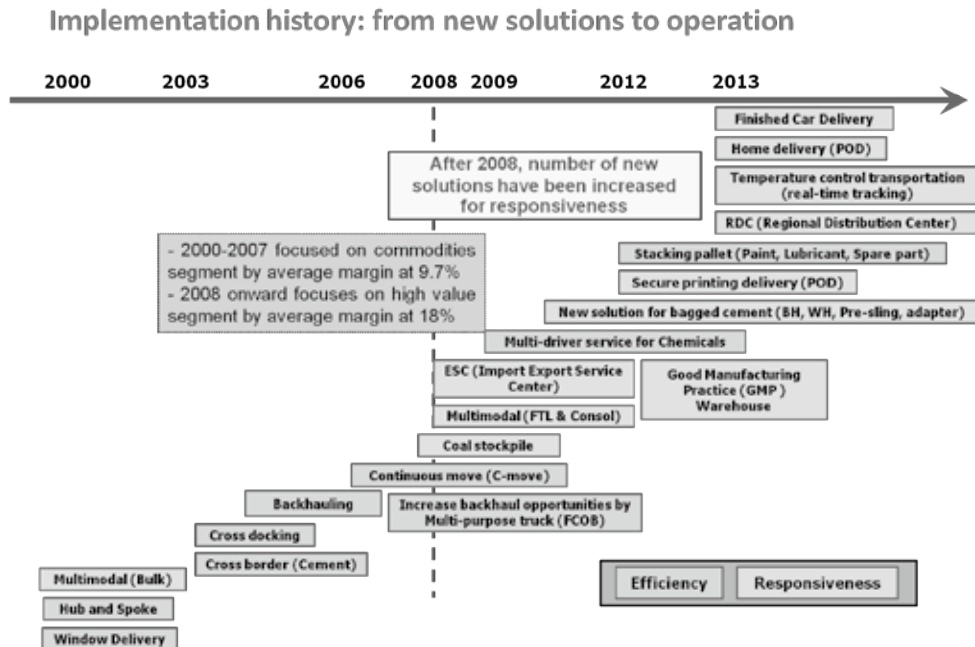


Figure 3.1-8 : Logistics Solution framework

## (4) Manage Operation for Excellence

### (A) Background

The definition of “Operation Excellence” is to continuously improve operational processes in terms of quality, cost and service delivery (Q, C, D) focusing on customers as a top priority. Due to continually rapid growth of SCG-L after economic crisis, extremely diversified and complicated logistics operations emerged; the company currently handled huge demand fluctuation, while remains cost competitiveness with high safety and environmental standard. In terms of internal complexity, the company has managed variety of truck (36 types), rail, barge fleets, together with 37 warehouses and 9 port operation nationwide. In addition, carriers’ complexity with 370 carriers and 6,900 drivers nationwide has challenged the company to maximize or optimize asset utilization as well.

### (B) Evolution of Manage Operation for Excellence

#### (B1) Before 2008: Strengthen Operation

The objective was to create trust and reliable services aligned with SCG Cement and Building Materials’ requirements in terms of increasing their market share. Thus, SCG-L tasks were to focus on network coverage expansion, including variety of logistics model to serve including backhauling, cross-docking, C-Move and multimodal transportation for cost efficiency.

#### (B2) 2008 Onwards: Pursue Sustainable Growth

The company has faced more diverse customer segments at this period. They have higher level of requirements for superior quality with competitive cost, while truck supply was shortage. As a result, the company has focused on increasing efficiency through new solutions, building up locked-in networks and leveraging capacity to serve both existing customers’ needs and new business requirements.

Furthermore, the company has integrated and locked in customers through ICT integration towards order management, monitoring, reporting, and claim & complaint system to achieve high customer’s responsiveness.

Moreover, the company has applied Logistics Engineering to develop various materials handling equipment, focusing on each customer's higher level of customized requirements with efficiency. The example included Pre-sling for Cement, Stacking Pallet for Consolidated Cargo, and Tailgate for Lubricant to support faster loading and unloading operation. The company has also modified certain truck fleet to serve according to customized needs of customers.

### (C) Application Case: Sustained Backhaul Matching Management in Northeastern Region

**(C1) Step 1 & 2: Understand the policies of seniors and Set up Tasks:** SCG Cement had requirement to increase Cement Market Share in N/E with competitive cost, while SCG-L required high business growth with efficiency through backhaul. Thus, the mutual requirement was to improve and sustain % Backhaul. At that time N/E region was divided into five zones. Based on past performance, it was found that zone 2 and 3 would be focused areas to improve from the lowest % Backhaul at 24% and 25% respectively.

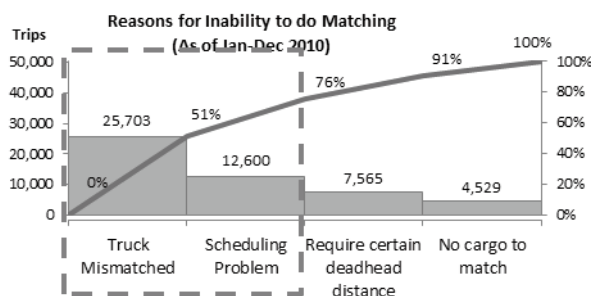


Figure 3.1-9: Reasons for inability to do Matching 2010

### (C2) Step 3: Investigate current situation:

There are two major reasons for inability to do backhaul, these are 1) truck mismatched during backhaul and 2) scheduling problem upon backhaul period requirement. (Figure 3.1-9)

### (C3) Step 4: Explore and Implement Countermeasure (Figure 3.1-10)

#### 1) Truck Mismatched Solutions

#### 2) Scheduling Problem Solutions

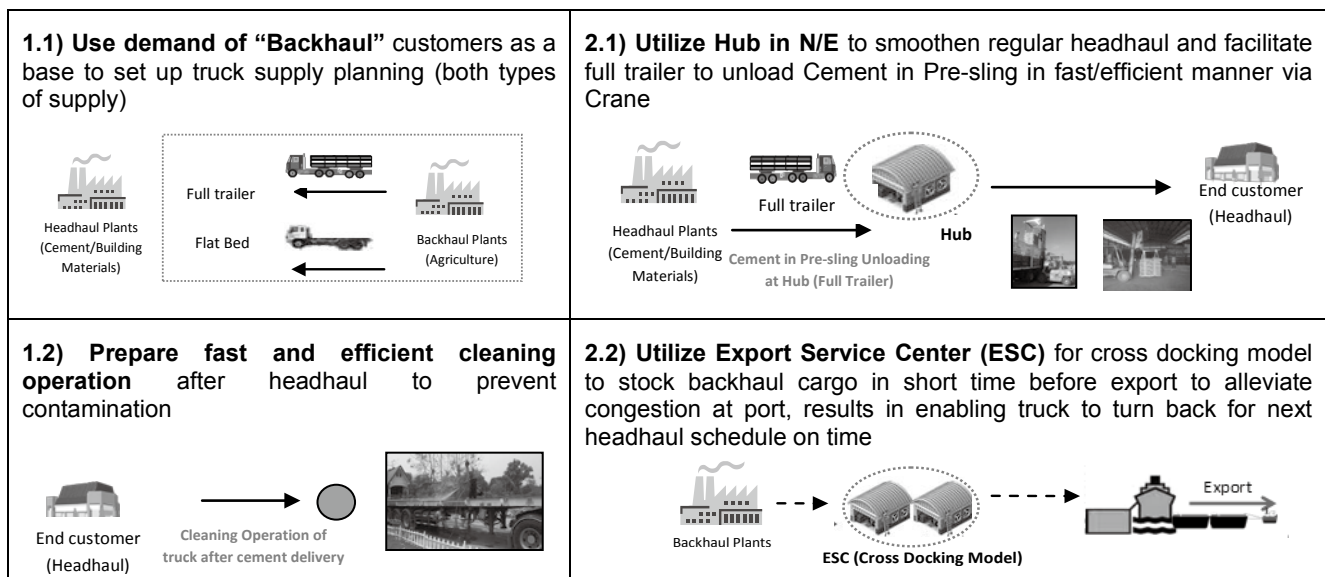


Figure3.1-1: Operation mechanism of backhaul (Matching) management: Northeastern region

**(C4) Step 5: Confirm the Effects:** The company can achieve Win-Win-Win Approach with Customer (Cost Saving), Carrier (Higher Revenue from better round trip) and SCG-L (%Backhaul improvement and Sales Revenue in N/E) (Figure 3.1-10)

### (C5) Step 6-7: Transfer to Daily Operation and Future Plan

The Company has expanded these methods as groundwork to ensure smooth backhauling operation into other zones/provinces of N/E in 2013, and separate from 5 zones to 7 zones to minimize deadhead

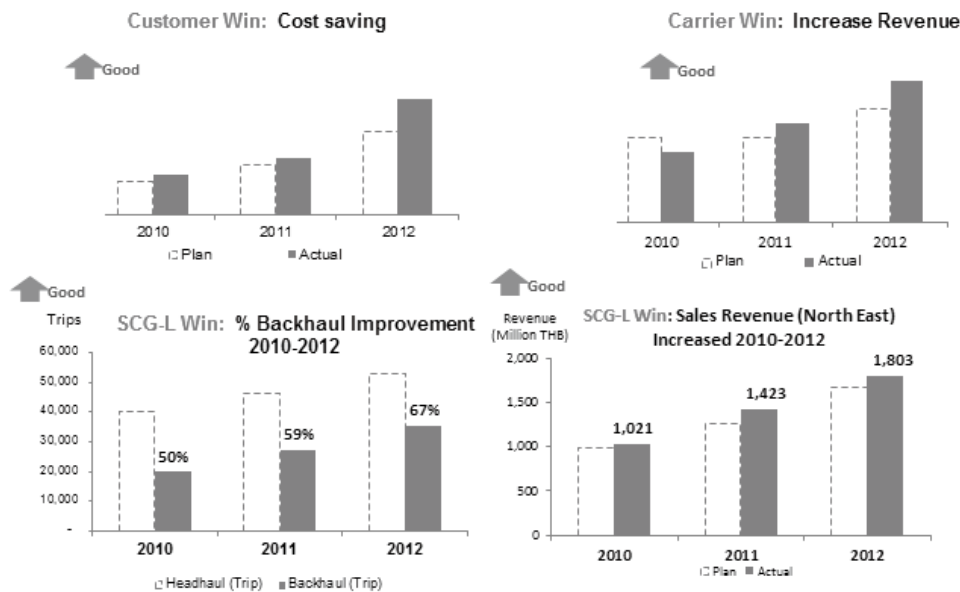


Figure 3.1-10: The effects of SCG-L's Operation towards customers, carriers and SCG-L (Win-Win-Win)

## (5) Overall Effects of Domestic Market Expansion

### (A) Revenue from strategic customers:

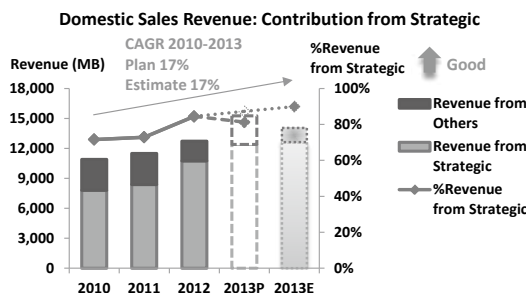


Figure 3.1-11 : Revenue from Strategic Customers

### (B) Revenue from new focused businesses:

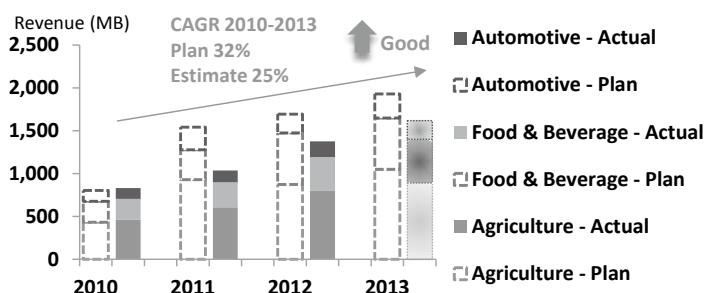


Figure 3.1-12 : Revenue from new focused business

### (C) Customer satisfaction: Maintain customer satisfaction at 95% satisfied and customer delight at 63%

### (D) Number and Value of New Solutions: Continually, new solutions have been developed and the service scope has been expanded. As a result, the number and value of new solutions have been increased and playing more important role in company's revenue.

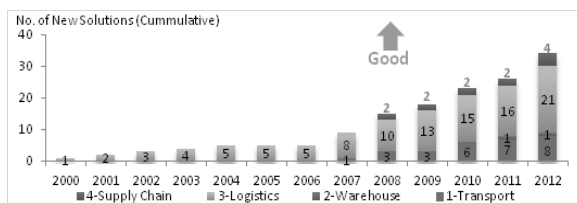


Figure 3.1-13 : Numbers of new solutions

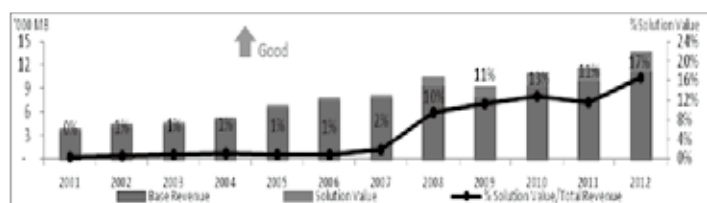


Figure 3.1-14 : New solution value 2001-2012

### (E) DM: Daily Operation Management

The company can smoothen daily operation and achieve % SLAs (95% on-time delivery) despite high fluctuation

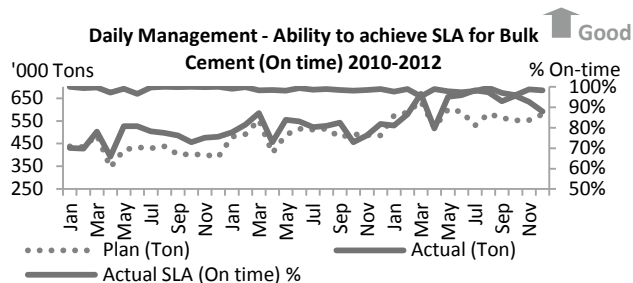


Figure 3.1-15 : Daily Management achievement (Bulk Cement)

### (F) PM: Efficiency Improvement by Backhaul Matching

The company can leverage capacity to serve incremental business from backhaul (Northeast & North areas)

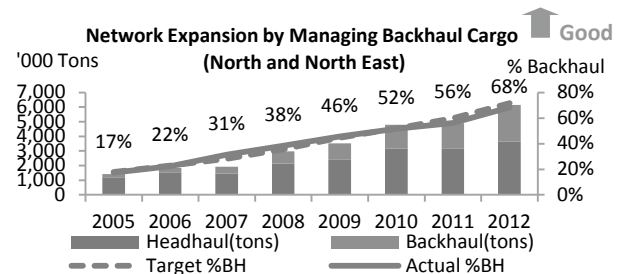


Figure 3.1-16 : Policy Management achievement (Matching network)

### (6) Future Plans

- Apply Strategic Customer Development process to grow with strategic customers in focused businesses: Food and Beverage, Automotive, and Cold Chain business
- Summarize learning and business practices in each major product to apply with other customers
- Develop systematic evaluation of customer value creation from solution development
- Enhance capability for integrated solution design and development through
  - Developing Staff's logistics competency
  - Integrating ICT and engineering tools to extend logistics service options
- Strengthen logistics operation for retail business aligned with following strategic businesses:-
  - Bagged Cement / Mortar, Food & Beverage, Automotive and Cold Chain businesses
  - Transport OK & Delivery towards "Windows" basis

## 3.2 Overseas Market Development

### (1) Background

In response to "Go Regional" policy and huge opportunity from AEC, SCG-L set a mission to become one of the leading Third Party Logistics Providers in the Region after AEC establishment in 2015. We will expand our presence in The Greater Mekong Sub-region countries (GMS) and Indonesia by leveraging our expertise as well as customer and carrier network, creating intra-regional network connectivity to achieve the company's goals. We align with the expansion and investment of SCG and to capture opportunities from "Emerging Economics Corridors" and "Border Prosperity".

For SCG-L, we have new challenges of expanding our logistics service in Overseas Market which have logistics infrastructures and uncompetitive logistics cost. To overcome these challenges, transferring know-how from Thailand to local operation, managing risk, building up a strong carrier network and building trust to customers were the key success factors.

### (2) Evolution of Overseas Market Development

#### (A) Before 2008: Period of Operation Strengthening by Process Improvement and Standardization

SCG-L firstly explored and built logistics capacity to support inbound and outbound logistics operations of Kampot Cement (KCC) in Cambodia and Vina Kraft (VKPC) in Vietnam by collaborating with the customers to develop and transfer our knowledge to create a specific platform called "Logistics Development Platform for Regional Market".

### (B) 2008 Onwards: Pursue sustainable growth

Cambodia and Vietnam are in the Synergize stage of logistics platform, which divided into 3 steps. We managed to synergize our logistics network by increasing backhauling and acquiring new outside-SCG customers; hence, network utilization can be improved. We developed Intra-regional logistics business and expanded coastal logistics to enhance connectivity in AEC.

In particular, collaboratively applying the **Win-Win-Win concepts** also creates value added to all related parties (customers – carriers-SCG Logistics) in the whole chain. Simultaneously, we succeeded to transfer our logistics platform to other countries including Indonesia, Myanmar, Laos and South China as shown in the development stage of each base country.

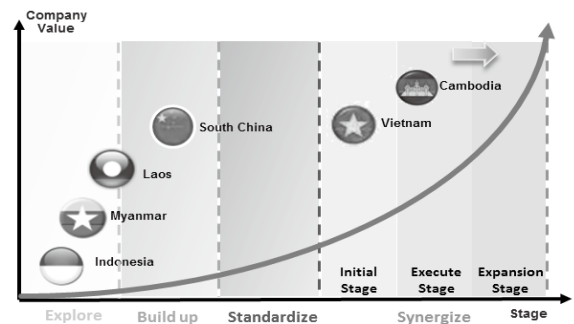


Figure 3.2-1: Stage of Logistics Development Platform for regional market as of Y2012

### (3) Overall Effects of Overseas Market Development

**(A) Operation Base effect** (Figure 3.2-2 & 3.2-3): All dimensions of customer satisfaction in Cambodia market are better than competitors and the percentage of backhauling increased from 10% (2010) to 33% (2012). The revenue from both SCG and Outside-SCG customers were increased.

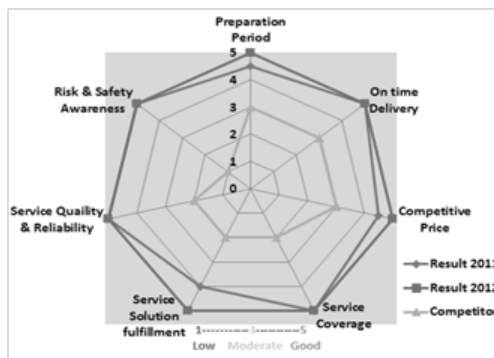


Figure 3.2- 2: Customer Satisfaction Survey Results in Cambodia Y2012

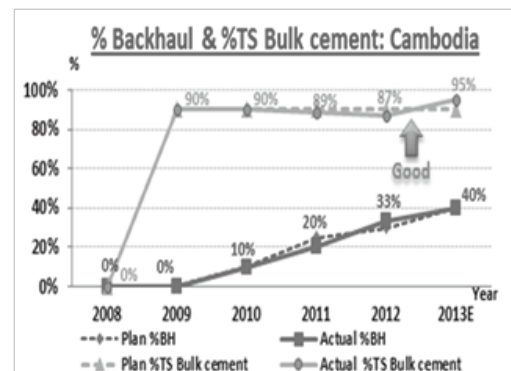


Figure 3.2- 3: %Backhaul and % TS Bulk cement in Cambodia

### (B) GMS countries and Indonesia Project Status

Table 3.2-1: Completion of each project milestones

Country	Key Activities
Lao	1. Completion of company registration 2. Start operation in Mar'13 (1st shipment): Cross border transportation Thai-Lao
Myanmar	1. Completion of logistics solution and data submission for feasibility study 2. Survey water way transportation route 3. Set up barge company
Indonesia	1. Completion of logistics solution and data submission for feasibility study 2. Cement plant project approved 3. Railway mode pre-feasibility study
South China	1. Bagged sugar transportation 350,000 Ton (Nov 2012 – April 2013) 2. Molasses transportation 21,720 Ton (Nov 2012 – April 2013)

### (C) Intra-regional effect

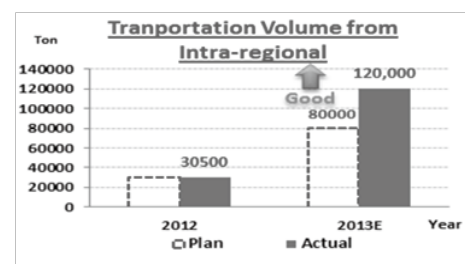


Figure 3.2- 4: Transportation Volume from Intra- regional

### (4) Future Plans

- Improve operational efficiency and provide high value added services with competitive advantage
- Expanding logistics services to Outside-SCG customers, especially in agriculture business
- Strengthen Intra-regional network by creating logistics connectivity



### 3.3 Proactive Quality Assurance

#### (1) Quality definition

As a company in the service sector, SCG-L defines “Service Quality” aligned with customers’ expectation and perception in terms of Service reliability and Customer responsiveness. According to service reliability, we must deliver a consistent service based on customers’ requirements which basically consist of **On-time delivery, Zero damage or loss, and On-time customer document return**.

In today’s logistics business, it is important to re-act to customers’ diverse requirements promptly. This ability can be referred to as “Customer Responsiveness”, e.g. an ability to serve fluctuating demand of customers.

#### (2) Our challenges

As a Third Party Logistics Provider (3PLs), SCG-L has faced a number of difficulties that may degrade its service quality. These difficulties come from three main sources. First of all, on the demand side, many factors resulted from customers’ requirements can impact SCG-L’s service quality, e.g. fluctuating and diverse demand and a high level of SLA. Secondly, on the supply side, a large number of carriers and their drivers is also considered critical.

For example, SCG-L has to establish a standard working system such as a working procedure and work instruction in order to standardize 370 carriers and 7,500 subordinated drivers to ensure our service quality providing to our customers.

Finally, on environment and safety, SCG-L needs to ensure a safe and environmental-friendly working condition to its employees and also near-by community. Due to impacts from these difficulties, we need to develop a proactive quality assurance system in order to ensure service quality and bring a “Win-Win-Win” solution to all stakeholders.

#### (3) Proactive QA System

To ensure all of the service qualities and bring Win-Win-Win to all stakeholders, SCG-L divide and implement QA System in 3 parts (Figure 3.3-1).

**(A) Design Process:** SCG-L includes QA activities at the beginning of the supply chain, start from New Service to our customer. We apply Quality Function Deployment (QFD) concept and Failure Modes and Effects Analysis (FMEA)

#### (B) In Process Control for Existing Services:

The Proactive monitoring activities lead us to detect the abnormalities or nonconformance earlier. From those information, we can take an early action to prevent or alleviate the negative effect to our customers. Those proactive monitoring activities will be explained in the topic of “**Early Detection for Early Action**”

**(C) Claim & Complain Management** to quickly response to the customer voice.

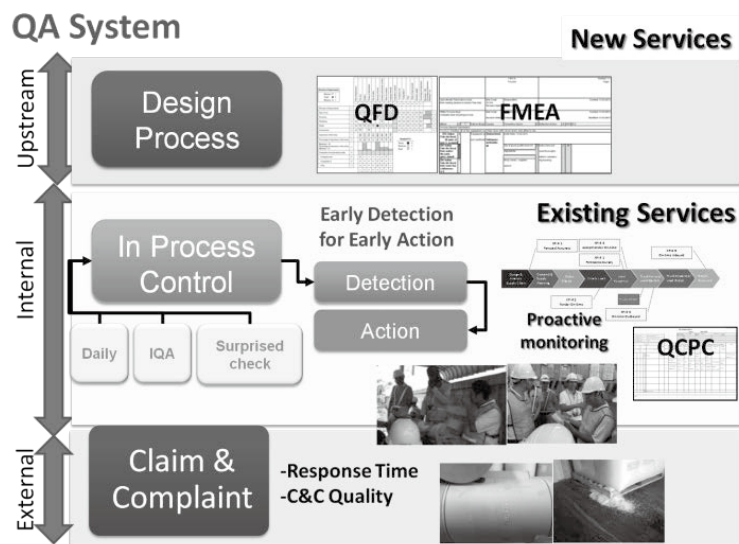


Figure 3.3- 1: The Conceptual QA System

#### (4) Key implementation: Early Detection for Early Action

SCG-L has implemented many Proactive monitoring activities as follow;

(D1) Route planning activity or Delivery Planning: Company identify truck station and resting area for the driver in order to prevent the accident caused by parking at the unsafe area.

(D2) Driver and truck & Equipment readiness to ensure to achieve Zero product damage.

(D3) Visibility in all steps in Supply chain to ensure On-time delivery safety

- GPS monitoring to achieve On-Time Delivery
- Over speed monitoring and alert system.

(D4) Surprised check and management diagnosis system by MD

Those proactive activities lead us to detect the abnormalities and take an early action to prevent negative effect to customers.

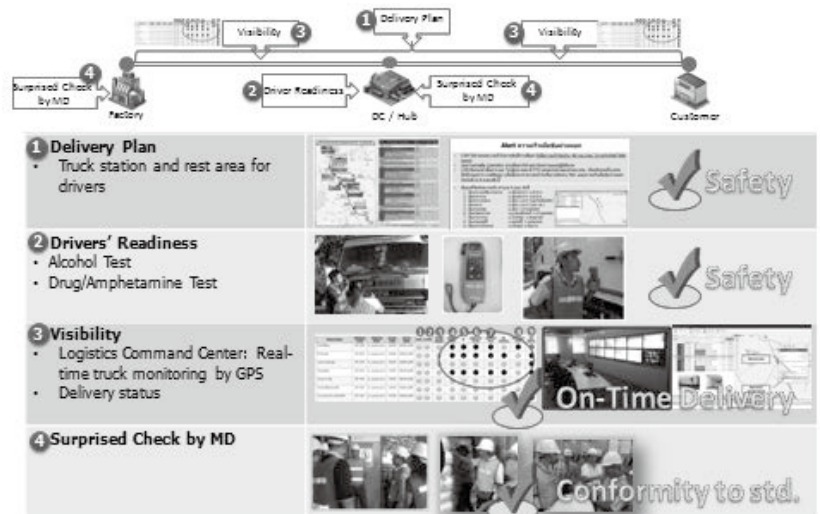


Figure 3.3- 2: Early Detection for Early Action Activities

#### (5) Application Case: Improve transportation management visibility by applying GPS technology

##### (A) Background

From order to cash process visibility in figure 3.3-3, SCG-L faced several in-efficiency mainly caused from lack of visibility such as invisible driver performance and un control safety standard, unable to monitor end to end process due to different ICT system and GPS supplier. The lack of visibility leads to the difficulty to manage and control driver performance to align with SCG-L safety standard and the difficulty to visualize and detect the abnormality in transportation process. Moreover, to increase visibility, we need to integrate different ICT system in single platform.

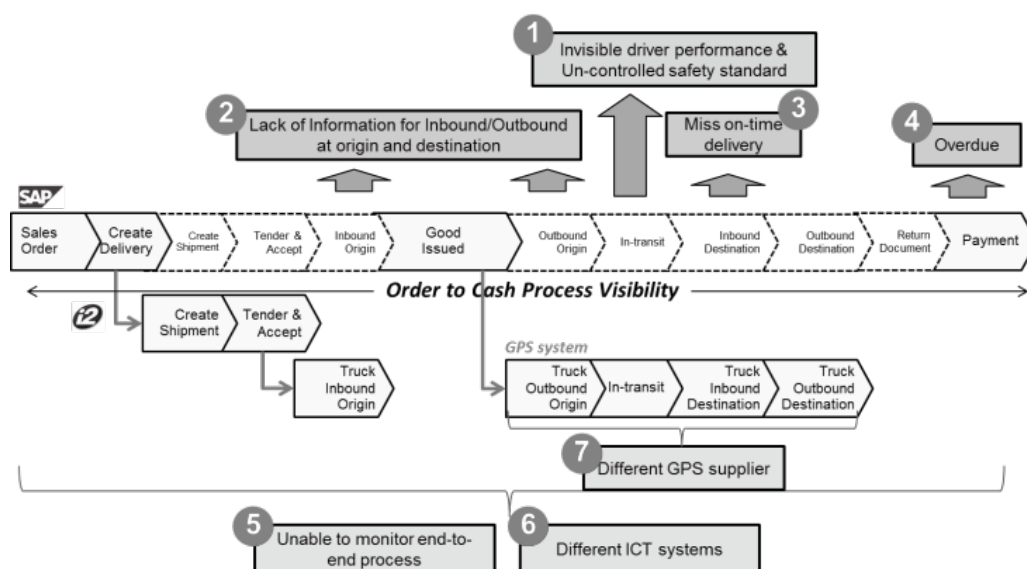


Figure 3.3-3: Order to cash process visibility

## (B) Implementation

To overcome these difficulties, Safety Monitoring Center (SMC) has been established in 2011 and extended scope in 2013 to be Logistics Command Center (LCC) with 7 days 24 hours staffs to monitor all GPS truck with abnormality detection system by applying 5 step of proactive visualization concept.

The LCC process can summarize in figure3.3-4 starting from visualize all truck equipped with GPS, then analyze and detect the abnormality. The alert will be classified by type and severity with the action to call to driver by LCC staffs.

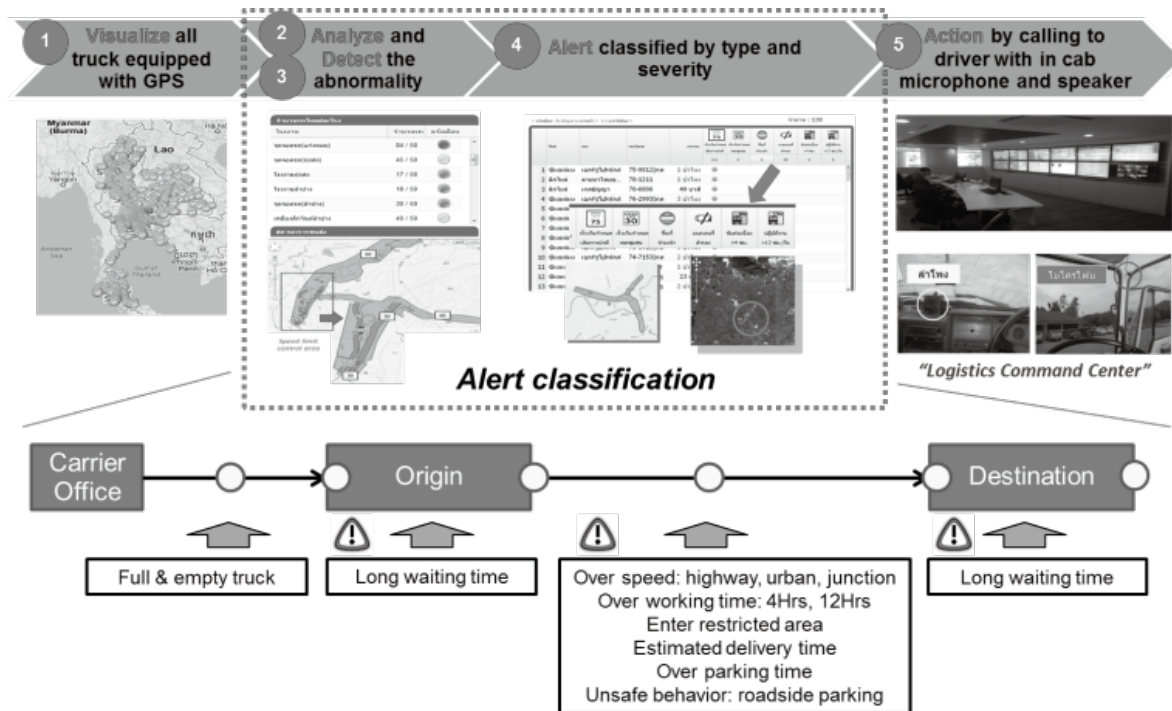


Figure 3.3-4: Logistics Command Center Process

Furthermore, we also integrated critical information from different ICT system into Supply Chain Visibility Platform with in process KPI setting up to detect the abnormality for proactive action (figure3.3-5).

Shipment Number

Sold-To Code

Shipping Point

Carrier Code

Options

Search Criteria

Completed within KPI

Alert near miss KPI

Completed but over KPI

Alert over KPI

Search

Cancel

Information

Ship-to Name	Shipping Point	Shipping Name	Carrier Code	Carrier Name
จาก หนอง	SP-5603	สงขลา-เชียงใหม่	103013	โสภณ ทรัพย์
SCG Network Phitsanulok Hub	SP-1304	สง. ปูนาค-เขาหลวง	104403	เกียรติเพชรดี
SCG Network Phitsanulok Hub	SP-1304	สง. ปูนาค-เขาหลวง	108785	สว่างใจ หวานสมบูรณ์
พ.อ. ส. เกียรติเพชร	SP-1304	สง. ปูนาค-เขาหลวง	144367	ห่วงวันสวนจำศีล ทรัพย์ปรีชาดี หวานสมบูรณ์
พ.อ. ส. เกียรติเพชร	SP-1304	สง. ปูนาค-เขาหลวง	144367	ห่วงวันสวนจำศีล ทรัพย์ปรีชาดี หวานสมบูรณ์

TMS

GPS

SAP

GPS

Doc

Open	Tender	Tender Accept	Inbound Origin	GI	Outbound Origin	Inbound Dest	Act. Delivery	Outbound Dest	Doc Return
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Status Tracking

Figure 3.3-5: Logistics Command Center Process

## (C) Confirm the Effects

After implemented this system, the number of alerts from over-speed limit driving which significantly impacted the number of accidents had been sharply reduced

### 3.4 Professional Carrier Management

#### (1) Background

SCG-L is “the Logistics Provider” who works among customers and carriers, having main duty in capturing needs or pains from both parties. Then, what had been captured is being transformed to create value to both customers and carriers.

As a Third Party Logistics (3PL), SCG-L has outsourced its operations to carriers which their performance reflect the service quality and value not only to the customers, but also to the society and the environment. By these reasons, SCG-L has developed carrier management system by extending ISO 9000:2008 standard to develop carrier to professional carrier by increasing no. of Partnership and Certified carrier to deliver quality of service to customers, support company’s growth and create Win-Win-Win concept.

#### (2) Carrier Classification System

In order to effectively manage carriers, SCGL had implemented carrier classification system since 2005 which continuously changed carrier classification criteria to be more appropriate. Recently, in 2011 SCGL used 2 criteria: carrier performance indicator (SCGL Score) and revenue as shown in Figure 3.4-1 and table 3.4-1.

Revenue (M\$)	SCG-L Score		
	70	80	90
100	A	C	P
50	A	C	C
30	A	A	A

P:Partnership C:Certified A:Approval

Table 3.4-1: SCG-L score criteria

SCG-L Score (%)			
Performance			Cooperation
Process	KPI	Accident	
30	30	20	20

Figure 3.4-1: Criteria for carrier classification

#### (3) Focused Activities

Table 3.4-2: Focused Activities

Problem / Concern / Challenge	Focused Activities
Inconsistent service quality since each carrier performing with a different performance standard	1. Set up carrier classification and management standard 2. Enhance carrier performance and capability
Insufficient number of drivers and quality of drivers	3. Proactive recruitment and development

#### (4) Overall Effects of Professional Carrier Management

From the implementation of the previously mentioned activities, the major effects were:

- Carriers’ performance (SCG-L Score) increased from 71% to 87% and revenue portion from Partnership and Certified Carriers increased 2.5 times in 2013, resulting from the effort of promoting the priority program
- Percentage of trained drivers was increased from 33% (2008) to 100% in 2012 and 2013
- From the carrier engagement survey, carrier participated in survey are aligning and growing with SCG-L

### 3.5 Proactive HR Management

#### (1) Background

Due to rapid business growth and a trend of outsourced logistics services in the past decade, opportunities existed for SCG-L to gain more market share as long as efficient and effective services can be provided to customers. Employees’ competency is one of the most important factors to achieve this objective. Therefore, the Human Resource department needs to recruit highly qualified candidates as a main driver to SCG-L’s successful business expansion and future growth under the competitive labor market environment.

## (2) HR Strategic Framework

To support new business expansion, SCG-L needs to

- Rotate our existing employees to new business positions
- Fulfill the immediate vacant positions by recruiting the new ones from outside.

This is called HR fulfillment cycle for new business expansion.

To achieve effective human resource management, the HR strategic framework has been developed (Figure 3.5-1) with proactive methodology by considering the existing and new dimensions in both employee and business areas.

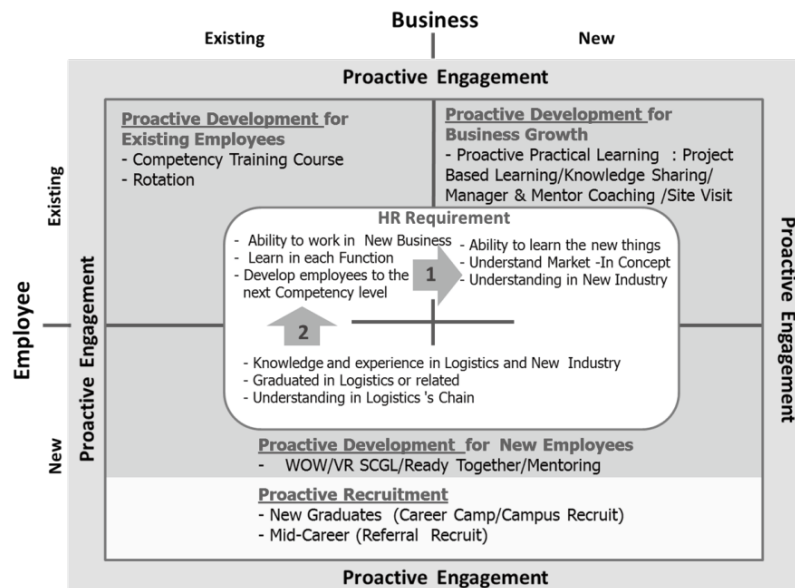


Figure 3.5-1: HR Strategic Framework

## (3) HR Strategic Framework

**(A) Proactive Recruitment:** the HR department recruited New Employees proactively via Career Camp and Campus Recruitment. This proactive recruitment hastens the recruitment process by two months. We can recruit our employees from more high quality applicants for 95% from 2008. Also, 24% increasing in percentage of candidates passed the interview.

**(B) Proactive Development:** HR department develops 2 groups of employees which is New Employees and Existing Employee. New employees will develop in Logistics Business, culture and mentoring. For Existing Employee will develop by Competency Development and Existing Employees who will transfer to New Business will develop by Proactive Practical Learning in order to support business growth.

**(C) Proactive Engagement:** Detect satisfaction early by survey every 2 years by outsourcing company.

## (4) Overall Effects of Proactive HR Management

### (A) Employees Effects

(A1) Recruitment: Regarding Proactive Recruitment the company received more application form from applicants with higher quality for 95% from 2008. Also, there was increasing in percentage of candidates who passed the interview for 24%. We recruited 73% of the employees from this approach; another 27% from the previous channels; Walk in and Internet Posting.

(A2) Development: 9% increasing in Common Competency Development from 2010.



(A3) Turnover Rate: the turnover rate of the employees dropped to only 2.8%, lower than other logistics businesses in the market which is 10.4%.

## (B) Business Effects

After implement 3 HR focused activities, there are increasing in net sales per head both Existing Business and New Business.

## 4. Overall Effects and Future Plans

In the past decade, SCG-L has gone through several difficulties, complicated situations and challenges such as the U.S. subprime crisis in 2008, Thailand political protest in 2010 and floods crisis in 2011. By applying TQM framework, SCG-L has been able to cope with all the difficulties arising from these events and compete in a highly volatile market. The effects from applying the TQM framework can be recognized in both tangible and intangible senses.

### 4.1 Overall Tangible Effects

#### (1) Revenue Growth

Due to effective implementation of the TQM framework and business expansion strategies, total revenue of SCG-L has been increased triple during the past 10 years, as shown in Figure 4.1-1.

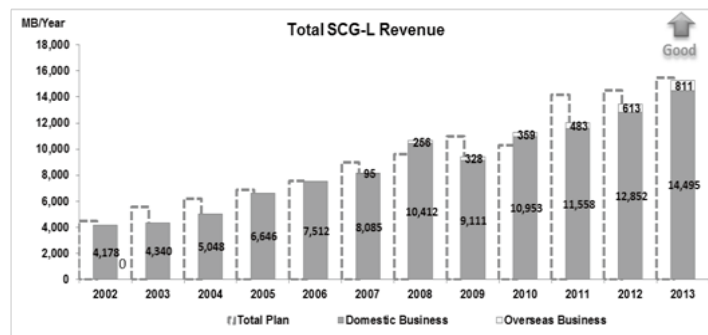


Figure 4.1-1: Total SCG-L Revenue( Domestic and Overseas Business)

### 4.2 Tangible Effects from Strategies

#### (1) Domestic Market Expansion

To summarize the effect of domestic market expansion strategy, the success of applying market-in concept together with developing new logistics solution as well as managing operation for excellence which can be proved by the significant revenue growth in all focused businesses as shown in Figure 4.2-1.

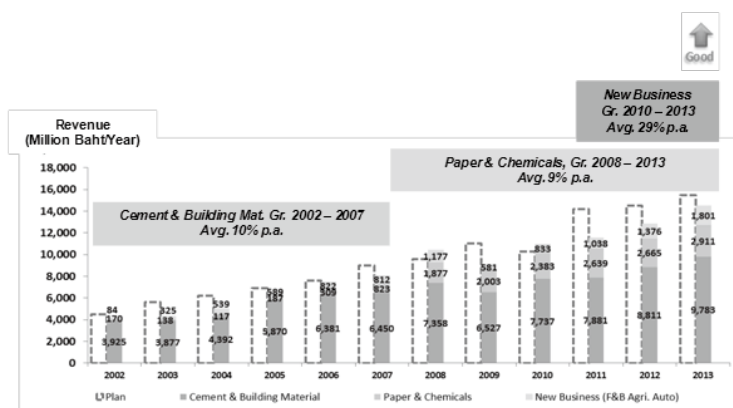


Figure 4.2-1: Revenue by Customer Businesses

#### (2) Overseas Market Development

Aligning with SCG's "Go Regional" policy, a lot of activities has been done to expand and strengthen SCG-L's services. By focusing on expanding business from Cambodia to multiple countries, SCG-L has a great opportunity to grow and compete in ASEAN Economic Community (AEC) (Figure 4.2-2)

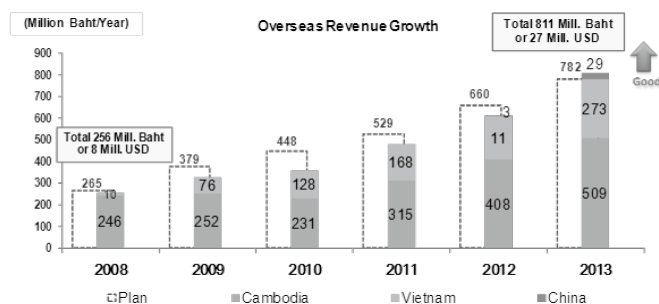


Figure 4.2-2: Revenue by Country

### (3) Proactive Quality Assurance

Proactive Quality Assurance system has been launched in 2011 to handle claims and complaints systematically. As a result, the visibility is opened in 2011 and claim rate has been decreased in 2013 (Figure 4.2-3).

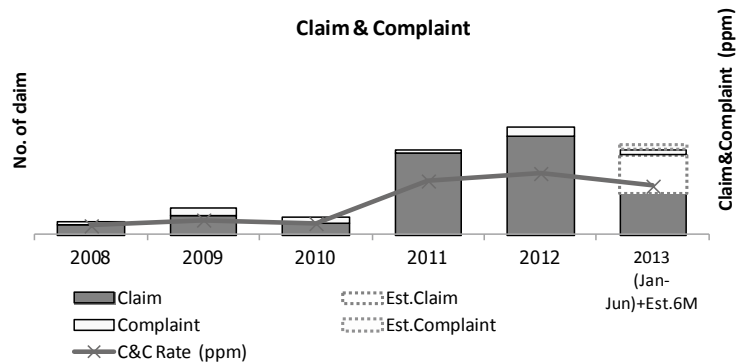


Figure 4.2-3 : Number of Claim & Complaint, Claim Rate (PPM)

## 4.3 Tangible Effects to realize the Dominant Logistics Provider Business Objectives

In order to realize the achievement of business objective, “To be a Dominant Third Party Logistics Provider in Focused Businesses”, three major areas are emphasized as follows:

### (1) Market Share in focused businesses

As a result of all the effort put on improving the operations such as cost saving and responsiveness by increasing network coverage, managing backhaul matching, improving customer satisfaction, SCG-L has dominated the cement, building materials, and paper market as can be seen from the market share consistently more than 10%. (In 2012, SCG-L has 42% market share in Cement business, 16% in Building Materials business and 28% in Paper Business.)

The company’s next challenging task is to expand and become to a dominant third party logistics provider by 2016 in potential market, chemicals and new focused businesses such as F&B and Agriculture.

### (2) Network Coverage Expansion

To dominate the logistics market, SCG-L pays high attention on expanding its network coverage.

Securing existing customers and acquiring the new ones allow the company to gain more sales volume and the number of origins (+70%) and destinations (+120%) (Figure 4.3-1) This strengthens SCG-L’s logistics network and provides more opportunities to manage backhaul transportation leading to better cost efficiency and competitive advantages.

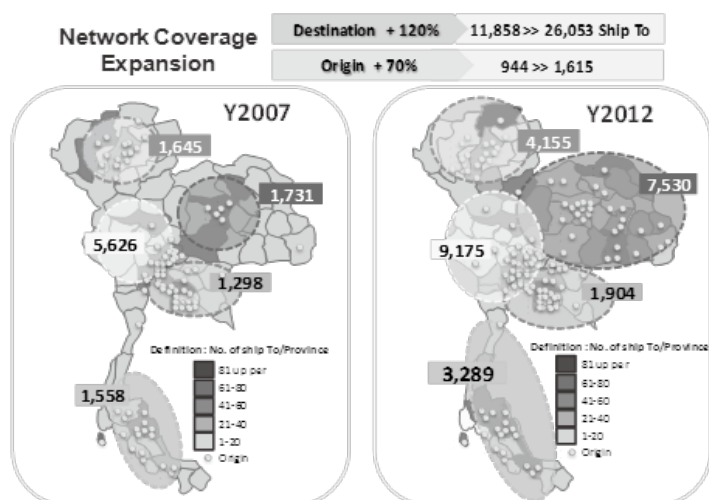


Figure 4.3-1: Network Coverage Expansion

### (3) %Customer Satisfaction

Even SCG-L faced tough situation from the flood crisis in 2011 and was affected by the shortage of truck supply and drivers due to sudden recovery of demand in Cement and Building Material business, SCG-L's service quality, reflected by overall customer satisfaction, can be maintained at a very high level, i.e. more than 90 percent of the customers gave a score above 5 out of 10 according to a survey. (Figure 4.3-2).

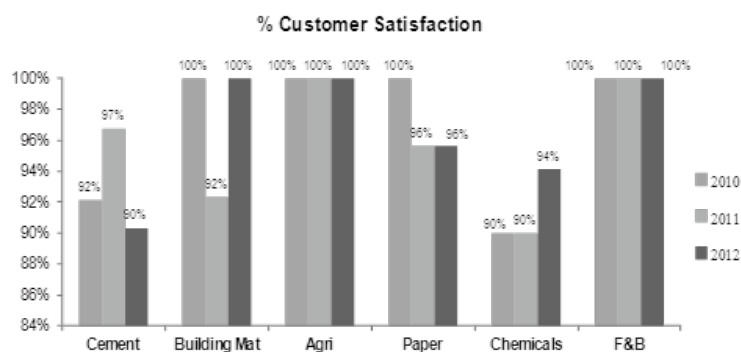


Figure 4.3-2: % Customer Satisfaction

(% of customers those give a score above 5 from 10 Rating Scale)

### 4.4 Intangible Effects

- By developing intimate collaboration and sharing information with its strategic customers, SCG-L is able to create strategies that align with customers' strategies so as to improve the whole supply chain.
- Employees get more insights into TQM concepts and are able to work systematically

### 4.5 Future Plans

#### (1) Grow with SCG Customers

- Continuously improving efficiency and flexibility of SCG's Supply Chain and Moving Toward Green Logistics

#### (2) Expand to Outside SCG Customers

- Agriculture and F&B: Aggressively Expand to customers by Total Supply Chain Approach
- Cold Chain: Cautiously Expand to Premium Quality Segment
- Auto Chain: Aim to be leader in Replacement Equipment Market (REM) and extend services to finished car carriers and OEM

#### (3) Create Growth Platform for ASEAN Integration

- Grow business in each country by focusing on strategic customers and improve operation efficiency and then providing value added services
- Enhance Connectivity with 3 Cross-countries platforms: Road transport, Border warehouse, Coastal transport

#### (4) Strengthen infrastructure to sustain business

- Proactive Quality Assurance : Strengthen upstream process and improve internal process control by "early detection for early action"
- Professional carrier development : Move majority of carriers to Partnership and Certified level and utilize them to serve new businesses expansion
- Safety management: Commitment to continuously improve safety management system to achieve zero accidents
- Strategic ICT management: Visualize Total Supply Chain Visibility and reduce manual job by utilize ICT system
- Proactive HR management : Roll out functional competencies in all departments and proactive practical learning

## 5. Future Plans for Developing TQM Activities

### (1) Cross- functional Policy Management:

- Promote seamless TQM along a supply chain through WAOT from customer to SCG-L and then Carriers.
- Strengthen cross-functional policy management by motivating and facilitating all members to collaborate Work As One Team.

### (2) Proactive Daily Management:

- Develop ICT system for total visibility for take immediate action and preventive action.
- Level up Logistics Management system to the World Class by implementing ISO 39001: Road Traffic Safety Management and ISO 28000: Security Management Systems for the Supply Chain.

### (3) Employee Initiative Activities:

- Motivate and Motivate by Carriers Opportunity , Benefits and rewards
- Emphasize promotion to increase the no. of successful cases of small group Kaizen, and maintain its participation rate

### (4) Education and Training:

- Develop training programs focusing on in-depth customer need identification and enhance analytical skill through a project based approach
- Develop competency and capability of “New Leader of WAOT” to perform as “ Mini MD” and “ New Leader of CoPs” to perform as “ New Manager”