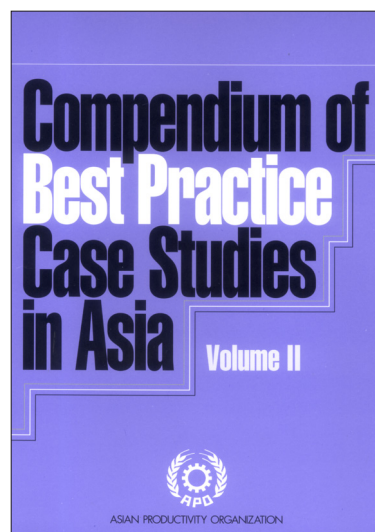From:

APO Best Practice Network: Compendium of Best Practice Case Studies in Asia, Volume II

©APO 2007, ISBN: 92-833-7053-8

Published by the Asian Productivity Organization
1-2-10 Hirakawacho, Chiyoda-ku, Tokyo 102-0093, Japan
Tel: (81-3) 5226 3920 ・ **Fax:** (81-3) 5226 3950
E-mail: apo@apo-tokyo.org ・ **URL:** www.apo-tokyo.org

Disclaimer and Permission to Use

This document is a part of the above-titled publication, and is provided in PDF format for educational use. It may be copied and reproduced for personal use only. For all other purposes, the APO's permission must first be obtained.

The responsibility for opinions and factual matter as expressed in this document rests solely with its author(s), and its publication does not constitute an endorsement by the APO of any such expressed opinion, nor is it affirmation of the accuracy of information herein provided.

Compendium of Best Practice Case Studies in Asia

Volume II

APO Best Practice Network
Compendium of Best Practice Case Studies in Asia

Contents

Foreword

In its commitment to enhance the productivity and competitiveness of organizations in the Asia-Pacific region, the Asian Productivity Organization (APO) has established the APO Best Practice Network (APO-BPN). It aims to generate, share, and transfer knowledge on best practices that will enable organizations in APO member countries improve their performance.

This second Compendium of Best Practices (Volume II) is a result of a year of benchmarking among participating national productivity organizations (NPOs) culminating in the 2005 APO-BPN Workshop in Bangkok, Thailand, where the NPO customer organizations shared their best practices. Volume I of the Compendium was similarly produced with best practices shared on three topics—People Performance Management, Balanced Scorecard, and Frontline Customer Service.

The best practices featured in Volume II also revolve around three topics — innovation culture, organizational excellence in SMEs, and how to do local benchmarking. To maximize productivity and competitiveness in today's knowledge economy, a culture of innovation is critical. Promoting organizational excellence among SMEs is also imperative as they are the economic backbone of a country and major contributors to GDP. Although there are proven benefits of organizational excellence models in large organizations, concerns arise regarding their unwieldy nature and resource load when these models are applied in their raw form to small organizations. Local benchmarking is important as well to parallel international benchmarking efforts of the APO-BPN. Some NPOs have had success in implementing local benchmarking and linking this with the APO-BPN to maximize knowledge transfer in their own countries. Other NPOs want to learn how best to do it and how to support their customers in benchmarking.

The Compendium uses the same format for both Volume I and II. The format consists of important knowledge base to understand the best practice in all aspects such as organizational profile, rationale and objectives of the best practice, its overall description, leading practices adopted, benefits gained, lessons learned, key performance indicators/ measures, recent improvements, and next steps for continuous improvement. The best practice companies have likewise been coded for the purpose of emphasizing the best practice rather than the company.

Volume II has been compiled as a result of the success of Volume I in assisting NPOs in their task of helping their customer organizations to improve. Through this Compendium, NPOs will now have the opportunity to disseminate best practice knowledge on the above topics in their own countries.

SHIGEO TAKENAKA
Secretary-General

Tokyo
February 2007

Preface

What is APO-BPN

The Asian Productivity Organization-Best Practice Network (APO-BPN) is a network of organizations in Asia with a common purpose of achieving competitiveness through sharing of best practices. The APO, the umbrella organization of APO-BPN, is a regional inter-governmental organization which aims to help its member countries increase productivity and achieve greater socio-economic development; and ultimately attain a better quality of life in the Asia-Pacific region. Each member country designates a national body to be its National Productivity Organization (NPO). NPOs are either agencies of the government or statutory bodies entrusted with the task of promoting productivity in their respective countries.

The best practice network aims to generate knowledge on global best practices that will be useful for NPOs in helping organizations in their country achieve best practice performance standards. It also seeks to support the transfer of best practice knowledge among organizations in the APO member countries and position the NPOs as leaders in the area of knowledge transfer.

The APO-BPN provides organizations with a useful platform for inter-country best practice benchmarking. Specifically, it helps them:

- identify where global best practices reside;

- gain useful knowledge on global best practices that will help them achieve superior performance;

- augment their own best practice networks or learning circles within their own countries by accessing the APO Best Practice Network for global knowledge; and

- learn how to acquire and apply best practice knowledge, including how to do benchmarking.

Why APO-BPN was established

In the knowledge-based economy, one key to competitive advantage of an organization is its knowledge on the best practices of others, and leveraging on it. Organizations, whether in manufacturing or services, have to benchmark themselves against the best standards or practices worldwide to achieve competitive advantage and business excellence. The best practice journey embraces the concept of organizations looking outwards to see what can create value for their stakeholders. The knowledge gained could be used to innovate on best practices, and thus, introduce methods that are better than the best.

Organizations on their own, however, often face difficulties in using best practice knowledge for performance improvement. They might neither be familiar with relevant sources for best practices nor able to get other organizations share their knowledge on best practices with them. Moreover, they might find the cost of gaining best practice knowledge limiting, and not have the know-how to use the knowledge gained to improve their operations. The NPOs could help overcome these barriers by collecting, organizing, and sharing knowledge on local and international best practices efficiently. They could also help facilitate the use of knowledge by organizations for performance improvement. Thus, a key initiative to support NPOs in undertaking this role is the establishment of a best practice network among APO member countries.

How APO-BPN works

The best practice network is composed of various stakeholders from the Asia-Pacific region. These are primarily the NPOs and their customer organizations, professional and industry associations, benchmarking experts, and the APO Secretariat. Each of them has defined roles and obligations to ensure efficiency and effectiveness of the APO-BPN.

APO-BPN aims to facilitate sharing and learning of best practices in specific areas of interest (or topic areas) among participating countries, so that there is rapid and efficient transfer of best practices. The entire best practice network process for each topic area is led by the NPO Working Group nominated to undertake the role of "driving" the sharing and learning process. The NPO Working Group consists of representatives from NPOs that have client enterprises participating in the network.

The APO-BPN Methodology

The best practice network methodology covers the programming and the benchmarking process. The programming process involves identification of projects that includes research and evaluation of topic ideas; preparation of topic information sheet; determining program of projects; development of project action plan, business case, and specific topic marketing kit; and research report.

The benchmarking process, on the other hand, starts with securing participation of organizations with outstanding performance in each country. This is followed by planning meetings and data collection and analysis. The results of the data collection and analysis are the leading practices that are shared among APO-BPN stakeholders through workshops. These leading practices are then disseminated through the NPOs and other forms of information dissemination such as internet and publications. The next step is integration of learning and follow-up actions. This may include dissemination of findings by the NPOs, further learning such as site visits and workshops, and development of action plans and
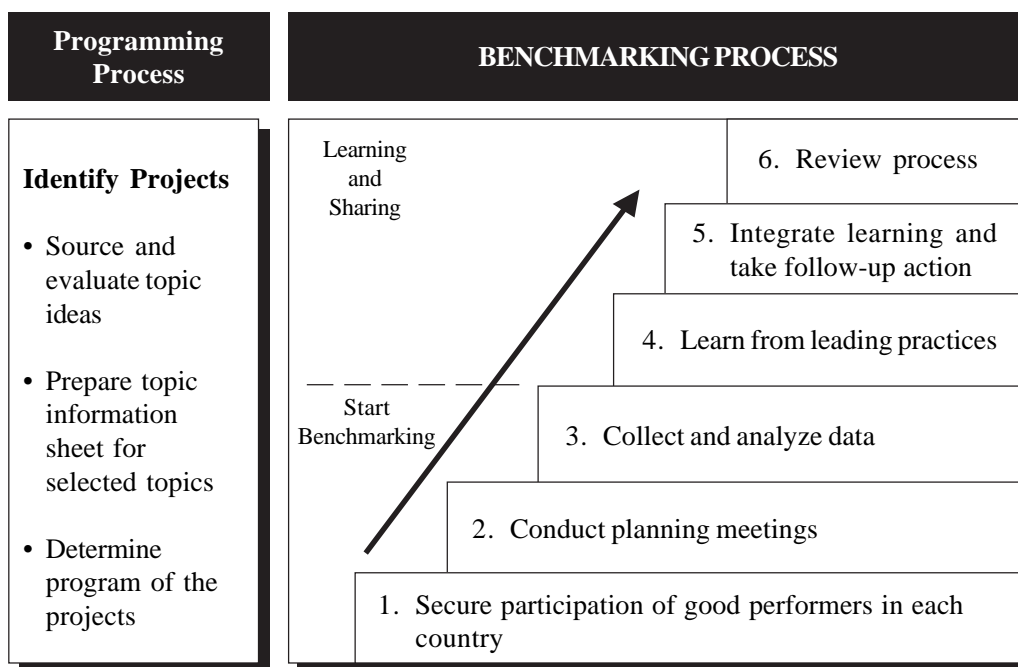
Programming Process	BENCHMARKING PROCESS

Identify Projects

- Source and evaluate topic ideas

- Prepare topic information sheet for selected topics

- Determine program of the projects

Learning and Sharing

Start Benchmarking

6. Review process

5. Integrate learning and take follow-up action

4. Learn from leading practices

3. Collect and analyze data

2. Conduct planning meetings

1. Secure participation of good performers in each country

Figure 1: APO-BPN Methodology Framework

implementation by participating organizations. The benchmarking process will culminate through a review process that will be the basis for improving the next cycle of the APO-BPN.

How APO-BPN started and how methodology was applied

During the APO study meeting held on April 24-27, 2001 in Singapore, the participants from 13 APO member countries agreed that a best practice network could be set up among the NPOs. The APO-BPN initially conducted best practice demonstration projects on topic areas of interest to client organizations of NPOs. A series of workshops was then conducted where the APO-BPN methodology was developed and applied.

First APO-BPN Workshop
Singapore
November 26-28, 2001

In the first workshop, the participants identified eight possible topics for demonstration projects. These topics were in the areas of the balanced scorecard, performance management system/people development and management, and customer focus and service. The topics were identified based on the needs of the NPOs' client organizations, and prioritized from eight possible topics through a process of agreement between the participating NPOs. In addition, a common benchmarking framework or methodology for

conducting the demonstration projects was developed. Hence, a standard, consistent method of securing the participation of NPO client organizations in the demonstration projects and of carrying out benchmarking across countries was established.

Second APO-BPN Workshop
Bangkok, Thailand
May 21-24, 2002

The second workshop was the planning phase or the first phase in the agreed-upon benchmarking methodology. Planning was done for the three selected demonstration projects—balanced scorecard, customer service, and human resources performance management system. Training on the methodology was also conducted so that project participants would be able to implement these projects in their own countries. The NPO representatives from Thailand, Malaysia, and the Philippines were appointed as project leaders for the balanced scorecard, human resources performance management system, and customer service projects, respectively. They were tasked to coordinate the project implementation activities of the participants in line with the timelines decided at the workshop. These project teams were assigned to secure the participation of best practice organizations, develop data collection tools, and prepare a report on the data collected.

Third APO-BPN Workshop
Kuala Lumpur, Malaysia
October 28-31, 2002

In this workshop, the project teams reviewed the methodology adopted for the demonstration projects based on their experiences during the implementation. The main interim findings in the demonstration projects were discussed and a preliminary list of learning needs and best practices were compiled. They also identified the specific follow-up actions to be taken for the demonstration projects over the next five months. In preparation for the fourth workshop, the project teams were tasked to complete the data collection, finalize the survey questionnaire matrix, finalize the learning needs template, and identify selected participating client organizations with best practices to address the learning needs.

Fourth APO-BPN Workshop
Manila, Philippines
October 14-17, 2003

In this workshop, the selected organizations in Asia presented their best practices on their respective topics—People Performance Management (PPM), Balanced Scorecard (BSC), and Frontline Customer Service (FCS). The project teams for each topic discussed the status of the demonstration projects including the challenges they faced in implementing the methodology, how these could be addressed, as well as the key findings from the demonstration projects. They also developed case study reports on individual companies which presented their best practices during the workshop. Site visits in three organizations

with corresponding topic areas were also conducted. Key findings from the cases under each topic area were identified including the approaches, benefits, and lessons learned.

Fifth APO-BPN Workshop
Kathmandu, Nepal
June 22-25, 2004

Twenty two participants from 15 APO member countries participated in the workshop to finalize the demonstration projects, review the benchmarking methodology, and plan for next best practice network projects. Three demonstration topics were prioritized and scoped—organizational excellence for SMEs, how to do local benchmarking, and developing a culture of innovation. The workshop also covered how to improve ongoing benchmarking collaboration among NPOs as well as how to enhance the use of e-benchmarking. Further, roles and responsibilities for the sustainability of the APO-BPN were identified and a one-year cycle for future projects was developed.

Sixth APO-BPN Workshop
Bangkok, Thailand
August 2-5, 2005

Twenty four participants from 14 member countries shared their best practices on the topics identified during the fifth workshop. The shared leading practices are expected to address the learning needs of the participating organizations. After the sharing, they developed the implementation framework for the adoption of the leading practices and reviewed e-benchmarking among NPOs. Follow-up activities over the next nine months were also discussed.

What is the purpose of this Compendium

This compendium is a compilation of the best practices shared by various organizations in Asia which participated during the sixth workshop. It is being published for the purpose of knowledge sharing among the APO member countries. The organizations represented in this compendium are coded to protect their internal confidentialities. This is also to emphasize the leading practices, rather than the image of the organization. Most of all, the best practices here are intended for replication or innovation to improve the performance of an organization.

Introduction

Organizations with the intent of enhancing their performance have various improvement approaches to choose from. Benchmarking is one of the effective management tools that can be used to create incremental changes as well as strategic reforms for the organization. The APO Best Practice Network (APO-BPN) provides a good venue for organizations in Asia to benchmark each other's best practices.

As defined by Benchmarking Partnerships (Australia), a best practice (also referred to as leading or outstanding practice) is something that demonstrably contributes to excellent business outcomes or results. It is something unique or different that others don't do. A best practice is not only a plan or intent, but also something that is well-deployed or utilized throughout the organization and is continually being improved. Moreover, it is something that is looked up to by peers and experts and viewed as very useful to learn about. It could be a plan of action, a method of widely implementing a plan, a way of measuring performance and using the results, and a way of improving performance.

During the sixth workshop of the APO-BPN, three new benchmarking topics were shared — Innovation Culture, Organizational Excellence in SMEs, and How to Do Local Benchmarking. These topics were selected through a voting done in the fifth workshop. As shown in Table 1, the first three topics garnered the highest number of votes above the rest of the topics submitted by the NPOs.

Table 1: Results of Voting for the Selection of Benchmarking Topics

Suggested Topics	Total No. of Votes
How to do Local Benchmarking	54
Organizational Excellence in SMEs	37
Developing Culture of Innovation	29
Six Sigma	29
Customer Satisfaction Indicators and Measures	27
Process Management	23
Organizational Competence	21
Lean Production	20
ISO 9000	18
Succession Planning and Talent Management	17
TQM for SMEs	16
Data, Information, and Knowledge Management	11
5S	9
Green Productivity	7
Environmental Management in the Hotel Industry	6
Suggestion Schemes	2
Women Entrepreneurs	2
Excellence in Leadership	2
Educational Excellence	0
Joint Labor Management Consulting Systems	0
Sustaining Best Practices	0

The APO member countries which participated in the demonstration project on **Innovation Culture** were the Republic of China, Malaysia, Vietnam, Pakistan, Singapore, and the Philippines. They shared best practices on innovation with the aim of gaining competitive edge for Asian countries, harnessing knowledge workers towards higher productivity, and widening innovation practices into other developing Asian countries. The scope of creating and sustaining innovation covered:

- leadership,
- managing knowledge workers,
- creating organizational climate,
- infrastructure and infostructure,
- obtaining ideas on innovation,
- types of incentives and recognitions,
- drivers of innovation or push factors, and
- key performance indicators (KPIs) for developing a culture of innovation.

For the demonstration project on **Organizational Excellence in SMEs**, the participating APO member countries were Singapore, Malaysia, India, Pakistan, Republic of Korea, Thailand, Republic of China, Philippines, Mongolia, and Sri Lanka. They shared best practices on business excellence framework that can help SMEs sustain and improve their business. Because the current business excellence frameworks were deemed to be overwhelming for SMEs, an SME expert helped in the demonstration project. Entrepreneurship and agility were identified as core competencies of SMEs. The benchmarking project considered frameworks that have been used by successful SMEs in various countries. The project also considered a possible "baby awards" framework that could be readily applied in SMEs based on similar frameworks in Malaysia and Singapore. The aim of the "baby awards" framework is to reduce the resource drain on SMEs and also to facilitate a more efficient and effective accreditation process.

The member countries which participated in the demonstration project on **How to Do Local Benchmarking** were the Philippines, Nepal, India, Pakistan, Republic of Korea, Iran, Bangladesh, Mongolia, India, Fiji, and Sri Lanka. They shared best practices on the common and systematic methodology in undertaking benchmarking studies. The objective of the demonstration project was to enhance organizational performance through strengthening of the NPOs' approach in world-wide benchmarking. Aligned with the APO mission, the topic scope covered:

- creating awareness between NPOs and their client organizations,
- how to set up a local benchmarking network,
- how to get members to the network,
- how to define topics on benchmarking,
- criteria used to define best practice companies,
- when an external expert is needed,
- roles of NPOs and client organizations,
- how to write best practice case studies,

- common benchmarking process,
- benchmarking the benchmarking process of other NPOs,
- how to sustain benchmarking activities,
- how to expand the network after the initial benchmarking,
- key performance indicators/measures of benchmarking, and
- how to disseminate/transfer best practice information/data/knowledge.

Organizational Excellence in SMEs

OE-001: RISING ABOVE THE REST

Organizational Profile

Over the past 37 years, OE-001's businesses have evolved from a traditional packaging printer into an integrated value chain service provider.

To date, the company has provided a wide range of turnkey services and products categorized into "Print Related" and "Non-Print Related" business activities:

Print Related
• Digital Pre-Press Database Management
• Packaging Design Services
• Offset Printing and Packaging Services
• Software/Hardware Turnkey Manufacturing Services

Non-Print Related
• 3PL Warehouse Management and Fulfillment Services
• 3R Management Services
• Online Distribution

OE-001 has manufacturing and service operations in Singapore, Indonesia, China, and Malaysia. It also has a network of joint ventures and strategic business alliances with Korea, Thailand, and Japan catering to the needs of customers and markets in these countries.

The company has a diverse client base composed mainly of multinational companies representing various industries such as information and communications technology, consumer electronics, pharmaceuticals, publishing and education, food and beverage, and advertising and promotions. Majority of OE-001's customers and markets require 100 percent quality, on-time delivery, responsiveness, and cost competitiveness.

Two print-related key customers have selected OE-001 to be their partner-supplier. The selection was based on the organization's consistency in its performance and the commitment it has demonstrated. As a partner-supplier, OE-001 participates in product development and improvement projects of these key customers and shares with them its business plan and improvement initiatives.

Some key customers' information systems are also connected to OE-001's internet and intranet, which facilitates sharing of information.

Two of the company's key customers in the IT sector have recently expanded their business relationship with OE-001. One has appointed OE-001 as its sole regional service

provider for the reverse logistics of its products, while the other as its principal supplier to handle its online distribution.

Currently, OE-001 has a total of 62 approved suppliers, eight of which are regarded as key suppliers accounting for 80 percent of commodity value. The company is in the process of developing its key suppliers to become partner-suppliers.

The raw material suppliers and the licensees of value chain management services are vital to OE-001's businesses. They provide raw materials and peripherals such as paper, chemicals, CDs, diskettes, and cables.

The licensees provide value chain management services to customers globally in accordance with the methods and quality levels prescribed through the Technology Licensing Program launched in 1999 by OE-001 to support the global access local supply (GALS) business model which the company innovated.

As a value chain management services provider, OE-001 works closely with suppliers selected by its customers. These suppliers could become its competitors; thus, OE-001 creates a balance between customer needs and its relationship with such suppliers.

OE-001 invests extensively in technology to enhance its business operations. Its offices are situated in TIC Tech Center, which was specially built in 1997. The building is fully equipped with fiber optic cable that makes OE-001 capable of high volume broadband data transmission. This allows OE-001's customers to communicate and transact business with them and transfer data and graphics digitally.
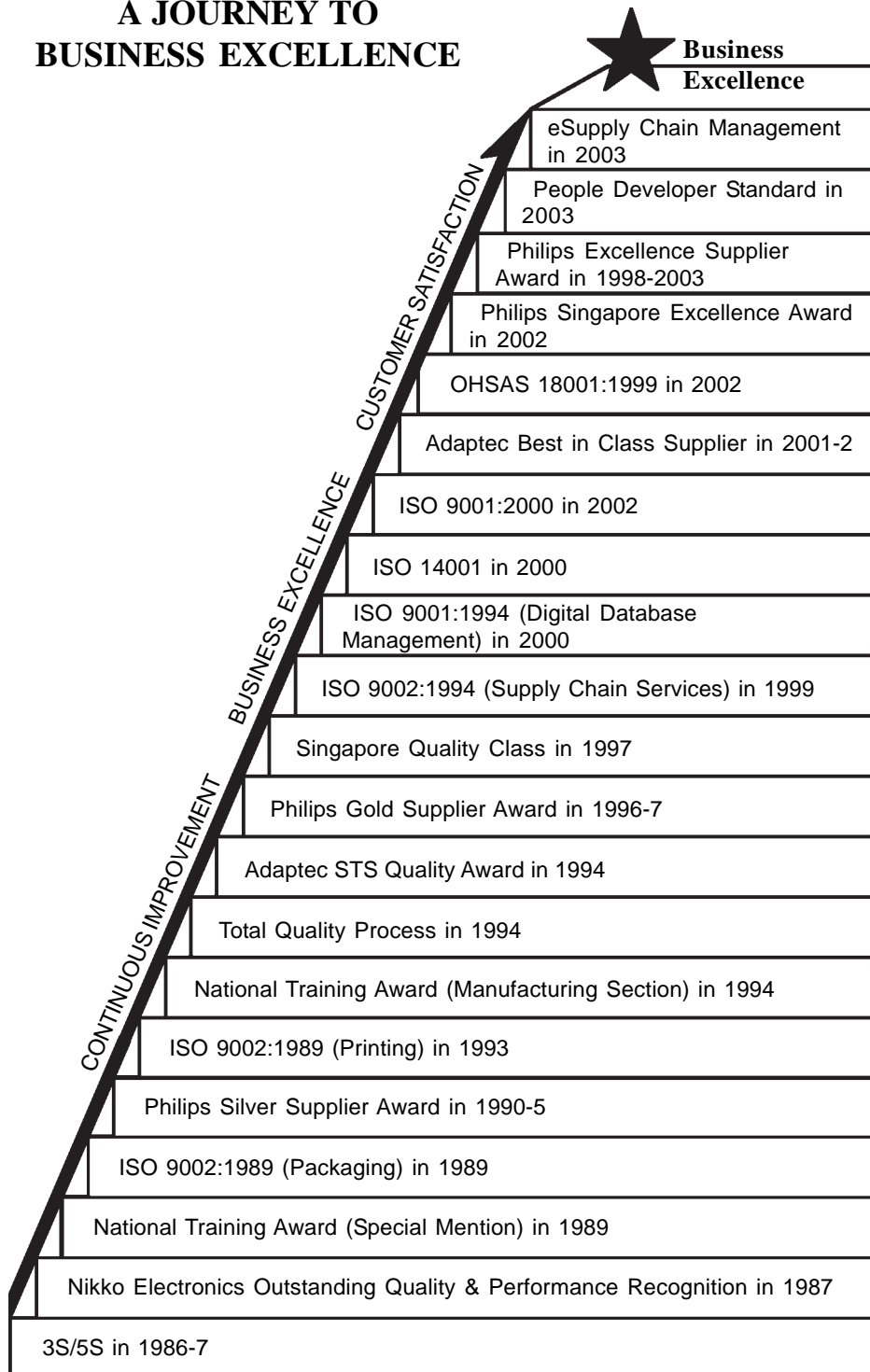
Information management at OE-001 is facilitated through a comprehensive and multi-dimensional IT application system that provides high-speed network and hardware for effective dissemination and sharing of information. It also has a web-enabled B2B ERP Business Systems where all the customers' production and manufacturing requirements are stored.

Other OE-001 facilities and services include computer integrated printing for full color offset printing (direct computer-to-plate digital printing), comprehensive in-house converting processes, semi-automatic kitting line, as well as automatic storage and retrieval system for logistics management services.

OE-001 was incorporated in Singapore under the Companies Act (Chapter 50). On February 19, 1994, it became a public company. It was admitted to the official list of the Stock Exchange of Singapore Dealing and Automated Quotation System on April 13, 1994. On May 5, 2003, it was upgraded to SGX-Mainboard. OE-001 is governed by the provisions of the Companies Act and by the regulations of the Singapore Exchange Ltd.

Most of OE-001's operations in Singapore are developed and managed based on ISO 9001:2000, ISO 14001:1999, and OHSAS 18001:1999 Standards and eSCM Certification.

A JOURNEY TO
BUSINESS EXCELLENCE

Business Excellence

eSupply Chain Management in 2003

People Developer Standard in 2003

Philips Excellence Supplier Award in 1998-2003

Philips Singapore Excellence Award in 2002

OHSAS 18001:1999 in 2002

Adaptec Best in Class Supplier in 2001-2

ISO 9001:2000 in 2002

ISO 14001 in 2000

ISO 9001:1994 (Digital Database Management) in 2000

ISO 9002:1994 (Supply Chain Services) in 1999

Singapore Quality Class in 1997

Philips Gold Supplier Award in 1996-7

Adaptec STS Quality Award in 1994

Total Quality Process in 1994

National Training Award (Manufacturing Section) in 1994

ISO 9002:1989 (Printing) in 1993

Philips Silver Supplier Award in 1990-5

ISO 9002:1989 (Packaging) in 1989

National Training Award (Special Mention) in 1989

Nikko Electronics Outstanding Quality & Performance Recognition in 1987

3S/5S in 1986-7

CUSTOMER SATISFACTION

BUSINESS EXCELLENCE

CONTINUOUS IMPROVEMENT

Rationale and Objectives

To fulfill its vision, OE-001 has to be competitive not only in its pricing but also in its creativity and innovativeness in providing solutions needed by its customers. The challenge is not just to be better but also to rise above the rest. The organization competes on capability and not on pricing. To do this, OE-001 strives to:

- strengthen the current competency of its personnel and provide ways for them to improve their competency to meet new and future requirements of the customers,

- re-invent business model to cope with regional and global competition,

- attract and retain human resource talents who are capable of meeting the business needs regionally and globally,

- develop more partner-customers whose businesses are operating globally, and

- improve company profitability and liquidity to support its strategic objectives.

Leading Practices Adopted

OE-001 considers the following as contributing factors in the organization's success:

- Strategic directions are well-defined.

  A vision statement and a set of core values are developed and communicated to all levels of the organization as well as to its key stakeholders. The key issues and priorities relevant to achieving the strategic objectives are defined and reviewed regularly.

- The voices of customers drive team outcomes.

  Customers are clearly identified and their needs are analyzed, evaluated, and translated into product and service requirements. Customer satisfaction is measured to gather information for improvement.

- Leadership is committed, involved, and shared.

  Top management is committed to continuous improvement within the organization. They strive to reduce barriers between functions and promote teamwork and open communication. Leadership, accountability, and responsibility are shared throughout the organization.

- Processes are continuously improved

  Improvement initiatives are linked directly to the goals and objectives of the organization. Process improvements are implemented, monitored, and embedded to ensure consistency.

- Visionary Leadership

  The progressive attitude and vision of OE-001 senior leadership plays a major role in the continued growth and success of the organization. The company has transformed itself from a traditional printing and packaging entity to a more diversified business providing supply chain solutions to its customers, in addition to its printing business.

  The flexibility of the organization in embracing new business models and venturing into new markets are a proof of the top management's visionary leadership. In addition, the leadership has also taken the responsibility of gradually shifting from a traditional family business to a progressive corporation that adopts some of the cutting edge management practices.

Benefits Gained and Key Lessons Learned

For OE-001, organizational excellence is a self- assessment approach to enhance the effectiveness, competitiveness, and flexibility of the business as a whole. It is a quality process where all employees work together to eliminate mistakes and improve the process towards the achievement of business excellence.

Because of the company's leading practices in organizational excellence, there is a rapid deployment of business strategy. Work and resource allocation priorities become more self-evident in the organization. Employees have become aware of their individual purpose and how their contributions help in achieving the strategic goals of the company, thus making them appreciate the value of their work.

Next Steps for Continuous Improvement

OE-001 looks forward to extending business excellence beyond its Singapore headquarters. To achieve this, OE-001 plans to develop the competency of its internal assessors' team, explore the best practices that lead to continuous improvement, align results with its strategic objectives, and develop holistic management approaches to ensure business continuity.

References:

1. Daniel Buenas, "Changing with the times", Business Times, November 2003, http://businesstimes asial.com.sg/story/0.4567.00.html.

2. Decision Process International, "Leveraging Change into Strategic Advantage", http://www.decisionprocesses.com/results/teckwah_interview.asp.

3. SCCCI, "Fastest Growing 50 in 2003". http://English.scci.org.sg/index.cfm?GPID=286.

4. National University of Singapore, "NUS Business School up with more Chinese universities with keen support from industry". http://www.fba.nus.edu.sg/news/pr200502a.htm.

5. Steven Ng, "Fund and Games" September 24, 2003, Computer Times Technology, http://computertimes.asiaone.com.sg/specials/story/0.5104.1359.00.html.

OE-002: MEETING CUSTOMER'S EXPECTATIONS THROUGH ORGANIZATIONAL EXCELLENCE

Organizational Profile

OE-002 started in 1983 as a trading company. In 1984, OE-002 started manufacturing leather products; and today it becomes the top selling brand for high-end consumers. OE-002 exports 30 percent of its products to China, Singapore, Middle East, and the Philippines; while 70 percent of its production is for the local market.

The company has around 200 employees with around 130 involved in the production aspect. The rest are in the sales, administration, and marketing departments. Since 2002, OE-002 has significantly increased its sales from 3 percent to expected 6 percent in 2005.

Rationale and Objectives

OE-002 has adopted the process improvement system to ensure waste reduction and meet customer expectations at the lowest production cost possible. Its key objectives are to ensure effective process management through *Kaizen* practices, 5S, and ISO-9000, and instill awareness among all employees on the need to stay efficient and continuously enhance their skills.

Overall Description

The system consists of better human resource management through continuous staff training and skill development, waste reduction techniques through *Kaizen*, and ISO-9000 to ensure quality of products.

Leading Practices Adopted

Strong leadership of top management ensures the successful implementation of process management techniques, such as visual management. Leadership in OE-002 is characterized as interactive and motivated. Employees are encouraged to participate in management decision making. The company's staff are involved in highlighting divisional key performance indicators (KPIs) and effectively displaying them for continuous monitoring and evaluation. OE-002 has also strong focus on training. It taps external expertise and follows up at least twice a year the current practices being adopted. Government support is one of the key factors that drive OE-002 towards organizational excellence.

Benefits Gained

Attributing to its organizational excellence, OE-002 has gained:
• sales increase,
• reduced wastage,
• enhanced market performance,

- higher ranking,
- higher staff morale, and
- system-focused approach.

Lessons Learned

The company used to have problems in identifying critical areas in the manufacturing process as well as in the existing bottleneck prevalent in the system. In response, OE-002 hired external consultants to perform systems maintenance, which is being monitored through bi-annual surveys in the company.

Another problem faced by OE-002 was the rapid diversification and the rising cost of leather in recent years. Thus, the company consolidated its production and focused on its premier brand.

Key Performance Indicators/Measures

OE-002 uses internal measures such as growth in sales, market performance, divisional KPIs, and waste reduction. It considers the Prime Minister Industry Award which it received as a leather industry as one of its external measures of success.

Recent Improvements

Due to customers' demand for reducing the manufacturing cost, OE-002 initiated "Enhancing Productivity through higher Sales per Employee".

Next Steps for Continuous Improvement

To ensure higher quality and more efficient production system, OE-002 plans to join the Thailand Quality Award program.

OE-003: EMPOWERING EMPLOYEES BRINGS ORGANIZATIONAL EXCELLENCE

Organizational Profile

Main products and services

OE-003 is a small enterprise engaged in the design, manufacture, and export of decorative earthenware ceramics. It started in 1994 as a manufacturer and exporter of its products. The closure of Arte Ceramica in 1996, a major source of sales of OE-003, paved the way for its venturing into product design and marketing as the key personnel of Arte Ceramica who were tasked with design and marketing were eventually absorbed by the company.

OE-003 currently sells decorative and functional (specialty dinnerware) ceramics to the local market through its own retail stores called "The OE-003 Shop". The first retail store was established in 1997 as a factory outlet in San Pedro, Laguna. More retail outlets subsequently opened in various malls in Metro Manila.

In addition to decorative earthenware ceramics, OE-003 produces industrial ceramics of porcelain balloon formers that are used by two Philippine manufacturers of latex balloons.

Key markets and customers

In 2004, 61 percent of OE-003's products were made for the export market and 39 percent were produced for the local market. Decorative earthenware ceramics were exported directly to importers and retailers abroad, with the US market accounting for 80 percent of the total export sales. The rest were sold to other countries such as UK and Australia.

Of the total amount produced for the local market, 59 percent were supplied to OE-003's own retail outlets and 31 percent to other retailers and balloon manufacturers.

Key suppliers and partners

OE-003 sources all its raw materials and other supply requirements from local importers and distributors. Logistics are outsourced from transport providers.

OE-003 has partnered with three educational institutions to provide on-the-job training programs for students. It is a member of the Philippine TQM Foundation that provides training and support in total quality management. It collaborates with the Industrial Technology Development Institute of the Department of Science and Technology for future production of advanced ceramics. The company also works with the Department of Trade and Industry through its Technical Committee 29 for Ceramics and Ceramic Products chaired by OE-003's CEO.

Major technology and facilities

There are three major technologies used in the production of ceramics: (1) high-temperature technology, (2) glaze technology, and (3) body formulation technology.

High-temperature technology. The manufacture of ceramics involves the application of high temperature to transform raw materials from the earth into hard and dense ceramics. The key equipment is the kiln, which is fired by LPG at a temperature in excess of $1100^{\circ}C$.

Glaze technology. Glaze is a thin layer of fused glass that makes ceramics glossy. Over 90 percent of OE-003's ceramic products are glazed and it is important to consider the compatibility of fired ceramics body with the glaze. Incompatibility of the body with the glaze can result in numerous kinds of defects in the finished products. Hence, a thorough knowledge of glaze technology plays a major role in ensuring the viability of ceramics manufacturing.

Body-formulation technology. A complete know-how of body-formulation methods is essential and critical in the ceramics business. Because of the instability of raw materials obtained from the earth, constant adjustment of body formulation is necessary to ensure that specifications are achieved during processing. The whole process should be closely monitored from the first phase of forming to the final stage of firing.

Rationale and Objective

Competitive environment

During the peak of decorative ceramics production in the Philippines in 1994, the country recorded a total output of less than 0.2 percent of the world market for ceramics. Today, the country's market share has dipped further with the closure of more than 80 percent of ceramics manufacturers that started in 1995. Like in other manufacturing business, China is the dominant supplier followed by other Asian countries such as Vietnam, Thailand, Indonesia, and Sri Lanka.

Although there are no available data on the market share of Philippine manufacturers, OE-003 believes it would perhaps rank second or third among the manufacturers of "white" decorative ceramics in the Philippines (excluding red clay or terra cotta manufacturers). This could be verified with Philippine government institutions such as the Bureau of Customs, Bureau of Export Trade Promotions, and non-government organizations like the Foreign Buyers Association of the Philippines.

Key challenges

Rising cost of inputs. Because ceramics manufacturing is labor and energy intensive, the long-term viability of OE-003 as a contract manufacturer for foreign importers,

distributors, and retailers remains a concern. The steep rise in the price of oil and the increase in wages have severely affected the profitability of all ceramics manufacturers.

Poor sourcing of raw materials: Being a small enterprise, OE-003 does not have adequate volume to directly import raw materials from reliable suppliers abroad. The company is dependent on local importers from whom it has no control over the quality of raw materials. Sourcing of raw materials from local importers also entails higher costs.

Lack of modern equipment: OE-003's kilns are manually operated and are more than 10 years old. To remain competitive with other countries, it needs to upgrade not only its kilns but also its other equipment.

Organization's Excellence Journey

With assistance from various Philippine government agencies, the private sector, and international organizations, OE-003 was able to implement the following improvement programs:

1997	Work Improvement for Small Enterprises (WISE)
	Industrious, Systematic, Time-conscious, Innovative, and strong Value for work (ISTIV)
1994-1997	Manufacturing Productivity Extension (MPEX)
1998	Environmental Management System (EMS)
2000-present	Total Quality Management (TQM)

Leading Practices Adopted

Best Practices Contributing to Superior Performance

On the basis of the definition that a best practice is something unique or different that others don't do, OE-003 believes it has yet to come up with its best practice. However, if one were to choose a practice at OE-003 that has contributed to superior performance, it would have to be its employee involvement activities.

Two of such activities have been implemented at OE-003. In June 2004, Quality Control Circle (QCC) activities were initiated as part of the company's employee involvement program. Seven circles completed seven projects in 2004 and nine circles were registered in January 2005. For year 2005, OE-003 targeted to implement a total of 18 projects with themes that should align with the chosen company theme—"Target 50". It means that employees should aim for 50 percent improvement of the current situation. This is based on the belief that a stretched target will improve the ability of employees to be more creative and innovative.

OE-003 held QCC project presentations and a competition in August 2005; the second round was conducted in December of the same year. The winner of the first company competition was presented in the Philippine TQM Foundation's QCC Presentations held in September 2005.

Because of the experience gained by the in-house trainers of OE-003 in launching QCCs, they have been invited by other companies to introduce QCCs to their employees. The same trainers have been asked to conduct the seminar at a sister company of OE-003.

OE-003 has initiated another employee involvement activity, the suggestion scheme, which is called "Quick and Easy Kaizen" (after the title of a book authored by Norman Bodek). In 1998, OE-003 launched a suggestion scheme named "McGyver Awards" which was renamed the "Bright Ideas Award" in 2003. However, this was not widely implemented because of the numerous problems that included a tedious approval procedure, the lack of formal documentation, and the lack of promotion and reward system. The activity failed to motivate the employees.

With *Quick and Easy Kaizen*, suggestions are no longer approved by top management but by supervisors who work with the originator of the idea in implementing the suggestion. The form suggested by Norman Bodek was adopted to simplify the documentation of the suggestion. In the old suggestion scheme, only a total of five suggestions were received from all employees for the entire year of 2003 and none in 2004. However, with the implementation of *Quick and Easy Kaizen* in May 2005, a total of 17 suggestions have been received and implemented after only two months of introduction.

Four examples are shown below:

Quick & Easy Kaizen	No. 004
Before Improvement Applying tape to seal the hole during glazing takes time and consumes too much tape. 	***After Improvement*** I made a rubber plug to seal the hole.
The Effect: The plug saves time and is reusable.	
Submitted by: Alvin Heredia	Date: May 14, 2005

Quick & Easy Kaizen   No. 007

Before Improvement	*After Improvement*
Painting takes too much time and coating is sometimes uneven.	I joined three brushes to come up with a wider one.

The Effect: Painting time was reduced and the coating was made more even.

Submitted by: Alvin Heredia   Date: 24 June 2005

Quick & Easy Kaizen   No. 011

Before Improvement	*After Improvement*
Vase always cracks at the bottom upon drying.	I had a special tray made with a hole in the center. This tray was elevated to allow air to circulate at the bottom of the base for a more even drying.

The Effect: Cracks were eliminated at the bottom of the vase.

Submitted by: Flory Flores   Date: 10 June 2005

Quick & Easy Kaizen	No. 016
Before Improvement Paper is placed underneath the dripping pipes. Paint and paper are wasted.	**After Improvement** I made a metal sheet trough to collect the dripping paint into a can.

The Effect: Paint and paper are not wasted and cleaning is avoided.

Submitted by: Noe Pertez Jr.	Date: 27 June 2005

Key Factors Contributing to the Organization's Success

OE-003's mere survival in the Philippine decorative ceramics industry could be regarded as remarkable considering the business closure of more than 80 percent of the players, after China's entry into the export market. The profitability of OE-003's factory operations in the past year and the increase in export sales in the first half of 2005 has been the "icing on the cake".

OE-003 considers its people as one of the key contributing factors to the organization's success because of their continued support and cooperation with management and its programs. With the setting up of activities that call for employee involvement, this cooperation is expected to be stronger.

Another major factor is the company's flexibility to adapt to its changing environment. When foreign buyers of decorative ceramics moved from the Philippines to China beginning in 1997, OE-003 had established local retail outlets. This enabled OE-003 to survive when others were folding up due to lack of foreign orders. With the current downturn in the local market for decorative ceramics, OE-003 is once again adapting by slowly exiting the local retailing business to concentrate on the export market.

Continuous product development also contributes to the success of OE-003. Decorative ceramics is likened to the fashion business where trends change fast in terms of colors and shapes. A full pipeline of new products ensures continuous placement of orders by foreign buyers. This is accomplished at OE-003 by its participation twice a year at the Manila FAME (Furnishings and Accessories Manufacturers' Exchange), an international exhibit and trade fair for gifts and housewares.

Finally, the adoption of TQM has likewise helped in the company's goal towards success. OE-003 has benefited from implementing better and improved internal systems. Quality principles are slowly being instilled in the minds of its staff that could result to better employee performance in the years ahead.

Benefits Gained

Although cost savings from QCC and *Quick and Easy Kaizen* have not been substantial, these two employee involvement activities have imparted to the employees the need for continuous improvement in everything that they do. As a member of the Philippine TQM Foundation, OE-003 has often been cited for its implementation of QCCs despite its size as an SME. For over 25 years, it was mostly the multinational and large companies which have been practicing QCCs in the Philippines.

The creation of self-directed work teams has been the ultimate goal of all employee involvement initiatives that have been launched and will be launched by OE-003.

Organization's Key Performance Results

OE-003's key performance results show an overall trend of improvement in the last three years (as shown in Figures 1 to 4):

	2000	2001	2002	2003	2004
Factory Sales	100.00	81.42	74.87	109.75	117.89
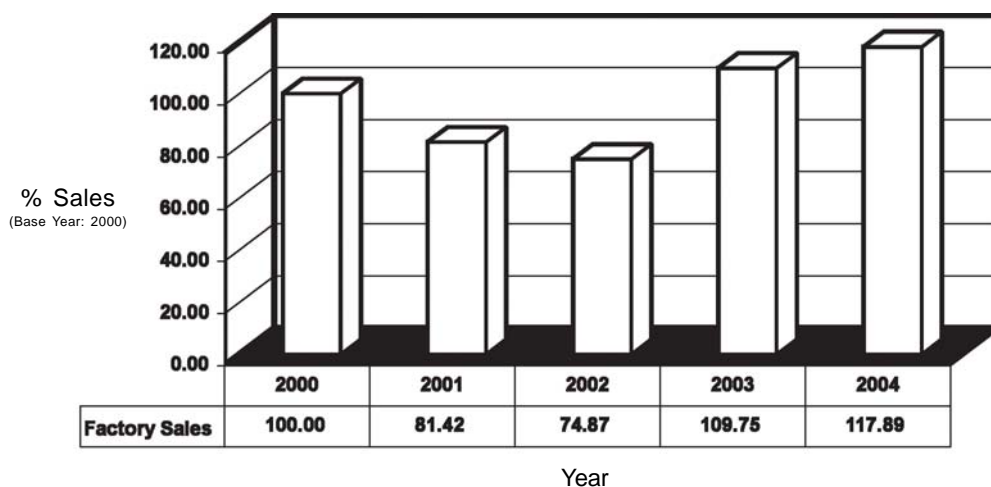
Year

Figure 1: OE-003 Factory Sales from 2000 to 2004
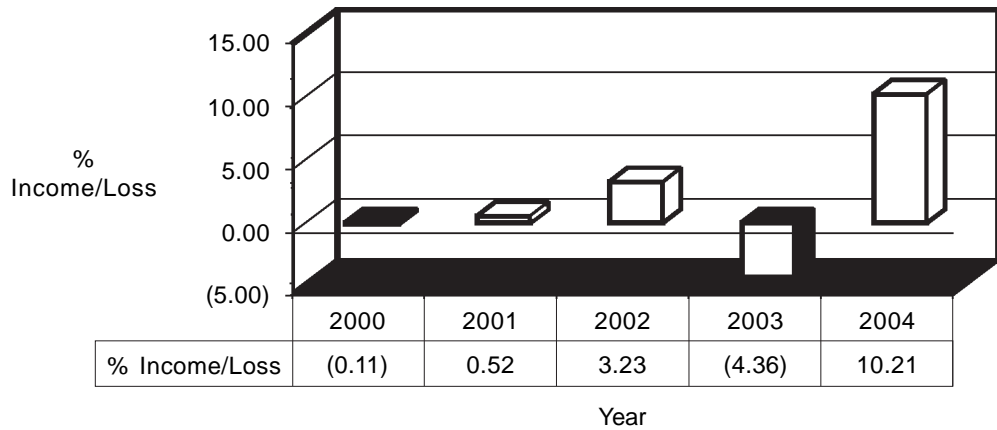
Figure 2: Income/Loss as Percentage of Sales from 2000 to 2004

	2000	2001	2002	2003	2004
% Income/Loss	(0.11)	0.52	3.23	(4.36)	10.21

	2002	2003	2004
Productivity	100.00	95.29	101.97
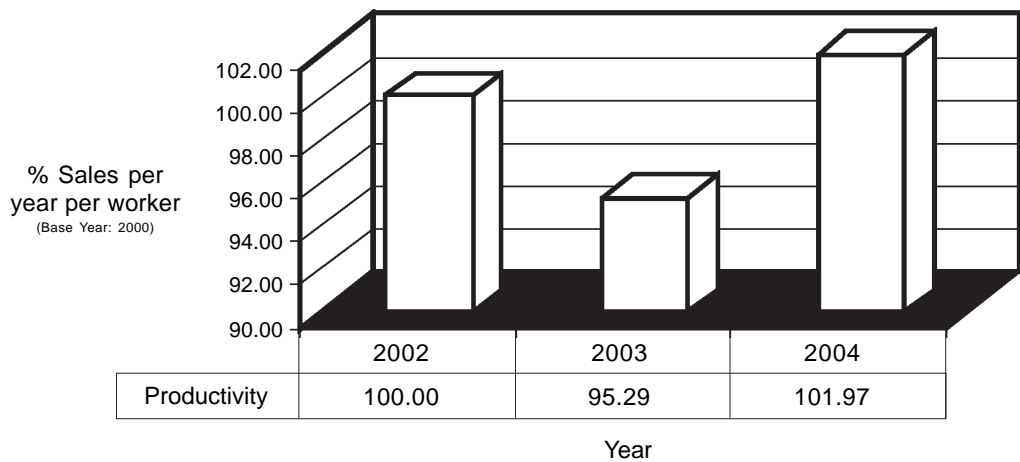
Figure 3: Productivity expressed as % sales per worker per year (base year: 2000) from 2002 to 2004
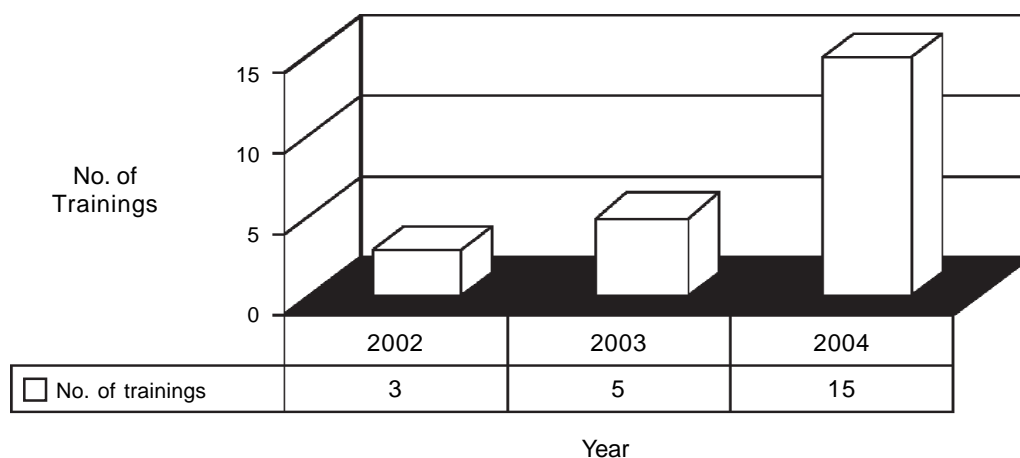
Figure 4: Number of training programs and QCC projects as a measure of moral.
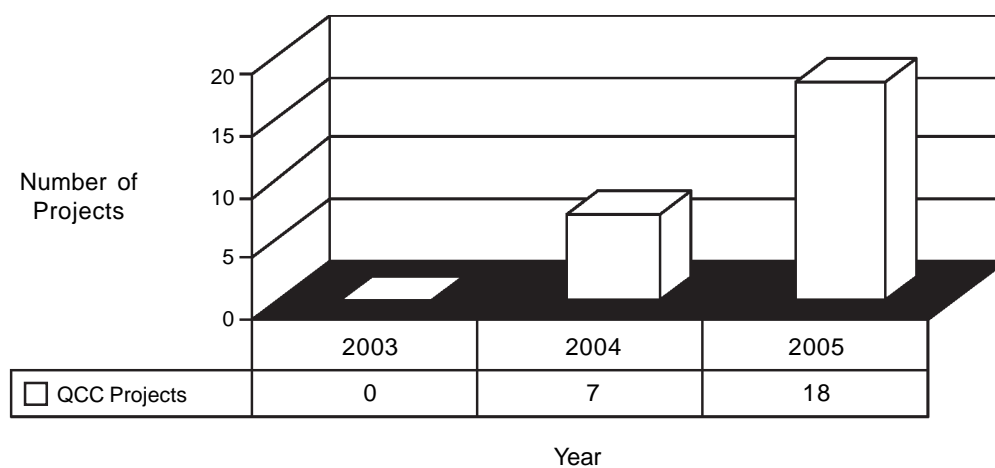
Figure 5: QCC Projects

Recent Improvements

In addition to the QCC and *Quick and Easy Kaizen*, OE-003 launched the Small Group Activity or SGA in October 2005. While QCC projects are limited to problems in one area and take six months to finish, the SGA is for cross-functional teams and is intended to address projects that can be implemented in three months or less.

Next Steps for Continuous Improvement

OE-003's journey to business excellence will continue with its adoption of the Philippine Quality Award as its framework for achieving organizational excellence. This framework will enable OE-003 to integrate its TQM initiatives with other improvement programs such as Six Sigma and Lean Manufacturing, which it hopes to implement in the future.

Culture of Innovation

CI-001: INNOVATION FOCUSED ON CUSTOMER AND QUALITY

Organizational Profile

CI-001 belongs to the Sumitomo Group and is currently the second largest brewery in Japan employing 4,233 employees. In 1998, it recorded sales amounting to US$ 9.7 billion. CI-001 registered a business growth of four times its sales in the last ten years. Its market share increased from 24 percent in 1992 to 35 percent in 1997.

Rationale

CI-001 has been in the market for the last 110 years. When its business performance was below expectations, CI-001 brought in a new CEO to review its business processes and practices. He quickly adopted the company's philosophy—"Customer First" and "Quality as Highest Priority". Emphasis was given to product improvement, customer satisfaction, and leveraging performance using the Japan Quality Award (JQA) Business Excellence Model.

To regain CI-001's market position and continue to supply fresh beers to customers, the management decided to embark on a journey to excellence. There have been actions taken to improve the internal business processes.

Overall Description

CI-001 has adopted the JQA Model as basis for improvement and applied its philosophy into sales, production, and development. The company focuses on the elements in the JQA which are leadership, strategic planning and development, human resources development, process management, customer market knowledge, and knowledge management.

Leading Practices Adopted

Leadership

With strong leadership and passion for excellence in performance, the management has outlined the following concrete actions:

- set a clear vision such as attaining customer satisfaction through providing the highest quality products combined with promotional activities;
- provide clearly defined corporate action policy for better understanding and operation;
- communicate extensively corporate policy, business plan, and slogan in its New Year message;

- conduct visits by top management to key customers; and
- conduct regular company visits to improve communication with employees.

Strategy Development

CI-001 takes every effort to understand the needs and expectations of its customers. The company conducts an annual survey among 5,000 customers to understand their preferences on beer taste. It also conducts survey on food menu of schools to know the taste of the younger generation. This strategy has led to the development of products that are accepted by the customers.

Product Excellence

Guided by the concept "same quality and taste anywhere", CI-001 gives priority to monitoring and controlling beer from production to market. The Fresh Management Project Team reviews the supply chain system and is able to set seven days as delivery target. The packaging system has been customized to pack and produce products in good condition. The fresh management system ensures that customers get quality beer. All beers remain in the market for only three months; after which, they are returned to the company.

Customer and Market Knowledge

To improve its customer and market knowledge, CI-001 has undertaken the following initiatives:

- review of the whole value chain of customers to better understand their needs;
- regular visit by salesmen, market ladies, and sales promotion personnel;
- proposal on beers appropriate to different food styles;
- regular and proper maintenance of draft beer server equipment;
- analysis of consumers' feedback and action proposal to management; and
- establishment of a call center and focus group to collect information and measure customer satisfaction.

Benefits Gained

The culture of innovation has brought several benefits to the company such as energy conservation, reduction in carbon dioxide, increased productivity, and improved business performance.

Key Performance Indicators/Measures

The key performance indicators of CI-001 are:

- savings in electrical energy which was reduced from 1.51 kilowatt per hour (kwh) for every litre in 1994 to 1.35 kwh in 1996;
- fresh management system of which delivery target was reduced from nine days in 1992 to five days in 1996;
- productivity improved from 87,000 cases per employee in 1992 to 117,000 cases per employee in 1994; and
- customer satisfaction improved remarkably from 26.2 percent in 1993 to 40.9 percent in 1997.

CI-002: INNOVATION IN TECHNOLOGY, INNOVATION IN LIFESTYLE

Organizational Profile

CI-002 is into the computing, communications, and consumer electronics business. It provides digital lifestyle devices to industries and individual consumers in the Asia Pacific region, Europe, America, and China. It has 13,000 employees.

Rationale and Objectives

CI-002 has adopted the culture of innovation to achieve higher competitiveness and address its customers' specific needs. It aims to improve the productivity of its workforce and improve the quality of its products. Further, the culture of innovation in CI-002 has the objectives of increasing the market share and revenue of the company.

Leading Practices Adopted

CI-002 innovates in the areas of information technology, organizational technology, human resource management, product design, and process management.

It strengthens its networking, project management, and business intelligence in the area of information technology. Organizational effectiveness is ensured by leveraging on CI-002's business groups, manufacturing, research and development, as well as on its business partners. The company retains its talents by continuously improving its recruitment process, maintaining a talent database, providing training, and job rotation. The company makes sure that its product designs are market specific, value driven, and environment friendly. Its process management has a global outlook, internal alignment, and key performance indicators.

One of the leading practices adopted by CI-002 is the integrated supply chain management linking its suppliers, internal operations, and channel partners. The company's material and production planning includes vendor management inventory to align replenishment, manufacturing, and fulfillment. CI-002 also promotes knowledge sharing among its employees through the intranet and provides patent incentives.

Benefits Gained

CI-002's revenue has been doubling every two years. It is one of the leaders in the IT market and communication products. Through the supply chain management system, CI-002 is able to address its customers' demands. Because of its efficient inventory control, the company is able to secure material supply and quick response on production. Employees are also motivated through knowledge sharing and patent incentives.
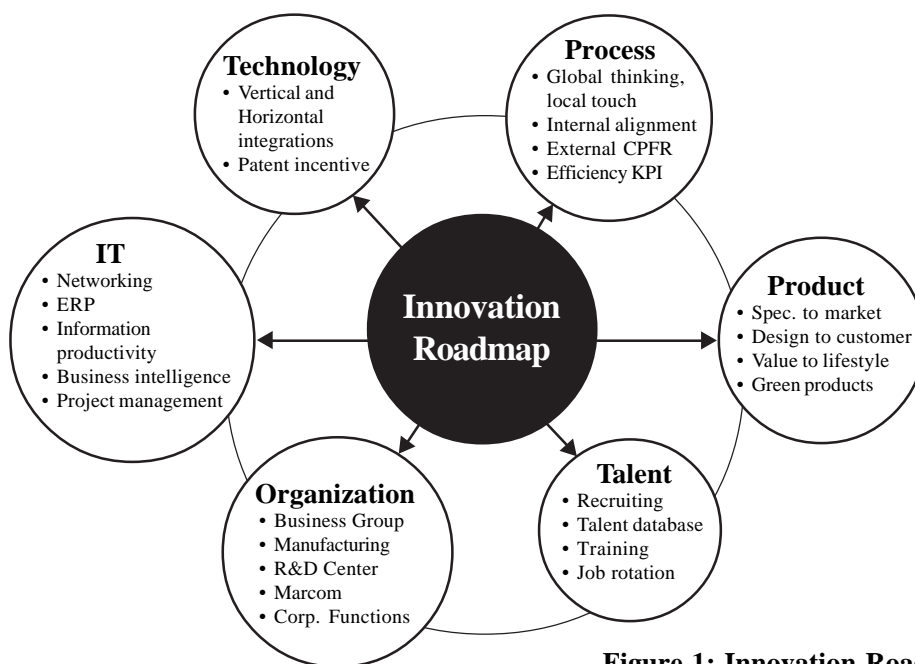
Figure 1: Innovation Roadmap

Lessons Learned

CI-002 addresses the lack of documentation from engineers by providing incentive schemes and defining its key performance indicators.

Key Performance Indicators/Measures

CI-002 measures the effectiveness of its innovation approaches through the number of patents registered and new products developed annually. To date, CI-002 has 2,300 patents and it develops 10 new products annually.

Recent Improvements

Some of the improvements introduced by CI-002 are:

- innovation in lifestyle which enhances the customer's experience;
- digital image enhancement technology which produces higher definition visuals that are deeper, richer, and clearer; and
- measurement laboratory certified by both government and customer to enable quality assurance.

Next Steps for Continuous Improvement

To differentiate its products in the global market, the company is looking into developing radio frequency product in mobile phones.

CI-003: CUSTOMER SATISFACTION FIRST

Organizational Profile

CI-003 is a consumer electronics company which specializes in the manufacture of car stereo component, car CD player, GPS car navigation system, and communication navigation system. Its customers are people who expect better information and communication equipment such as HiFi audio in their cars. The company's brand slogan is "Sound, Vision, and Soul"; its vision is to become an "Entertainment Creation Company"; and its objective is "Customer satisfaction is the first priority".

Rationale and Objectives

Ten years ago, CI-003 was in a serious financial situation. Its market eroded and the prices for electronic product went down due to stiff business competition. These problems were further compounded with the company's attitude of not listening to its customers. What triggered CI-003 to promote a culture of innovation was a serious complaint from a customer about the quality of the company's products. The management decided to improve its business performance by giving emphasis to the voice of the customers.

CI-003 has also concentrated on applying the Japan Quality Award (JQA) principles to improve its processes and products.

Leading Practices

Deployment of culture of innovation

The culture of innovation or CI has been deployed through understanding customers' needs and developing new requirements for the new car life entertainment. To accelerate the self innovation concept, CI-003 fosters the culture of excellence by motivating and challenging the spirits of employees. CI-003 also encourages open communication, where employees are given opportunities to contribute to the well-being of the organization.

Top management commitment

The top management has promoted the "Three Gen Slogan — Genba (operation site), Genbutsu (products), Genjitsu (fact)" to foster CI within the company. Meeting the challenges outlined in the JQA model has accelerated the spirit of improvement. To further promote CI and attain customer satisfaction, the management conducts the "Customer Satisfaction Town Meeting", a venue for customer complaints and recommendation of remedial plans and actions.

Customer relationship

A systematic structure has been established to collect consumers' opinion. Surveys are conducted among end-users and customer requirement sheets are administered. Specifically, CI-003 focuses on the quality and safety of products, smooth delivery, and aftercare service. This is to ensure the establishment of customer loyalty where key performance indicators or KPIs are used to measure SBU's performance on customer satisfaction.

CI-003 has redefined its customers and identified their requirements. It has segmented the market according to product categories, sales channels, and areas. Subsequently, it has adopted a management policy based on the JQA. Some of the elements in the management policy are: (1) customer satisfaction first, (2) quality improvement worldwide, (3) management based on human development, (4) focus on environmental and social harmony, (5) focus on profit/cash flow, (6) continuous creation of new values, and (7) the "3 Gen" oriented global operations.

Among the critical success factors towards customer satisfaction are CI-003's ability to be the first developer and dispatcher of products into the market, its continuous value creation to the products, development of multiple design and devices, and provision of high quality and reliable products with competitive prices.

To support these critical success factors, CI-003 has addressed the following core competencies:

- ability to identify market needs,
- know-how to create new products,
- better planning and development capabilities, and
- willingness to promote product as a top brand.

Benefits Gained

CI-003 is able to improve its performance. It has been accepted by the customers as the leading company in the communication navigation systems.

Lessons Learned

Getting the employees to accept the open communication concept is a challenge. CI-003 is able to overcome this problem by introducing various initiatives in the organization.

Key Performance Indicators/Measures

The key performance indicators of CI-003 include market share, business performance and customer satisfaction indices, brand image, quality, cost delivery performance, and customer satisfaction of sales agents.

CI-004: FORGING AHEAD WITH INNOVATION

Organizational Profile

Established in 1968, CI-004 has grown into a technologically advanced and diversified turnkey marine solutions provider. CI-004 has also become a leader in building highly customized and specialized medium-sized vessels for both the naval and commercial customers. With its in-house design team and state-of-the-art systems, CI-004 is able to cater to the needs of its customers in building customized vessels to suit unique operations.

CI-004 currently operates two yards in Singapore. The Benoi yard has two syncrolifts with capacity exceeding 4,000 dwt, eight covered workshops, and six covered sheds for steelwork fabrication construction. The Tuas yard has two floating docks capable of handling vessels of up to 70,000 dwt and covered workshops for controlled activities.

CI-004 currently employs about 920 full-time staff and 600 contract workers. It has also dedicated workforce and workshop facilities in Tuas Maintenance Base and in Changi Maintenance Base. CI-004's global presence is complemented by its US-based arm, VT Halter Marine, which is in Gulfport Mississippi.

Rationale and Objectives

CI-004 has adopted and implemented the innovation strategy to gain competitive advantage in the increasingly competitive shipbuilding and ship repair market. This is attributed to the growing number of low-cost production facilities in other countries such as China and India. To survive in the marine market, CI-004 has to build better-designed ships in a shorter time and at a lower cost. This is in line with the company's vision—"To be a global and world class project manager, designer, builder and repairer in the marine and related industries".

CI-004 seeks to expand its business and operations beyond Singapore and strives to achieve a world class standard through leadership and excellence in delivering its products and services. CI-004 has adopted the mission "to continuously innovate and be globally competitive in our products and services". This involves staying ahead of its competitors, expanding market shares, increasing sales and profitability, and meeting the mid-term and long-term targets of the company.

Overall Description

CI-004 harnesses the creative energy of all its employees to be globally competitive and world class. This has led to innovation in product development, production processes, and service performance. In a competitive and demanding market, CI-004's customers have rising expectations in terms of pricing and turn-around time without compromising quality

and safety. With the advent of new technologies, CI-004 sees its customers heading towards structural changes, if not transformation, in their future demands.

Leading Practices Adopted

CI-004 has adopted a three-pronged innovation strategy: (1) production innovation, (2) process innovation, and (3) learning for innovation. For CI-004, the way to success is to strive for continuous innovation to meet rising customers' needs. This includes delivering products and services at competitive pricing and fast turn-around time without compromising quality and safety. It also involves exploring new technologies and developing new products and new capabilities in preparation for the future transformational demands of the customers. To meet these challenges, CI-004 has adopted the strategy "forge ahead with innovation".

At the company level, the core values are harnessed to shape employees' behavior and achieve STEP which stands for Service, Teamwork, Excellence, and People.

S - Service   The belief to provide the best to customers at all times.

T - Teamwork   The efforts of individual employees should be combined to achieve the best results.

E - Excellence Enhance the value of work through continuous innovation and adoption of best practice. Innovate and explore new frontiers to create new values. Commit to surpass goals.

P - People   Respect the dignity and rights of individuals. Facilitate the development of employee innovativeness and creativity through training and cultural induction.

STEP aims to instill and motivate the company's workforce to strive for innovation. CI-004 has various innovation programs set up under the three key innovation platforms, namely: (1) new products and capabilities, (2) process and services, and (3) learning for innovation.

Innovation Strategy

CI-004 emphasizes innovation as a key element to success. "Forging ahead with innovation" is CI-004's direction. It aligns its strategic directions and thrusts, both mid-term and long-term, with its parent company's strategic goals and thrusts which are set to meet stakeholders' expectations.

CI-004 effectively manages its key products and services to meet customers' mounting requirements and expectations. To meet the challenges ahead, the company incorporates innovations and continuous improvements in its key processes.

Another key aspect of CI-004's innovation strategy is the involvement of everybody, from the receipt of ideas to their implementation. To meet the mid-term and long-term strategic targets, CI-004 requires a dynamic innovation leadership structure to ensure that the plans are carried out in a coordinated manner. The leadership structure intends to steer, guide, and communicate the various innovation initiatives, and if appropriate, endorse and reward the innovations implemented.
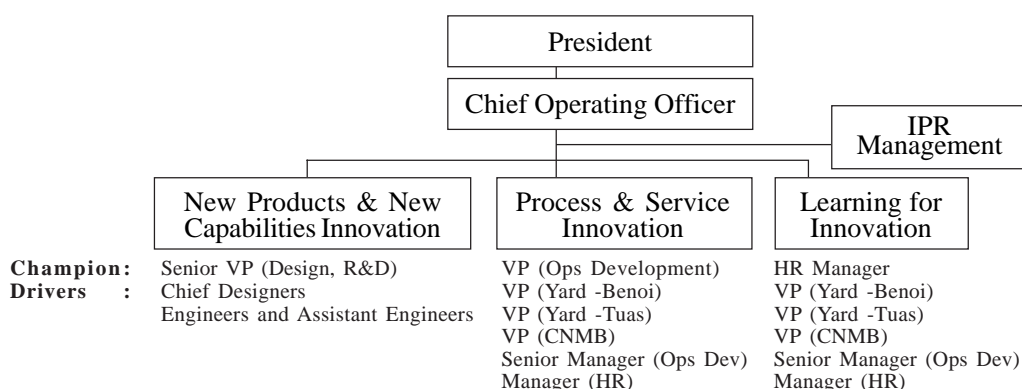
```
                          ┌─────────────────────────┐
                          │        President        │
                          └─────────────────────────┘
                          ┌─────────────────────────┐      ┌──────────────┐
                          │ Chief Operating Officer │      │     IPR      │
                          └─────────────────────────┘      │  Management  │
                                                           └──────────────┘
      ┌──────────────────┐  ┌──────────────────┐  ┌──────────────────┐
      │ New Products & New│  │ Process & Service│  │   Learning for   │
      │Capabilities Innov.│  │    Innovation    │  │    Innovation    │
      └──────────────────┘  └──────────────────┘  └──────────────────┘
```

Champion : Senior VP (Design, R&D) VP (Ops Development) HR Manager
Drivers : Chief Designers   VP (Yard -Benoi)   VP (Yard -Benoi)
     Engineers and Assistant Engineers VP (Yard -Tuas)   VP (Yard -Tuas)
                  VP (CNMB)   VP (CNMB)
                  Senior Manager (Ops Dev) Senior Manager (Ops Dev)
                  Manager (HR)   Manager (HR)

Figure 1: Innovation Excellence Committee Chart

Culture

CI-004 communicates its value concepts to all levels within the organization through various means. One is by inducting new staff into the company's value culture through orientation programs within their first month. Within the departments, functional managers are given the responsibility to reinforce the company's culture and values to the staff. To encourage employees to constantly keep abreast of and apply the company's concepts and methodologies, CI-004 has a reward system in place. Individual employees are rewarded through the "Model Employee Award". Functional departments, on the other hand, may vie for the "Workshop Safety and Housekeeping Award". There are also company incentives for the employees and their family members such as scholarships, sponsorships, and bursary awards, among others. The company also takes into consideration the employees' behavior aside from their work performance rating. Innovation teams with successfully implemented projects are rewarded with deployment rewards of up to SGD10,000 or 10 percent of net savings achieved, whichever is lower. This is over and above the annual innovation teams' challenge which comes with a cash prize of SGD5,000.

CI-004 communicates to its suppliers and partners the company's value concepts, quality culture, and safety considerations through documents such as purchase specification and through project review meetings. To instill innovative culture throughout the company and ensure intellectual property management, CI-004 has participated in the intellectual property rights or IPR committee chaired by the parent company. The committee provides a concerted approach, discipline, and framework to create an innovative culture.

Benefits Gained

With strong management commitment and support, CI-004 has promoted an innovative culture that permeates the entire organization. Innovation target for new products development is set every year and tracked through CI-004 performance indicators tracking system. The key benefits gained were in the areas of marketable products, state-of-the-art capability/technology, competitive and efficient processes, and pervasive culture in the organization.

New Products

As a result of the adoption and implementation of innovation strategy, some of the innovative products successfully built and delivered to customers include:

VESSEL TYPE	SPECIAL FEATURES
13mHigh Speed Fast Craft	• High speed shallow draft landing craft capable of carrying passengers such as a platoon of troops in full battle gear or even a four-ton vehicle • Designed to beach or retract fully laden on typical sandy shores
RoRo/LoLo Container Vessel	• Shallow draft and custom built to specific customers' requirements • Innovation on carrying all containers on deck for faster turnaround • Design for ease of production (structure and piping)
1018TEU Container Vessel	• Bangkok maximum class • Carries more TEUs than any CV of its size • Higher speed for a feeder vessel of conventional design
PatrolVessel	• Largest PV with water jet propulsion at the point of time of design and construction • Highly maneuverable • Low manning through higher degree of automation • Versatile and multi-role platform, shallow draft
Landing Ship Tank	• Multi-role, advanced automation for navigation and low manning • Versatile, higher speed, shallow draft, wave damping design at the forward end of well deck
Self-propelled Floating Bridge System	• Self-propelled, interchangeability, patented connectors
27m Stealth Interceptor	• A versatile multi-purpose platform • Excellent shallow water capability and high maneuverability • Interceptor is designed with a unique V-shaped hull that provides optimal performance even after prolonged operations in rough seas

New Capability

In line with CI-004's technology roadmap, innovative capabilities are being acquired and gradually built up in tandem with the growth potential of customers' requirements. One of the significant achievements of CI-004 was the incorporation of stealth technology into its designed ships. CI-004 is now able to design vessels with stealth capability. This capability has helped broaden CI-004's product range in the new naval shipbuilding and repair market.

Competitive and Efficient Process

The adoption and implementation of innovation strategy has introduced the use of *Kaizen* methodology throughout the company. CI-004 strives for continuous innovation and improvement, particularly in its work processes and support services. The marked benefit of this initiative was improvement in process efficiency and significant cost savings. Avoidance of mistakes has saved CI-004 millions in production cost. The savings in 2005 alone was in excess of SGD 2.5 million.

Sustainable Culture

Though culture is not directly measurable, Employee Opinion Survey results showed that employees tend to agree that some form of 'innovation culture' has started to take shape and most of them are positive about the effect that it will bring to CI-004.

Lessons Learned

One of the key lessons learned in the adoption and implementation of innovation strategy is the need for clear direction and mandate as well as provision of adequate human and financial resources.

Management commitment is also important. In the case of CI-004, its president personally oversees the product development activities. The senior vice-president champions innovations in design, research, and development. The chief operating officer is tasked to strengthen ground operations and personally oversee the process development within the yard. In addition, up to four percent of the company profit is allocated yearly to fund innovation activities.

Next Steps for Continuous Improvement

CI-004 plans to deploy the innovation strategy throughout the entire shipbuilding process which includes design and production. The company also looks forward to building better-designed ships in a shorter duration and at a lower cost.

CI-005: ENHANCING CUSTOMER RELATIONSHIP

Organizational Profile

CI-005 was established in 1989. At present, it employs 219 staff deployed in its five branches in Thailand. CI-005 is into the information, measurement, and control instrumentation business providing system control products such as analyzer, industrial recorder, and test and measurement equipment. Its customers are mainly from Asia.

Rationale and Objectives

The key reason of CI-005 in adopting the culture of innovation is to meet its customers' demands and enhance its relationship with them. One of the philosophies of CI-005 is to make customers their friends after the project.

Leading Practices Adopted

CI-005 conditions the mind, behavior, and commitment of the staff to have foresight on customer's demands and deliver quality and innovative products. The company promotes team spirit, respect for individual, and creativity. It encourages employees to contribute not only in the organization but also to society as a whole.

CI-005 has adopted the *Hoshin* and the plan-do-check-act cycle approaches to continuously improve the organization. It gives high importance to its customers by providing support services including the training of its customers' staff and a 24-hour customer service support center. The company reaches out to the community by providing free training to university graduates on the industry.

Benefits Gained

The company has maintained more loyal customers and gained their trust as well. This is manifested in the sales turnover, which has increased three times, and the positive trend in a number of projects contracted.

Lessons Learned

When the Thailand regulatory authority required all factories to have an emission control monitoring system, CI-005 has no technology to support it. To meet the project requirements, CI-005 sought expert advice from Japan and Singapore and at the same time looked for innovative solutions to meet the market needs.

Key Performance Indicators/Measures

CI-005 measures its success by the number of projects completed on time and the revenue generated from the projects. It keeps track of its customers' satisfaction level through key indicators such as customer complaints and service delivery time. Post project reviews are also conducted and lessons learned are documented for other project leaders to refer to.

Recent Improvements

CI-005 has recently promoted among its employees the principles "see clearly, know in advance, and act with agility".

Next Step for Continuous Improvement

CI-005 consistently reviews its current position and plans to expand its market reach to other parts of the world.

How to Do Local Benchmarking

BM-001: IMPROVING THE PERFORMANCE MANAGEMENT PROCESS OF IN-HOUSE CALL CENTERS THROUGH LOCAL BENCHMARKING

Industry Profile

The Call Center Evolution

A call center is a physical environment dedicated to servicing and interacting with customers or potential customers. It is comprised of agents whose primary function is to handle inbound or outbound traffic via telephone and other available channels such as e-mail, Short Messaging Service, and web-chat. (2003 Philippines Call Center Industry Benchmark Study, Australian Consumer Association Research Pty Ltd).

Inbound calls are initiated by the customer to obtain information, report a malfunction, or ask for help. This is substantially different from **outbound calls** where the agent initiates the call to sell a product or service to the customer.

The staff of the call center is often organized in levels, with the first level being routed to an agent who can resolve issues or respond to general information type of inquiries. If the first level is unable to respond to the issue, the issue is escalated to a more highly skilled agent or to a company's service provider such as sales or quality assurance.

Call centers have evolved over the past 20 years as a convenient and cost-effective way for organizations to keep in contact with their customers. Call centers are dependent on telephony-based equipment (the standard PABX/ACD) that aggregates incoming calls, distributes them over a group of customer service representatives, and queues the calls when necessary. Current research shows that most call centers are under pressure to reduce costs, causing them to explore means of customer contact that are not so labor intensive as the telephone. The major cost in running a call center, even in less mature markets, is labor.

Since mid-1990s, the development of more sophisticated communications and information technology equipment has enabled organizations to handle a range of customer interactions using common equipment and databases, many of which reduce the labor content of the interaction. These interactions can be through a number of communication channels, including phone calls, e-mails, web chat sessions, and faxes. The trend to make the call center responsible for these channels is moving the call center to become a contact center.

A **contact center** can offer human help to self-service customers who need it, and is set up to handle customer interactions through more than one type of communications channel. By making use of information provided by centralized databases and customer

relationship management software, the contact center's role as a "one stop shop" means that the center has an important and strategic position within customer-focused organizations.

Contact centers are handling an increasing percentage of most organizations' customer contacts. The present research shows this statistics varies from 70 percent to 80 percent of all customer contacts in mature markets where the contact center handles e-mail, faxes, and regular mail as well as phone calls. Thus, contact centers are a key element of customer care.

The Philippines is ranked among the world's top four offshore destinations. Well-known for its highly-skilled labor force, the Philippines is poised as the offshore destination of choice for call center outsourcing, specializing in customer support services. The country enjoys a competitive advantage in the call center market, specifically because of the Filipinos' high level of English proficiency, highly developed telecommunications infrastructure, competitive cost structure, and the country's 95 percent literacy rate.

The network of leading inbound and outbound US call centers with offshore Philippine operations includes telemarketing, reservations, customer support, non-profit surveys, and cross-selling. Cost savings amount to 40 to 60 percent of US rates (TelePlaza study, 2004).

Industry Size

Approximately 150 organizations operate call centers in the Philippines, operating 200 calls and 20,000 seats compared to India's 96,000 seats. It is estimated that 80 percent of these seats are operated by call center outsourcing bureaus.

In-house call centers are normally medium-sized call centers ranging from 1 to 50 seats. However, there are in-house call centers that have eventually extended their services to other customers outside their organizations. These in-house call centers leverage their competitive advantage in terms of experience, excess capacities, economies of scale, and the use of state-of- the-art technology.

For outsourcing bureaus, the mean number of seats per organization is 550.5, projected to be 1,041.8 seats in 12 months time. This represents a growth rate of 89 percent over the next year. For in-house call centers, the mean number of seats per organization is 25.1, projected to be 39.4 seats in 12 months time representing a growth rate of 57 percent.

Outsourcing bureaus account for 80 percent of the call center seats in the Philippines. Sixty percent of call centers in the Philippines are equipped with less than 20 agents, compared to 68 percent in 1999, indicating a slight growth in recent years.

Outsourcing call center bureaus can be classified into American-owned ones with operations only in the Philippines, multinational center operators, and Philippine-owned.

Table 1: Number of Seats

Year/Type	<20 seats	20-50	51-100	100+
1999	**67.5%**	17.5%	7.5%	7.5%
2003	**59.6%**	13.5%	7.7%	19.0%
Outsourcing	8%	8%	8%	76%
In-House	75%	15%	8%	2%

The call center industry in Cebu province in the central Philippines has seen at least nine offshore call center operations setting up shops in the province in the last 12 months. The Department of Trade and Industry projects that the total number of Philippine call center seats would hit 40,000 (about 64,000 jobs) this year, double the number of seats in 2003 (callcentres.net, 2003 Philippine Call Centre Industry Benchmark).

Organizational Profile

The members of BM-001 come from different industries in the Philippines namely insurance, pharmaceutical, power, food and beverage, government service, fast food chain, as well as bank and car batteries.

To encourage open sharing in the initial stages of the BM-001 benchmarking network, it was agreed among the members that only one representative per type of industry will be asked to join the network.

Objectives

The objectives of the network are for its organizational members to

- have a deeper appreciation of benchmarking,
- be guided on how to use benchmarking for effective management of in-house call centers in the Philippines, and
- establish a network for continuous improvement.

Leading Practices Adopted

BM-001 has adopted the APO benchmarking methodology that APO technical expert Bruce Searles taught in 2004. This methodology consists of four stages that are based on accepted business standard model but targeted specifically at benchmarking.

Stage 1: Planning and Analysis. BM-001 sets the vision for delivering the outcomes of the benchmarking project in consultation with stakeholders, chooses a benchmarking

topic, selects the project sponsor, plans the benchmarking process, establishes the team, chooses the partners, and conducts data collection and analysis.

Stage 2: Learning and Sharing. In this stage, knowledge exchange takes place. BM-001 examines comparative strengths and opportunities for improvement and facilitates learning and sharing between the organization and chosen partners.

Stage 3: Recommendations. BM-001 draws up the plan in consultation with the sponsors and stakeholders to ensure that the plan has support and approval.

Stage 4: Implementation. This stage involves the implementation of the recommended changes and a review to determine the impact of the improvements.

After a careful study of the APO benchmarking process, the group developed a modified process. Below is BM-001's modified framework for benchmarking:

Phase 1   **Phase 2**   **Phase 3**   **Phase 4**

PLANNING AND ANALYSIS

LEARNING AND SHARING
GAP ANALYSIS

ORGANIZE THE TEAM → **SET TEAM GOALS** → **IDENTIFY PERFOR-MANCE STDS.** → **MEASURE, SHARE, LEARN & ADAPT**
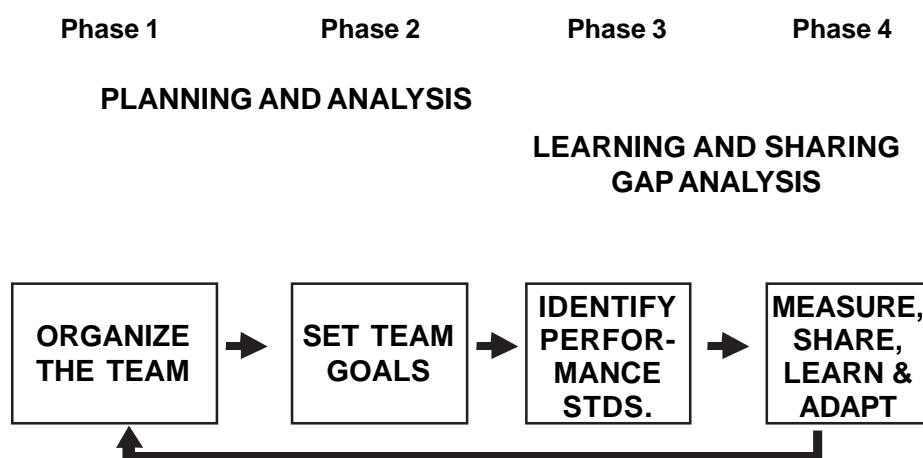
Figure 1: BM-001 Modified Benchmarking Framework

The modified benchmarking approach consists of four phases:

Phase 1: Organize the team. This includes identification of members; securing the support and approval of concerned senior management; conduct of benchmarking training and workshop; and agreements on hosting schedule, venue, house rules, and membership rules.

Phase 2: Set team goals. In this phase, objectives, roles, scope, and code of conduct in the benchmarking network are developed.

Phase 3: Identify performance standards. In this phase, BM-001 identifies an internally accepted benchmarking framework and standards that can be used as a reliable guide in the improvement of the call center management systems. From this set of standards, the group identifies the priority improvement areas based on the scope that was agreed upon in Phase 2.

Phase 4: Measure, share, learn, and adopt. This phase focuses on data analysis and comparison of processes with the internationally accepted standards. The members of the benchmarking network assess and identify the gaps per organization and develop individual action plans. This is also the stage where new levels of performance can be shared. A major highlight of this phase is the conduct of learning sessions based on topics that were identified as critical based on the gap analysis.

Benefits Gained

Some of the benefits that were gained after more than a year of implementing the benchmarking network are:

- better appreciation of the structured approach in benchmarking,
- additional source of call center learnings based on identified gaps, and
- strengthened benchmarking network.

Lessons Learned

In ensuring the sustainability of the benchmarking network, BM-001 has realized the importance of the following:

- support from top management,
- use of structured approach,
- defined objectives and roles,
- use of internationally accepted standards on performance excellence,
- having fun while learning, and
- continuously look for experts in critical areas that need to be addressed.

BM-002: LOCAL BENCHMARKING:
THE WAY TO IMPROVE PRODUCTIVITY AND COMPETITIVENESS

Organizational Profile

Part of BM-002's mandate is to promote productivity in Thailand. It offers training and consultancy services to both public and private sectors in areas such as production management, measurement and analysis as well as tools and techniques for productivity improvement; quality standard system; human resource management; business management; and distance learning program. It also facilitates benchmarking, assesses organizations using the Thailand Quality Award Criteria, and develops databases on productivity improvement. BM-002 widely promotes productivity in Thailand through media, conferences, symposiums, seminars, study missions, youth camps, exhibits, publications, and other promotional materials.

Rationale and Objective

With the goal of improving productivity among its stakeholders, BM-002 conducts local benchmarking to create a network of organizations that are sharing their best practices. In the process, BM-002 hopes to create a practical methodology for benchmarking and increase awareness on benchmarking among organizations.

Overall Description

BM-002 conducts local benchmarking using methodologies that are industry-based and process-based:

Industry-based Methodology

1. Identify industry critical success factors (CSFs)
2. Select processes that have impact to CSFs
3. Identify critical points for each process
4. Identify scope of process (flow chart)
5. Make a fish bone diagram: cause of critical point (process)
6. Identify key performance indicators (KPIs) and practices
7. Prioritize critical points
8. Develop questionnaire
9. Collect data and analyze them to select the best practices
10. Present best practices
11. Conduct site visits
12. Set improvement plans
13. Improve processes
14. Present outcomes of improvement plans

Process-based Methodology

1. Identify process for benchmarking
2. Conduct comparative benchmarking
3. Identify scope of process
4. Develop questionnaire
5. Collect data and analyze them to select the best practices
6. Present best practices
7. Conduct site visits
8. Set improvement plans
9. Improve processes
10. Present outcomes of improvement plans

Leading Practices Adopted

Among the successful practices which BM-002 has adopted are: 1) practical methodology for Thai organizations, 2) process and industry-based benchmarking, 3) setting up of teams of facilitators, 4) documentation of best practices shared through the benchmarking project, and 5) enhancement of concepts through the e-benchmarking network. BM-002 conducts training on benchmarking and facilitates the benchmarking process. To attract customers, it uses ICT tools in developing the comparative data. It also maintains a good relationship with the best practice companies in Thailand.

Benefits Gained

BM-002 has gained knowledge about benchmarking. It has also widened its benchmarking network and established the best practice database. Its unparalleled accomplishment is improving Thai's productivity and competitiveness.

Lessons Learned

With the rich sharing of information taking place during the benchmarking process, Thai organizations are afraid of information leaks. This makes it difficult to invite organizations to join the benchmarking project. Benchmarking is a new concept in Thailand and the skills of the BM-002 benchmarking teams are still at the beginning stage. With these issues at hand, BM-002 has developed a code of conduct for benchmarking and deployed it to the participating organizations. BM-002 has built good relationships with the best practice organizations and has invited them to host the site visits as well. BM-002 has also provided training on benchmarking for its teams of facilitators.

Key Performance Indicators/Measures

Obtaining the needed support for technical expertise and knowledge from the Asian Productivity Organization (APO) is one of the major contributing factors in the success of

the benchmarking project being implemented by BM-002. More so, networking with best practice companies in Thailand as well as the right skills and attitude of the people towards change bring all the success in the benchmarking project of BM-002.

To validate the results and effectiveness of the system, BM-002 uses measures such as number of enlisted participants, number of improvement plans presented, and the number of hosts each year.

Recent Improvements

BM-002 recently conducted promotional and awareness activities on benchmarking. It also did some follow-up on the impact of benchmarking among the participating organizations.

Next Steps for Continuous Improvement

To further improve the system, BM-002 deems it necessary to enhance and sustain the benchmarking network, intensify advocacy on benchmarking, and educate more organizations in Thailand on the benefits of benchmarking. It is also bent on equipping its people with benchmarking skills to effectively implement local benchmarking.

BM-003: BENCHMARKING IN THE HEALTHCARE SECTOR

Organizational Profile

BM-003 was established in 1996 to promote quality assurance, quality improvement, and quality management in healthcare in the Philippines. It is a professional, non-governmental organization with membership coming from health services, academe, professional organizations, and individuals. The major activities being undertaken by BM-003 are:

- training on quality assurance, quality management, and quality improvement;

- annual search for most outstanding quality improvement studies in hospitals and recognition of quality circle projects from BM-003 member hospitals;

- mid-year and annual convention where updates and issues on quality in healthcare are discussed;

- development of training modules such as the problem solving in quality improvement methodology; and

- monthly learning and sharing session on health, quality, and productivity.

In 2001, in partnership with the Development Academy of the Philippines, a core group of hospitals was created. Comprising secondary and tertiary hospitals from the government and private sector, the core group of hospitals serves as the nucleus and catalyst for quality movement in the health sector.

Rationale and Objectives

The vision of BM-003 is to be a dynamic, innovative organization committed to promoting quality in healthcare in order to contribute to the attainment of health for all Filipinos. Its mission is to improve the quality of healthcare of the Filipinos through advocacy, education, and research on quality in health services. BM-003 has adopted benchmarking as a quality improvement tool and an initial model in the healthcare sector.

Overall Description

With BM-003 as the lead agency in the benchmarking program, the other key players include the expert from the Asian Productivity Organization and the Best Practice Exchange Network of the Development Academy of the Philippines.

BM-003 follows the APO-BPN methodology:

1. Agree on benchmarking topic
2. Identify benchmarking partners
3. Agree on scope and define measures
4. Data collection
5. Form and train process improvement team (optional)
6. Collect data
7. Identify and share strengths and opportunities for improvement through a forum
8. Arrange site visit (if necessary) or conduct workshop
9. Recommend improvement
10. Implement improvement
11. Re-measure
12. Share results

The research and development committee of BM-003 serves as the benchmarking group. The benchmarking coordinator acts as the lead person for the benchmarking project while representatives from partner hospitals are responsible in quality assurance or quality management.

Monthly meetings are conducted with the core group of hospitals and bimonthly meetings are held with the benchmarking partner hospitals. The sharing of experiences related to quality among the hospitals takes place in these meetings. Hosting of the meetings is rotated among the participating hospitals.

Leading Practices Adopted

The pilot benchmarking project of BM-003 is on medication error. BM-003 goes through the following steps in conducting the benchmarking activity:

Step 1: Agree on benchmarking topic

The benchmarking committee suggests and the hospitals concur that proper administration of the right medication is critical to delivery of quality patient care. Therefore, "errors in medication" is suitable for a benchmarking study. In one of the BM-003 workshops, it was agreed that a pilot benchmarking project on patient safety with focus on medication error would be conducted.

Medication error is defined as a deviation from the physician's medication order; it is also a non-conformance, a failure to conform to specification.

Step 2: Identify benchmarking partners

The benchmarking partners — hospital administrators and medical directors — signify their commitment to the pilot project through a signed letter of acceptance. Though they were assured of confidentiality where the names of hospitals are coded, only a few participated in the project. Initially, eight hospitals signed in, but in the long run, only six hospitals were able to comply.

Partner hospitals come from the tertiary and secondary level hospitals with bed capacity of 30 to 300 and have been in operation for many years.

Step 3: Agree on scope and define measures

The participating hospitals agree on the scope to be covered by the benchmarking project as follows:

1.   All steps in medication administration process which cover the process from prescribing to documentation.

2.   Clinical areas such as pediatric and medical ward (Exclusion: intensive care unit, operating room, delivery room, emergency room)

3.   Route of administration: only parenteral medication given intravenously or administered by injection shall be included. (Exclusions: capsules, tablets, suspensions, topical, intravenous fluids, and blood products)

Parenteral medication is administered by any way other than through the mouth; it is applied, for example, to the introduction of drugs or other agents into the body by injection.

Harm done including adverse drug reaction and injuries will not be reported. Result of the error will not be part of the report as well as the identity of the hospital. Only the process will be reported.

Step 4: Data collection

Each partner hospital designates an internal benchmarking team to present their medication administration process and gather data on medication error rate.

There are 15 data points in six medication components to be gathered (Table 1):

Table 1: Six medication components and errors committed

Components	Error/Non-conformance	Clarification	
1. Patient (2)	Given to the wrong patient	"Correct" patient did not get his meds (P1)	Medication was ordered to John Doe
		Wrong patient got the meds (P2)	Medication was given to John Smith
2. Medication (3)	Wrong medication	- Wrong meds given (M1)	Ordered: Cefuroxime Given: Cefuroxone
		- Wrong dose form (M2)	Ordered: IVF Given: Oral
		- Giving unordered meds (M3)	Ordered: none Given: something
3. Dosage (2)	Wrong dosage Dose omitted	- Wrong amount given (D1)	Ordered: 250 mg Given: 500 mg
		- Zero amount given (D2)	
4. Frequency (4)	Wrong frequency	- Late administration (F1)	Standard: 12:00 noon Actual: 2:00 pm
		- Frequency not followed (F2)	Ordered: q4 Given: q6
		- Not given at all (F3)	Ordered but not given
		- Discontinued but still continued (F4)	Ordered: D/C but still given
5.Route (2)	Wrong route	- IM given as IV (R1)	
		- IV given as IM (R2)	
6. Document (2)	Not documented	- Given but not signed (A1)	
		- Signed but not given (A2)	

Step 5: Form and train process improvement team (optional)

Since the benchmarking partners are already familiar with quality circle teams and have attended the APO benchmarking seminar, BM-003 does not have to train the process improvement team.

Step 6: Collect data

The benchmarking partners submit their individual medication administration process. This process consists of six major steps: prescribing, transcription, requisitioning, preparation, administration, and documentation. Table 2 shows the medication error rate by type in the six partner hospitals. It has been noted that the error rate ranges from 0 to as high as 6.75 percent.

Table 2: Medication error rate by type in the six partner hospitals

TYPE OF ERROR	HOSPITAL/ERROR RATE						
	A	**B**	**C**	**D**	**E**	**F**	**ALL**
P. PATIENT							
P1. "Correct" patient did not get his medicines	0	0	0	0	0	0	
P2. Wrong patient got the meds	0	0	0	0	0	0	
M. MEDICATION							
M1. Wrong meds given	0	0	0	0	0	0	
M2. Wrong dose form	0	0	0	0	0	0	
M3. Giving unordered meds	0	0	0	0	0	0	
R. ROUTE							
R1. IM given as IV (R1)	0	0	0	0	0	0	
R2. IV given as IM (R2)	0	0	0	0	0	0	
D. DOSAGE							
D1. Wrong amount given	0.13	-	-	-	-	-	
D2. Dose omitted	0.54	0.52	0.46	-	-	0.83	
F. FREQUENCY							
F1. Late administration	2.02	1.08	1.07	-	-	0.01	
F2. Frequency not followed	-	-	-	-	-	0.01	
F3. Not given at all	0.13	-	-	-	-	-	
F4. Discontinued but given	-	1.28	-	-	-	-	
A. DOCUMENTATION							
A1. Given but not signed	0.13	3.87	1.92	0.30	0.49	2.60	
TOTAL	**2.95**	**6.75**	**3.45**	**0.30**	**0.49**	**3.45**	

BM-003 also found out that the type of errors common to all partner hospitals are under dosage, frequency, and documentation. The highest error rate falls under "given but not signed" and "late administration".
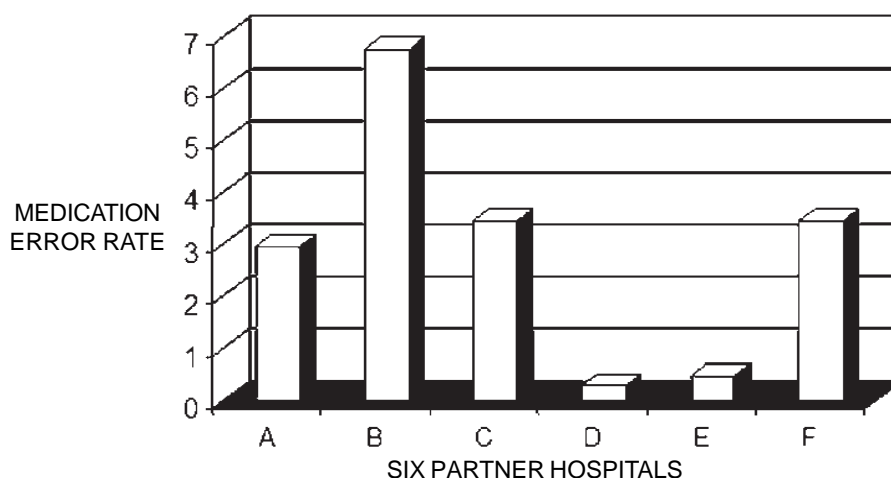

Figure 1: Medication error rate in the six partner hospitals

Step 7: Identify and share strengths and opportunities for improvement through forum

The submitted medication administration process by six partner hospitals is consolidated. It is reviewed by partners; others stick to their own medication process while others adopted practices considering the resources of their own facility where the process has to be implemented. Sharing of strengths and opportunities is also conducted.

Step 8: Arrange site visit (if necessary) or conduct workshop

Workshop is conducted as well as site visit in one of the benchmarking partner hospitals. BM-003 is able to witness and at the same time review the benchmarking partner's strategy and processes with regard to medication administration.

Steps 9 and 10: Recommend and implement improvement

Some of the partner hospitals have adopted the medication administration process of other partner institutions. It is a must that prior to implementation of the new process, staff undergo orientation before data collection to ensure that it is properly disseminated in the concerned section. Some of the partner hospitals have also distributed or even posted a copy of the adopted process for reference of their own staff.

Steps 11 and 12: Re-measure and share results

After implementing the adopted medication administration process, the group re-measures the error rate. Based on the results, medication error rate of some partner hospitals have increased and some decreased.
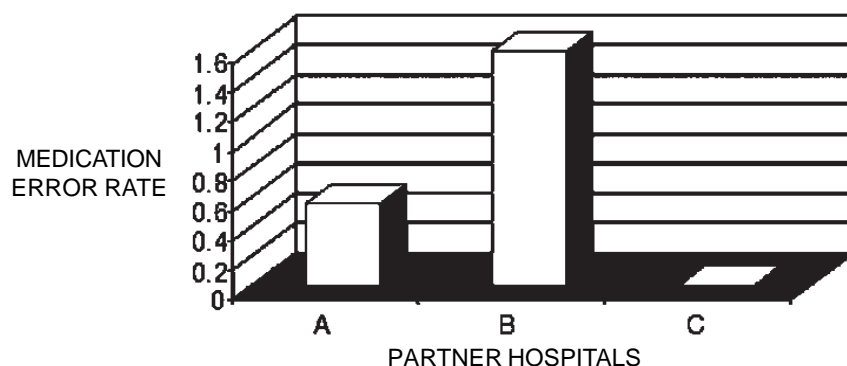

Figure 2: Medication error rate after implementation

The key factors for the successful implementation of the benchmarking project in the healthcare sector are:

1. strong partnership among the BM-003, the partner hospitals, and DAP;
2. sharing of experiences, data, and resources during meetings among partner hospitals;
3. continuous provision of technical guidance and encouragement from DAP;
4. voluntary participation of partners; and
5. consideration of the concerns and respect on feelings of non- participants.

Benefits Gained

The benefits derived from the project are:

1. increased commitment to pursue benchmarking in critical areas of patient care and hospital operations,
2. increased confidence in undertaking benchmarking due to knowledge and skills gained by experience,
3. networking among hospitals, and
4. benchmarking team organized by each hospital serves as core group for benchmarking activities.

Lessons Learned

BM-003 has seen the importance of obtaining the participation of pharmacists and doctors in the project so that they will also be aware of the medication error and its impact in patient care. For the health team to take proper action, they should be provided with data on the area of concern and its impact on patient care and in hospital operations. Issues and concerns should be explored and resolved as well.

To ensure high-impact projects, the selection of benchmarking focus should be data-based. There should also be a thorough discussion during the planning stage to make sure that all significant aspects are considered.

Recent Improvements

BM-003 and its partner hospitals participated in the sharing and learning workshop on best practices under the APO technical expert services program. After the visit of the APO technical expert, the benchmarking group convened again to revisit the medication administration process; it was agreed that the steps be reduced from 15 to 9. Flowchart of the revised process was also formulated and used in the staff orientation prior to implementation and data gathering.

Next Steps for Continuous Improvement

To further improve the benchmarking process, BM-003 plans to:

1. identify benchmarking focus areas with high impact,

2. conduct seminars on benchmarking in the healthcare sector for advocacy as well as knowledge and skill enhancement,

3. integrate benchmarking in training modules on quality management and quality improvement,

4. expand benchmarking activities in areas outside Metro Manila,

5. expand membership of hospitals to include doctors and pharmacists, and

6. network with other countries to facilitate exchange of best practices.

BM-004: SHARING AND LEARNING INSIDE AND OUTSIDE

Organizational Profile

BM-004 is engaged in the industrial automation and control business. Its products include control equipment system, application software package, field instruments, and analytical instruments. BM-004 is a solution provider involved in test and measurement and in project management as well. It offers on-call service, preventive shutdown maintenance, repair, calibration, system modification, and start-up. The company has a total of 219 personnel.

Rationale and Objectives

BM-004 has adopted local benchmarking to learn more about the process and improve the organization. A venue for sharing, learning, and networking among organizations, local benchmarking has proven to be beneficial to the company.

Overall Description

Here is how local benchmarking works:

After choosing an interesting topic, BM-004 studies the benchmarking process and sets the schedule of the benchmarking. This is followed by data collection using a questionnaire. The practices collected are shared within the group and the most outstanding company is selected. A site visit methodology should then be determined. The site visit is aimed at collecting data about an organization's best practices, processes, and enablers.

The preparation of action plan comes next. The action plan is then presented to the different groups involved. When everybody has been given the go signal, the plan is implemented accordingly. Follow-ups should be done to ensure implementation of the best practices.

Table 1:   Benchmarking Process 1

Process	Responsible
Identification of topic for benchmarking and application	Company
Training on the conduct of the benchmarking process	Group, facilitator
Scoping and analysis of the process in the organization	Company team
Data collection or survey from each department	Company team
Self assessment, summary, and score evaluation	Company team
Identification of topic for presentation among the groups	Company, facilitator
Selection of the best practice to site visit; selection of group head and secretary; scheduling	Group, facilitator

Table 2:   Benchmarking Process 2

Process	Responsible
Coordination among the groups on the scope of site visit and questions preparation	Group
Clarification of the code of conduct for site visit among the groups	Group, facilitator
Site visit	Group
Site visit report on best practice and enabler	Company team
Presentation to company team and identifying the enablers which can help improve the company's issue	Company team
Preparation of report and action plan	Company team
Presentation of the report among benchmarking groups	Group facilitator

Leading Practices Adopted

Some of the practices adopted by BM-004 includes (1) orientation program where each department head explains his or her department and its responsibilities and (2) skills preparation for new staff.

The orientation program that lasts for half a day to a whole day involves meetings with management and personnel who have been with the company for ten years. During these sessions, the staff are encouraged to talk about their experiences in the company. To promote internal customer satisfaction, team building is done. The budget allocated for this program is 10,000 Bahts. BM-004 plans to conduct orientation activities every quarter.

On the other hand, the action plan for the skills preparation for new staff includes skills inventory of newly hired employees, a table of required skills, individual plans, and a summary of probation evaluation.

The key factors for the successful implementation of these leading practices were: (1) the interactive activities for disseminating company policies to new employees, (2) staff networks, (3) cross-functional group activities for future relations and coordination, and (4) creation of a skill development plan for each personnel.

Benefits Gained

Local benchmarking is an enabler for improvement. It allows networking among organizations. Through continued site visits, BM-004 is able to understand the specific topic in-depth. Local benchmarking also fosters openness, new ideas, and a culture of sharing in the local industry.

Lessons Learned

In any endeavor, there will always be problems but these need not hinder the success of any task. BM-004 has proven that to any problem there is a corresponding solution, as shown in the following:

Problem 1: There is no working schedule specified in the action plan

Solution: Set up a team and let them draw up the working schedule. In this way, the members of the team would be able to understand the usefulness of the program.

Problem 2: It is difficult to understand the question.

Solution: Spend more time to carefully study the matter, explain the details, and do some follow-up.

Key Performance Indicators/Measures

BM-004 has been using the following parameters on the effectiveness of local benchmarking: (1) attitude towards the company, (2) rapport and relationship with fellow employees, (3) staff's in-depth understanding of the company's culture, (4) internal customer satisfaction, and (5) coordination.

Recent Improvements

BM-004 has introduced some improvements to local benchmarking to further enhance its effectiveness. These improvements include, among others, taking more time to understand

the data on the best practices and enablers gathered from the site visits. The enabler and its applications are also discussed. BM-004 has also worked on the plan as a team. Another improvement is the sharing of the insights and knowledge gained from other companies within the organization.

Integration of Best Practice Case Studies

Organizational Excellence in SMEs

The small and medium enterprises (SMEs) with best practices in organizational excellence are into the business of printing/packaging as well as the manufacturing of leather products and decorative earthenware ceramics. These companies have adopted the performance excellence framework embodied in their respective national quality award system, believing that this is the only way to survive and sustain their businesses. This framework serves as their yardstick for measuring business excellence. The best practices that can be gleaned from these SMEs are:

- committed and dynamic leadership with clear direction;

- systematic and structured journey for achieving excellence and sustaining continuous quality improvement for long-term growth;

- strategic deployment through the use of balanced scorecard;

- productivity and quality improvement efforts such as supply chain management, visual management, *kaizen*, and suggestion schemes;

- strong focus on training; and

- employees' participation in management decision-making and improving organizational performance.

Culture of Innovation

The featured best practices on developing a culture of innovation were culled from various companies whose businesses include brewery, industrial automation and control, consumer electronics, manufacture of digital lifestyle devices, and marine solutions. The objectives of these companies are to gain a competitive edge, harness knowledge workers toward higher productivity, and diffuse innovation practices in developing Asian countries. In view of this, they have adopted the following best practices:

- strong leadership in support of innovation (e.g. attractive reward and recognition, conduct of site audit to support and verify deployment of process innovation, setting up of systems)

- strong focus on customers (e.g. establishment of a customer satisfaction management committee to address complaints, conduct of customer complaints analysis, market research on future customer preferences)

- open communication that transcends across the organization (e.g. numerous communication platforms such as KM portal, cross-functional communication, and interaction with senior management)

- learning initiatives (e.g. sophisticated system of recruitment, conduct of project reviews, sharing lessons learned in the company, opportunities for multi-skilling of staff, people development programs)

How to do Local Benchmarking

The best practices on how to do local benchmarking — the use of systematic methodologies in undertaking benchmarking studies — were taken from the experiences of NPOs, partner associations/organizations, and specific companies. The rationale behind this is to enhance organizational performance through strengthening the NPOs' approach in worldwide benchmarking as aligned with the APO mission. The following are among the best practices exhibited:

- systematic benchmarking process with defined objectives, focus areas/scope, roles of members of a dedicated benchmarking team, and code of conduct

- use of international standards to align benchmarking with a quality framework

- segmentation of benchmarking (e.g. sectoral, process) to suit customer requirements, thus ensuring that benchmarking topics identified are customer-focused

- establishment of benchmarking networks to encourage participation of various organizations/associations/peak bodies and enable a cultural change among them

- advocating the inclusion of benchmarking initiatives in the country's five-year plan or national agenda and the issuance of a directive from government requiring the public sector to adopt benchmarking

- conduct of benchmarking training for senior executives and staff

- use of information technology (e.g. e-benchmarking) to facilitate knowledge transfer

- ensuring that sharing and learning takes place within the benchmarking groups through developing and maintaining a database of best practices, implementation of Communities of Practice (CoPs), conduct of learning sessions with experts, benchmarking with international companies, and e-benchmarking

- focus on management of benchmarking projects rather than the conduct of benchmarking training

- continuous improvement of the benchmarking process by benchmarking the process itself with other institutions

- use of APO and NPO resources to gain and enhance benchmarking skills

- sustaining participation in regular meetings of benchmarking groups through the use of motivational schemes (e.g. tokens)

Suggested Approaches for Deploying Best Practices

Best practices are initiatives to improve organizational effectiveness, service delivery, and employee satisfaction. They are valuable knowledge, which when applied, can help achieve organizational goals and contribute to excellent business outcomes or results. Thus, sharing good practices, learning from others, and applying a best practice are fundamental in achieving competitive advantage and business excellence.

Identifying and using the most appropriate and cost effective medium to deploy best practices are a challenge to an organization. To ensure that the best practices presented in this compendium are disseminated, shared, and applied, the following approaches are suggested:

1. Address the cultural challenge.

    Not all organizations have the inherent culture of knowledge sharing; though this culture can be embraced overtime through management support and allocation of sufficient resources for driving the change. It is important to pay attention to culture and behaviors on top of introducing new tools and processes. Adapting these tools and processes according to the local culture and ways enables the workers to appreciate and apply the best practice. Using the existing or indigenous practices of the organization in the replication process can help facilitate the implementation of a best practice.

2. Establish clear implementation goals.

    Expectations and commitment of all stakeholders must be clearly defined. Outcomes must be clearly identified including how success will be measured.

3. Build a sound infrastructure.

    Necessary structures, procedures, and resources must be determined and mobilized to manage effective implementation and attain set goals. It is important to ensure that support for the program will continue, even after the funding (e.g. externally-funded projects) has ended.

Below are some of the mechanisms for knowledge sharing and deployment that can be used:

1. Local Best Practice Exchange Network

    NPOs who have set up a best practice exchange network in their respective countries have demonstrated that being in a network allows localization of best practices. Through the local network, the worldwide best practices shared through the APO-BPN can easily get across the public and private organizations within an

APO member country. The exchange of information on best practices is facilitated among participating organizations in mutual cooperation. An established network is an effective venue for deploying best practices in various channels such as benchmarking activities, fora, workshops, seminars, and conferences.

2. Communities of Practice (CoPs)

A community of practice is a network of people who share a common interest in a specific area of knowledge and are willing to work and learn together over a period of time to develop and share that knowledge. CoPs have emerged as an effective way of creating, sharing, validating, and transferring both explicit and tacit knowledge. The interaction that develops among the participants in a CoP will facilitate learning and trigger new ideas from one another's specific practices to address common challenges.

3. Sharing of Best Practices through Multimedia

- **e-Benchmarking.** Once established, e-benchmarking or benchmarking through the internet is a powerful tool for exchanging of best practices. It provides greater and faster access to best practice information, thus accelerating the process of sharing and learning across organizations and NPOs. Through e-benchmarking, the exchange of information becomes more economical.

  Leading practices from different organizations may be uploaded to the web site for easier access of NPOs, including member organizations of local best practice networks. A feedback mechanism should be integrated into the process to generate comments from those who have downloaded the best practice information. A virtual forum may be added especially for those who have deployed and adopted the best practice.

- **E-group.** This is an excellent medium that allows the members to raise their issues and concerns and suggest improvements to each other.

- **NPO Newsletter.** Coming up with an NPO newsletter with a section devoted to best practices can help in the dissemination of learning experiences.

- **Video.** Capturing best practices in a video creates a greater recall. If a picture tells a thousand words, a moving picture incites the viewer to action.

Appendices

GUIDE TO ACRONYMS

APO	Asian Productivity Organization
APO-BPN	Asian Productivity Organization-Best Practice Network
CoP	Community of Practice
CSF	Critical Success Factor
DAP	Development Academy of the Philippines
ICT	Information and Communications Technology
IT	Information Technology
JQA	Japan Quality Award
KM	Knowledge Management
KPI	Key Performance Indicator
NPO	National Productivity Organization
QCC	Quality Control Circle
SME	Small and Medium Enterprise
TQM	Total Quality Management

LIST OF PARTICIPATING NPOs

Bangladesh	**National Productivity Organisation (NPO)** **Ministry of Industries** Shilpa Bhaban (1st Floor) 91 Motijheel, Commercial Area, Dhaka-1000 Tel: (880-2) 956-2883 Fax: (880-2) 956-3553 (Attn: NPO) E-mail: npobd@gononet.com
Republic of China	**China Productivity Center (CPC)** 2nd Fl., No. 79, Sec. 1, Hsin-Tai-Wu Road Hsichih 221, Taipei Hsien Tel: (886-2) 26982989 Fax: (886-2) 26982976 E-mail: 0092@cpc.org.tw URL: www.cpc.org.tw
Fiji	**Training and Productivity Authority of Fiji (TPAF)** Beaumont Road, 8 Miles, Nasinu Tel: (679) 3392000 Fax: (679) 3340184 E-mail: jone_u@tpaf.ac.fj URL: www.tpaf.ac.fj
India	**National Productivity Council (NPC)** Institutional Area, Lodi Road, New Delhi 110003 Tel: (91-11) 24690331 Fax: (91-11) 24615002 E-mail: is@npcindia.org URL: www.npcindia.org
Indonesia	**Directorate General of** **Training and Productivity Development** **Ministry of Manpower and Transmigration R.I.** Jl. Jendral Gatot Subroto Kav. 51, Floor VII/B Jakarta Selatan 12950 Tel: (62-21) 52963356 Fax: (62-21) 52963356 E-mail: protek@centrin.net.id

Islamic Republic of Iran	**National Iranian Productivity Center (NIPC)** No.23, Daneshsara St., Baharestan Sq., Tehran Tel: (98-21) 77646272 Fax: (98-21) 77646271
Japan	**Japan Productivity Center for Socio-Economic Development (JPC-SED)** 1-1, Shibuya 3-chome Shibuya-ku, Tokyo 150-8307 Tel: (81-3) # 34091135 Fax: (81-3) 34095880 E-mail: Y.Osaki@jpc-sed.or.jp URL: www.jpc-sed.or.jp/eng/
Republic of Korea	**Korea Productivity Center (KPC)** Saengsansung Bldg., 122-1, Jeokseon-dong Jongro-ku Seoul 110-751 Tel: (82-2) 7241180 Fax: (82-2) 7379140 E-mail: kbwoo@kpc.or.kr URL: www.kpc.or.kr
Malaysia	**National Productivity Corporation (NPC)** P.O. Box 64, Jalan Sultan 46904, Petaling Jaya, Selangor Tel: (60-3) 79556323 Fax: (60-3) 79578068 E-mail: hamdi@npc.org.my URL: www.npc.org.my
Mongolia	**National Productivity and Development Center (NPDC)** Room 102 & 103, Central Cultural Palace Sukhbaatar Sq. 3, Ulaanbaatar 11 Tel: (976-11) 326115 Fax: (976-11) 329799 E-mail: npdc-mon@mongol.net
Pakistan	**National Productivity Organization (NPO)** House No. 42-A, Nazim-ud Din Road Sector F-7/4, Islamabad Tel: (92-51) 9215981 Fax: (92-51) 9215984 E-mail: npopakistan@npo.gov.pk URL: www.npo.gov.pk

Philippines	**Development Academy of the Philippines (DAP)** DAP Building, San Miguel Avenue, Pasig, Metro Manila Tel: (63-2) 6312143 Fax: (63-2) 6312123 E-mail: apolu@dap.edu.ph URL: www.dap.edu.ph
Singapore	**SPRING Singapore** 2 Bukit Merah Central, Singapore 159835 Tel: (65) 62786666 Fax: (65) 62786665 E-mail: wong_wai_meng@spring.gov.sg URL: www.spring.gov.sg
Sri Lanka	**National Productivity Secretariat (NPS)** 134, 4th Floor, CIL Tower, High Level Road Colombo 06 Tel: (94-11) 2513156 Fax: (94-11) 2513296 E-mail: nposl@nps.lk
Thailand	**Thailand Productivity Institute (FTPI)** 12-15 Floor, Yakult Building, 1025 Pahonyothin Road Phayathai, Bangkok 10400 Tel: (66-2) 6195500 Fax: (66-2) 6198099 E-mail: pornchan@ftpi.or.th URL: www.ftpi.or.th
Vietnam	**Directorate for Standards and Quality (STAMEQ)** 8 Hoang Quoc Viet Street, Cau Giay District, Hanoi Tel: (84-4) 7911633 Fax: (84-4) 7911595 E-mail: vpc@fpt.vn URL: www.tcvn.gov.vn