

2014年度

デミング賞  
受賞報告講演要旨

GC America Inc.

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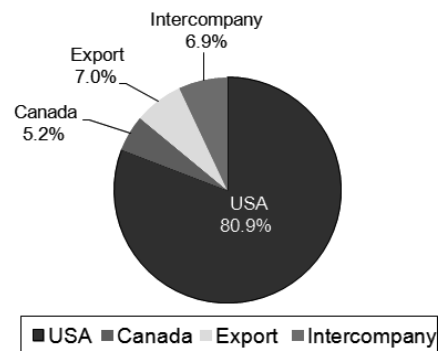
# 1. Company Outline

## 1.1 Outline

GC America Inc. (GCA) is a Manufacturer and Wholesale Distributor of Professional Dental Materials responsible for business operation in US, Canada, Export (Latin America, East Asia) and Intercompany Business. GCA was established in January 1992 as the subsidiary of GC Corporation (GCC) located in Japan. Our Corporate Philosophy is “SEMUI” which means “True products are made for the good of others, not for your own sake. In other words, they co-exist for mutual benefits.” Internally within GC Group, “we must act as a strongly-connected member of ‘GC Associates’ and we must be free from selfish thoughts and respect each other.” Externally outside GC Group, “we must do everything by thinking from the standpoint of others.” GCA has been increasing sales consistently and realizing sound increase in trading profit by selling products provided from GCC even in the harsh environment due to high Japanese yen (Figure 1.2).

Table 1.1 - Scope

Established	January 1992
Associates	261 (As of 3/31/2014)
Business	Manufacturer and Wholesale Distributor of Professional Dental Materials



FY2013 Total Sales  
Figure 1.1 - Sales by Division

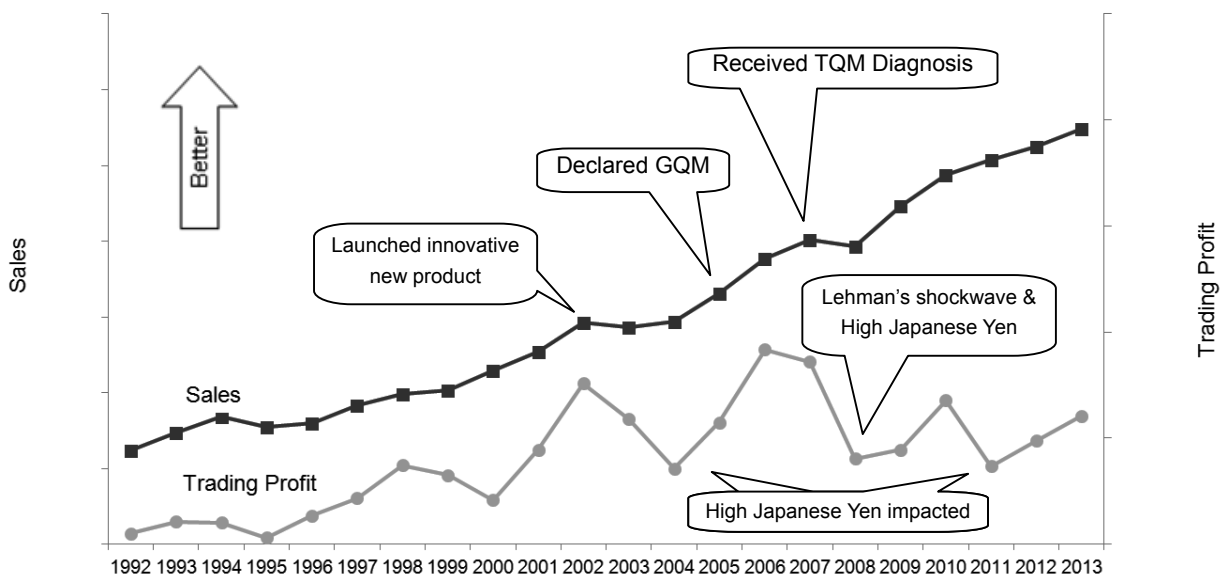


Figure 1.2 - History of Sales and Trading Profit  
(Including Intercompany)

GC has a long history in the US market (Figure 1.3). In 1981, our US branch was established in order to penetrate the US Market. Afterwards, GCC purchased Coe Laboratories, Inc. in 1990. This acquisition helped secure an important base to deploy GC's global strategies to the US market and beyond

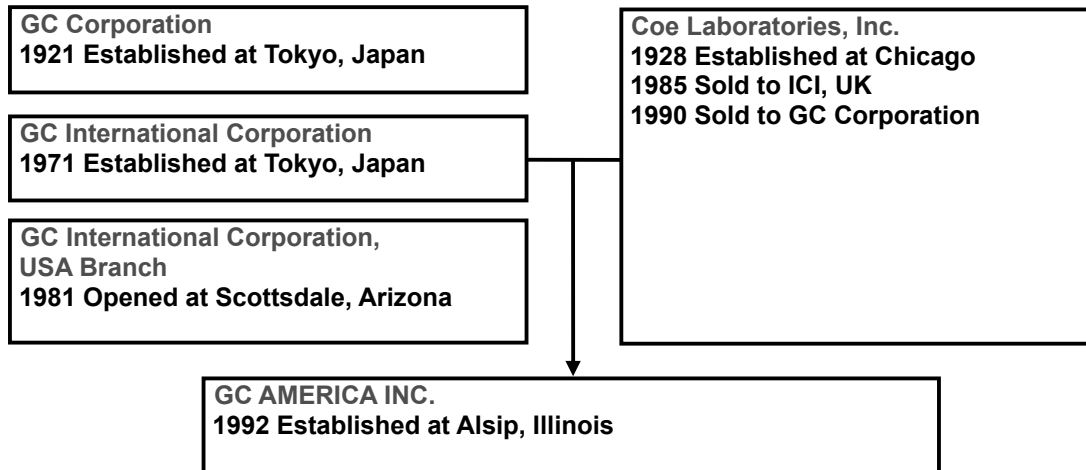


Figure 1.3 - History of GCA

- Reasons of acquiring Coe Laboratories, Inc.
- 1) To listen and respond to the “**Voice of Customer (VOC)**” in the US Market
  - 2) To secure a manufacturing base in the US Market
  - 3) To accelerate our entry to the US Market by utilizing existing structure

## 1.2 Main Products and their Features

GCA has 4 product sources (Table 1.2). We currently sell more than 141 products (3,801 items), including 57 products (756 items) manufactured in GCA.


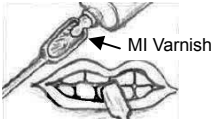
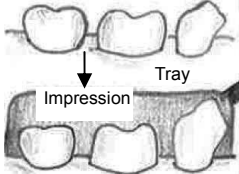
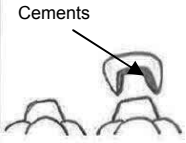
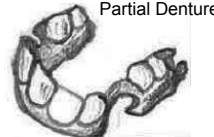
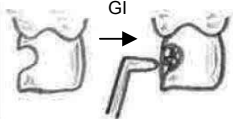

Table 1.2 - Sales by Product Sources

	<b>Product Sources</b>	<b>Explanations</b>
1	Products Manufactured in GCA	Products made from Raw Materials in GCA
2	Bulk Products	Products purchased from GCC as In-Process products in bulk and filled or packaged in GCA
3	Purchased Products from GCC or GCE	Products purchased as Finished Goods from GCC or GCE
4	Purchased Products from non-GC Vendors	Products purchased as Finished Goods from non-GC Vendors

GCA's Product Category for Sales Strategies

GCA categorized products into 7 baskets and planning future strategies according to these baskets. The product basket features and main products are described in Table 1.3.

Table 1.3 - Main Products by Product Basket in US Market  
(Professional Consumable Dental Market)

Product Basket Category	Feature (Main Products)	Clinical Case Example
Composite Restorative	Restorative material for tooth cavity made of highly aesthetic composite Main Product: G-aenial	
Preventive	Minimal intervention (MI) material to prevent or minimize the formation of cavities Main Product: MI Varnish	
Impression	Used to capture image of teeth; provided to a Dental Lab to make Indirect Prosthetics (Crowns, Bridges, Veneers) Main Product: EXA'lence	
Cements	Permanent or temporary cements to hold Dental Prosthetics (Crowns, Bridges, Veneers or Temporaries) in place Main Product: G-Cem	
Lab	Indirect materials that are used to create Crowns, Bridges, Inlays, Onlays, & Veneers from an impression of the teeth Main Product: Dental Stone, Initial	
GI Restorative	Restorative materials for tooth cavity made of Glass Ionomer Main Product: Equia	
Misc. (Others)	All products that are not classified in the six baskets listed above, including Denture Reline and Asepsis Main Product: Coe Soft	

### 1.3 Sales Channel

GCA sells products through our “Partners” (distribution dealers). The dental dealers carry the GC brand as well as all competitor brands and distribute to our “Customers”, who are Dentists, Hygienists, and Dental Technicians. Patients receiving treatment by dental professionals are defined as “End-users” (Figure 1.4).

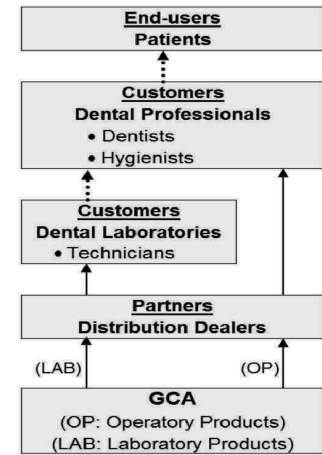


Figure 1.4 - Sales Channel

### 1.4 Characteristics of the US Market

#### 1) Largest Dental Market in the World

In terms of market size by country, the US is currently the largest dental market in the world (Figure 1.5). In addition, the US has the largest number of Major Dental Companies in the world (Figure 1.6). These leading competitive companies are securing US market share as well as deploying quality products recognized by the US market to the world.

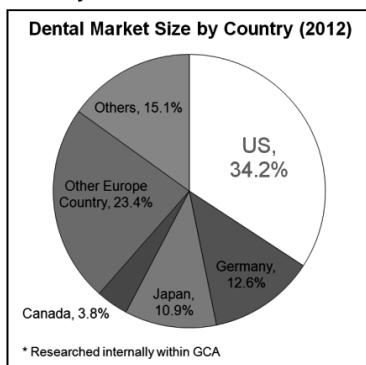


Figure 1.5 - Dental Market Size by Country

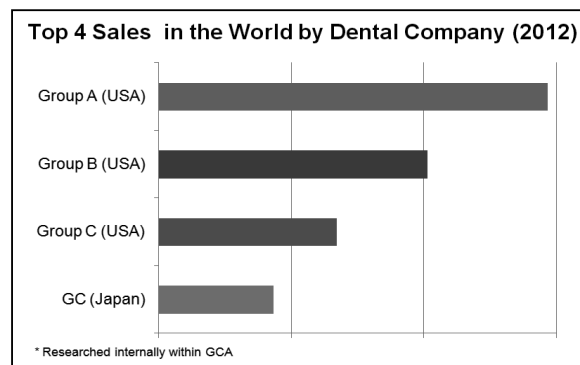


Figure 1.6 - Major Dental Company in the World

#### 2) Large Impact on Dental Research throughout the World

There are many dental researchers in the US. Amongst the international dental meetings held all over the world, the annual International Association for Dental Research (IADR) Meeting is held in the US once every two years. Many researchers from dental universities and manufacturers attend this meeting from all over the world. This meeting has a large impact on dental research throughout the world.

#### 3) Third Party Dental Material Evaluation Agencies

In addition, there are several influential third party dental material evaluation agencies based in the US. Evaluation results from these agencies are spread around the world.

In light of this situation, in order for GC Group to become the No.1 Dental Company in the world, it is essential that GCA becomes No.1 in the US market which is the largest market in the world.

## 2. Organization and Operation

### 2.1 Organization and Main Operations

GCA Organization and Main Operations (as of 3/31/2014) are described in Figure 2.1.

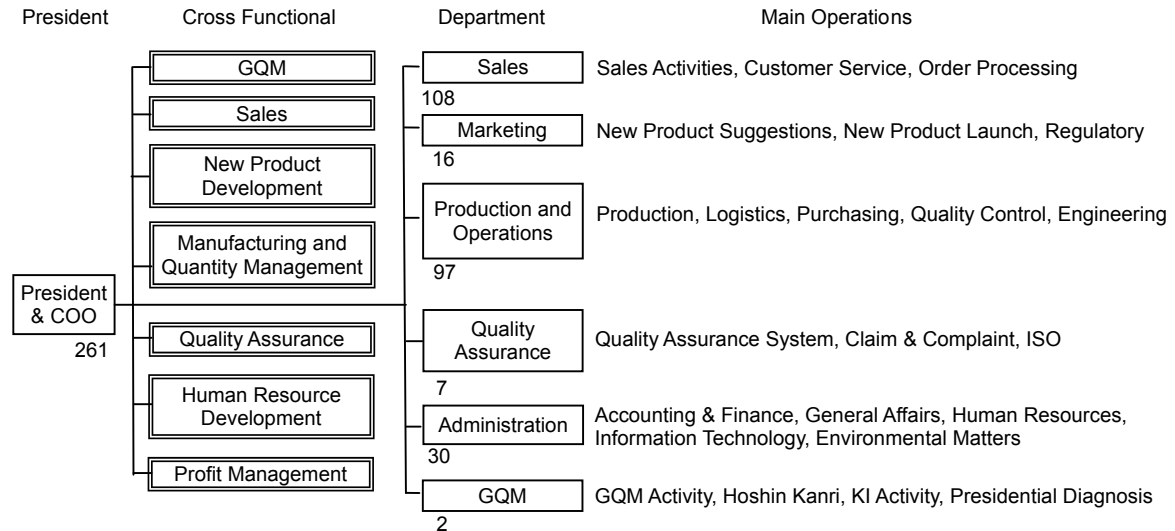


Figure 2.1 - Organization and Main Operations

### 2.2 GC Group Companies

GCA's position in GC Group Companies is described in Figure 2.2.

### 2.3 Main Meetings

Main meetings for companywide business management are described in Table 2.1.

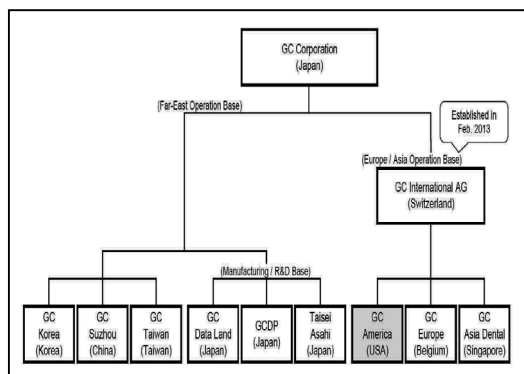


Figure 2.2 - GC Group Companies

Table 2.1 - Main Meetings

Name	Purpose	Frequency	Person in charge
Executive Committee Meeting	Discuss & decide company's directions and operational executions	Monthly	President
GQM Committee Meeting	Promote GQM Activity and discuss companywide Critical Problems	Monthly	President
Cross Functional Management (CFM) Committee Meeting	Develop future strategies (Mid Term Plan action items)	Monthly	Each CFM Chairman
6 Month Diagnosis 12 Month Diagnosis	Understand GQM activity implementation status and problems as well as discuss countermeasures for Management Policy achievement	6 Month & 12 Month	GCIAG President
3 Month Diagnosis 9 Month Diagnosis		3 Month & 9 Month	GCIAG Vice President
Management Policy Review Meeting	PDCA management of GCA Company Policy	Monthly	President



## 3. Management Goals and Business Strategies

### 3.1 Management Goals of GCA

In 2010, GCA established “VISION 2021” as our Management Goal “To be the No. 1 Dental Company in the US.” We defined this as being No.1 within the Professional Consumable Dental Market excluding Dental Equipment and Dental Surgical Products such as Implants. GCA has set this as our individual Management Goal in order to achieve GC Group’s Global Vision of “Challenge to be the No. 1 Dental Company of the World through making further contribution to the healthy long-living society.” GCA is taking actions by confirming changes in the dental market and clarifying the milestones towards the No.1 position. Currently, GCA holds the No. 4 position in the US Market.

Table 3.1 - FY2021 Management Goals

Item	FY2021 Management Goals
1. Market Share in US	No.1
2. Trading Profit	Trading Profit Ratio > 12%
3. New Product Sales	New Product Sales Ratio > 30%

### 3.2 Business Strategies

In order to achieve the Vision 2021 Management Goals, GCA developed following Business Strategies.

#### Business Strategies

1. Increase New Products Suitable for the US Market
2. Establish a Systematic Sales Structure
3. Increase GCA Manufactured Products to meet US Market Needs

Background of these Business Strategies is shown below.

#### 3.2.1 Increase New Products Suitable for the US Market

- 1) New products are required to ensure profit, because conventional products are in price competition.
- 2) GC Group’s new products were not always the best fit for the US market because they were developed to be accepted all over the world.

#### 3.2.2 Establish a Systematic Sales Structure

- 1) We could not understand the tendency, movement or impact of product growth by category because it was difficult to define a product’s category according to the previous sales strategy.
- 2) According to the previous sale strategy, we could not identify the following items:

- The cause of sales gap against target
- The effectiveness of executed sales promotion
- The sales gap by region, by sales associate, and by product

### 3.2.3 Increase GCA Manufactured Products to meet US Market Needs

- 1) In order to achieve the VISION 2021 target, GCA needs to expand manufacturing volume by increasing the number and quantity of products (Table 1.2).
- 2) GCA needs to challenge for developing manufacturing environment to meet Good Manufacturing Practice (GMP) requirements.

## 3.3 Principle of Behavior for Business Strategies

In order to implement our business strategies, GCA has defined the following two Principles of Behavior.

### 3.3.1 Challenge for No.1 Market Share by Enhancing Communication with Customers based on VOC

In order to ensure the quality of products and services, we have established our “VOC system.” There are many kinds of VOC, so we separated them into different categories and filter these VOC through our internal system. This is to ensure that we communicate back to our customers without failure (Figure 3.1).

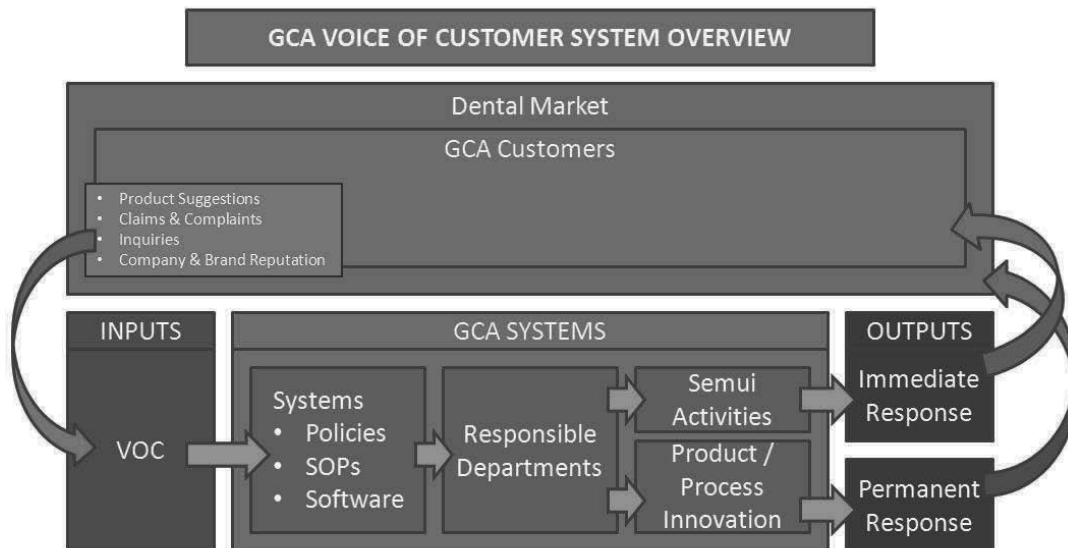
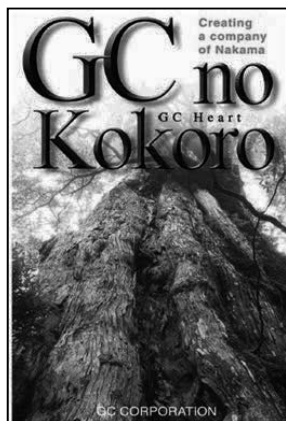


Figure 3.1 - GCA VOC System Overview

### 3.3.2 Enhance Quality of Work by Implementing SEMUI and GC no Kokoro

Since GCA started as a new company after GCC purchased Coe Laboratories, Inc. in 1992, we had two different cultures within one company. We chose leaders that both supported and embraced this newly established GC culture. But it was still very difficult to blend these two corporate cultures into one. To overcome this difficulty, GCA introduced and shared “GC no Kokoro” with all associates.

GC no Kokoro clarifies “GC Way” as values and approaches that should be shared by GC Associates. In order to share GC no Kokoro, we created a training course based on the GC no Kokoro textbook (Figure 3.2). We have successfully integrated two company cultures and we are now working towards the same goal to be the No.1 Dental Company in the US.



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Figure 3.2 - GC no Kokoro textbook

## 4. Progress of GQM Promotion

### 4.1 Outline and Aim

In 2005, in order to enhance the Company Quality to achieve our management goals, we introduced **“GQM (GC’s TQM).”** By establishing new systems and standards, our sales and profit were improved (Figure 1.2).

In 2007, GCA subsequently received the **“TQM Diagnosis”**, but our GQM was not mature enough and so we received many directions. In 2010, we established **“Vision 2021; To be the No. 1 Dental Company in the US”** to clarify our future direction.

In 2011, in order to expand our business strategies toward VISION 2021, GCA declared **“Re-challenge for the Deming Prize.”** Specifically, we introduced **“Cross Functional Management”** to enhance the level of our inter-departmental system. Also, we implemented **“Gap Analysis”** between sales target and result in order to clarify mid-term issues and tasks. In 2012, we received a **“Private TQM Diagnosis.”** Taking actions for the directions given, we established a foundation for future breakthroughs. As a result, in 2012 and 2013, GCA achieved the highest market share growth compared to our competitors.

#### 4.1.1 Vision Management

In GC Group, based on Corporate Philosophy and Management Principles, **“Vision Management”** is deployed to all GC Group companies as a business activity, utilizing GQM as its core (Figure 4.1). The **“VISION”**, which is a long term management goal, indicates future company direction. Based on the **“VISION 2021”** of the GC Group, GCA established our VISION 2021 (Chapter 3.1).

GCA develops 5-year **“Mid Term Plan”** consisting of 7 **“Cross Functional Management (CFM)”** and **“GQM Action Plan for 3 Years”** by Department with action items. We set up the **“Mid Term Plan Achievement Ratio”** to thoroughly implement the action items in the **“Quarterly Achievement Report.”**

We annually develop **“GCA Management Policy”** for our business. This is then deployed to **“Departmental Management Policy”** and down to **“Associate Performance Evaluation Sheet”** to achieve Major Targets through total participation.

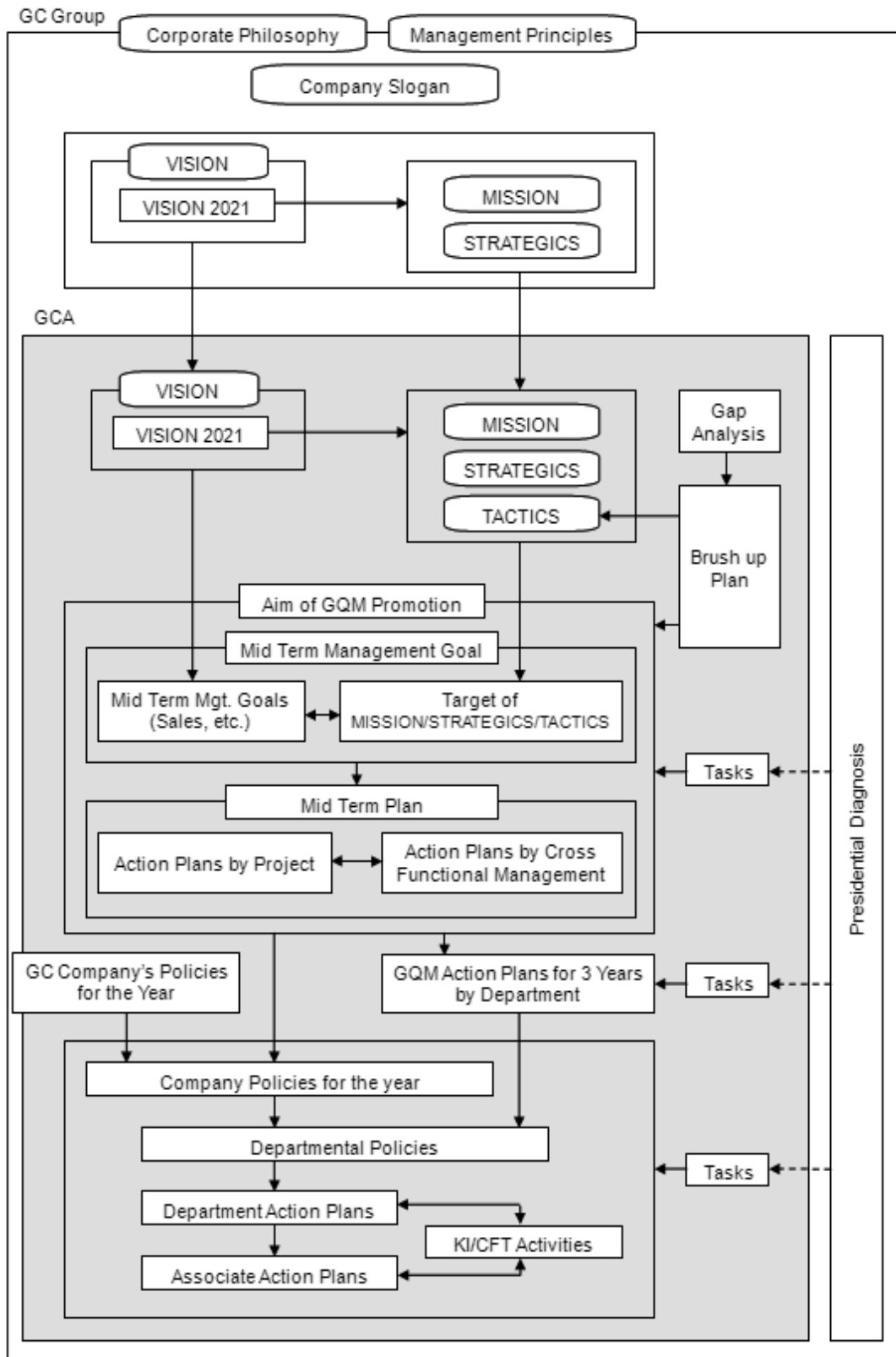


Figure 4.1 - Flow of Vision Deployment

Also, in order to share and achieve the “VISION 2021” with all associates, we have deployed GCA’s VISION MISSION to each associate and established a system tying the achievement of individual goals to company management goals.

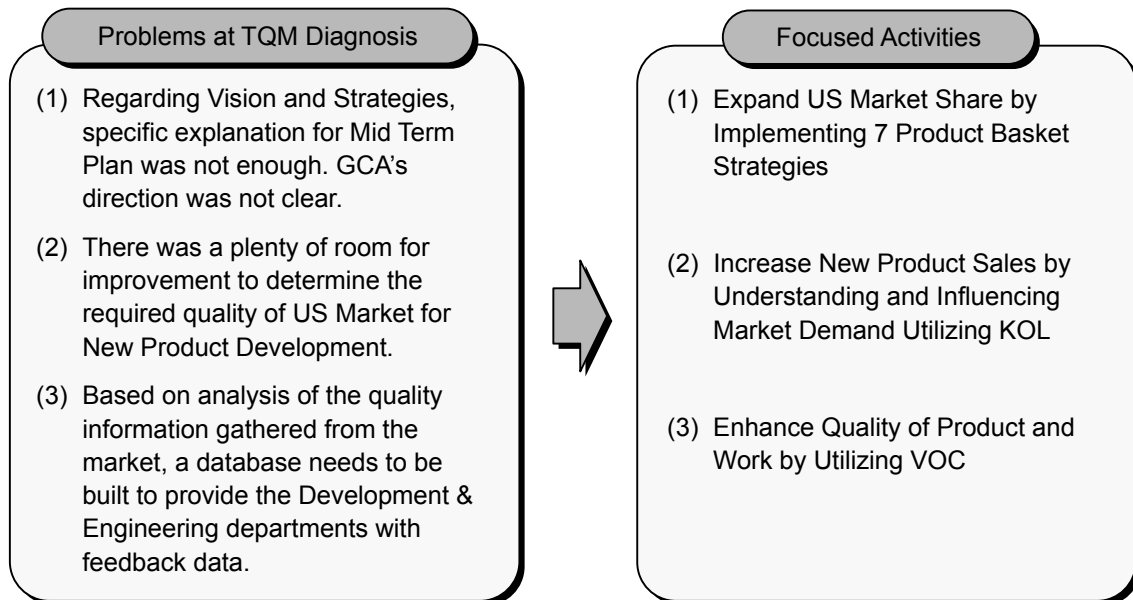
Figure 4.2 - Vision Mission Card

## 4.2 Basic Concept of GQM

Our basic concept is to achieve Mid Term Management Goals by improving Problem Solving Ability based on the Corporate Philosophy “SEMUI; Do unto others as you would like them to do unto you.”

## 4.3 Focused Activities

The Problems at TQM Diagnosis and Focused Activities are as follows:



## 4.4 Progress of Activities

Progress of activities based on the Focused Activities is shown in the Table 4.1.

Table 4.1 - Progress of Activities: GQM

Period	Before TQM Diagnosis	Infrastructure Development Period	
	- Nov, 2007	Nov, 2007 - FY2010	
Aims	Introduce and Stabilize GQM	Enhance GQM Level by Receiving TQM Diagnosis	
Major Action item	GQM	<p>Achieve Mid Term Management Goals by Improving Problem Solving Ability</p> <p>Clarified management issues and countermeasures by launching "Presidential Diagnosis"</p>	<p>Increased internal communication by establishing "GC Nakama Way" and "Town Hall Meeting"</p>
	New Product Dev.	<p>Increase New Product Sales by Understanding and Influencing Market Demand Utilizing KOL</p> <p>Submitted "New Product Suggestion Sheets (NPSS)" based on internal market expectations</p>	<p>Increased number of "VOC" &amp; "Post Production Feedback" for new product development by improving "CRM System"</p>
	Sales	<p>Expand US Market Share by Implementing 7 Product Basket Strategies</p> <p>Implemented "F-Force" strategy to determine focus products</p>	<p>Created "CRM System" to enhance communication to customers</p>
	Mfg. & Quantity Mgt.	<p>Enforce Flexible Production System by Promoting TOP Program</p> <p>Improved productivity by re-examining "Non-value Added Activities"</p>	<p>Improved Production 10KPI by implementing "TOP Program"</p>
	QA	<p>Enhance Quality of Product and Work by Utilizing VOC</p> <p>Created the GCA "VOC System" to identify the different types of voices</p>	<p>Increased use of "VOC" data by enhancing "Customer Feedback System"</p>
	HR Dev.	<p>Increase Associate Skills by Implementing SEMUI and GC no Kokoro</p> <p>Improved Associate Satisfaction by initiating "Associate Survey" and implementing action plans</p>	<p>Introduced "GC no Kokoro" by sending selected 5 students to Nakao School</p>
	Profit Mgt.	<p>Increase Trading Profit by Implementing Strategic Profit Management</p> <p>Improved profit by "Tracking Operating Expenses against Budget"</p>	<p>Reduced slow moving inventory and increased ROA by "Automated Inventory Report"</p>
Effects	TQM concept, terminology, and techniques have spread as a common language to communicate smoothly between sections.	Clarified Business Issues and Action items by Receiving TQM Diagnosis	
Problems/ Tasks	Skill-up of Nakama as a foundation of GQM was not enough.	Regarding Vision and Strategies, specific explanation for Mid Term Plan was not enough. GCA's direction was not clear.	

Strategic Expansion Preparation Period		
FY2011	FY2012	FY2013
Establish Business Strategies	Increase GQM Level by Receiving 2 <sup>nd</sup> TQM Diagnosis	Enhance Business Performance Results by utilizing established systems
<b>Achieve Mid Term Management Goals by Improving Problem Solving Ability</b>		
Clarified Mid Term Issues and Tasks by Implementing "Gap Analysis"	Increased KI Activity level by introducing "JDI Report"	Visualized KI communication by introducing "KI Progress Management Database"
<b>Increase New Product Sales by Understanding and Influencing Market Demand Utilizing KOL</b>		
Improved quality of NPSS and VOC through the "Merchandise Planning Meeting"	Aligned inter-departmental communication by "New Product Planning & Dev." meetings	Enhanced NPSS process by restructuring "KOL Communication System"
<b>Expand US Market Share by Implementing 7 Product Basket Strategies</b>		
Developed "7 Product Baskets" to determine targets and strategies	Implemented "Product Basket Strategies" and PDCA cycle	Implemented "GCA Selling Way" by emphasizing communication with customers
<b>Enforce Flexible Production System by Promoting TOP Program</b>		
Reduced back order and inventory by implementing companywide "Supply Chain CFT"	Improved "Overall Efficiency" by expanding "MEM" and "Work Center 10KPI"	Expanded GCA manufactured products by promoting "Transplant Projects"
<b>Enhance Quality of Product and Work by Utilizing VOC</b>		
Aligned departments and systems by visualizing the "VOC" system	Strengthened quality of each process by promoting "QA Certified Section Activity"	Enhanced "Product Development System" by utilizing the "VOC"
<b>Increase Associate Skills by Implementing SEMUI and GC no Kokoro</b>		
Penetrated "GC no Kokoro" by implementing training programs to all associates	Aligned "My Vision My Mission" to "GC no Kokoro" concepts by adjusting skill assessment system	Certified new "Sub-Trainers" to continue training
<b>Increase Trading Profit by Implementing Strategic Profit Management</b>		
Increased inventory turns by implementing "Supply Chain CFT"	Conducted "PM CFM Meeting" to identify countermeasures for unfavorable spending variances	Targeted "GCA Manufactured Products and their Desired Costs" to identify opportunities
Clarified Mid Term Issues and Tasks	Enforced the Business Systems based on Cross Functional Management	The future strategies to achieve the Vision 2021 were clarified along with KPIs improved.
Business Systems per Cross Functional Management were not sufficient	Need to show the results by utilizing the established systems	Challenge for the Deming Prize



## 5. Establishment & Practice of Management System

### 5.1 New Product Development

#### 5.1.1 Outline and Aim

Before TQM Diagnosis, there was no formalized process to effectively launch new products suitable for the US market or to identify new “**Leader in Class Products.**”

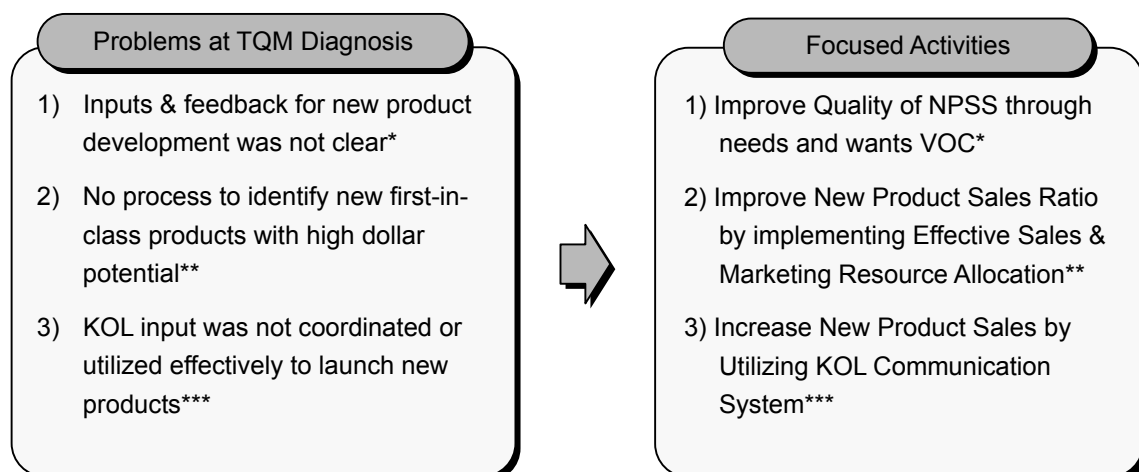
After TQM Diagnosis, we improved inter-company communications as well as collected and analyzed “**Voice of Customer (VOC)**” to achieve successful product launches. Next, we initiated the cross functional “**Merchandise Planning Meeting (MPM)**” to discuss, approve and coordinate new product submission to GCC through “**New Product Suggestion Sheets (NPSS)**.” We established the “**New Product Planning and Development (NPPD)**” meeting to oversee the launch process of new products through “**New Product Launch Master Control (NPLMC)**”. GCA utilizes “**Key Opinion Leaders (KOL)**” for new product suggestions, product design inputs and product introduction through educational activities. We restructured our “**KOL Communication System**” to streamline and coordinate KOL activities. As a result, we have created a foundation to increase new products suitable for the US market.

#### 5.1.2 Basic Concept

Our basic concept is to increase new product sales by understanding and influencing market demand utilizing KOL.

#### 5.1.3 Focused Activities

The Problems at TQM Diagnosis and the Focused Activities are as follows.



#### 5.1.4 Progress of Activities (Not shown)

### 5.1.5 Implementation Status of Focused Activities

#### Focused Activity 1: Improve Quality of NPSS through Needs & Wants VOC\*

Before TQM Diagnosis, there was no formal system utilizing “VOC.” All product launches were directed from GCC. After TQM Diagnosis, GCA started our VOC system to create NPSS for new product development. “Post Production Feedback (PPF)”, a subset of VOC, was created to provide direction for customer-oriented “NPSS”. We established “Merchandise Planning Meeting (MPM)” to approve and prioritize new product suggestions. In order to ensure on time launch, we established cross functional “New Product Planning and Development (NPPD)” meeting and enhanced “New Product Launch Master Control (NPLMC)” to clarify new product launch steps. We also put into place a required minimum number of VOC per month to be entered by our sales associates, producing higher numbers of “VOC.” As a result, number of “VOC” submissions (Figure 5.1.1) and “NPSS” converted from “VOC” (Figure 5.1.2) have increased allowing GCA to submit a higher number of “NPSS”, leading to increased numbers of new product launches.

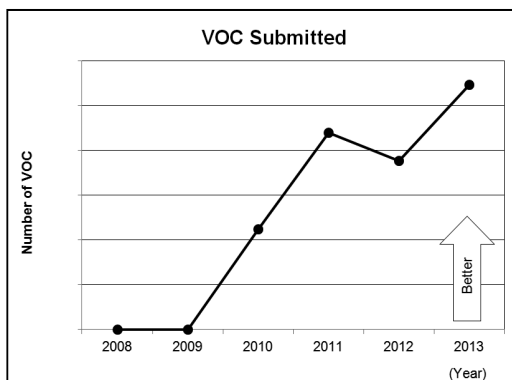


Figure 5.1.1 - VOC Submitted\*

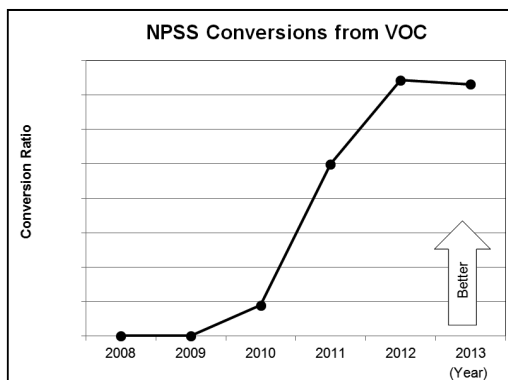


Figure 5.1.2 - VOC to NPSS Conversion Ratio\*

#### Focused Activity 2: Improve New Product Sales Ratio by Implementing Effective Sales and Marketing Resource Allocations\*\*

Before TQM Diagnosis, there was no formal process in place for allocating Sales and Marketing resources to drive new product sales. After TQM Diagnosis, we implemented inter-departmental communication meetings to meet product launch needs through better budget allocation and tracking. We have enhanced our “GCA Website” to increase the new product information and sales promotions.

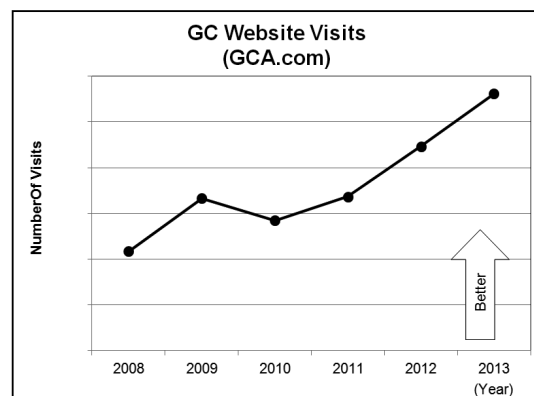


Figure 5.1.3 - GC Website Visits (GCA.com)\*\*

Tools such as Education Modules and GCA website are important resources to motivate customers in alignment with sales strategies. As a result, number of visits to our GCA Website has increased showing how we have optimized our presence as a provider of “leader in class” products. (Figure 5.1.3)

**Focused Activity 3: Increase New Product Sales by Utilizing KOL Communication System\*\*\***

Before TQM Diagnosis, there was no formal process to coordinate KOL communication or KOL activity with new product launches. After TQM Diagnosis, we started to leverage KOLs for their input and expertise during new product launches. We started collecting KOL product evaluation prior to launch to ensure quality of new products. In order to maximize the value of KOLs, we restructured “KOL Classification” by area of specialty (evaluator, writer, speaker, etc.) and by product basket. Also, we started “KOL Communication System” for KOL interaction and to support new product launches. As a result, number of clinical KOLs providing feedback and number of Continuing Education (CE) Course attendees have increased. (Figure 5.1.4 and 5.1.5)

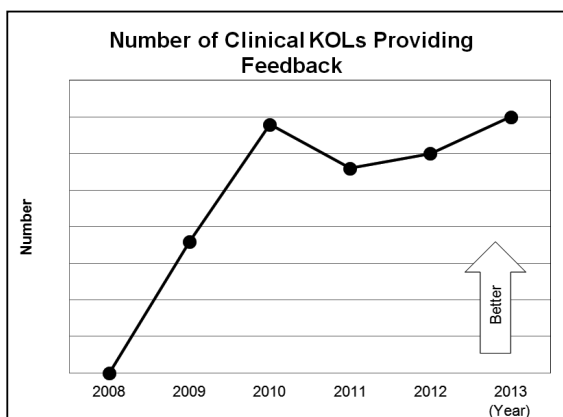


Figure 5.1.4 - KOLs Providing Feedback\*\*\*

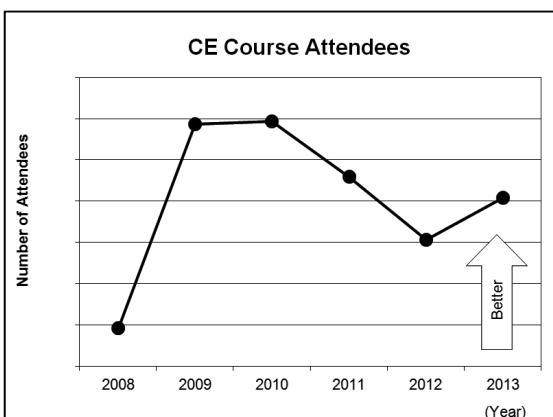


Figure 5.1.5 - CE Course Attendees\*\*\*

**5.1.6 Intangible Effects**

- 1) NPSS was improved as a result of improved VOC. \*
- 2) Communication for introducing new products to the market has been improved. \*\*
- 3) KOL relationships and communication were improved leading to better new product suggestions. \*\*\*

**5.1.7 Future Plans**

- 1) Automate NPSS, VOC and NPLMC systems to further streamline and improve new product launches. \*
- 2) Improve cross departmental communication and collaboration with all internal GCA Departments. \*\*
- 3) Increase new products suitable for the US market by improving KOL communication system. \*\*\*

## 5.2 Sales

### 5.2.1 Outline and Aim

Before TQM Diagnosis, we focused on proven products that generated revenue and not enough on key product portfolios needed to grow our business. Market analysis to identify key growth areas against our major competitors was not sufficient. In order to improve sales growth, we implemented “**F-Force**” strategy aligning our products into three categories, Future, Foundation, and Fundamental. However, when products transitioned between categories, it was difficult to understand the tendency, movement or the impact of market share growth by category. At the same time, the alignment between how GCA promoted products and how individual sales associates sold products was limited. Despite quarterly Regional Manager Meetings to align sales activities, target setting and planning for product portfolios were inadequate. As a result, our systematic selling structure was limited.

After TQM Diagnosis, we realigned our products into “**7 Product Baskets**” (Table 1.3) and created the “**GCA Selling System**.” Sales targets by basket are planned cross-functionally, and then cascaded down to the sales associates using the “**Quarterly Sales Target System**.” We aligned our major regional activities through the “**Market Portfolio Analysis System**,” which allows us to target specific areas and dealer partners where performance is below average. To visualize and communicate individual sales results against target, we have established the “**Sales Dashboard**” to show real time achievement of sales activities. We also enhanced communication with our customers through the “**GCA Selling Way**.” By implementing GCA Selling System, we are able to set targets and develop strategies at cross functional level then execute sales activities at departmental level.

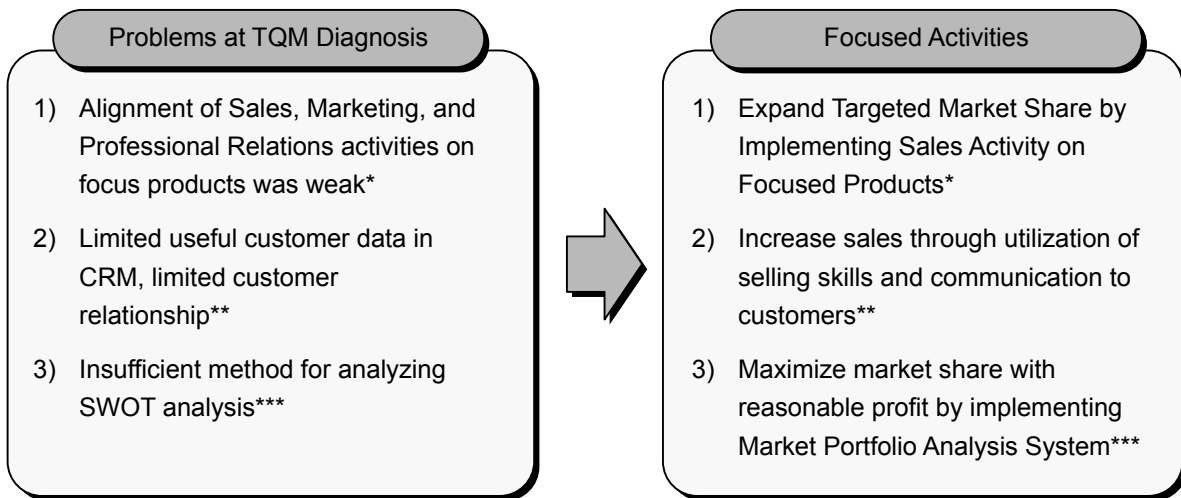
As a result, GCA has become the fastest growing dental company over the past two years, outgrowing our key competitors. We have also improved communication in regards to our new and innovative “**Leader in Class Products**.”

### 5.2.2 Basic Concept

Our basic concept is to expand US market share by implementing the “7 Product Baskets” strategy and aligning Sales, Marketing, and Professional Relations activities.

### 5.2.3 Focused Activities

The Problems at TQM Diagnosis and the Focused Activities are as follows:



### 5.2.4 Progress of Activities (Not shown)

### 5.2.5 Implementation Status of Focused Activities

#### Focused Activity 1: Expand Targeted Market Share by Implementing Sales Activity on Focused Products\*

To achieve market share growth for “Vision 2021”, we created “GCA Selling System” and “Product Basket Strategy” to target and plan our product portfolios by focusing on new & focused products. We restructured sales and marketing activities to align with Product Basket Strategy targeted on the focused products.

This alignment is communicated to sales associates allowing them to execute Quarterly Activity Plans. The Quarterly Activity Plans are cascaded down to Monthly Plans focusing on the “Product Basket Strategy” to increase market share. Product promotions are aligned through this strategy to support Sales activities. As a result, we have seen an increase in the Focused Product market share and an increase in New Product sales achievement (Figure 5.2.1).

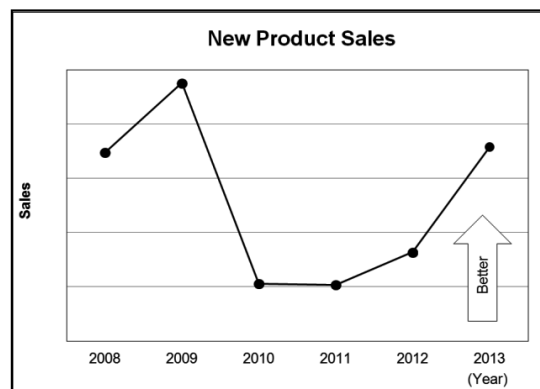


Figure 5.2.1 - New Product Sales\*

## Focused Activity 2: Increase Sales through Utilization of Selling Skills and Communication to Customers\*\*

In order to meet customer needs, improving communication with customers and strengthening selling skills are key elements of the “GCA Selling System.” By implementing “GCA Selling Way Training Program” and “Top 25% Skill-Up Program,” we aligned sales associates training to maximize our sales growth.

At the same time, we are able to identify key products, both GC’s and competitor’s being used by our customers through our “CRM System.” As a result, we have enhanced the number of communications with customers (Figure 5.2.2).

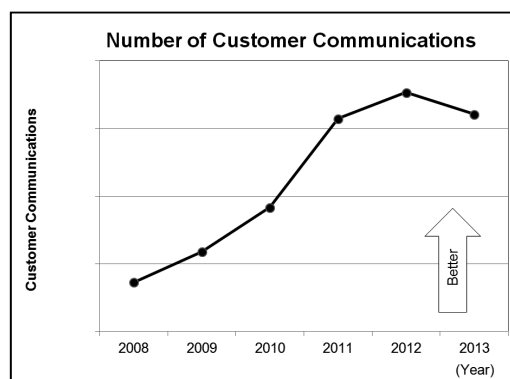


Figure 5.2.2 - Customer Communications\*\*

## Focused Activity 3: Maximize Market Share with Reasonable Profit by Implementing Market Portfolio Analysis System\*\*\* (Not shown)

### 5.2.6 Intangible Effects

- 1) The relationship between sales and marketing strategies was increased. \*
- 2) Increased quality of data in CRM for communicating with customers. \*\*
- 3) Improved GCA brand awareness as a provider of high quality products. \*\*\*

### 5.2.7 Future Plans

- 1) Increase sales productivity by promoting PDCA on Focused Product strategies. \*
- 2) Improve customer relationships with the viewpoint of “Leader in class” products. \*\*
- 3) Expand Market Portfolio Analysis System. \*\*\*

## 5.3 Manufacturing and Quantity Management

### 5.3.1 Outline and Aim

As the US manufacturing base of GC Group, our aim is to manufacture and supply products that directly reflect Sales and Marketing activities. In order to achieve “**Vision 2021**,” we have to expand GCA manufactured product sales, improve Quality (Q), Delivery (D), and Cost (C) concurrently. We expand our core product technology, provide stable supply sources to support production, and mitigate risk through transplant of GCC products to GCA. GCA must also improve our core competencies to guarantee the success of factory innovation projects and expansion of our manufacturing base.

In the past, our focus was on departmental optimization, so value stream activities for companywide improvements were weak. We implemented “**Tools to Optimize Productivity (TOP) Program**” (Figure 5.3.2), GC factory innovation activity, and enhanced our production and purchasing systems to demonstrate “small improvement / big effects.” We must attain effective & efficient improvement by all associates utilizing each of the 20 tools in combination in each work center. We also improved Production Amount per Head by KI Activities (Figure 5.3.1).

It is essential to expand GCA-developed products by utilizing our core competence, expand product items by transplant from the GC Group, and expand our existing products. We objectively evaluate the advantage / disadvantage of GCA production technology by utilizing our “**GCA Manufacturing Technical Map**.” We strategically plan to solve technical issues and to increase capital investment.

Through these activities, we improved labor productivity, production amount and backorders which directly relate to satisfying customer demand. As a result, we have created a foundation for the “**Vision 2021**” target of increasing GCA production to meet US market needs.

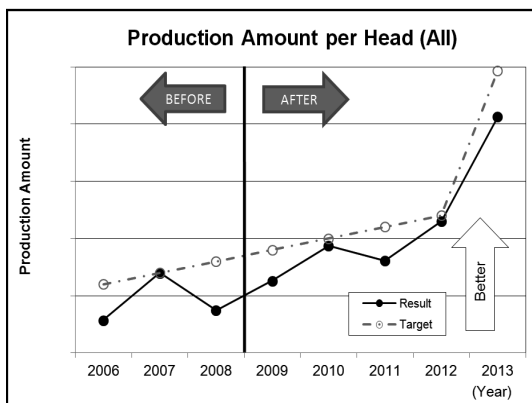


Figure 5.3.1 - Production Amount per Head (All)

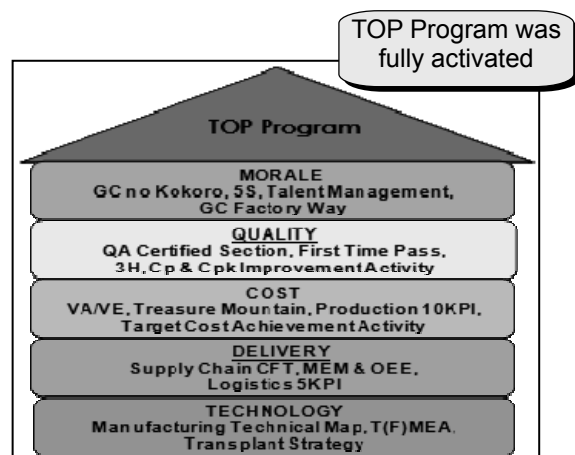


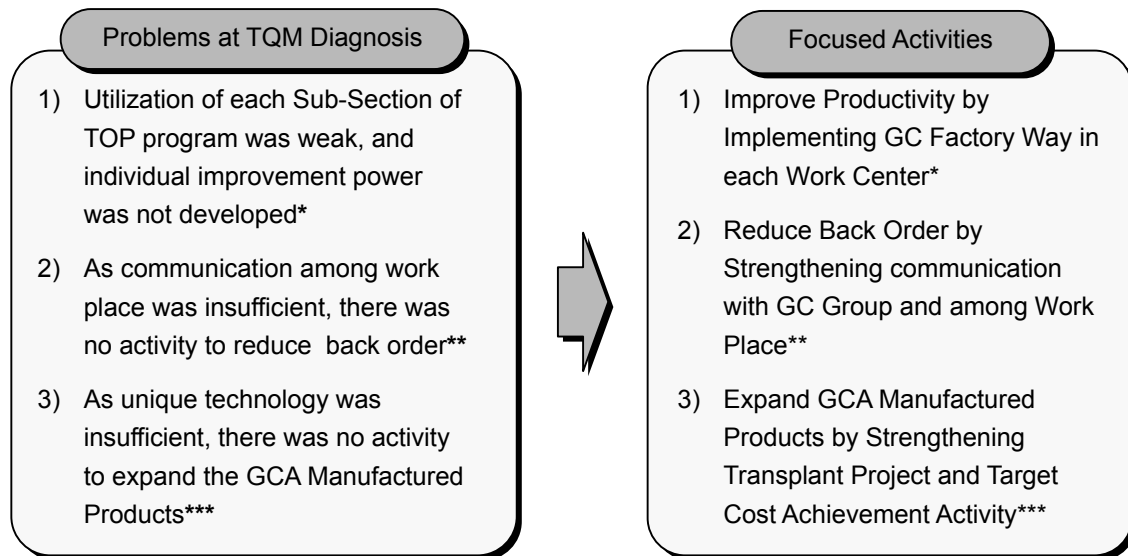
Figure 5.3.2- Relationship GQM & KI with TOP Program

### 5.3.2 Basic Concept

Our basic concept is to enforce flexible production system by promoting TOP program to increase our production amount to achieve “Vision 2021”.

### 5.3.3 Focused Activities

The problems at TQM Diagnosis and the Focused Activities are as follows.



### 5.3.4 Progress of Activities (Not Shown)

### 5.3.5 Implementation Status of Focused Activities

#### Focused Activity 1: Improve Productivity by Implementing GC Factory Way in each Work Center\*

To increase our GCA production amount for “Vision 2021”, we must increase the labor productivity. Productivity is the key for our long term growth and success. We evaluate our activities based on “**Production 10KPI**” and “**Logistics 5KPI**” including various productivity measurements. These KPI measures are commonly used in GC factories in other operations. Compared to other GC factories, the number of transplants GCA may acquire is determined for “Vision 2021.”

In order to increase labor productivity, we started taking actions by visualizing Muda in our “**Treasure Mountain**” and reduce them along with our KI Activities. In 2006, we initiated our first “**TOP Program**” and promoted process improvements. However, this activity was evaluated only at the department level, not at the work center level. The entire value stream was not visualized and our improvement was not systematic causing numerous issues and troubles on site.



We improved our “TOP Program” by implementing work-center level evaluations to increase associate’s involvement and hands-on experience. Currently, we manage our “Production 10KPI” in each work center. We also link our tasks to the Management Policy in a “Kaizen Map” (Figure 5.3.3) to clarify KI themes.

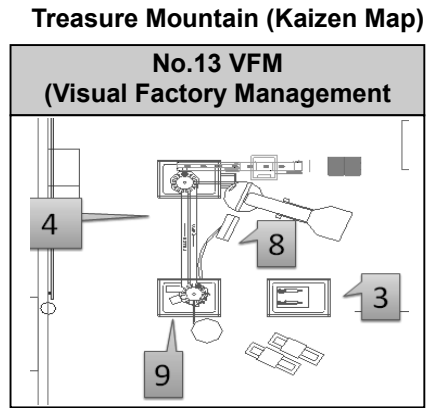


Figure 5.3.3 - KAIZEN Map

We are strategically promoting improvement by “Vision 2021 Road Map”, sharing Production 10KPI and Logistics 5KPI targets for each year. Improvement tasks are aligned with KI themes in “Hoshin Kaizen Matrix.” As a result, we have improved process productivity more than 10% compared to previous year. Labor productivity is also improved by 24% compare to 2008 (Figure 5.3.4).

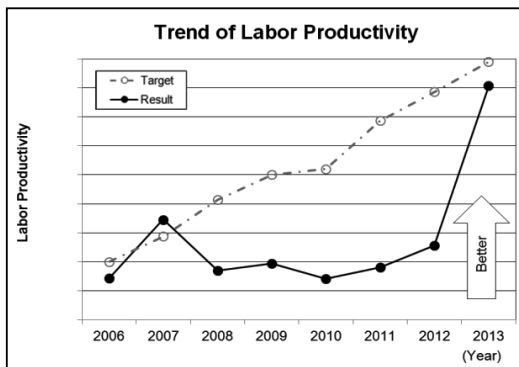


Figure 5.3.4 - Labor Productivity\*

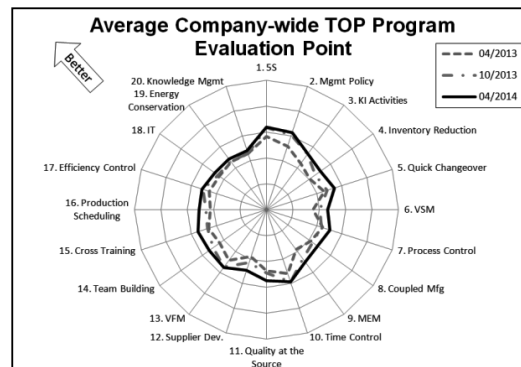


Figure 5.3.5 - TOP Program Evaluation Score\*

**Focused Activity 2: Reduce Back Order by Strengthening Communication with GC Group and among Work Place\*\***

In order to achieve “Vision 2021”, we must minimize the Back Order and maximize On-Time Delivery based on our customer needs. Reducing Back Order is our top priority as it is directly related to customer satisfaction.

In the past, Quantity Management was not systematic. Each responsible associate was handling back order and due date control as issues emerged. We established the “GCA Supply Chain CFT” and management system by clarifying organization. Currently, Manufacturing and Quantity Management CFM is working on reducing back order by analyzing their causes such as purchased product delivery delay, machine breakdown, production capacity, nonconformity at inspections, sales forecast accuracy.

### **Focused Activity 3: Expand GCA Manufactured Products by strengthening Transplant Project & Target Cost Achievement Activity\*\*\***

In order to achieve “Vision 2021”, we have to increase production amount. It is essential to expand GCA-developed products by utilizing GCA core competence, expand production items by “Transplant” from GC Group, and expand existing products. We are leveraging TOP Program “Technology” category to summarize our production technology in the “**Manufacturing Technical Map.**” We are accumulating and utilizing intrinsic technology according to our Mid Term Plan. “Product Engineering” section has achieved the highest “QA Certified Section” level at GCA.

#### **5.3.6 Intangible Effects**

- 1) The relationship with work places is strengthened by implementing TOP Program. \*
- 2) Global supply chain management with GC sister companies was strengthened. \*\*
- 3) Increase in GCA's manufacturing technology and knowledge level. \*\*\*

#### **5.3.7 Future Plans**

- 1) Become No.1 dental factory in USA by enhancing TOP Program activities. \*
- 2) Reduce intercompany lead times by Global CFM Activity with GC Group. \*\*
- 3) Increase sales of GCA produced products by innovating core competence and winning transplants from GC Group. \*\*\*

## 5.4 Quality Assurance

### 5.4.1 Outline and Aim

The aim of Quality Assurance (QA) is to fulfill customer expectations by realizing what customer values. Customers expect products that are “**easier-faster-better**” for their use, while end-users depend on quality dental care for healthy eating, enjoying a variety of foods, and having a pleasant smile.

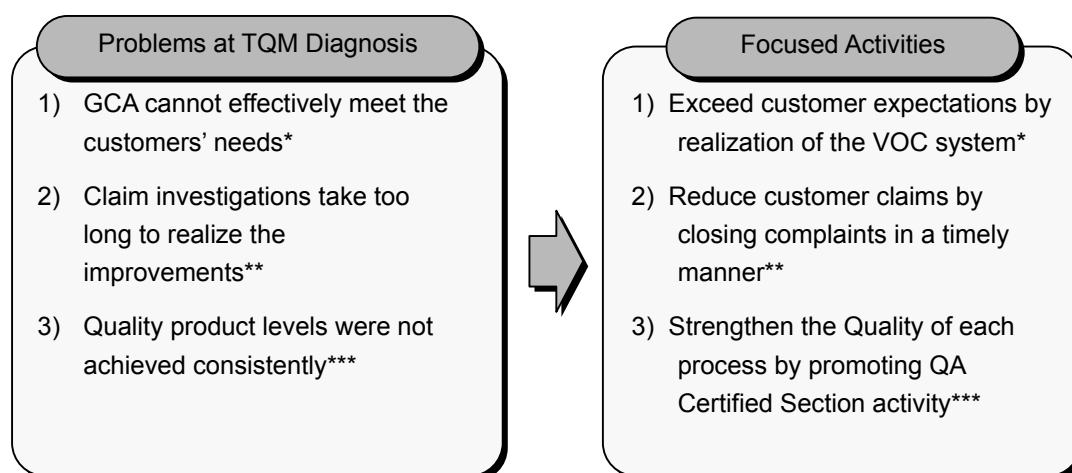
Previously, QA assessed customer satisfaction according to the “**Voice of the Customer (VOC)**” by focusing only on “**Claims & Complaints**”, while the roles & responsibilities for managing “VOC” data were not clear. Additionally, claims & complaints took too long to close, which weakened our relationship with customers. Overall, we could not realize products to satisfy our customers. GCA established the “**VOC System**” to visualize and link all the processes used to manage the different voices that GCA receives. We follow our Quality Policy: “**Customer Needs Define Quality**” and use the expertise of our customers to guide our innovations for products and services that will meet their needs and assure the satisfaction of the end-user.

### 5.4.2 Basic Concept

Our basic concept is to enhance quality of product and work by utilizing VOC assuring customer and end-user satisfaction.

### 5.4.3 Focused Activities

The problems at TQM Diagnosis and Focused Activities are as follows.



### 5.4.4 Progress of Activities (Not shown)

## 5.4.5 Implementation Status of Focused Activities

### Focused Activity 1: Exceed Customer Expectations by the Realization of the VOC System\*

After TQM diagnosis, improved management of the “VOC” System enabled GCA to better use the customers’ voice for assuring product qualities. The “VOC System Chart” was created to visualize all the voices that we receive and how to effectively manage their input, processing, and output. Systems were created and revised to ensure alignment of roles & responsibilities for handling each type of VOC. Immediate actions are taken based on “SEMUI” to respond to the customers, as well as, long term permanent actions to assure the satisfaction of the entire market. The “VOC System” is used for “New Product Planning & Development (NPPD),” for new products and to improve existing products. New “Design Review” and “Quality Function Deployment” systems were integrated with NPPD to realize product innovations.

### Focused Activity 2: Reduce Customer Claims by Investigating and Closing Complaints in a Timely Manner\*\*

After TQM Diagnosis, we changed the “Claim & Complaint Handling System” to improve investigation steps and communication between all GC companies. The “CRM System” was modified by QA, IT, Customer Service, and overseas GC companies. This enabled GCC, GCE, and GCA to more quickly handle claims for inter-company products and decreased the time to close claims & complaints providing faster responses to the VOC (Figure 5.4.2). The quick response and implementation of countermeasures keeps the claim ratio low, by preventing new claims.

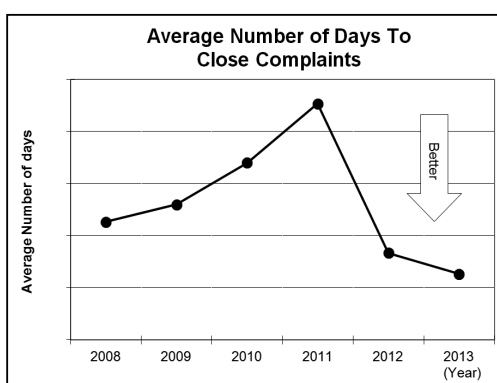


Figure 5.4.2 - Average Number of Days to Close GCA Complaints\*\*

### Focused Activity 3: Strengthen the Quality of each Process by Promoting QA Certified Section Activity\*\*\*

After TQM diagnosis, we learned more about the “QA Certified Section” global system and began to promote audits within GCA. Since 2011, many sections have challenged but were not able to pass. QA Certified Section activities were added to the QA Cross Functional Management (QA CFM) Meeting agenda to review audit results, consult on improvements, and monitor progress. The audit schedule is visualized to help sections plan and prepare (Figure 5.4.3). The audit activities and consultation supports stronger implementation of GQM principles. Now, there have been 4 “QA Certified Section Challenge Awards” and 1 “QA Certified Section Talent Award” (Figure 5.4.4). This demonstrates that sections have “Enhanced the Quality of Work” to realize superior “Quality at the Source”.

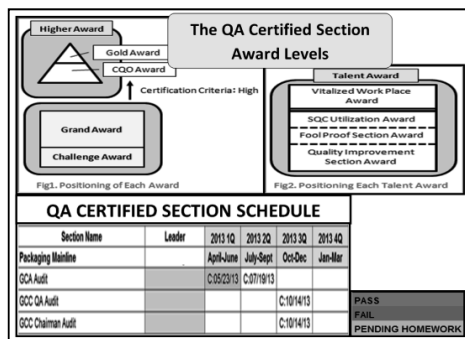


Figure 5.4.3 - QA Certified Sections Audit Schedule

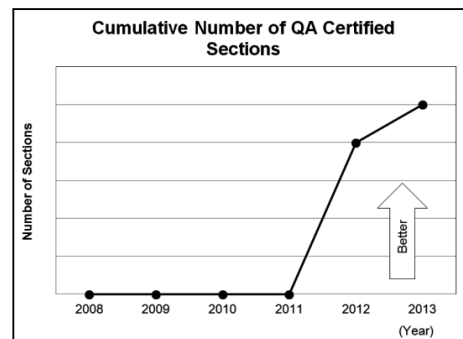


Figure 5.4.4 - Cumulative Number of QA Certified Sections\*\*\*

#### 5.4.6 Intangible Effects

- 1) “SEMUI” activities and product / process innovations have been realized by visualizing the “VOC” system to better meet customers’ needs and assure satisfaction.\*
- 2) A faster response to “VOC” improved the relationship with the customer. \*\*
- 3) Through “QA Certified Section” activities, GQM principles are implemented for higher standards of “Quality at the Source”. \*\*\*

#### 5.4.7 Future Plan

- 1) Realize new products and innovations through better alignment of “NPPD”, “Sales”, and “QA” systems. \*
- 2) Improve quality of the corporation by integrating all quality systems through comprehensive software. \*\*
- 3) Expand “QA Certified Section” system to all sections to assure GQM principles companywide. \*\*\*

## 5.5 Human Resource Development

### 5.5.1 Outline and Aim

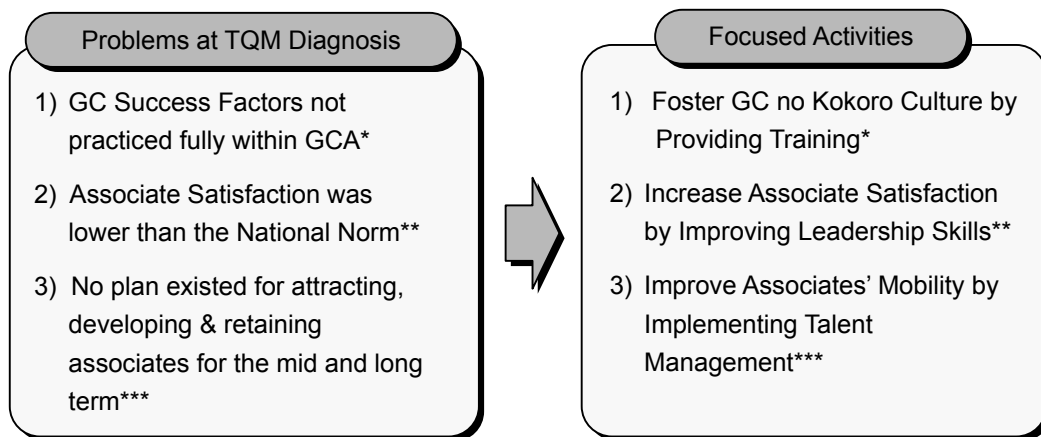
Human Resources provide leadership for our investments in human resources. The aim is to ensure our return on investment includes skilled, motivated and adaptable associates who apply their talents to achieving GCA VISION 2021. Before TQM Diagnosis, the success factors utilized at GCC were not fully applied at GCA. Associate satisfaction was lower than the national norm. There was no plan for attracting, retaining and developing associates for the mid and long term. As a result, associates' efforts were not linked to achieving company goals. We launched “Human Resource and Development Cross Function Management (CFM)” to foster a “GC no Kokoro” culture, develop leaders who inspire excellence as well as attract, retain and develop top talent.

### 5.5.2 Basic Concept

Our basic concept is to increase associate skills by implementing “SEMUI” and “GC no Kokoro.”

### 5.5.3 Focused Activities

The Problems at TQM Diagnosis and the Focused Activities are as follows.



### 5.5.4 Implementation Status of Focused Activities

#### Focused Activity 1: Foster GC no Kokoro Culture by Providing Training\*

GCC has learned many lessons in the 90 years while in successful operation. These lessons have shaped GC's unique characteristics. Before TQM Diagnosis, many of these concepts were not fully implemented at GCA. The problems in implementing these concepts include the different languages and cultures between the home countries. American businesses operate under a different set of values and

practices. For most businesses, the primary focus is on financial results (Figure 5.5.2). In GC Group, we follow a different path. From the beginning, our founders set out to “Develop a product needed in peoples’ lives.” The pinnacle of success in GC Group globally is to contribute to the Oral Healthcare and “**Quality of Life.**”(Figure 5.5.1)

After TQM Diagnosis, in order to overcome these differences, we developed a plan to train GCA associates on “GC no Kokoro” locally by GCA Trainers. To teach GCA associates to operate according to “GC no Kokoro”, a concept with Buddhist roots is very challenging. We sent selected GCA associates to GCC for “GC no Kokoro” training to become certified “**Master Trainers**” also known as “**Storytellers.**” Now we have added such stories in “GC no Kokoro” training. As a result, we have increased GCA associates’ understanding of “SEMUI” and “GC no Kokoro” evaluation points have been improved. (Figure 5.5.2)

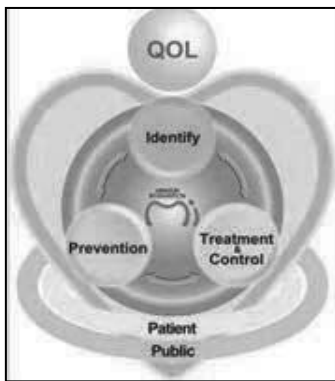


Figure 5.5.1 - GC’s Minimum Intervention Dentistry Supporting “**Quality of Life**”

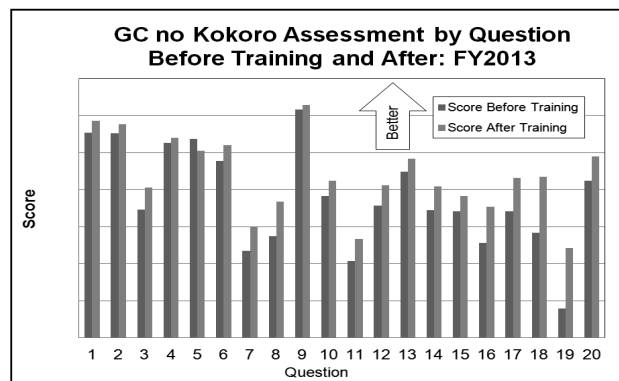


Figure 5.5.2 - GC no Kokoro Assessment by Question\*

## Focused Activity 2: Increase Associate Satisfaction by Improving Leadership

### Skills\*\*

In the past, our associate satisfaction and turnover rate were not formally measured. According to the Gallup Organization, a third party expert in research and consulting, associate satisfaction directly correlates with organizational success. We established a formal system to review associate satisfaction using an anonymous survey. We analyze the survey data and implement action plans to improve associate satisfaction. Based on the survey results, for example, we conduct feedback conversations for the section leaders where improvements are needed. Annually, managers and supervisors implement an action plan to improve their leadership of their sections. We also provide leadership training. As a result, our associate satisfaction and turnover rate (ratio of associates no longer with GCA) have been maintained in a healthy range compared to the national norm.

### Focused Activity 3: Improve Associates' Mobility by Implementing Talent Management\*\*\*

Before TQM Diagnosis, there was no system to plan for the necessary number and skills of associates needed to achieve GCA's vision. After TQM Diagnosis, in order to recruit, train, and retain quality associates, GCA developed a system for "Talent Management."

We reviewed general economic and labor trends as well as future trends in dental industry. Based on these trends and according to our growth targets, we developed major skill targets for mid and long term staffing plans. As we develop and cross-train GCA associates, we have been able to increase the percent of key positions filled internally (Figure 5.5.3).

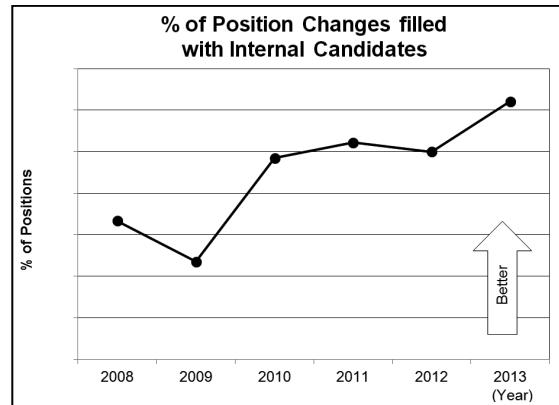


Figure 5.5.3 - Positions Filled Internally\*\*\*

#### 5.5.5 Intangible Effects

- 1) Enhanced relationships among associates by implementing companywide "GC no Kokoro" training. \*
- 2) Risk of labor lawsuits have been reduced through improved leadership skill. \*\*
- 3) GCA's reputation as a "Top company to work for" has been improved. \*\*\*

#### 5.5.6 Future Plans

- 1) Design interview protocols to evaluate candidates' fit with "GC no Kokoro" culture. \*
- 2) Increase frequency and depth of leadership training. \*\*
- 3) Design and implement a succession planning system in "Talent Management". \*\*\*

### 5.6 Profit Management (Not shown)



## 6. Overall Effects

In order to achieve “VISION 2021”, we have implemented our Focused Activities based on “Business Strategies” along with “Principals of Behaviors”. As a result, we have achieved following effects.

### Business Strategy 1: Increase New Products Suitable for the US Market

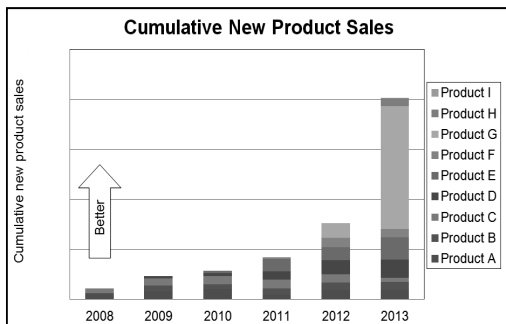


Figure 6.1- Cumulative New Product Sales

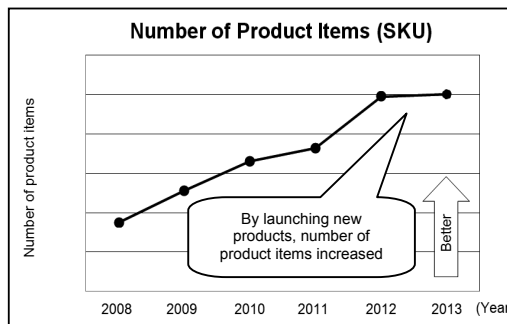


Figure 6.2 - Number of Product Items

### Business Strategy 2: Establish a Systematic Sales Structure

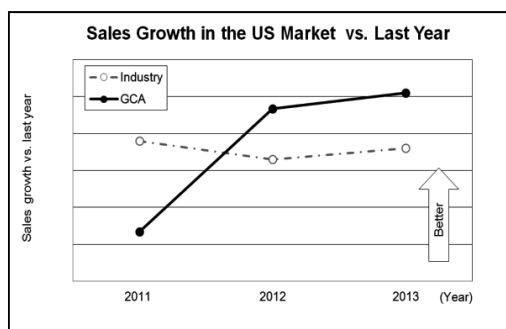


Figure 6.3 - Sales Growth in the US Market vs. Last Year

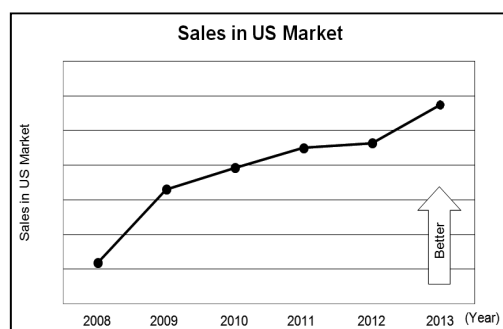


Figure 6.4 - Sales in US Market

### Business Strategy 3: Increase GCA Manufactured Products to meet the US Market Needs

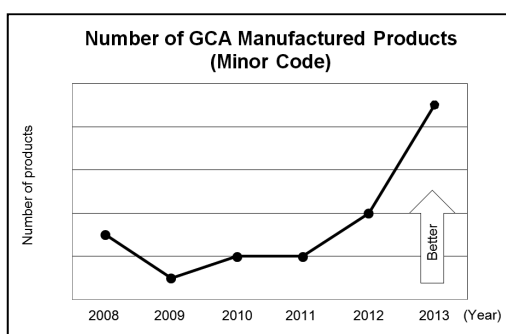


Figure 6.5 - Number of GCA Manufactured Products

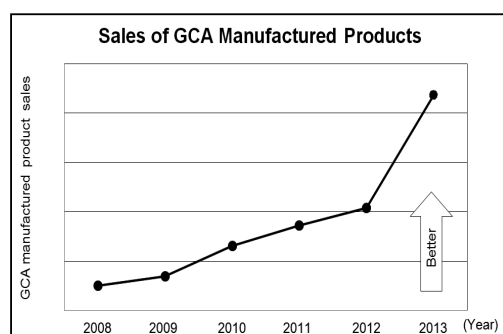


Figure 6.6 - Sales of GCA Manufactured Products

## Principals of Behaviors

1: Challenge for No.1 Market Share by Enhancing Communication with Customers based on VOC

2: Enhance Quality of Work by Implementing SEMUI and GC no Kokoro

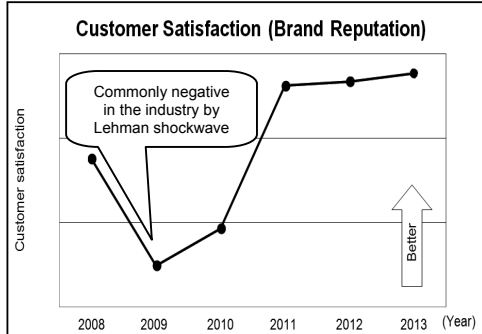


Figure 6.7 - Customer Satisfaction



Figure 6.8 - Dealer Satisfaction

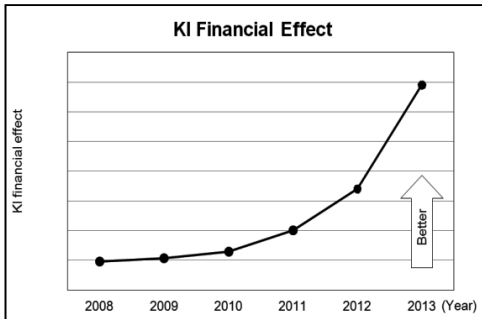


Figure 6.9 - KI Financial Effect

## 7. Future Plans

In the 21st Century, the world is getting smaller. People’s expectation to equally enjoy healthy human life is getting higher also in the US, Canada, and Latin America. In order to meet customer expectation, GCA has to promote “**Multinationalization**” and “**Area Strategy**”. We will increase manufacturing capacity by transplant and establish “**The Few and the Proud**” Sales Force.

In this circumstance, what GCA has to do is to share the Corporate Philosophy, “**SEMUI**”, spirit with the associates on site to take all actions based on the other party’s standpoint. We must expand GQM promotion continuously as a member of GC Group to contribute widely to the dental world.

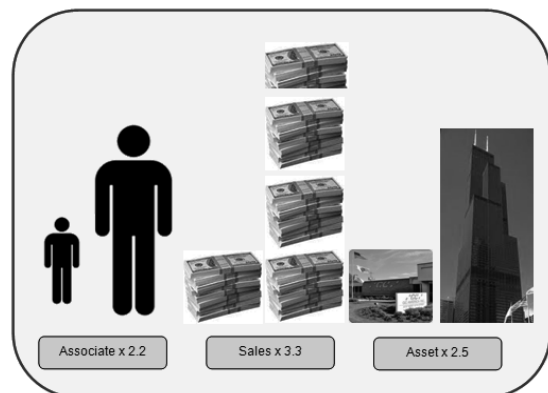


Figure 7.1 - GCA in 2021 vs.2013