

การวางแผนกลยุทธ์ทางด้านโลจิสติกส์สำหรับสินค้าประเภทระบบบำบัดน้ำเสีย
ตามแนวทางการประเมินผลแบบดุลยภาพ



นาย อุกฤษฏ์ โชตินันทเศรษฐ์

วิทยานิพนธ์ฉบับนี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิศวกรรมศาสตรมหาบัณฑิต

สาขาการจัดการทางวิศวกรรม ภาควิชาศูนย์ระดับภูมิภาคทางวิศวกรรมระบบการผลิต

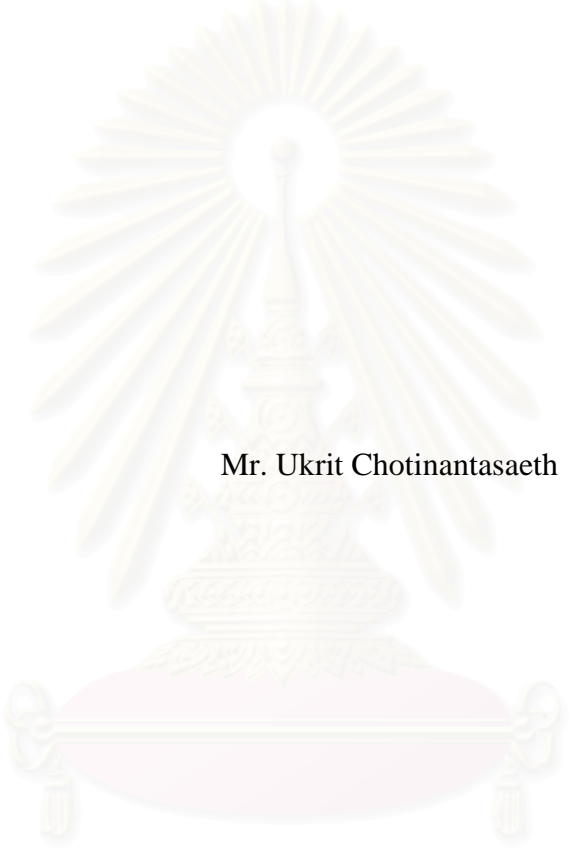
คณะวิศวกรรมศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2546

ISBN: 974-17-4478-1

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

LOGISTICS STRATEGIC PLANNING FOR A PRODUCT OF ON-SITE
WASTEWATER TREATMENT SYSTEM BASED ON THE BALANCED
SCORECARD APPROACH



Mr. Ukrit Chotinantasaeth

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

A Thesis Submitted in Partial Fulfilment of the Requirement
for the Degree of Master of Engineering in Engineering Management
The Regional Centre of Manufacturing Systems Engineering

Faculty of Engineering
Chulalongkorn University

Academic Year 2003

ISBN: 974-17-4478-1

Copyright of Chulalongkorn University

Thesis Title LOGISTICS STRATEGIC PLANNING FOR A PRODUCT OF
ON-SITE WASTEWATER TREATMENT SYSTEM BASED
ON THE BALANCED SCORECARD APPROACH
By Ukrit Chotinantasaeth
Field of study Engineering Management
Thesis Advisor Assistant Professor Prasert Akkharapathompong

**Accepted by the Faculty of Engineering, Chulalongkorn University in
Partial Fulfillment of the Requirements for the Master's Degree**

.....Dean of Faculty of Engineering
(Professor Direk Lawansiri, Ph.D)

THESIS COMMITTEE

.....Chairman
(Professor Sirichan Thongprasert, Ph.D)

.....Thesis Advisor
(Assistant Professor Prasert Akkharapathompong)

.....Thesis Co-advisor
(Dr.-Ing. Ksemsan Suwarnarat)

.....Member
(Associate Professor Chuvej Chansangavej, Ph.D)

อุกฤษฏ์ โชตินันท์เศรษฐ์ : การวางแผนกลยุทธ์ทางด้านโลจิสติกส์สำหรับสินค้าประเภทระบบบำบัดน้ำเสียตาม
แนวทางการประเมินผลแบบดุลยภาพ (LOGISTICS STRATEGIC PLANNING FOR A PRODUCT OF ON-SITE WASTEWATER TREATMENT
SYSTEM BASED ON THE BALANCED SCORECARD APPROACH)

อ. ที่ปรึกษา: ผศ. ประเสริฐ อัครประดมพงศ์, อ. ที่ปรึกษาร่วม: ดร. เกษมสันต์ สุวรรณรัตน์,
134 หน้า. ISBN 974-17-4478-1

จุดประสงค์หลักของวิทยานิพนธ์ฉบับนี้จัดทำขึ้นเพื่อวางแผนกลยุทธ์ทางด้านโลจิสติกส์ (Logistics) และจัดทำแผนการดำเนินงานสำหรับสินค้าประเภทระบบบำบัดน้ำเสียตามแนวทางการประเมินผลแบบดุลยภาพ เพื่อปรับปรุงการดำเนินงานภายในองค์กร, การใช้งบประมาณอย่างคุ้มค่า, การเจริญเติบโตของธุรกิจ และเพื่อเพิ่มความพึงพอใจของลูกค้า ขั้นตอนการศึกษาวิทยานิพนธ์ฉบับนี้เริ่มจากจัดการประชุมระหว่างคณะกรรมการบริหารเพื่อแถลงวิสัยทัศน์ เป้าหมาย และกลยุทธ์การดำเนินงานของบริษัท ซึ่งจะเป็นรากฐานของการศึกษาวิทยานิพนธ์ฉบับนี้ ผู้เขียนจะวิเคราะห์สภาพแวดล้อมโดยรวมทั้งภายในและภายนอกของบริษัท โดยส่วนที่เกี่ยวกับโลจิสติกส์จะทำการวิเคราะห์โดยคณะกรรมการบริหาร 4 คนด้วยการใช้วิธีวิเคราะห์สภาพแวดล้อมภายนอกและสภาพแวดล้อมภายในที่เกี่ยวกับโลจิสติกส์ของบริษัทเพื่อหาจุดแข็ง จุดอ่อน โอกาส และ ปัจจัยคุกคามของบริษัท สภาพแวดล้อมภายในที่เกี่ยวกับโลจิสติกส์จะถูกวิเคราะห์เพื่อหาจุดแข็งและจุดอ่อนของบริษัท และ สภาพแวดล้อมภายนอกจะถูกวิเคราะห์เพื่อหา โอกาส และ ปัจจัยคุกคามของบริษัท การวิเคราะห์ปัจจัยเหล่านี้ จะสามารถหาปัจจัยหลักที่มีผลต่อความสำเร็จขององค์กร และเพื่อเรียงลำดับความสำคัญของปัจจัยเหล่านี้ ผู้เขียนจึงได้จัดทำ การวิจัยเพื่อเปรียบเทียบความต้องการของลูกค้าที่มีต่อโลจิสติกส์และศักยภาพของบริษัท ซึ่งปัจจัยที่ค้นพบจะถูกนำไปประกอบเป็นแผนที่กลยุทธ์ทาง โลจิสติกส์ โดยจะมีการประชุมกับเจ้าของกิจการเพื่อจัดทำกลยุทธ์เพื่อใช้กับโลจิสติกส์ภายนอกองค์กร กลยุทธ์เหล่านี้จะถูกใช้เพื่อการวางแผนกลยุทธ์ และการจัดทำ ตัวชี้วัดประสิทธิภาพ ซึ่งแต่ละแผนจะสามารถนำไปปฏิบัติโดยใช้เครื่องมือที่ชื่อว่าเมทริกไดอะแกรม (matrix diagram) เป็นเครื่องมือในการแบ่งงานไปยังแผนกต่างๆ โดยที่ทั้งแผนกลยุทธ์ และ ตัวชี้วัดประสิทธิภาพจะถูกนำไปใช้ทำแผนการดำเนินงานซึ่งมีส่วนช่วยในการแข่งขันกับคู่แข่งในตลาด ขั้นตอนสุดท้ายของวิทยานิพนธ์จะเป็นการประเมินผลโดยเจ้าของกิจการ เพื่อวิเคราะห์ความเป็นไปได้ของแต่ละแผนการดำเนินงาน

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ภาควิชา ศูนย์ระดับภูมิภาคทางวิศวกรรมระบบการผลิต ลายมือชื่อนิสิต.....
สาขาวิชา การจัดการทางวิศวกรรม ลายมือชื่ออาจารย์ที่ปรึกษา.....
ปีการศึกษา 2547 ลายมือชื่ออาจารย์ที่ปรึกษาร่วม:

447 16277 21 : MAJOR ENGINEERING MANAGEMENT
KEY WORD : LOGISTICS/STRATEGIC PLANNING/BALANCED SCORECARD

UKRIT CHOTINANTASAETH: LOGISTICS STRATEGIC PLANNING FOR A PRODUCT OF
ON-SITE WASTEWATER TREATMENT SYSTEM BASED ON THE BALANCED
SCORECARD APPROACH

THESIS ADVISOR: ASST. PROF. PRASERT AKKHARAPRATHOMPHONG,

THESIS CO-ADVISOR: DR.-ING KSEMSAN SUWARNARAT, 134 pp. ISBN: 974-17-4478-1

Main objective of the thesis is to generate proper logistics strategy and action plan for on-site waste water treatment system in order to effectively improve internal work process, cost efficiency, business growth, and customer satisfaction using the Balanced Scorecard Approach. As the first step, a meeting is conducted with the company board of directors to verify corporate vision, mission, objective, and strategy. This process clarifies the base from which the thesis will be conducted. The author will then analyze the internal and external environment of the company. As for the logistics related external and internal environment of the company, the analysis is done by 4 directors of the company board. Using the SWOT analysis, the logistics related internal environment is used to find the strength and weakness of the company; the logistics related external environment is used to find the opportunity and threat of the company. The SWOT analysis will enable the findings of the outbound logistics critical success factors. In order to analyze the priority for each critical success factor, the study were conducted to compare customer's requirements for logistics and the capability of the company using order winning and order qualifying criteria as a tool. The critical success factor is deployed to create the logistics strategy map. Meeting with the company owner is then organized to generate outbound logistics strategy from the objectives in the strategy map. As a result, the strategy is translated into strategic planning and Key Performance Indicators. The strategy strategic planning and KPI are integrated into the concerned department by using matrix diagram. A proper action plans are generated according to the strategy strategic planning and KPI in order to gain benefits and compete with the competitors in the market. The last step is the verification of company's owners.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

The Regional Centre for Manufacturing System Engineering

Field of study Engineering Management

Academic year 2003

Student's signature.....

Advisor's signature.....

Co-advisor's signature.....

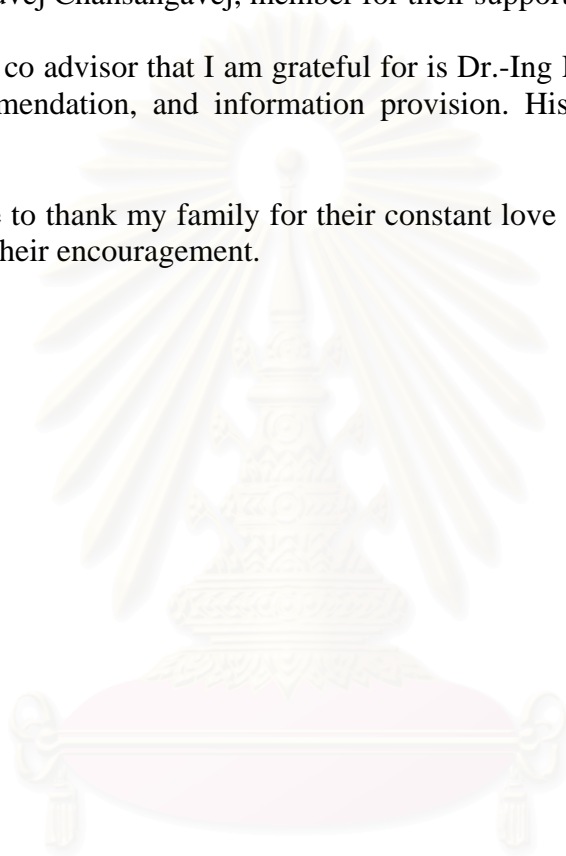
Acknowledgement

This thesis would not be successful without the help and support from many people who have contributed so much through the process.

First, I would like to thank my advisor, Assistant Professor Prasert Akkharapathompong for his valuable input and patience in advising and correcting from drafts to final print outs. I would also like to thank Professor Sirichan Thongprasert, Ph.D; president and Assoc. Prof Dr. Chuvej Chansangavej, member for their support and guidance.

Another significant co advisor that I am grateful for is Dr.-Ing Ksemsan Suwarnarat, who has help in recommendation, and information provision. His kind assistant is greatly appreciate.

Lastly, I would like to thank my family for their constant love and support. This thesis is partly the result of their encouragement.



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

CONTENTS

ABSTRACT (THAI)	iv
ABSTRACT (ENGLISH)	v
ACKNOWLEDGEMENT	vi
CONTENTS	vii
CHAPTER 1	
INTRODUCTION	1
1.1 Back ground of research	1
1.2 Back ground of the company	1
1.3 Statement of problem	2
1.4 Objective of the study	2
1.5 Scope of the study	2
1.6 Methodology	3
CHAPTER 2:	
LITERATURE REVIEW	4
2.1 Concerned theory	4
CHAPTER 3	
ANALYSIS OF CURRENT INTERNAL AND EXTERNAL ENVIRONMENT	12
3.1 The identification of the corporate mission and vision	12
3.2 Internal environment	14
3.3 Logistics related internal environment	20
3.4 External environment	24

CONTENTS (continued)

3.5 Logistics related external environment.....	34
3.6 Summary of the company's internal and external environments.....	38
3.7 Customers requirements.....	46
3.8 Customer requirement analysis.....	48
3.9 Priority analysis of the company's critical success factors.....	50

CHAPTER 4

THE DEVELOPMENT OF FOUR PERSPECTIVE AND KEY PERFORMANCE

INDICATORS FOR LOGISTICS STRATEGY..... 54

4.1 Planning.....	54
4.2 The translation of outbound logistics critical success factors.....	55
4.3 The development of the logistics strategy, strategic planning, measures, and KPI.....	58
4.4 Relationship of the strategy, strategic planning, and KPI to concerned departments.....	71

CHAPTER 5

INITIATIVE STRATEGIES AND MEASURES..... 76

5.1 Planning.....	76
5.2 Implementation.....	77
5.3 Action plan schedule.....	105
5.4 Strategic planning and action plan verification.....	120

CONTENTS (continued)

CHAPTER 6

CONCLUSION AND RECOMMENDATION	121
6.1 Thesis Conclusion.....	121
6.2 Thesis Support & Constraint.....	127
6.3 Recommendation for Further Research.....	127
REFERENCES	128
APPENDICES	130
APPENCIX A: Logistics strategic planning forms.....	131
BIOGRAPHY	135

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER 1

INTRODUCTION

1.1 Back ground of research

As the world population rapidly multiplies, consumption of the mother earth's resources also increases in direct proportion. Unfortunately, the massive amount of consumption results in unprecedented waste and pollution that creates a simple question yet to be answered: where will all the waste be dumped?

Developed countries are aware of this scenario and have initiated actions, in terms of law and regulations, in order to protect their natural resources. Developing countries are following up as it is now one of the required regulations from their business partner from developed countries. Environmental care issue is, then, brought into the scope in hope of curing the earth before it is ever too late.

As the topic becomes global issue, environmental consultants are now in high demand to solve the existing problems, prevent the foreseen disaster, and, in return, make huge gains from this business. Thus, the market is expanding, and the competition is getting more intense. Business survival is now more difficult. So, profit gaining would surely be a struggle. To maintain its business, companies would need expertise, strong strategic planning, and well-structured management for competitive edge strength.

1.2 Background of the company

In 2003 The ABC Company has been established by four partners from four different business sectors in order to solve pollution problems. ABC started its business by solving pollution problems for business partners of the company owners. Most of ABC products are new innovations designed by the company research and development team. The company aims at expanding the market for its products. In order to do so, the company members have to conduct proper strategic planning for the expansion and to obtain competitive advantages.

1.3 STATEMENT OF PROBLEM

ABC is the company just established to solve pollution problems. Presently, the customers are business partners of ABC's owners.

Most of ABC's products are customized design by ABC's R&D team and tailored-made to suit the customers' needs. The treatment system already installed for existing customers will be used as show case demonstration for future customers.

Since the designs of the company product are newly developed, ABC has to carefully prepare for its strategic planning. Logistics strategic planning is required in order to improve its competitiveness. The minimization of cost and lead time would help ABC to gain benefits in the market. Timing is essential before competitors can launch the same products into the market. As this is the situation, ABC has to aim its positioning as leader in the environmental care market. Its strategic planning and logistics strategic planning will be the main factors for the company. This thesis would aim most emphasis on logistics strategic planning.

1.4 OBJECTIVE OF THE STUDY

- To generate proper logistics strategic plan and action plans for a product of on-site wastewater treatment system based on the Balanced Scorecard Approach.

1.5 SCOPE OF THE STUDY

- The study of logistics strategic planning will cover all four perspectives of the Balanced Scorecard and it will cover delivery and installation process of a Bio-Breath product of the environmental consultant business.

1.6 Methodology Framework

There is altogether nine stages of Methodology Framework in this study. They are shown below.

The study is carried out in the following steps:

1. Search and study involved journals, literature, and information post on Internet
2. Conduct focus group interview with the owners of the company
3. Analyze current situation of the business and corporate governance
4. Analyze logistics related external environment and internal environment of the company
5. Analyze logistics strategic critical success factors of the business based on Balanced scorecard Approach
6. Have a Meeting with the company owners and perform the Logistics strategy objectives and key performance indicators based on the balanced scorecard
7. Create the Initiatives of logistics strategy and Action plans by discussion with the owners to verify the result.
8. Summarized result and formulate suggestions
9. Prepare for presentation and final report

CHAPTER 2

LITERATURE REVIEW

General

The purpose of this chapter is to review theories from literature that are being used in this research. These theories are explained in the section below.

2.1 Concerned Theory

Logistics

According to Christopher Martin (1998), logistics could be defined as the process of strategically managing the procurement, movement and storage of materials, parts, finished inventory and the related information flow through the organization and its marketing channel in such a way that current and future profitability are maximized through the cost-effective fulfillment of order.

Strategic Management

Strategy

Strategy can be defined as a comprehensive plan of action which set a critical direction and guide the location of the resource to achieve long-term organization objectives. It is regarded as an action that considered as a good guess which must be done to ensure continuing prosperity for the organization. The choice of strategy is a complex and risk task since they define the direction that organization intends to move in a competitive environment. It is the choice that specifies how management team plans to match organization internal and external environment.

Strategic formulation

Strategic formulation is the development of long-range plans for the effective management of environmental opportunities and threats, in light of corporate strengths and weaknesses. It includes defining the corporate mission, specifying achievable objectives, developing strategies, and setting policy guidelines.

Balanced Scorecard

Kaplan, R. S. and Norton, D. P., *Translating Strategy into Action*, 1996. They showed that the Balanced Scorecard is a framework for unifying measures deduced from strategy. Balance Scorecard not only retaining the financial measures of part performance, but also introduces the drivers of future financial performance. The drivers, which are encompassing customer, internal-business-process, and learning and growth perspective, are deduced from an explicit and rigorous translation of the organization's strategy into tangible objectives and measures. The Balanced Scorecard stresses that financial and non-financial measurements must be the combination of information system for employees at all levels of the organization. Persons who must understand the financial consequences of their decisions and actions are front line employees. Persons who must understand the drivers of long term financial are senior executives. A business unit's mission and strategy should be translated into tangible objectives and measures by the use of Balance Scorecard. The measures show a balance between external measures for shareholders and customers, and internal measures of critical business processes, innovation, and learning hand growth. Between the outcome measures, the results from past efforts, and the measure that drive future performance are balancing the measures. Between objective, easily quantified outcome measures and subjective, somewhat judgmental, performance drivers of the outcome measures are balancing the scorecard.

Kaplan, Robert S., and Norton David P., *The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in The New Business Environment*, 2001. They showed that the Balanced Scorecard enabled the early-adopting companies to focus and align their executive teams, business units, human resources, information technology, and financial resources to their organization's strategy. They also showed that there are five principles of Strategy-Focused Organization. These five principles are firstly, translate the strategy to operation term; secondly, align the organization to the strategy; thirdly, make strategy everyone's everyday job; fourthly, make strategy a continual process; and lastly, mobilize change through executive leadership.

Environmental scanning

Wheelen and Hunger (2002) show that external environment and internal environment must be scan before an organization strategy formulation, in order to identify possible opportunities, threats, strengths, and weaknesses.

External Environment of the company

There are many variables that affect company's external environment. Kroll, Parnell, Wright (1998) showed that we could divide external environment in to two parts, which are societal environment and task environment (industry)

Societal Environment

The societal environment is including the general forces that do not straightforwardly tap on the short-run activities of the organization but that can influence its long run decision. These forces can be derived by using PEST analysis. PEST analysis is consisted of political-legal, economics, social, and technology.

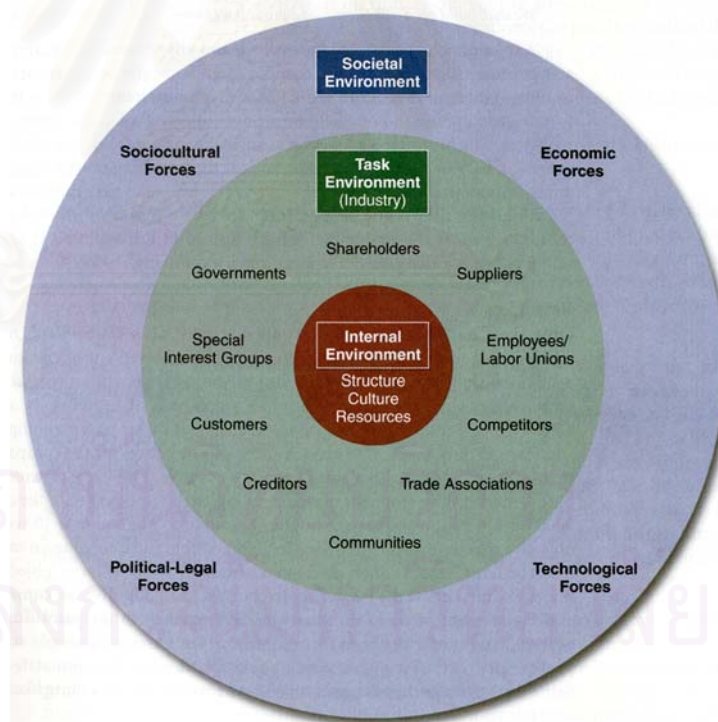


Fig. 2-1: Society Environment (Wright, 1998)

Task Environment

Michael E. Porter (1980) showed that the essence of formulating competitive strategy is relating a company to its environment. Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the firm's environment is the industry or industries in which it competes. Industry structure has a strong influence in determining the competitive rules of the game as well as the strategies potentially available to the firm. Forces outside the industry are significant primarily in a relative sense; since outside forces usually affect all firms in the industry, the key is found in the differing abilities of firms to deal with them.

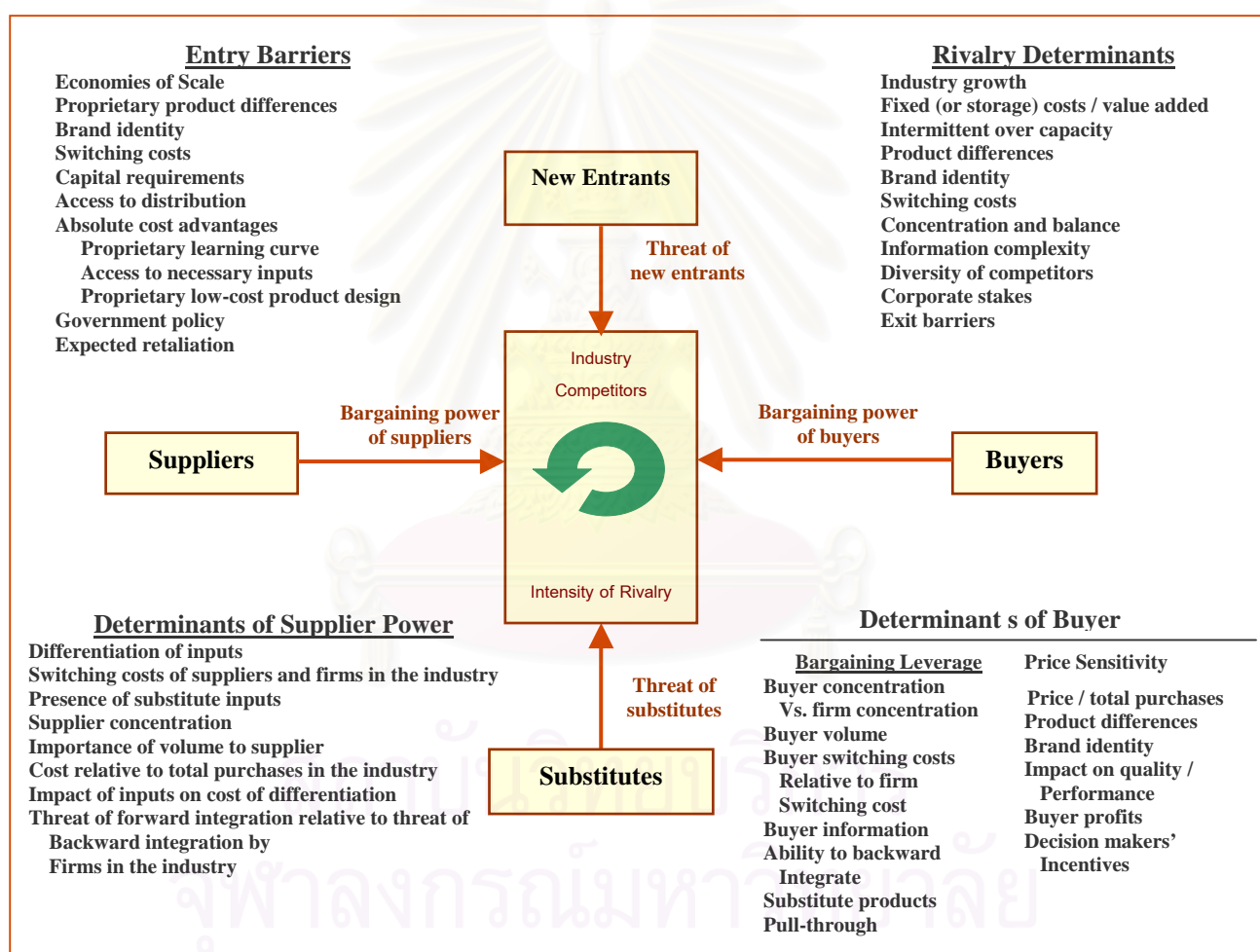


Fig 2-2: Forces Driving Industry Competition (Michael E. Porter, 1980)

Threat of new entrants

The threats of new entrants into an industry are depending on the barriers to entry that are presented, and also depending on the reaction from existing competitors. Though the products of each company are not similar to each other, the functions of them are quite the same but the efficient are not. The switching cost is high in this business. Though the barrier is not considered a low for the new entrant

Bargaining power of suppliers

Suppliers can apply bargaining power by raising the prices or reducing the quality of purchased goods and services. In so doing, powerful suppliers can squeeze profitability out of an industry. The industry may not be able to recover cost increases in its own prices.

Bargaining power of buyers

Industries are competed by the buyers to force down their prices, bargaining for higher quality or more services, and playing competitors against each other. All these situations are reducing industry profitability. The power of buyer groups depends on a number of characteristics of its market situation and on the purchases amount from the industry compare with its overall business.

Threat of substitute products

The firms in an industry are competing with each other since they are trying to produce substitute products, which will limit the potential returns of an industry by placing a ceiling on the prices firms in the industry can profitably. The more attractive the price and performance alternative offered by substitutes, the firmer the lid on industry profits.

The Rivalry among Existing Firms

When one or more competitors feel the pressure or see the opportunity to improve position, rivalry will occurs.

Order winning and order qualifier

Order winner and order qualifier was devised by Hill (1993) in order to provide a framework to considerate how to increase company's products in the market. Order winning criteria are the factors that offer a competitive boundary over the other in the market. Order qualifying criteria are the factors that are crucial to maintain a position in the market.

Slack (1990) showed that there are five performance objectives that manufacturing can pursue in order to gain a competitive advantage. They are cost, speed, quality, dependability, and flexibility. He also showed the steps to evaluate order winning and order qualifying criteria.

Step 1: Setting objective

Slack (1990) had extended Hill's (1993) order winning and order qualifying criteria to create the nine-point scale, which shows the product feature ranking that is important to customer.

1) Provide a crucial advantage with customers	}	Order Winning Objectives
2) Provide an important advantage with most customers		
3) Provide a useful advantage with most customers		
4) Need to be up to industrial standard	}	Order Qualifying Objectives
5) Need to be around median industry standard		
6) Need to be within close range of the range of the industry		
7) Not usually important but could become more so in future	}	Less Important Objectives
8) Very rarely rate as being important		
9) Never come in to consideration		

Fig. 2-3: Slack's nine Point Important Scale (Slack, 1990)

Step 2: Judging achieved performance

Slack (1990) used the competitor performance scale to analyze the company's position against its competitors.

- 1) Consistently considerably better than our nearest competitor
- 2) Consistently better than our nearest competitor
- 3) Consistently marginally better than our nearest competitors
- 4) Often marginally better than most competitors
- 5) About the same as most competitors
- 6) Often close to the main competitors
- 7) Usually marginally worse than most competitors
- 8) Usually worse than most competitors
- 9) Consistently worse than most competitors

Fig. 2-4: Slack's nine Point Performance Scale (Slack, 1990)

Step 3: Prioritizing through the importance/ performance gap

The gap between the performance objectives on the customer important scale and their position relating to the company's performance against its competitors will give a clear indication of the priorities that manufacturing, purchasing and the supply chain must focus on to achieve the stated objectives.

The Basic 7 QC tools

These tools are used as an assistance to locate, collect, and analyze the causes of the problems in order to improve or solve those problems. These tools are check sheet, graphs, pareto diagram, Causes and effects diagram (fishbone diagram), control chart, histogram, scatter diagram.

1. Check sheet is a form that has been designed to collect information according to the user's need.
2. Graphs are tools that used to shows data or to arrange data in form that more easy to understand.
3. Pareto diagram is a tool to analyze data and to arrange them according to its importance. Each data will be showed to compare with others.
4. Caused and effects diagram is a tool that identify the cause and effect relationship by analyzing the root cause of the problem.
5. Control chart is a chart that uses to trace and control the variable not to exceed the expected range.

6. Histogram is a chart that shows the distribution of population.
7. Scatter diagram is a tool that shows relation between two sets of data or two set of variable.

The new 7 QC tools

These tools is a quality tools that assisting to arrange text information, sort them in the form that can be solved, and improve planning system. These tools are affinity diagram, relation diagram, tree diagram, matrix diagram, arrow diagram, process decision program charts, and matrix data analysis.

1. Affinity diagram is a tool that assisted to reduce data confusion by rearranging the data structure into user friendly form.
2. Relation diagram is a tool that used to solve the complexity of data by clarifying the problem and the root cause of it.
3. Tree diagram is a tool that assisted to show strategies in a system form. Beginning with the objective, this tool will be used to develop strategies. These strategies will then being used as objectives in further steps.
4. Matrix diagram is a tool that consisted of vertical and horizontal information. The cross sections of information are being used to analyze the thought to solve the problems.
5. Arrow diagram is a chart that shows the problems solving solution used to assist the progress tracing of the problem.
6. Process decision program chart is a tool that used to control problem solving process according to the objective set.
7. Matrix Data Analysis is a tool that can be widely used to analyze many analyses. It can be used in quality deployment to stage the relationship of two factors or to find the relationship of two substitutable factors.

CHAPTER 3

ANALYSIS OF CURRENT INTERNAL AND EXTERNAL LOGISTICS ENVIRONMENT

General

The purpose of chapter 4 is to analyze the current internal and external logistics environment of the company. This chapter is consisted of nine major sections. The first section is the identification of the corporate vision, mission, objectives, and strategy. It is held be conducting an interview with executives and the owners of the company. The second and third sections are the internal and external environment of the company. They are analyzed by the author. The third and forth sections are the analysis of logistics related internal and external of the company. They are analyzed by individual inquiry from all members of company board. The fifth section is the SWOT analysis. It is used to find the company logistics related critical factors. The sixth and seventh sections are the customers' requirement and the customers' requirement analysis. The purpose of these sections is to study customers' needs and use them to analyze the importance of the critical success factors from customer point of view. The last section of this chapter is the order winning and order qualifying criteria. It will prioritize the critical success factors with respected to the customers' point of views.

3.1 The identification of the corporate vision, mission, objectives, and strategy

3.1.1 Planning

An interview with the company's executives and company's owners will be conducted in this phase. They are invited to join a meeting that discusses on their corporate vision and strategy. At the meeting, the researcher has a responsibility to record the discussion and the content of the meeting. As a result, the update version of the corporate vision and strategy are generated and it will be used as the guideline to translate the corporate strategy into the company's functional level. This meeting will be conducted to introduce the concept of the Balanced Scorecard, and identify the business unit vision and strategy. This business unit vision and strategy will be used as a guideline to effectively translate into every functional level of the company in further study.

3.1.2 Implementation

The researcher will arrange the meeting and invite all four owners of the ABC co., Ltd. The researcher will also provide a document of the Balanced Scorecard concept for every

member in the meeting. The meeting will be divided in to two sections. At the first section the researcher will spend for clarification of the Balanced Scorecard approach. At the rest of the meeting, the researcher will discuss on the corporate mission, vision, objective, and strategy with company's owners. During the discussion, the researcher will also ask some questions, which were unclear with the researcher. Therefore, vision, strategies, and some unclear questions of the company will be discussed clearly during this meeting.

3.1.3 Results

Corporate Strategic Posture

Corporate Vision

“We will conserve the value of God's land and his creation”

Corporate Mission

“We are the company who conserve all kind of environment, treat all kind of pollution, and give knowledge to everyone who needed”

Corporate Objective

- Growth
- Efficiency (low cost)
- Quality
- Service
- Contribution to society
- Contribution to employees
- Technology leadership

Corporate Strategy

- Customer Relationship Management
- Suitable Price
- Innovativeness (update design)

3.2 Internal Environment

In this section, the author will analyze the overview of the internal environments of the company.

3.2.1 Business Unit Objective

The business unit objective of the company can be described in four perspectives according to the Balanced Scorecard approach as shown below.

Financial Perspective

- Optimizing cost
- Continuously increasing sales

Learning and Growth Perspective

- Improve appropriate knowledge to company's personnel
- Information system
- Study and adapt new technologies
- Always improve quality of product and design

Customer Perspective

- Control quality of products
- Always improve service
- Customer satisfaction
- Retain customers and also looking for new customers

Internal-Business-Process Perspective

- Provide quality products
- On time delivery
- Low cost

3.2.2 Corporate Governance

3.2.2.1 Board of Directors

The directors of the company are internal directors who are directly affected by the company's shares. These directors are the owners of the company who serve on the board since the company has established. They are the people who manage their own strategic and future decisions.

3.2.2.2 Organization structure

The company's organization chart

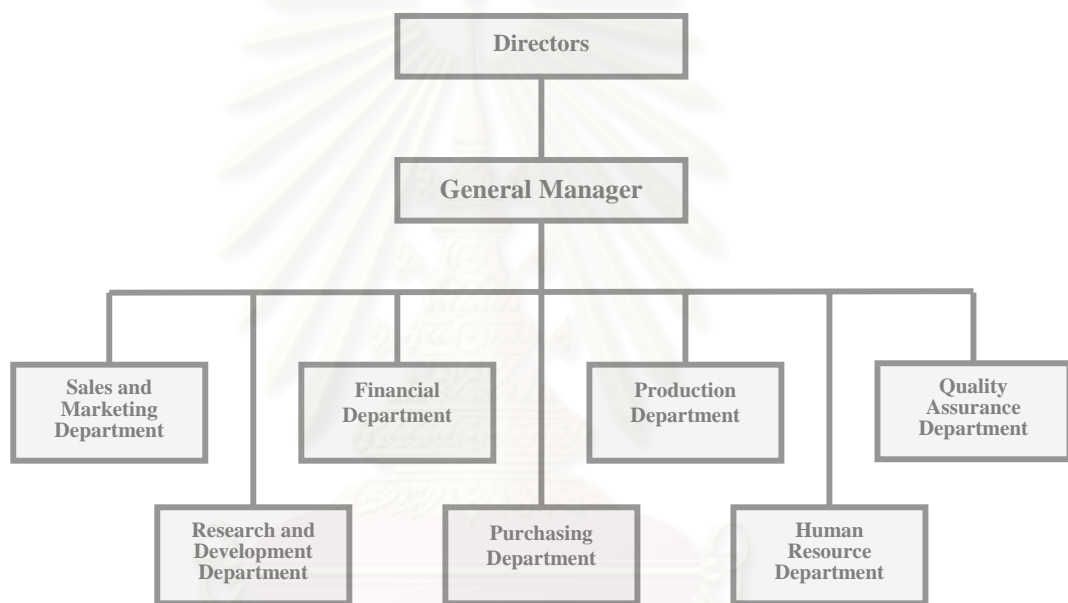


Fig. 3-1: ABC's organization chart

ABC organization structure is a functional structure. Every functional is characterized by the synchronized collection of similar activities and the partition of discrete activities on the basis of function.

3.2.2.3 Corporate Resources

Marketing

Products

Bio-breath is a wastewater treatment system that use microorganism to treat waste. These specific microorganisms are raised in the complex circumstance provided in the system by using very specific component.

Product Classification

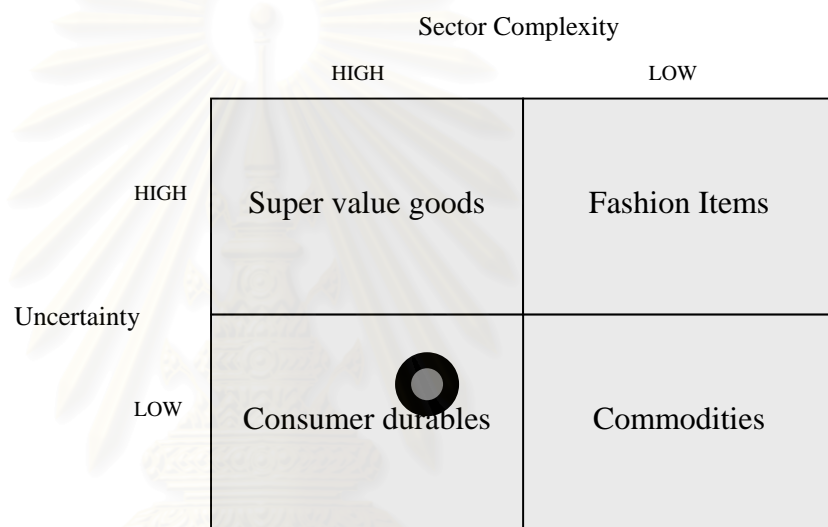


Fig. 3-2: Product classification

Price

The price of bio-breath product has been set nearly to others similar propose products from competitors in the market. The structure of the price has been set to reduce according to the volume of the product bought.

Place

Presently, ABC sells the product directly to its customers.

Promotion

ABC uses direct marketing with its customers.

Finance

The financial information of the company is not currently available since the first year summary is not finished.

Research and Development

ABC has very strong R&D team. Every product of the company has been delicately designed and tested before launch the market. These products of the company have targeted to provide better feature compared to the products from competitors.



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Logistics and Operation Management

Company's processes: The processes of ABC can be described in a flow diagram that shown below.

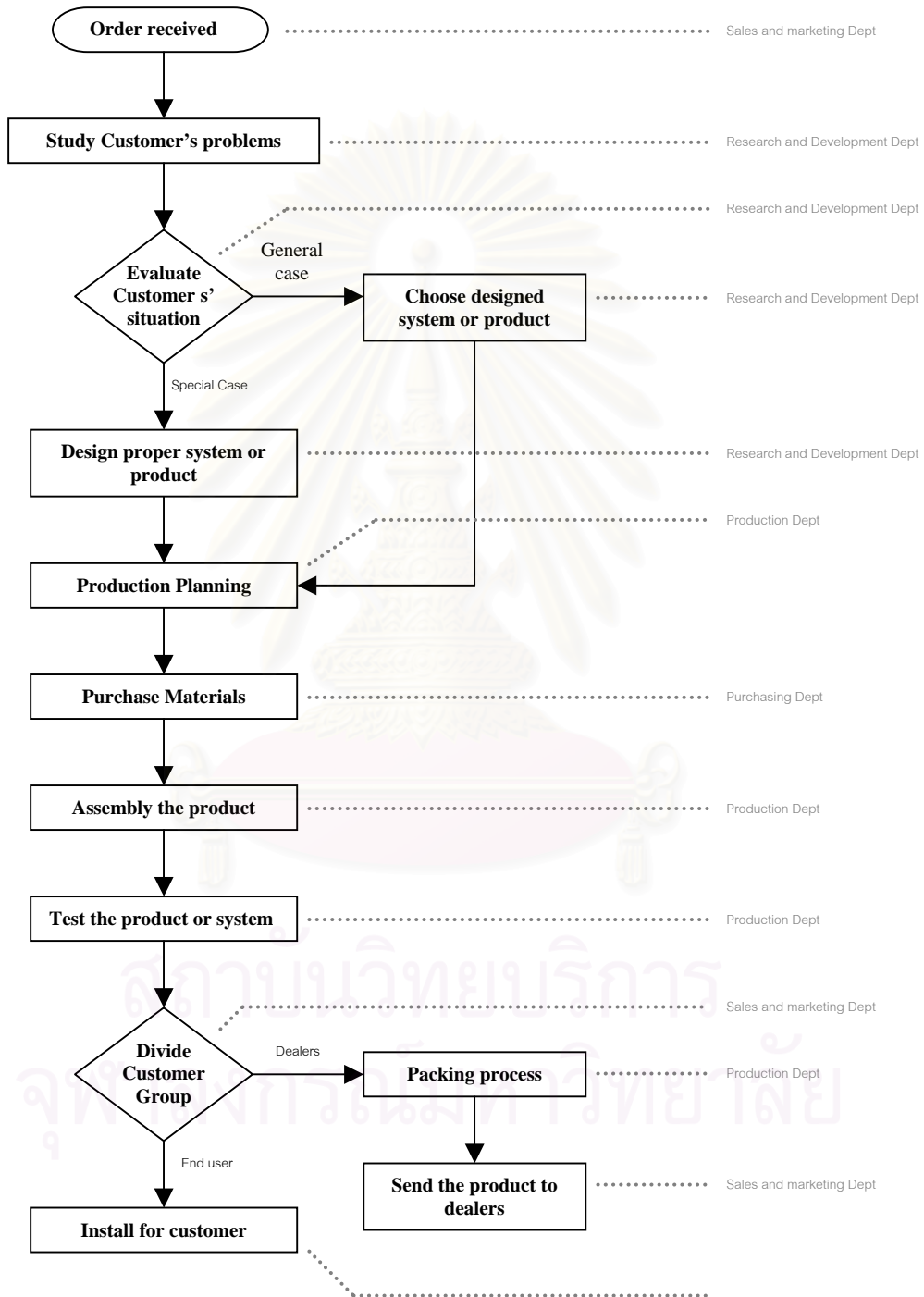


Figure 3-3: ABC's work process

The logistics that we considered in this study is the logistics in last chain of the company. The related logistics in this chain are Inventory, Delivery, and Installation.

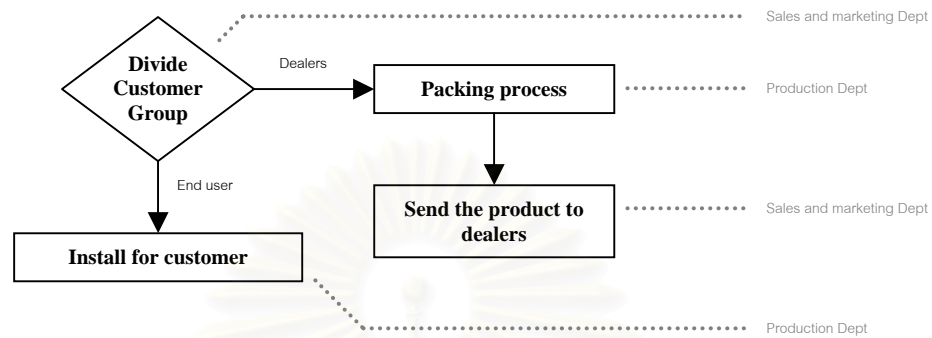


Figure 3-4: ABC's outbound logistics work process

Human Resource

Every employee has been sort by ABC human resource department to verify their performance and skill before recruit them to their position. Most of employees revealed their alternative performance after recruited for a while. Some employees had been assigned for those alternative performances which were not related to their departments.

Information system

ABC has rent its own domain to create electronics mails address. ABC uses those mails to communicate between departments, to communicate with suppliers, and to communicate with customers. ABC use computer to collect information of the company.

3.3 Logistics related internal environment of the company

3.3.1 Planning

To analyze the Logistics related internal environment of the company, the author has created form 1 with reference to “The strategic planning and Balance Scorecard process handbook”, Asst. Prof. Achara Chandrachai (2002). The form 1 is included most of the company internal activities. There are three main parts in this form. The first part is consisted of most of the internal activities in the company that are summarized from section 3.2. The second part is the performance check list that is being used to evaluate the performance of each activity in the first section. The purpose of this evaluation is to evaluate the performances of those internal activities with respect to the owners of the company. The last part is the evaluation of logistics related importance of each activity to the company. The purpose of this evaluation is to locate the activities that are important to the company logistics.

3.3.2 Implementation

The author would use this form to collect individual point of view from each member of the company board. From this form, each member of the company board would be requested to analyze each item of the internal environments and weigh its performance, and each member also requested to analyze how important of that item to the company outbound logistics. The expected result of this analysis was to assess the strengths and weaknesses of the company outbound logistics. There were altogether three columns of contents in form 1. Each column of the form was described as follow.

- The first column “Internal Environment” showed the activities in the company. The categories of this column were divided into four perspectives according to the Balanced Scorecard approach, which were customer perspective, internal process perspective, Learning and growth perspective, and financial perspective.
- The second column “Performance” was to indicate the performance of the activities in the first column. The marks would be rank from 1 to 5, which 5 stands for excellent performance, 4 stands for good performance, 3 stands for

average performance, 2 stands for poor performance, and 1 stands for very poor performance.

- The third column “Importance in term of logistics” was to indicate the importance of the activities in the first column in term of logistics. The marks would be rank from 1 to 5, which 5 stands for very importance, 4 stands for importance, 3 stands for relatively importance, 3 stands for less importance, and 1 stands for least importance in term of logistics to the company.

The example of the company’s strength and weakness analysis form was shown in the figure below.

	Performance					Importance in term of logistics				
	1(low)	2	3	4	5(high)	1(low)	2	3	4	5(high)
Customer										
Marketing										
Product development										
Customer loyalty										
Sales performance										
Promotion/Advertisement										
Market information										
Customer behaviors understanding										
Internal Process										
Product/Service quality										
Responsiveness										
Cooperative with suppliers										
Employee Satisfaction										
Position assigned										
Payment										
Performance										
Learning and growth										
Information technology										
Training and skill										
Performance measurement										
Financial										
Profitability										
Profits growth										
Liquidity										
Costing										

Table 3-1: Form 1 sample

The results from logistics related internal environments analysis were collected in table 2 and summarized in the Pareto graph in figure 9. Each number in the table indicated the number of opinions from the company board. Since there were four members of company board, four marks were the highest votes in each block. The performance of each item were calculated by summarizing the multiplying of each mark to the performance, which that mark stand for. Similarly to the importance column, the importance of each item was also calculated by summarizing the multiplying of each mark to the level of importance. The highest possible marks for performance and importance in each item was 20, therefore 20 marks was equal to 100% of importance.

	Performance					Importance in term of logistics				
	1(low)	2	3	4	5(high)	1(low)	2	3	4	5(high)
Customer										
Marketing		2	2			1	3			
Product development					4	3	1			
Customer loyalty		1	3					1	3	
Sales performance										
Promotion/Advertisement	1	3						1	3	
Market information			4			4				
Customer behaviors understanding				3	1				2	2
Internal Process										
Product/Service quality			3	1		4				
Responsiveness	1	3								4
Cooperative with suppliers			2	2						4
Employee Satisfaction			2	2				3	1	
Position assigned		3	1						3	1
Payment			4					1	3	
Performance			4							4
Learning and growth										
Information technology		4							2	2
Training and skill	1	3							1	3
Performance measurement	3	1						1	3	
Financial										
Profitability	1	3				4				
Profits growth		4				4				
Liquidity			4					1	3	
Costing				1	3					4

Table 3-2: Form 1 result

The data collected in table x can be summarized in the Pareto graph as shown in the figure below. The data were arranged with respected to the importance of outbound logistics. The outbound logistics related internal environments were chosen from the item that were higher than or equal to 80 percent importance to the outbound logistics. The items that were higher than 50 percent of performance were considered as strengths of the company. Likewise, the items that were lower than or equal to 50 percent were considered as a weaknesses of the company. According to the graph, there were ten items that were higher than 50 percent importance, which were product development, costing, customer behaviors understanding, cooperative with suppliers, employees' satisfaction, product and service quality, payment, performance and skill, marketing information, and liquidity; and there were ten items that were lower than or equal to 50 percent which were performance measurement, profits ability, promotions and advertisements, employees training, responsiveness to customer, profits growth, information technology, position assigned, marketing, and customer loyalty.

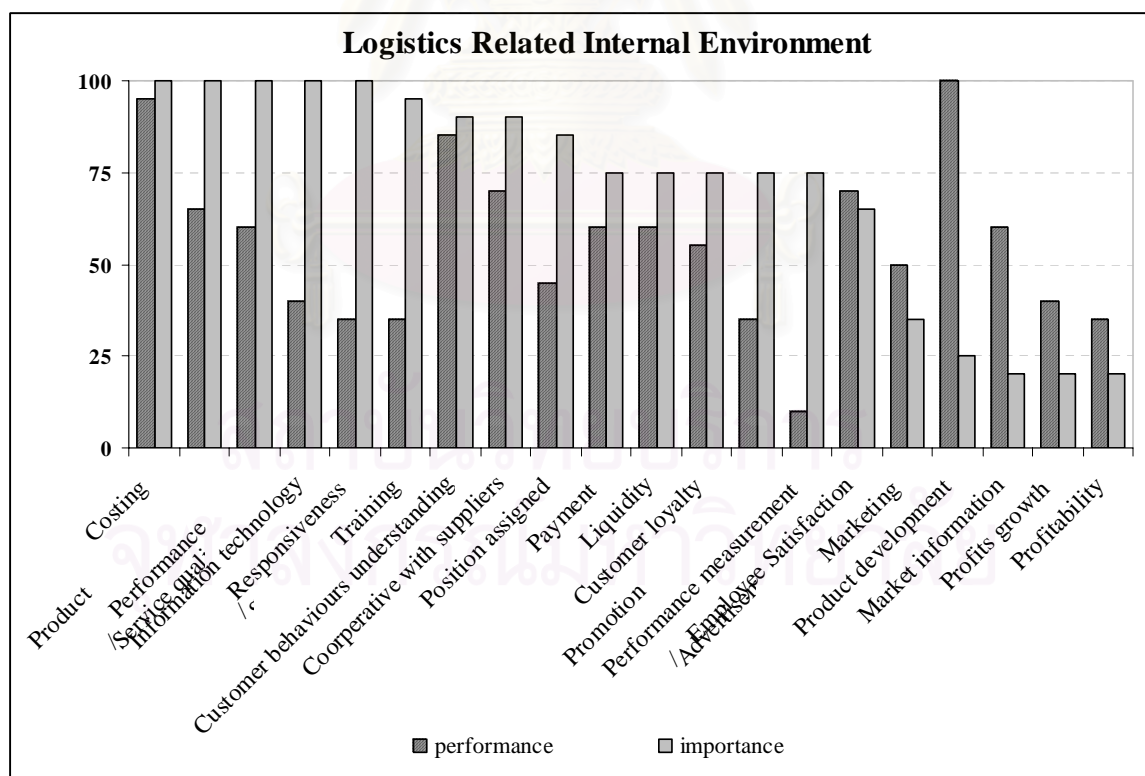


Fig. 3-5: Logistics related internal environment

3.4 External environment

The PEST analysis, which consisted of political-legal, economics, social-culture, and technology, is being used to analyze the external environment of the company. This analysis is done by the author.

Political-legal

There are three main political-legal issues that directly effect ABC company, which are patent, environment legal, and the world trade organization. These issues are explained below.

Patent

ABC products were designed by its R&D team. Patent system helps the design owner to protect his/her right to use his/her designs. It slows down the copycats who intend to copy others' products to earn their profits.

Environmental legal

Thai people are starting to concern about environment. There are many laws and regulations that are using to enhance and conserve national environment. These regulations caused everyone conserve the environment. Every industrials those never treat their waste have been forced by the regulations to treat their waste before discard to the environment.

The World Trade Organization (WTO)

Chinese companies are ones of ABC's suppliers and customers. ABC buys materials and sells goods to them. Both Thai and China are members of WTO. The main function of WTO is to ensure that trade flows as easily, predictably and freely as possible.

Economic

There are four factors that are directly effect the economical condition of the company, which are gross domestic product, interest rates, inflation tares, and exchange rate.

Gross Domestic Product (GDP)

Thai economics could be summarized by observing the trend of Thai GDP since GDP refers to the value of a nation's annual total production of goods and services as a major pointer of economics development. The consistent growth in GDP from 1987 to 1996 produced a healthy economy in which businesses find growing demand for their outputs because of rising customer expenditures. On the other hand, a decline in GDP from 1997 to 1998 reflected the reduction of consumer expenditures and lower demand for business outputs. The GDP from 2001 showed a sign of economics recovery. As we could notice from predicted 2003 to 2006 GDP, Thai economics is in improving trend.

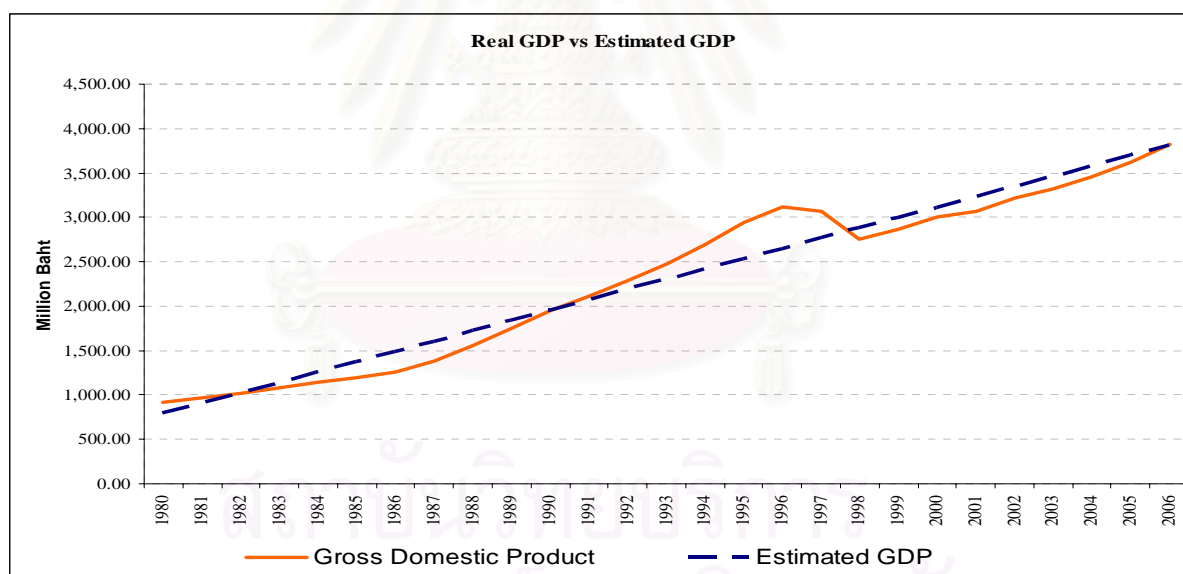


Figure 3-6: real GDP vs. Linear estimated GDP (The Bank of Thailand and www.asiatrادهub.com)

Interest rates

Short and long term interest rate rates significantly affect the demand for products and services. Interest rate levels greatly affect strategies decision. High rates prevent business to raise funds to expand or to replace aging facilities. Lower rates

are more conducive to capital expenditures and to merge and acquisitions. The figures below are showing the history of saving and loaning interest rate in Thailand.

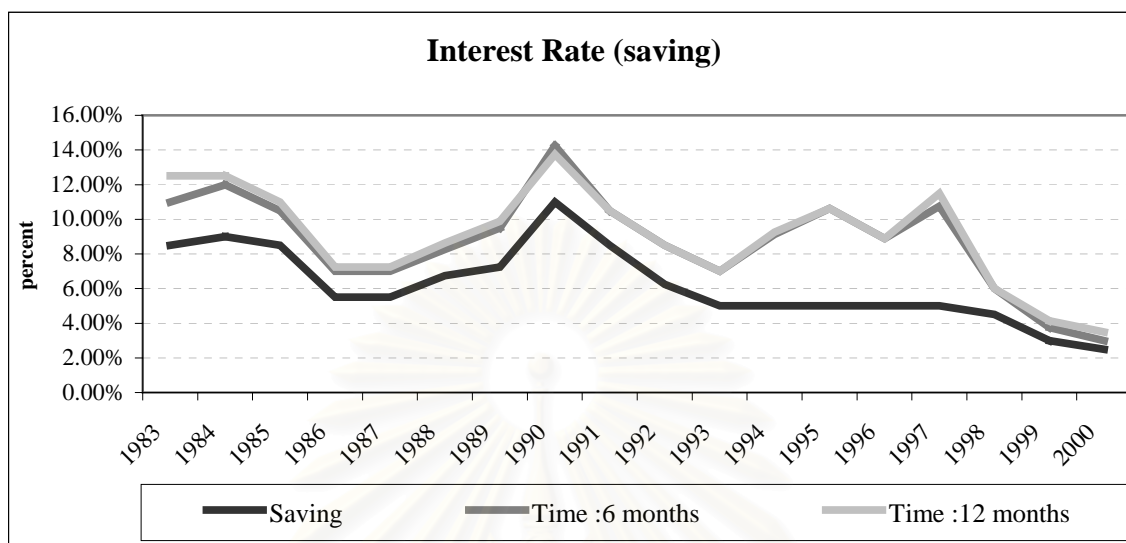


Figure 3-7: Interest rate (saving)

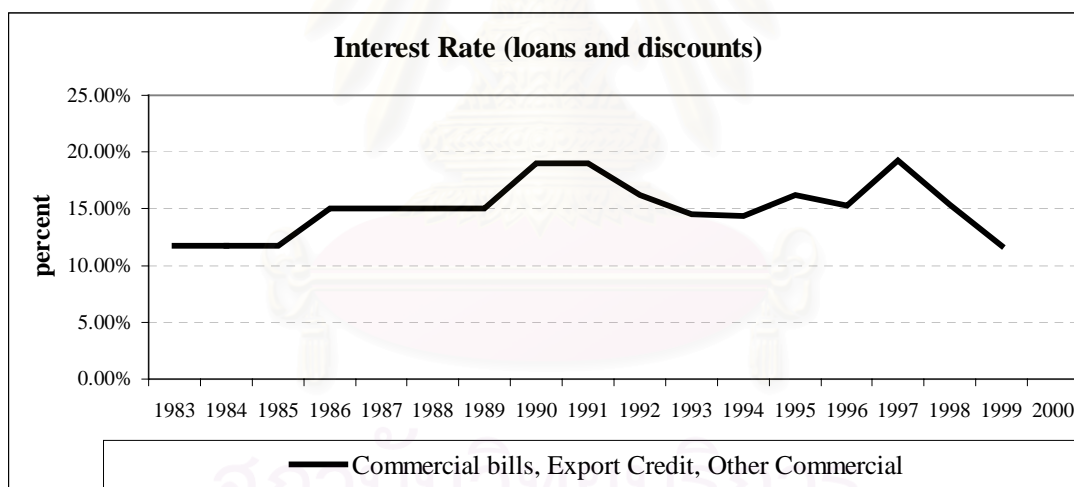


Figure 3-8: Interest rate (loans and discounts)

Due to the decreasing train of loans interest rate, it is generally offering beneficial to companies who want to expand their capitals. In additional, lowing saving interest rate prevent company to receive benefits from interest earning. Therefore, it is not interesting to deposit in this period.

Inflation rates

Inflation is a general rise in the price levels of goods and services. If the rate of inflation rises slightly, it will give incentive to business operators. A sharp rise, on the other hand, will cause volatility and pose problems on the system, especially on the cost of living and economic stability, which hinder development of the economy.

In Thailand, the inflation rate is measured from changes in the consumer price index, which is a weighted average of prices of goods and services regularly consumed. Weights are determined from household spending patterns obtained by surveys. Department of Internal Trade, Ministry of Commerce, is the one who calculates the consumer price index in Thailand.

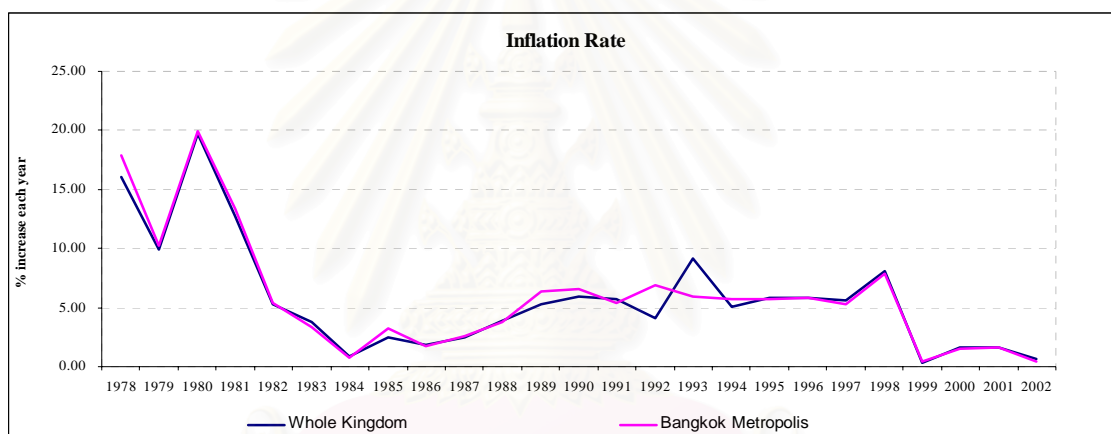


Figure 3-9: inflation rate (the Bank of Thailand)

Theoretically, inflation arises from 2 major factors:

First factor: The force of demand. This happens when the demand for goods and services surpasses what is available in the economic system, thus causing the prices of goods and services to rise. Increase in demand for goods and services may arise from many reasons such as: an increase in money supply, fiscal deficit, increased external demand, and changes in consumption behavior of the public.

Second factor: Higher production cost. This incident forces the producers to raise the prices of goods. Higher production cost may stem from many factors such as: an increase in wages; natural disaster such as drought,

flood, storm, fire and war; and changes in import prices which may increase depending on world market condition or exchange rate changes.

Exchange rate

Since ABC has bought some materials from China and also sells its products to China, the value of Chinese Yuan Renminbi affects the strategic decisions of the company. When the value of Thai Baht is decreased compared to the value of Chinese Yuan Renminbi, ABC would gain benefits when ABC sells product to china but ABC would lose its benefits when ABC buy material from China. In the other hand, ABC would gain benefits when ABC buy material from china if the value of Thai Baht is increased compared to the value of Chinese Yuan Renminbi. The figure below is showing the history Chinese Yuan Renminbi exchange rate history.

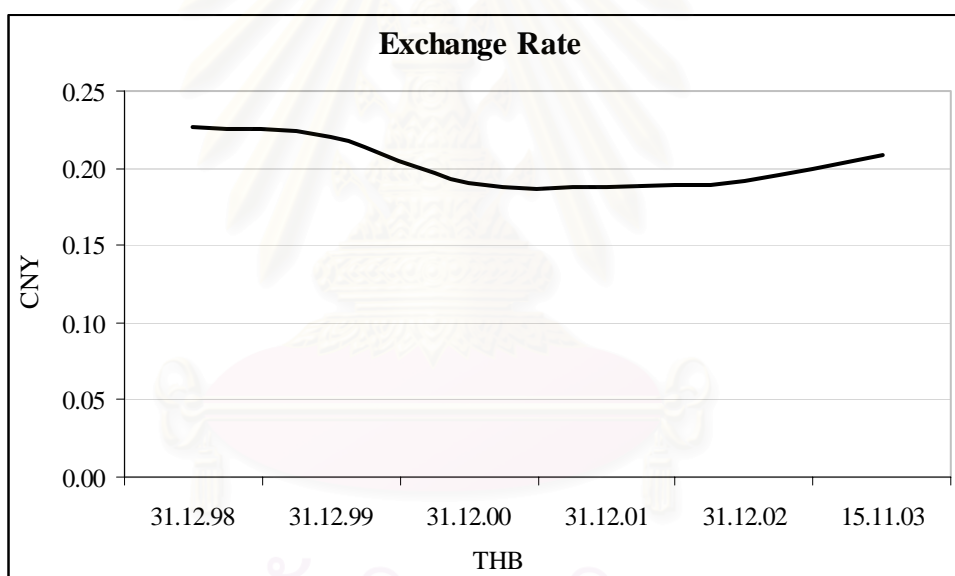


Figure 3-10: Exchange rate (CNY vs. THB) (<http://www.oanda.com/convert/fxhistory>)

Social-cultural

There are five social-culture issues that effected the company external environment, which are brand image, relationship priority, individualism and collectivism, power distance, and uncertainty avoidance. These issues are described below.

Brand Image

Thai people like to buy good brand image product. Most of the products that are sold by good brand company are more likely to success in the market. They can sell their products even though the qualities of those products are lower than the competitors' products. They can even sell though the prices are higher than the competitors. The brand image is one of the important factors that have high impact to the buyers' behaviors of Thai people. ABC brand is a new brand in the market therefore ABC has to create good strategies to build good image to its brand.

Relationship priority

Relationship takes an important role in Thai businesses these days. It involves in every business however the level of importance is not equal in each business and in each market. It is important to build relationship to target market to gain competitive advantage over the competitors. Present customers of ABC are business partners of the company owners thus they have good relationship to each others. To gain benefits in the market, ABC has to create good strategies to build good relationship to its target market.

Individualism versus collectivism

This basic culture dimension shows the difference of culture holds between individuals and the group responsible for each member's welfare. Individualism always places responsibility for poor decisions on individual but most of Thai who are collectivism always blame group of members for making bad decisions. Therefore it is important to have good key performance indicator for each employees to measure their performance and also to set proper target to each other to support the department key performance indicator.

Power distance

This basic culture dimension shows the degree of inequality between people in different occupation or different social classes. Large power distance culture like Thailand, leader and supervisors enjoy special recognition and privileges. Mostly, the communications in the company are only in one direction since the power

distance creates top down management style. ABC is also one of Thai company that managed by top down management style.

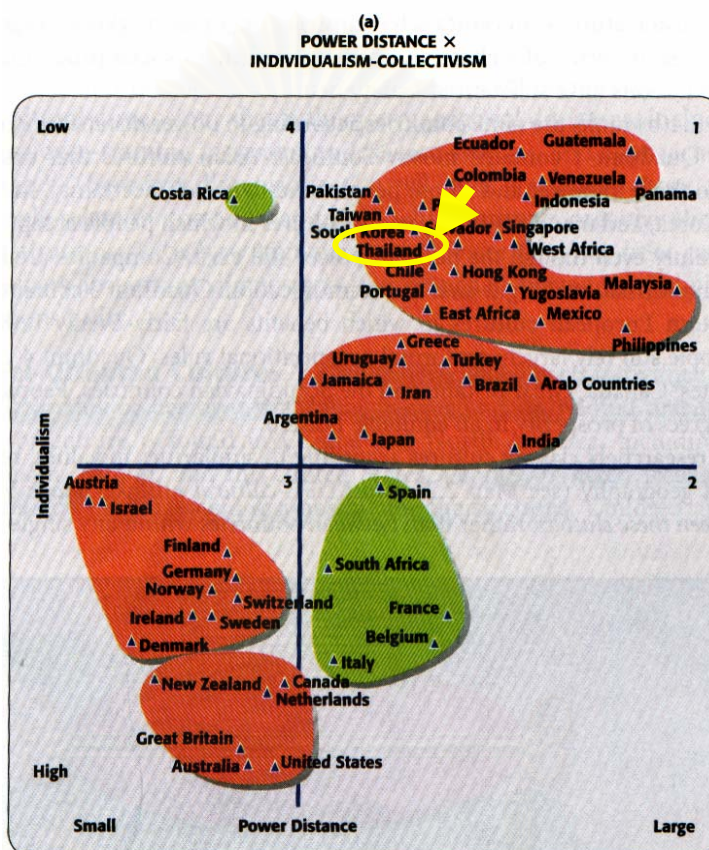


Figure 3-11: Power distance vs. Individualism-Collectivism

Uncertainty avoidance

This basic culture dimension identifies a culture willingness to accept uncertainty about the future. Strong uncertainty avoidance culture country is the country that has lower employee turnover, more formal rules for regulating employee behavior, and more difficulty in implementing change. The small uncertainty avoidance or risk-accepting cultures welcome more practices from other cultures but suffer from greater employee turnover.

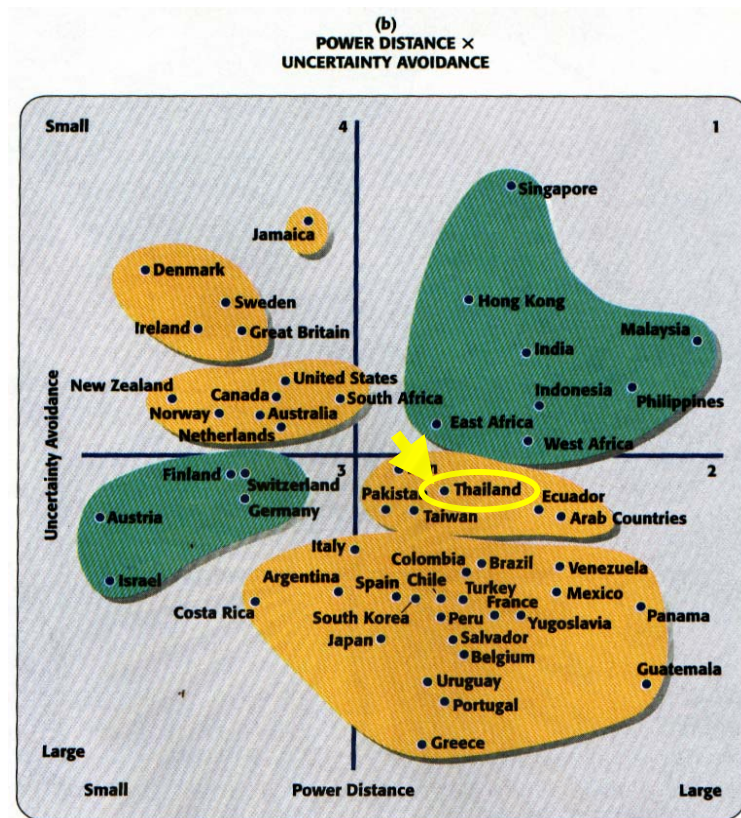


Figure 3-12: Power distance vs. Uncertainty avoidance

Technology

There are two technologies that effected the company external environment, which are electronic data interchange, and website. These technologies are described below.

EDI (Electronics Data Interchange)

Electronics Data Interchange or EDI is the electronic exchange of common documents such as purchase orders, invoices and fund transfers between trading partners. It allows two companies to communicate through their computer systems and a third-party network, thus the company could reduce the potential for human error and saving time and money. EDI significantly reduces the lead time for most transactions by avoiding the use of mail and delivery services. It allows users to reduce their inventory and frees working capital. EDI also reduces the risk for human error, because it eliminates most re-keying. EDI translates into savings since the costs associated with routine transactions such as issuing purchase orders, invoices and payments are often hidden in the operating budgets of various departments.

Website

Internet is the new source of information that widely used by almost everyone to search for information that they need to know. Many companies use website to communicate with their customers. Instead of publish only brochures, they use website to promote their companies and their products. Customers could easily get information of the expected products that they need by visiting their websites. In case that customer has not any information of the products, they could still search that information from search engine website.

Task Environment

Task environment of the company can be analyzed from porter's five competitive forces of the company. These forces are threat of new entrants, bargaining power of suppliers, bargaining power of buyers, threat of substitute products, and the Rivalry among Existing Firms

Threat of new entrants

In this business, the capital requirement of these products and services are much more than existed company could supply since water treatment is required from the government. Therefore every company with good strategic planning could easily entrant to the business no matter how good the products and services they could provide.

Bargaining power of suppliers

One product is normally consisted of several components. The switching costs of each component are not the same. The switching costs of some components are high and some are not. There are more than enough suppliers that can supply all components to every company. Therefore the bargaining powers of suppliers are considered as high for only some suppliers that supply very specific components of the product.

Bargaining power of buyers

The buyer concentration is higher than seller and the switching cost of the product is also high. Brand identity and product quality are important. There is some bargaining power of buyer in this market but not much.

Threat of substitute products

The treat of substitute products in the business is very high. Every company has to develop their products to compete with each other in order to gain greater benefits from the business. The company that has no design development will not survive in the business in the long term. They may gain some profits but only in a short term.

The Rivalry among Existing Firms

The competition in this business is high. The brand identity is one of the key issue in this section. Product performance and the overall cost are also the most important issue in the business. Therefore the survivors of this business are the companies that have good reputation, good marketing, and good strategic planning.

3.5 Logistics related external environment

3.5.1 Planning

To analyze the Logistics related external environment of the company, the author has created form 2 with reference to “The strategic planning and Balance Scorecard process handbook”, Asst. Prof. Achara Chandrachai (2002). Form 2 is included all of the company external environments that have been described in section 3.4. There are three main parts in this form. The first part is the list of the entire company external environment described in section 3.4. The second part is the opportunity and threat evaluation of these activities from the owners’ point of view. The last part is the evaluation of the logistics related importance of these activities to the company.

3.5.2 Implementation

The author would use this form to collect individual point of view from each member of the company board. From this form, each member of the company board would be requested to analyze each item of the external environments whether it was an opportunity or threat of the company, and each member also requested to analyze how important of that item to the company outbound logistics. The expected result of this analysis was to assess the opportunities and threats of the company outbound logistics. There were altogether four columns of contents in form 2. Each column of the form was described as follow.

- The first column “External Environment” showed the factors that created opportunities or threats of the company. These factors were external environments of the company that were shown in chapter 5.
- The second column “Possible Trends” showed the possible trend of the factors from the external environment in the first column.
- The forth column “Status” showed the critic of the effects in the third column whether they were opportunities or threats of the company outbound logistics. The company owners will analyze whether each activity is an opportunity or a threat of the company.
- The last column “Level of importance” showed the importance of those external environments in the first column to the company outbound logistics. The marks would be rank from 1 to 5, which 5 stands for very importance, 4

stands for importance, 3 stands for relatively importance, 3 stands for less importance, and 1 stands for least importance in term of logistics to the company.

The example of logistics related external environment analysis form was shown in the figure below.

External Environment	Possible trends	effect		Level of Importance				
		Opportunities	Threat	1(low)	2	3	4	5(high)
Political	Patent							
	WTO							
	Environment Legal							
Economics	GDP							
	Interest rate							
	Inflation rate							
Socials/Cultures	Exchange rate							
	Population							
	Brand Attractive							
	Relation priority							
	collectism							
Technologies	power distance							
	Uncertainty avoidance							
	Website							
Task Environment	EDI							
	CAD/CAM							
	New entrants							
	Suppliers							
	Buyer							
	Substitute product							
	Existing firm							

Table 3-3: Form 2 sample

The results from logistics related external environments analysis were collected in table 4 and summarized in the Pareto graph in figure 17. Each number in the table indicated the number of opinions from the company board. Since there were four members of company board, four marks were the highest votes in each block. The votes in fifth column showed the opinion whether the effects in fourth column were opportunities or threats. Four marks in forth column stand for 100% agreement. In this column, we could notice that every member gave 100% agreement in every block since every block was indicated whether 100% opportunity or 100% threat. The additional seventh column was the cumulative of the level of importance in sixth column. The marks in seventh column were calculated by summarizing the multiplying of each mark to the level of importance, which that mark stand for. The highest possible marks in seventh column was 20, therefore 20 marks was equal to 100% of importance.

External Environment	Possible trends	Effect		Level of Importance					Total
		Opportunities	Threat	1 (low)	2	3	4	5 (high)	
Political	Patent	4		3	1				5
	WTO	4			4				8
	Environment Legal	4		2	2				6
Economics	GDP	4		1	3				7
	Interest rate	4		3	1				5
	Inflation rate	4		1	3				7
	Exchange rate		4		1	3			10
Socials/Cultures	Population	4			4				5
	Brand Attractive		4	2	2				6
	Relation priority	4		3	1				5
	Collectism		4			4			12
	power distance		4	1	3				7
	Uncertainty avoidance	4		4					4
Technologies	Website	4					2	2	18
	EDI	4						4	20
	CAD/CAM	4		1	3				7
Task Environment	New entrants		4					4	20
	Suppliers		4					4	20
	Buyer		4					4	20
	Substitute product		4			2	2		14
	Existing firm		4					4	20

Table 3-4: Form 2 result

The data collected in table x can be summarized in the Pareto graph as shown in the figure below. The outbound logistics related external environments were chosen from the factors that were higher or equal to 80% importance to the outbound logistics. As shown below, the chosen factors were EDI and Website. Both of them were the opportunities of the company and both of them were come from technology category.

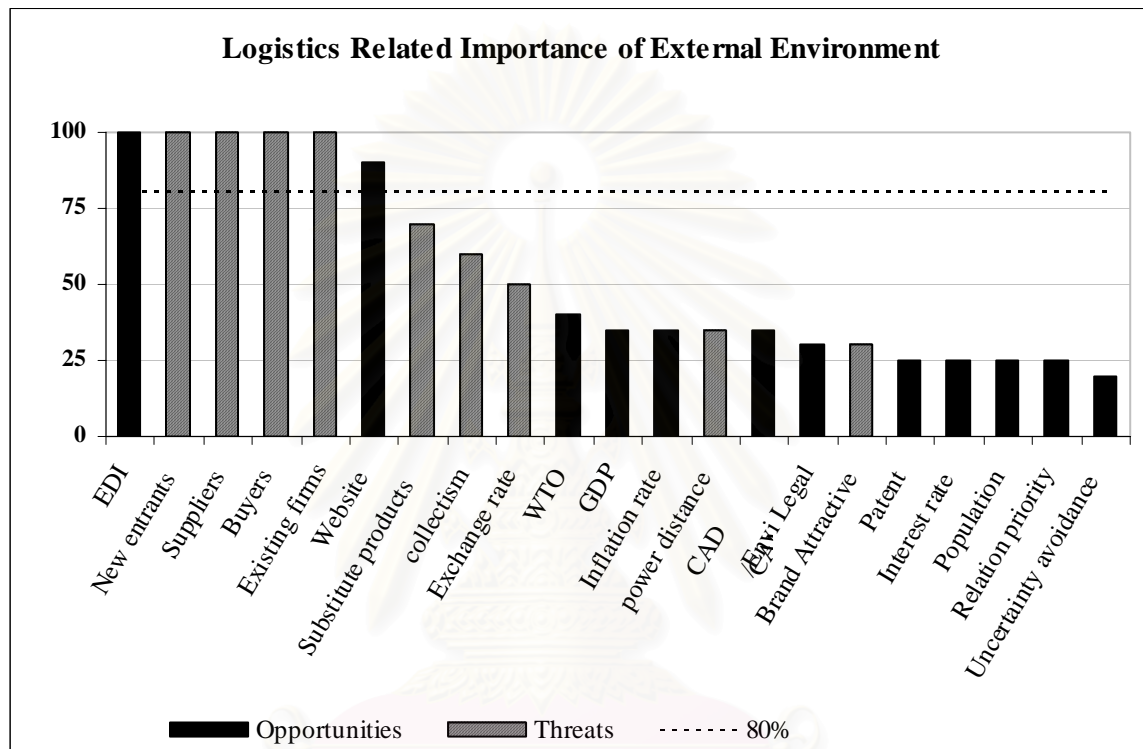


Figure 3-13: Logistics related external environment

3.6 Summary of the company's internal and external environments

According to the results from outbound logistics related internal and external environment analysis, the author could summarize the company's strength, weakness, opportunities, and threats in this section. All of the Pareto graph would be arranged with respected to the importance of outbound logistics. The items that would be sorted and collected to refer in further studies were the items, which were higher than 80 percent importance to the outbound logistics.

Strength

According to the company internal environment, the author found that there were ten strengths of the company. The data could be summarized and arranged in order according to their level of importance as shown in the figure18. These strengths were shown below.

- Product development
- Costing
- Customer behaviors understanding
- Cooperative with suppliers
- Employees satisfaction
- Product and service quality
- Payment
- Performance
- Marketing information
- Liquidity

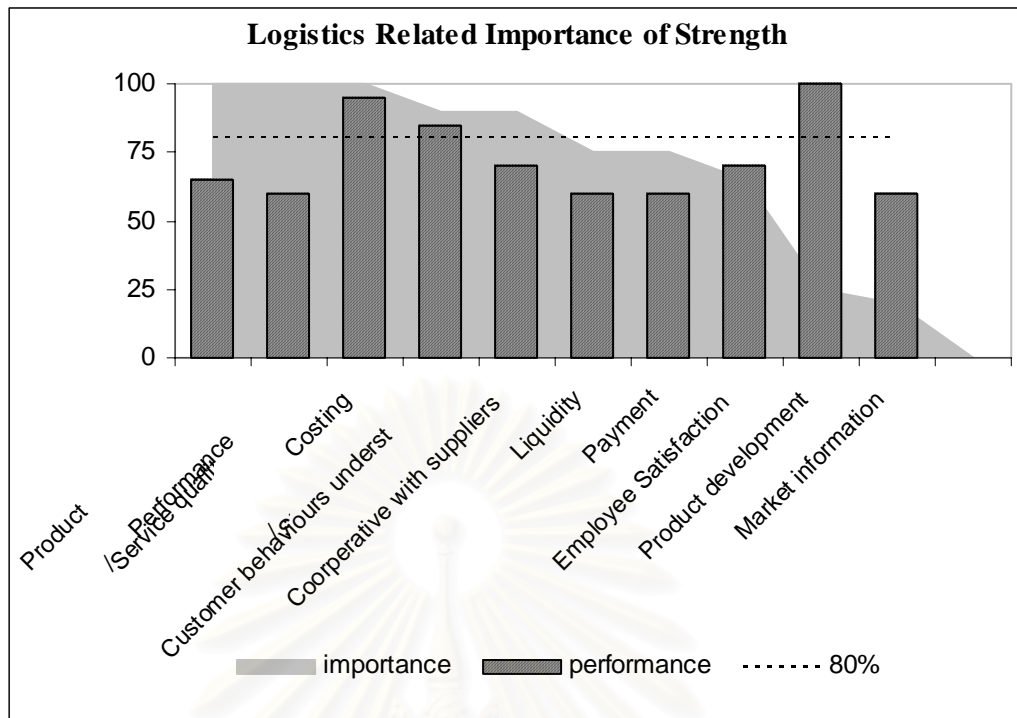


Figure 3-14: Logistics Related Importance of Strength

The author would chose only the strengths those were higher than 80% of the outbound logistics importance for our further study. According to the graph in figure x, there were five items that were higher than 80 percent importance to the outbound logistics, which were shown below.

- (Above 75%) - Costing
- Customer behaviors understanding
- (Above 50%) - Cooperative with suppliers.
- Product and service quality
- Performance

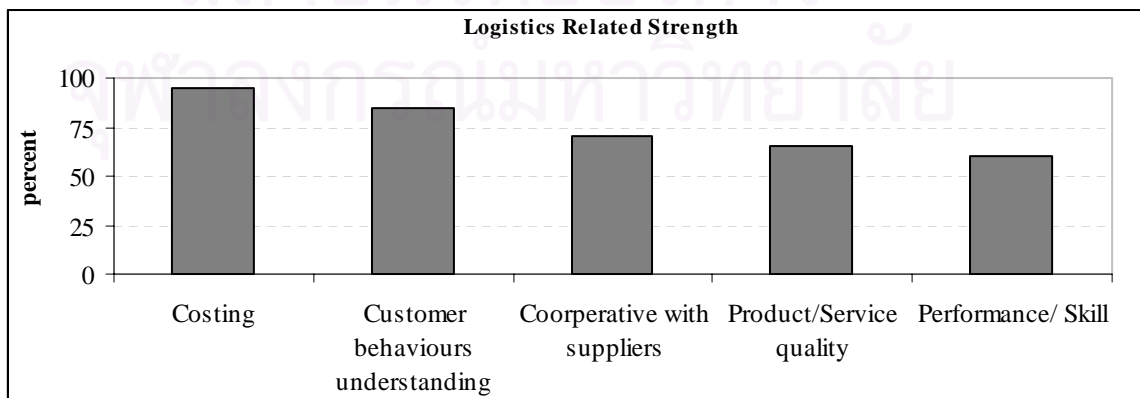


Figure 3-15: the company logistics related strength

Weakness

According to the company internal environment, the author found that there were ten weaknesses of the company. The data could be summarized and arranged in order according to their level of importance as shown in the figure19.

- Profits ability
- Promotions and advertisements
- Employees training
- Responsiveness to customer
- Profits growth
- Information technology
- Position assigned
- Marketing
- Customer loyalty
- Training and skill

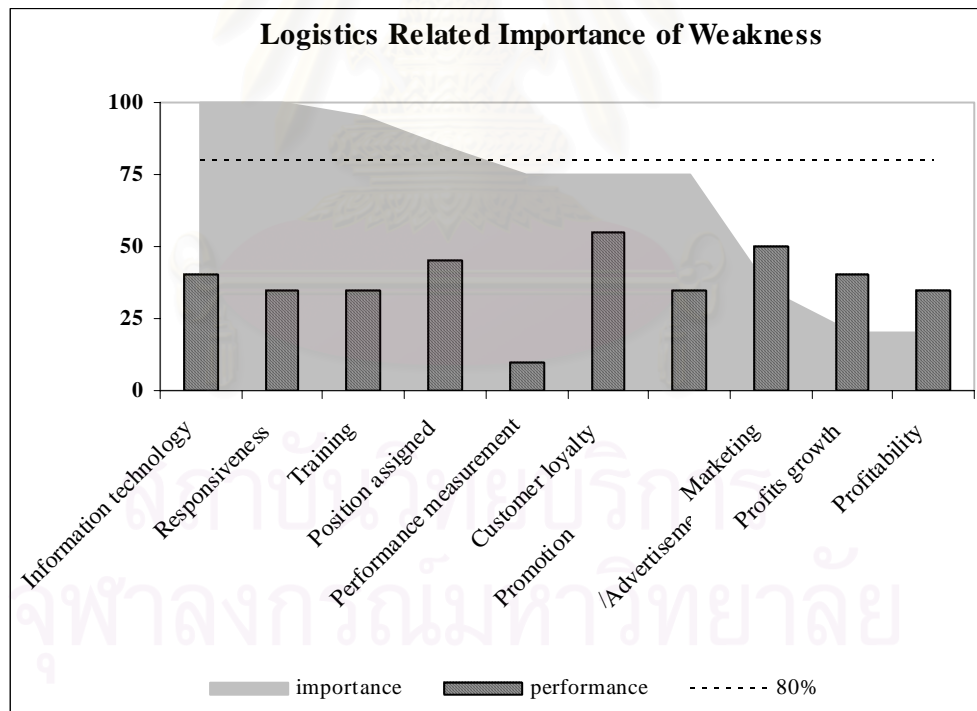


Figure 3-16: Logistics Related Importance of Weakness

The author would chose only the weaknesses those were higher than 80% of the outbound logistics importance for our further study. According to the graph in figure x, there were five items that were higher than 80 percent importance to the outbound logistics, which were shown below.

(Above 25%)

- Training and skill

The training of the company normally held right after the employees have been hired and these trainings are normally specific according to the job description of the employee. Presently, there are not any plans for further training.

- Responsiveness

Bio-breath is the product that required various D-time (demand time) according to customer groups. Most of them require short D-time. Presently, the responsiveness of the company to customer is not appropriate according to many factors such as the performance and skill of employees, the position assigned, and the information technology of the company.

- Information technology

Though IT system development is one of company's corporate objectives, there is only electronics mail that has been used.

- Position assigned

Though there are no training beyond employees' job description, the management team normally found that their employees could be able to complete some other task better than his task assigned.

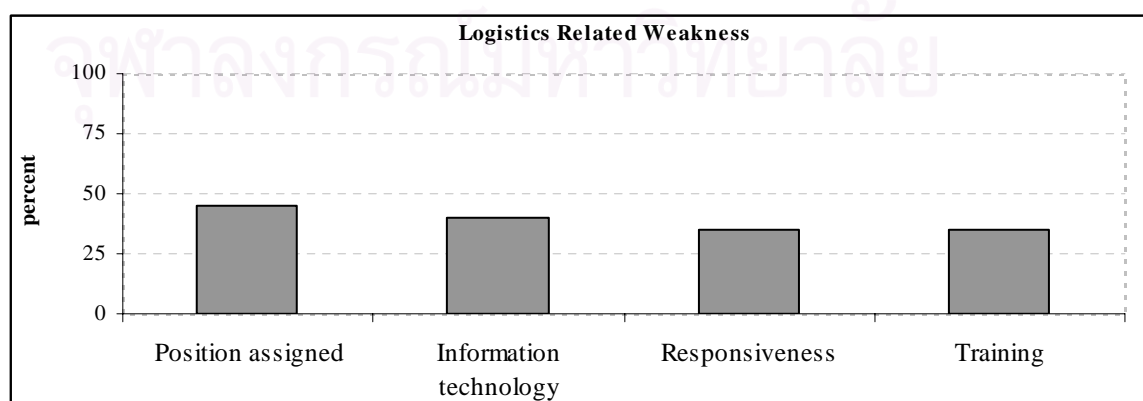


Figure 3-17: the company logistics related weakness

Opportunities

According to the company external environment, the author found that there were ten opportunities of the company external environment. The data could be summarized and arranged in order according to their level of importance as shown in the figure 20. These opportunities were shown below.

- Patent
- WTO
- Environmental legal
- Interest rate
- Population
- Relation priority
- Uncertainty avoidance
- Web site
- EDI
- CAD/CAM

The author would chose only the opportunities those were higher than 80% of the outbound logistics importance for our further study. According to the graph in figure x, there were two items that were higher than 80 percent importance to the outbound logistics, which were shown below.

- EDI

EDI is the system that widely use in many company. EDI would improve communication between each other in the supply chain. It would reduce redundant processes and also reduce time consumed in the processes.

- Website

Website is the easiest way to communicate with company target markets. It is fast and powerful. The data could be update everyday. All the information is directly appear to the customers.

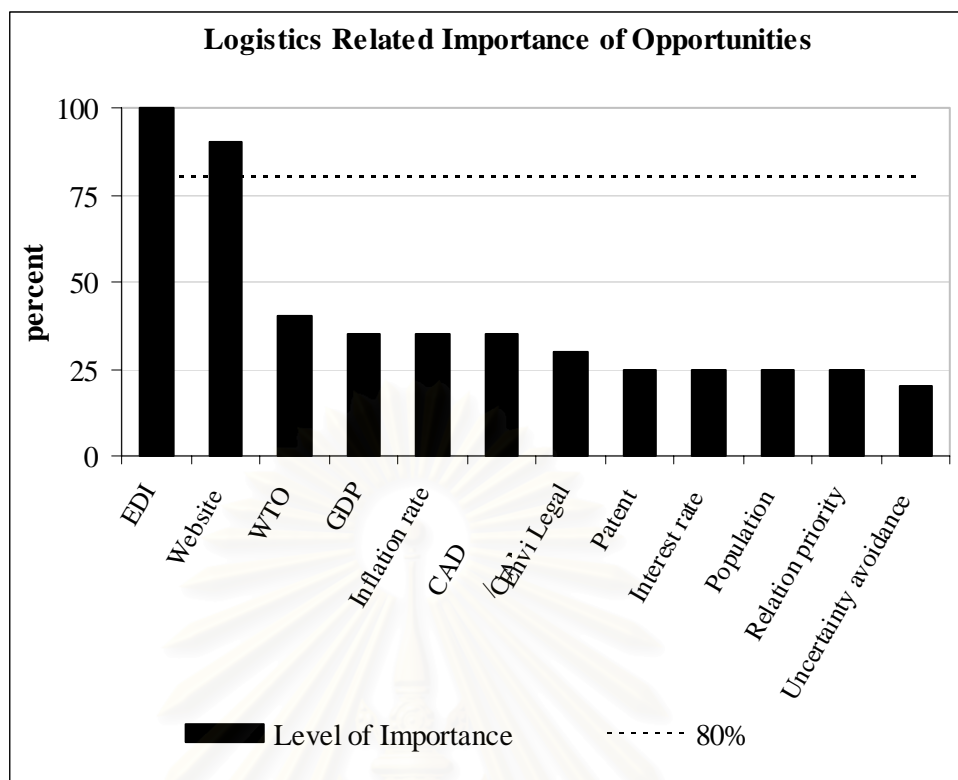


Figure 3-18: Logistics Related Importance of Opportunities

Threats

According to the company external environment, the author found that there were four threats of the company external environment. The data could be summarized and arranged in order according to their level of importance as shown in the figure x. These threats were shown below.

- Exchange rate
- Brand attractive
- Collectism
- New entrants
- Suppliers
- Buyers
- Substitutes products
- Existing firms

The author would chose only the threats those were higher than 80% of the outbound logistics importance for our further study. According to the graph in figure 21, there were 4 items that were higher than 80 percent importance to the outbound logistics.

- Suppliers
- Buyers
- Substitutes products
- Existing firms

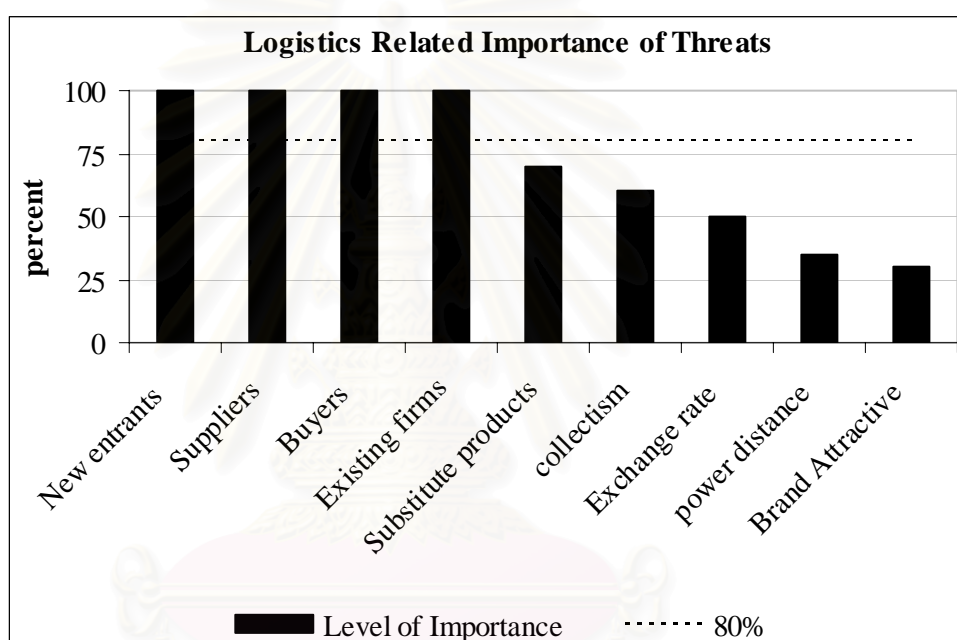


Figure 3-19: Logistics Related Importance of Threats

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

The critical success factors that are important to ABC logistics strategic planning can be arranged according to their importance to the company outbound logistics as shown below.

1. Position assigned
2. Performance and skill
3. Product and service quality
4. Costing
5. Responsiveness
6. Training
7. Information technology
8. Customer behaviors understanding
9. Cooperative with suppliers



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

3.7 Customer requirements

3.7.1 Planning

To understand customers' requirements for the company logistics, the author has created form 3 to collect information from all groups of the company customers. The purpose of this form is to collect individual point of view from each customer. There are three parts in this form. The first part is the company's customer list. The second part is the market size of those customer compared by their buying power. The last part is the outbound logistics related factors that persuade those customers to buy product from the company.

3.7.2 Implementation

The author had to interview, collected information from all groups of the company's present customers, and recorded them in form 3 in order to use as reference information to analyze their requirements for the company outbound logistics. The expected result of this analysis was to assess the customers' requirement of the company outbound logistics. There were altogether two main columns of contents in form 3. Each column of the form was described as follow.

- The first column "Customers" showed the present groups of the company customers.
- The second column "Market size" showed the percentages of each customer market size according to the sales amount of the company.
- The third column "Factor to persuade" showed the collected factors that persuade each group of customer from each group of customer in the first column.

Customers	Market size	Factors to persuades
Current Customers		
1) Small size group		
2) National Park		
3) Local Projects		
4) International Projects		

Table 3-5: Form 3 sample

The author has interviewed and collected information from four groups of the company present customers which were small size groups, national parks, local projects and international projects. The collected information could be summarized in the table below.

Customers	Market size	Customers' needs
Current Customers		
1) Small size group	30%	On time delivery Transportation safety Short installation time Short order cycle time Good service Satisfaction guarantee Low cost
1) National Park	10%	On time delivery Good service Installation in rural areas
4) Local Projects	40%	On time delivery Good service Low cost Short installation time
4) International Projects	20%	On time delivery Good service Low cost Short installation time

Table 3-6: Form 3 result

3.8 Customer requirement analysis

3.8.1 Planning

To analyze the critical success factor of the company with respected to the customers point of view, the author has created form 4, which included all customers' requirements and company logistics critical success factors. The author would use this form to collect individual point of view from each member of the company board.

3.8.2 Implementation

From this form, each member of the company board would be requested to analyze the relation of each customer's requirement with the logistics critical factors. The expected result of this analysis was to assess the relationship of customers' requirement and logistics critical factors. There were altogether three main columns of contents in form 4. Each column of the form was described as follow.

- The first column "Customers' need" showed the needs that customers expected from company outbound logistics. These needs are collected from section 3.7.
- The second column "Importance" showed the level of importance of customers' need. Since every need collected from section 3.7 are all important to our customers, the author would weight all those needs to the maximum importance level, which is equal to 10 in this case.
- The Third column "Level of importance" showed the critical success factors of the company out bound logistics. The relation of customers' needs and company logistics critical success factors would be analyzed in this column.

CUSTOMERS"NEED	Importance
On time delivery	10
Transportation safety	10
Short installation time	10
Short order cycle time	10
Good service	10
Satisfaction guarantee	10
Low cost	10
Installation in rural areas	10
Importance	

Table 3-7: Form 7 sample

Costing	Customer behaviors understanding	Cooperative with suppliers	Product and service quality	Performance and skill	Position assigned	Information technology	Responsiveness	Training

The results from customer requirements analysis were collected in table 8 and summarized in the Pareto graph in figure 22.

CUSTOMERS"NEED	Importance
On time delivery	10
Transportation safety	10
Short installation time	10
Short order cycle time	10
Good service	10
Satisfaction guarantee	10
Low cost	10
Installation in rural areas	10
Importance	

Table 3-8: Form 7 result

Costing	Customer behaviors understanding	Cooperative with suppliers	Product and service quality	Performance and skill	Position assigned	Information technology	Responsiveness	Training
⊙		⊙	⊙		⊙	⊙		○
⊙			⊙	⊙	○		⊙	⊙
			⊙	⊙	⊙	△	⊙	○
		⊙		△	⊙	⊙	⊙	
△	⊙		⊙	⊙	⊙			⊙
△	⊙		⊙	⊙			⊙	
⊙				○	○	○		⊙
⊙				⊙	⊙			
380	180	180	450	490	510	190	360	330

⊙ = 9 ○ = 3 △ = 1

The data collected in table 8 can be summarized in the Pareto graph as shown in the figure below. These data would be used as reference for order winning and order qualifying criteria.

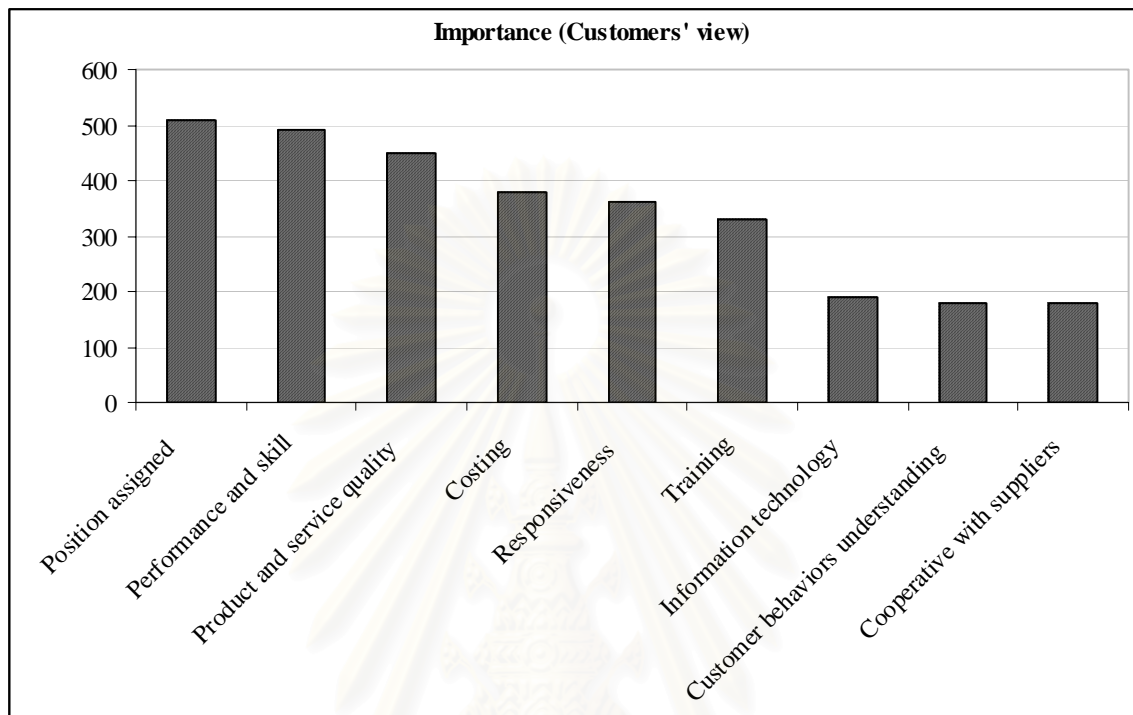


Figure 3-20: Importance in term of customers

3.9 Priority analysis of the company's critical success factors

3.9.1 Planning

According to the output form section 4.6, we knew that ten items, which exceed 80 percent importance, were the critical success factor for the company outbound logistics. Consistent with the conclusion in table 8, we found the relationship between customer's needs and the company critical success factors. The purpose of this section was to analyze the priority of each critical success factors by using order winning and order qualifying criteria. There were three steps to complete this analysis. The first step was to create the nine-point scale, which shows the product feature ranking that was important to customer. This nine-point scale was arranged with respected to the results from figure 22. The second step was to analyze the company performance. The company performance is collected from the critical success factor arranged by its performance from the result in section 4.6. The last step was to prioritizing those objectives through the importance/

performance gap. The gap between the performance objectives on the customer important scale and their position relating to the company's performance against its competitors would give a clear indication of the priorities for the company outbound logistics.

3.9.2 Implementation

Step 1: According to Slack's nine point important scale, the customers' needs are acted as the company order winner and order qualifier that could be scaled as follow:

1. Position assigned
2. Performance
3. Product and service quality
4. Costing and Profitability
5. Responsiveness
6. Training and skill
7. Information technology
8. Customer behaviors understanding
9. Cooperative with suppliers

Step 2: According to Slack's nine point performance scale, the company critical success factors arranged by their performance are showed below:

1. Costing
2. Customer behaviors understanding
3. Cooperative with suppliers
4. Product and service quality
5. Performance and skill
6. Position assigned
7. Information technology
8. Responsiveness
9. Training

Step 3: Prioritizing those objectives through the importance/ performance gap

The result from order winning and order qualifying criteria showed that there were three factors that needed to action urgently; which were position assigned, responsiveness, and training and skill. There were three factors that needed to action; which were product and service quality, performance, and information technology. Costing and corporative with suppliers were indicated as appropriate, and customer behaviors understanding was indicated as excessively appropriate.

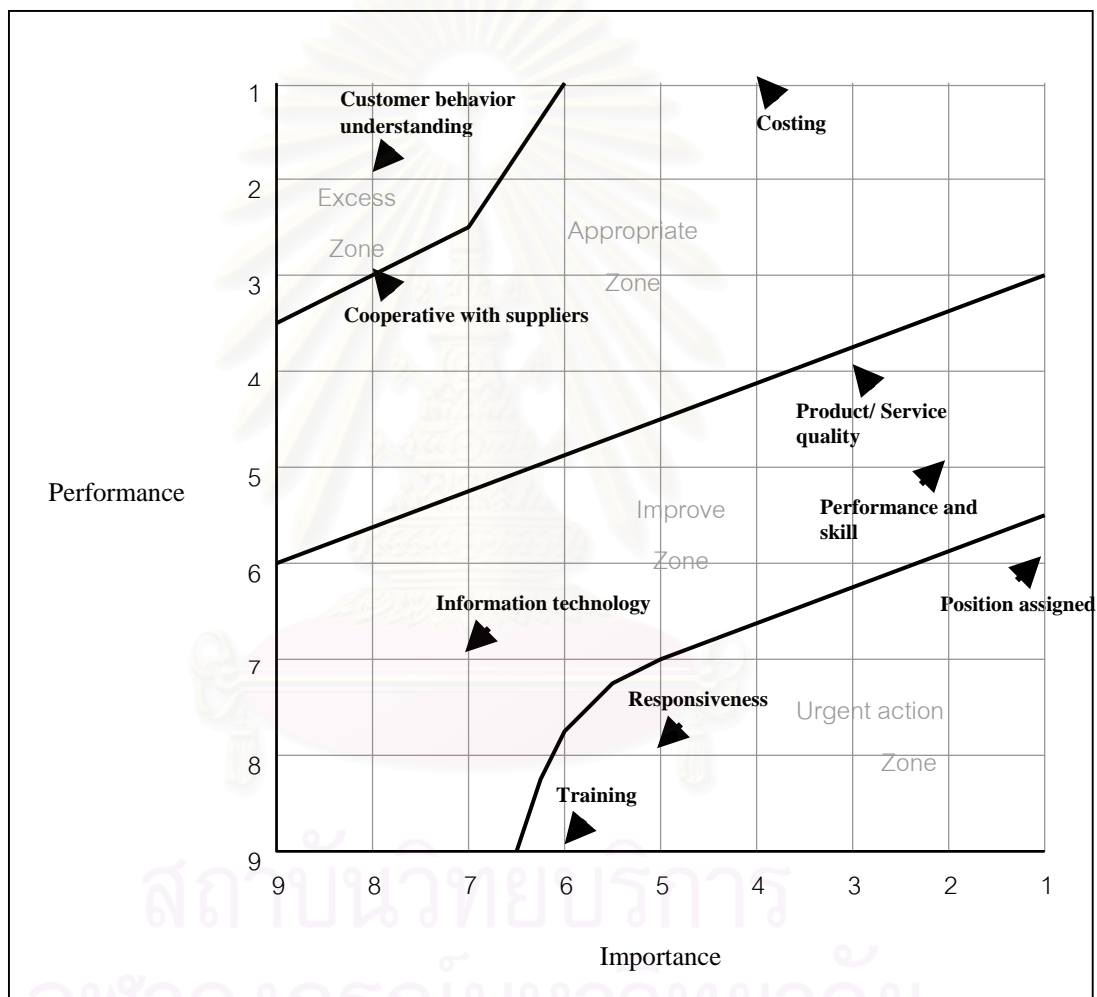


Figure 3-21: Slack's Interpretation of Performance (Slack, 1990)

The results of the order winning and order qualifying of the company in figure 23 showed the result that can be summarized as follow.

Urgent action zone

- Responsiveness
- Position assigned
- Training

Improve zone

- Performance
- IT
- Product and service quality

Appropriate zone

- Costing
- Cooperate with suppliers

Excess zone

- Customer behavior understanding



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER 4

THE DEVELOPMENT OF FOUR PERSPECTIVES AND KEY PERFORMANCE INDICATORS FOR LOGISTICS STRATEGY

General

The purpose of this chapter was to create outbound logistics strategies, measures, and key performance indicators from the logistics critical success factors that were used as logistics strategic objective in this section. The strategies, measures, and key performance indicators would be generated by having meeting with the company owners. The expected outputs from this chapter were the proper outbound logistics measures and key performance indicators that would be used to generate outbound logistics action plan in further study.

4.1 Planning

The meeting with company owners is arranged in these phase to generate outbound logistics strategies according to the strategy map that created by the author. The owners also take part to translate those strategies into measures and key performance indicators. These measures and key performance indicators are then matched with the concern department by using matrix diagram.

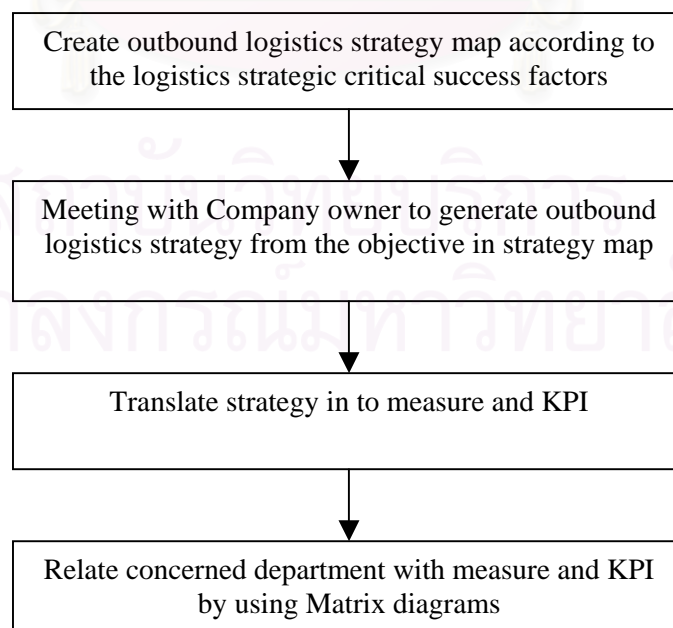


Figure 4-1: Chapter 5 flow diagram

Strategy map

First of all, the logistics strategy map will be generated according to the concept of the Balanced Scorecard Approach. The map will be used as a guide line in the meeting to perform all four perspectives of logistics strategies. At the meeting, these strategies will be translated to logistics measure and key performance indicators. At the end of this chapter, Matrix diagrams will be used to relate measure with concerned department.

4.2 The translation of the outbound logistics critical success factor

According to the Balance Scorecard Approach, the researcher will generate the strategy map by translating the outbound logistics critical success factors in previous chapter. The critical success factors were categorized into four perspectives as shown below.

Customer Perspective

Customer behaviors understanding

Product and service quality

Responsiveness

Internal Process Perspective

Position assigned

Cooperative with suppliers

Performance

Employee Learning and Growth Perspective

Information technology

Training and skill

Financial Perspective

Costing

From these factors, the strategic map could be generated as in figure 25.

The development of outbound logistics strategy map

ABC Logistics Strategy Map

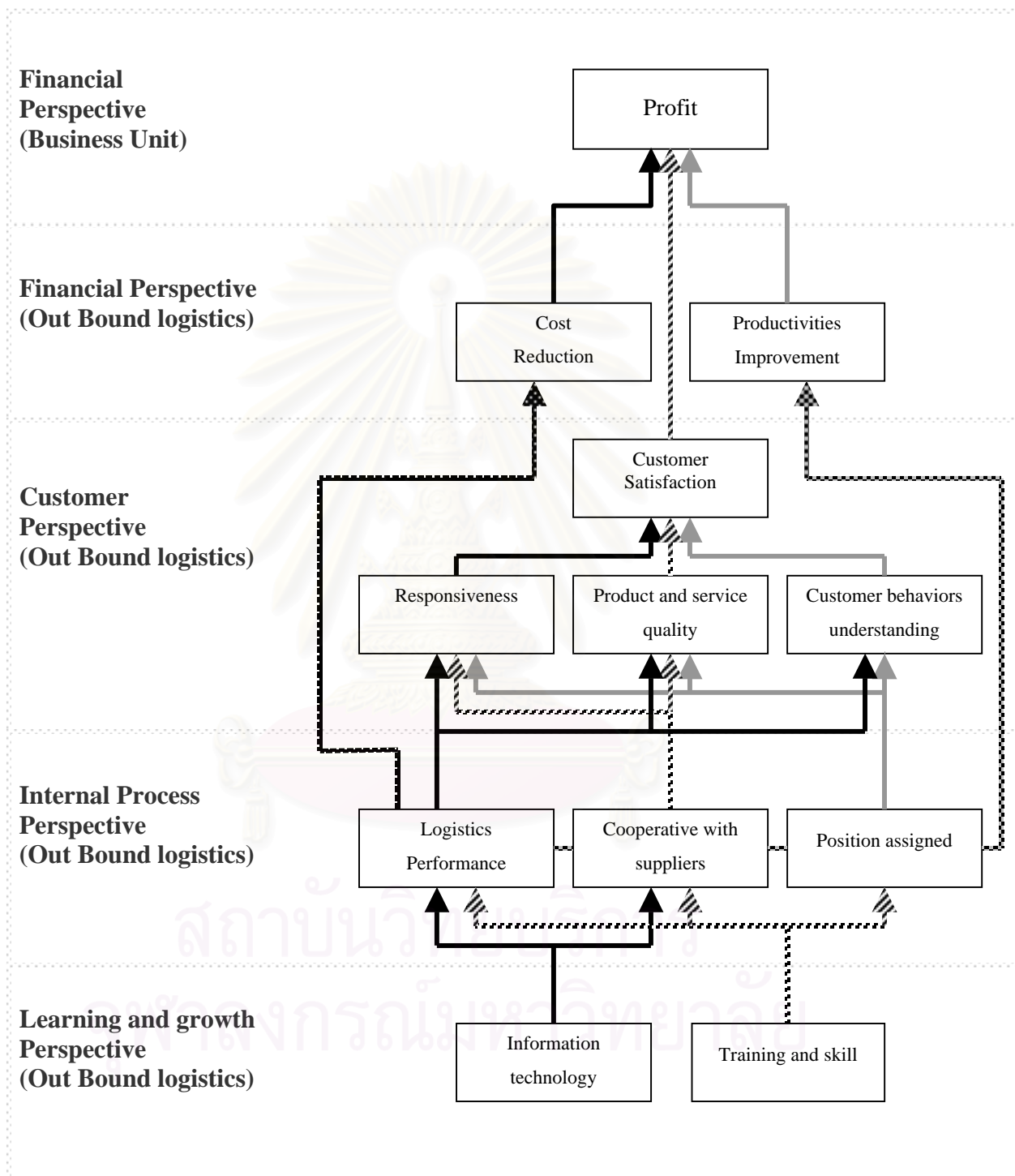


Figure 4-2: Strategy map

The development of outbound logistics strategy

At this section, the meeting with company owners is conducted to generate the company outbound logistics strategy. The meeting will be conducted to brainstorm by using SWOT analysis to analyze the strategic initiatives that provides several solutions for corporation to achieve its goal. However, the strategy could require much time and also give various solutions difficult to achieve due to time limitations and resource constraints.

	Opportunity	Threat
	<ul style="list-style-type: none"> • EDI • Website 	<ul style="list-style-type: none"> • New entrants • Suppliers • Buyers • Existing firms
Strength	- Customer Relationship Development	<ul style="list-style-type: none"> - Improve logistics cost - Customer relationship development - Improve logistics performance - Improve supplier on-time delivery
Weakness	<ul style="list-style-type: none"> - Website development - EDI development 	<ul style="list-style-type: none"> - Improve logistics responsiveness to customer - Improve logistics service - Improve logistics labor utilization - HR logistics continuous improvement

Table 4-1: The development of outbound logistics strategy by using SWOT analysis

When corporation uses strategic initiatives, it uses the Matrix chart to compare the relationship between Strategic Initiatives and strategic objectives. The chart will match the initiative with each objective to ensure that it can achieve the desired response. It is possible that one strategic initiative could be an answer to several objectives and vice versa. Another key reason for using the comparison chart is to make sure every objective set is answered by a strategic initiative. So it is almost impossible to not achieve the goal.

	Improve logistics cost	Customer relationship development	Improve logistics performance	Improve supplier on-time delivery	Improve logistics responsiveness to customer	Improve logistics service	Improve logistics labor utilization	Website development	EDI development	HR logistics continuous improvement
Costing	■									
Customer behaviors understanding		■								
Cooperate with suppliers			■							
Product quality						■				
Performance			■							
Training										■
Responsiveness					■					
IT							■	■	■	
Position assigned			■				■			■

Table 4-2: the relationship of the initiatives and the objectives

4.3 The Development of outbound logistics strategy, strategic planning, measures, and KPI

According to the objectives from the strategy map and the outbound logistics strategies generated by using SWOT, the strategic planning and measures are generated at the meeting by the author and company owners. After getting the strategic planning and measures, the KPI of these strategic planning are generated by the owner's proposed suggestion. At least one performance indicator has to propose to each measure. The proposed factors will be eliminated to keep only one best choice by using the performance indicator test from "Balanced Scorecard: Implementing Scorecard", Asst. Prof. Dr. Pasu Dacharin (2002). There are five criteria in this test, which are the reality test, the usefulness test, the easy to measure test, the cost test, and the easy to measure test. Each criterion will be marked from 1 which is the worse to 5 which is the best.

Financial Perspectives

Strategy

- **Improve logistics cost**

Costing is the strength of the company and its status is in the appropriate zone. Since cost is one of the company outbound logistics critical success factor, the company has to generate measure to support its cost reduction strategy.

Strategic planning

According to the meeting, the company could improve its outbound logistics cost by reducing its finish good inventory cost and also reducing its finish good transportation cost.

- **Just In Time to reduce inventory cost**

The key result area of this strategic planning is finished good inventory cost. There are many key performance indicators that could indicate this cost, which are shown in table X. The most suitable indicator for this measure is % inventory cost.

- **Reducing finished good transportation cost**

The key result area of this strategic planning is finished good transportation cost. This kind of cost could be indicated by many key performance indicators, which are shown in table X. The most suitable indicator for this measure is % transportation cost.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. Just In Time to reduce inventory cost	- inventory cost	5	3	3	5	2	18
	- % inventory cost from total cost	5	5	4	5	4	23
	- Cost of inventory per unit	4	2	2	5	3	16
	- % inventory cost per unit (from total cost)	4	3	2	5	2	16
2. Finished good transportation cost	- transportation cost	5	2	3	5	2	17
	- % transportation cost from total cost	5	5	4	5	5	24
	- Cost of transportation per unit	4	2	2	5	3	16
	- % transportation cost per unit (from total cost)	4	2	2	5	2	15

Table 4-3: Improve logistics cost KPI sorting

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Customer Perspective

Strategy

- Improve responsiveness to customer

The responsiveness is the weakness of the ABC. The company has to urgently take action to the customer responsiveness since it is one of the critical success factors that are in the urgent action zone.

Strategic planning

According to the meeting, the company could improve its responsiveness by setting the improving target and follow that target by reducing the responsive time that used by concerned departments.

- Set responsive target

The key result area of this measure is the responsive target. This responsive target could be measured by % of actual performance versus planned target.

- Improve responsive time

The key result area of this measure is the responsive time. The key performance indicator of the responsive time is the average time from customer contact to the response from the company.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. responsive target	- % Actual versus planned	5	4	5	4	5	23
2. responsive time	- Average time from customer contact to response	5	5	3	4	5	22

Table 4-4: Improve responsiveness to customer KPI sorting

Strategy

- Improve service

The service is considered the company strength but is still in the improve zone.

Strategic planning

Since service is very important to customer, the company will improve the service by setting complaint center to collect information form customer and use this useful information to improve services.

- Logistics excellent

Though the performance of this measure could be measure from customer complaint and customer satisfaction feedback, the only one indicator will be chosen and it is the number of customer complaint.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. Service excellence	- Customer complaint	5	5	5	5	2	22
	- Customer satisfaction feedback	4	4	5	5	1	19

Table 4-5: Improve service KPI sorting

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Strategy

- Customer relationship development

Customer behavior understanding is one of the company strength that is in the excess zone. One of the ways to understand customers is to develop good relationship with them.

Strategic planning

To develop customer relationship, the company will build the relationship by spending more time to build relation and use customer satisfaction index to improve customer satisfaction.

- Relationship builder

The key result area of this measure is the relationship builder. This measure could be measured by average time spend on customer relation and average cost spend on customer relation. The average time spend on customer relation is the chosen KPI for this measure.

- Improve satisfaction to customer

The key result area of this measure is customer satisfaction. It could be measure by many KPI such as customer satisfaction index and customer complaint. In this case, customer satisfaction index is being used.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. Relationship builder	- Average time spend on customer relation	4	5	5	5	5	24
	- Average cost spend on customer relation	3	4	5	5	2	19
2. customer satisfaction	- Customer satisfaction index	5	5	5	4	5	24
	- Customer complaint	3	4	2	5	3	17

Table 4-6: Customer relationship development KPI sorting

Internal Process Perspective

Strategy

- **Improve logistics performance**

Logistics performance is the company strength that is in the improve zone.

Strategic planning

The company will improve its logistics performance by improving on-time delivery to customer and also reducing inventory of finished good.

- **On-time delivery to customers**

The key result area of this measure is the on-time deliver. The key performance indicators that could be used to indicate this measure are the number of on-time delivered and the percentage of on-time delivery. On-time delivery to customer will be evaluated by the percent of the on-time delivered goods.

- **Just In Time to improve finished good inventory**

The key result area of this measure is the finished good inventory. The finished goods inventory could be evaluated by its turn in a year, its cost, and

the percentage of its cost from total cost. The inventory turn is being used to evaluate the finished good inventory.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. On-time deliver	- Number of on-time delivery	3	3	4	5	3	18
	- % of on-time delivery	5	5	4	5	5	24
2. Finished goods inventory	- Inventory turn	4	5	4	5	5	23
	- Total inventory cost	3	3	4	5	3	18
	- % inventory cost from total cost	3	3	4	5	4	19

Table 4-7: Improve logistics performance KPI sorting

Strategy

- Improve supplier on-time delivery

Supplier on-time delivery is the strength of the company that is in the excess zone. To improve on-time delivery, the company has to make a production plan and also has to follow it properly.

Strategic planning

One of important factors in production plan is the material delivery from suppliers. Therefore, the company also has to improve suppliers' on-time delivery.

- On-time delivery from suppliers

Like the on-time deliver to customer, on-time deliver from suppliers is evaluated by the percent on-time delivered of materials.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. On-time delivery	- % On-time delivery	5	5	4	4	5	23

Table 4-8: Improve supplier on-time delivery KPI sorting

Strategy

- Improve labor utilization

Position assigned of the employees is the weakness of the company that is in urgent action zone.

Strategic planning

Since one of the current problems in the company is the position assigned of employees in the company, the company will rearrange the position of the employees to improve the utilization of the works.

- Put the right man on the right job

The utilization will be evaluated from revenue per employee.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. the right man on the right job	- Revenue per employee	4	5	5	5	5	24
	- Average labor cost per unit	2	3	4	5	3	17

Table 4-9: Improve labor utilization KPI sorting

Learning and growth Perspective

Strategy

- Website development

IT is the company weakness that is in the improvement zone. Website is one of company logistics related opportunity to the company.

Strategic planning

According to the company logistics external environment, website is one of the opportunities that might give benefits to the company.

- Improve business-to-customer communication

The company will develop the website to communicate with target market and also to give knowledge to everyone who needs. The key result area of this measure is the communication to target market. The website will be evaluated by numbers of visitors.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1.Communication to target market	- Number of visitors	5	5	5	5	3	23
	- Number of customer from website	3	3	4	4	5	19

Table 4-10: Website development KPI sorting

Strategy

- EDI development

IT is the company weakness that is in the improvement zone. EDI is another opportunities of the logistic external environment that might give many benefits to the company.

Strategic planning

The company will develop and use EDI to communicate with suppliers to improve the communication system between the companies.

- Improve business-to-business communication

The key result area of this measure is the communication. The EDI will be evaluated by the amount of time reduction of the percentage of the time usage improvement.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. communication	- % time reduction	5	4	5	5	5	24
	- % cost reduction	3	4	3	5	3	18

Table 4-11: EDI development KPI sorting

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Strategy

- HR continuous improvement

Position assigned of the employees is the weakness of the company that is in urgent action zone. Since human resource is the most important resource to run the company, it is very important to continuing improve this important resource.

Strategic planning

The company will improve the skill of its human resource by conducting appropriate training to it employees.

- Improve employee skill

The key result area of this measure is the employee skill. The HR training will be evaluated by the number of training days.

Key Result Area	Performance Indicator	Tests					Total
		The reality	Usefulness	Easy to measure	Cost	Behavior	
1. Employee skill	- Training day per year	4	5	5	5	3	22
	- Training cost per year	2	3	5	5	2	17

Table 4-12: HR continuous improvement KPI sorting

The strategies, measures, and key performance indicators of the company can be summarized in the table below.

Perspective	Strategy	Strategic planning	KPI
Financial	Improve logistics cost	Just In Time to reduce finished goods inventory cost	% Inventory cost
		Reduce finished goods transportation cost	% Transportation cost
Customer	Improve responsiveness to customers	Set responsive target	Actual versus plan
		Improve responsive time	Average time from customer contact to response
	Improve service	Logistics service excellent	Customer complain
	Customer relationship development	Relationship builder	Average time spend on customer relation
Improve satisfaction to customers		Customer satisfaction index	
Internal Process	Improve logistics performance	On-time delivery to customers	Number of on-time delivery
		Just In Time to improve finished goods inventory	Inventory turn
	Improve supplier on-time delivery	On-time delivery from suppliers	On-time delivery
	Improve labor utilization	Put the right man on the right job	Revenue per employee
Learning and Growth	Website development	Improve business-to-customer communication	Number of visitors
	EDI development	Improve business-to-business communication	% improvement
	HR continuous improvement	Improve employee skill	Training day per year

4.4 Relationship of strategies, measures, KPI, and concerned departments

The purpose of this section was to relate each of the strategies, measure, and KPI that we have generated from logistics objectives with concerned department in order to generate action plans in further study. The matrix diagram will be used to match the strategies, measures, and KPI with the departments.



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

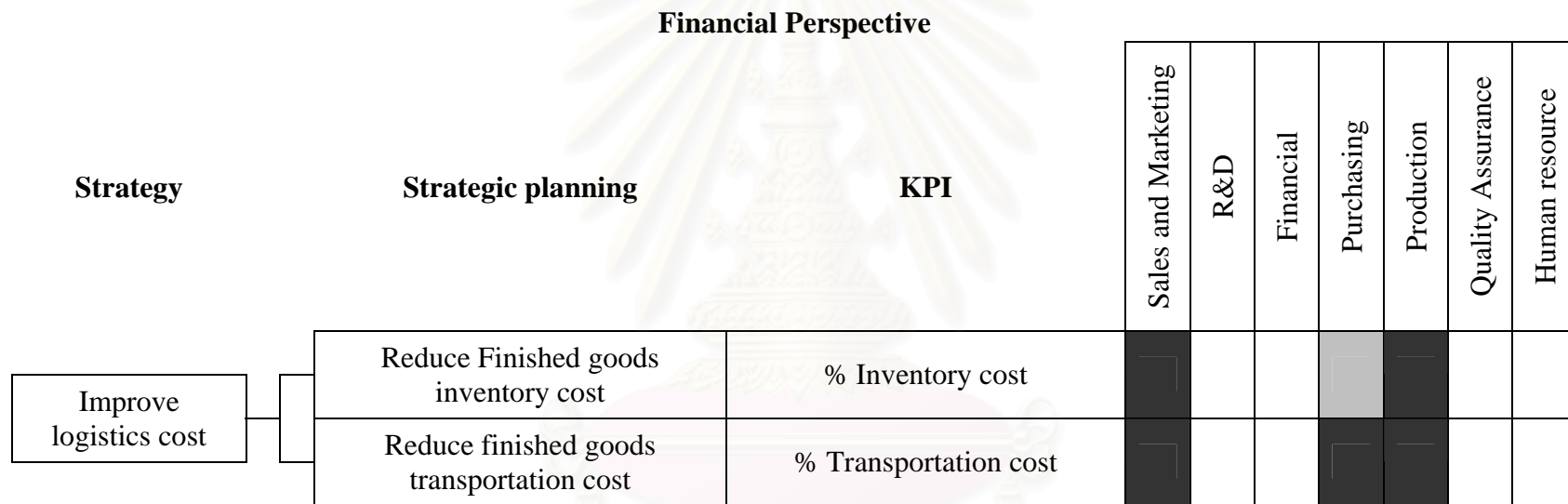


Fig. 4-3: Financial perspective responsibility

Customer Perspective

Strategy	Strategic planning	KPI	Sales and Marketing	R&D	Financial	Purchasing	Production	Quality Assurance	Human resource
Improve customer responsiveness	Set responsive target	Actual versus plan							
	Improve responsive time	Average time from customer contact to response							
Improve service	Service excellent	Customer complain							
Customer relationship development	Relationship builder	Average time spend on customer relation							
	Improve customer satisfaction	Customer satisfaction index							

Fig 4-4: Customer perspective responsibility

Internal Process Perspective

Strategy	Strategic planning	KPI	Internal Process Perspective						
			Sales and Marketing	R&D	Financial	Purchasing	Production	Quality Assurance	Human resource
Improvement logistics performance	On-time delivery to customers	% on-time delivery	■	■		■	■		
	Improve Finished goods inventory	Finished goods inventory turn	■			■	■		
Improve supplier on-time delivery	On-time delivery from suppliers	% On-tine delivery				■			
Improve labor utilization	Put the right man on the right job	Revenue per employee							■

Fig. 4-5: Internal process perspective responsibility

Learning and Growth Perspective

Strategy	Strategic planning	KPI	Sales and Marketing	R&D	Financial	Purchasing	Production	Quality Assurance	Human resource
Website development	Improve communication to target market	Numbers of visitors							
EDI development	Improve logistics communication	% improvement							
HR continuous improvement	Improve employee skill	Training day per year							

Fig. 4-6: Learning and growth perspective responsibility

CHAPTER 5

INITIATIVE STRATEGIES AND MEASURES

General

There are two objectives in this phase, which are to create the action plan for the business unit in order to use in the coming period; and to verify the action plan results with the company owners and executives.

5.1 Planning

The action plan will be generated in the middle management meeting according to the strategy, measure, and KPI; which have been generated in chapter 5. The time lines of the actions are arranged with respect to the result of order winning and order qualifying in chapter 3.

According to the order winning and order qualifying criteria, the critical success factor of the company outbound logistics can be arranged according to its urgency as follows.

- Responsiveness
- Position assigned
- Training
- Performance
- IT
- Product and service quality
- Costing
- Cooperate with suppliers
- Customer behavior understanding

We will use this urgency order as a guide line to create action plan from the company measures and KPI.

5.2 Implementation

The meeting with middle management will be conducted to implement action plan to all measure generated in chapter 4.

5.2.1 Strategic planning and measures arrange in BSC four perspectives

Objective: Responsiveness

Strategy: Customer responsive improvement in logistics process

The measures that used in this strategy are set to the responsive target and improved responsive time. The KPI used for these measures are the target set and average time from customer contact to response.

Strategic planning: Set customer responsive target

Estimated budget: 10,000 Baht **Timing:** Q1

KPI: %actual vs. planned **Target:** 100%

Present performance: N/A

Measure

- Standard time improvement

Strategic planning: Improved logistics responsive time

Estimated budget: 100,000 Baht **Timing:** Q1

KPI: Average time from customer contact to response

Target: with in 1 day **Present performance:** with in 3 days

Measure

- Standard time improvement
- Call center set up
- Improve communication by using EDI

Objective: Position assigned**Strategy: Improve labor utilization**

The measure that used in this strategy is putting the right man on the right job. The KPI that used for this measure is the revenue per employee.

Strategic planning: Put the right man on the right job

Estimated budget: 40,000 Baht **Timing:** Q1

KPI: Revenue per employee **Target:** 250,000 Baht

Present performance: 180,000 Baht

Measure

- Aptitude test
- Performance evaluation
- Rotate department
- Departments training

Objective: Training**Strategy: Human resource continuous improvement**

The measure that used in this strategy is improving employees' skill. The KPI that used for this measure is the training day per year.

Strategic planning: Improve employees' logistics skill

Estimated budget: 80,000 Baht **Timing:** Q1

KPI: Training day per year **Target:** 7 days per year

Present performance: 2days per year

Measure

- Service improvement training
- Product training
- Customer handling training
- Driving training
- Departments training
- Website users training
- EDI users training
- Logistics improvement training

Objective: Performance**Strategy: Improve logistics performance**

The measures that used in this strategy are on-time delivering to customers and improving finish goods inventory. The KPI that used for these measures are percent on-time delivered and finished goods inventory turns per year. The finished goods inventory turns per year is also giving the same result to the reducing inventory cost measure from improving logistics cost strategy. These measures could be merged into one action plan. Thus, there are two KPI for action plan, which are inventory turns per year, and percent inventory cost.

Strategic planning: On-time delivery to customers

Estimated budget: 30,000 Baht **Timing:** Q2

KPI: % on-time delivery **Target:** 95%

Present performance: 87%

Measure

- Improve on-time delivery
- Getting more suppliers
- Cooperate with alliance
- Getting more alliances

Strategic planning: Just In Time to improve finished goods inventory

Estimated budget: 90,000 Baht **Timing:** Q2

KPI: Inventory turns **Target:** 12 turns per year

Present performance: 8 turns per year

Measure

- Improve communication by using EDI
- Improve on-time delivery
- Logistics improvement training

Objective: Information technology**Strategy: Website development**

The measure that used in this strategy is improving communication to target market. The KPI that used for this measure is number of visitors.

Strategic planning: Improve business-to-customer communication

Estimated budget: 150,000 Baht **Timing:** Q2

KPI: Number of visitors **Target:** 100,000 visitors/ year

Present performance: N/A

Measure

- Website construction
- Search engine ranking
- Banner renting
- Set up environment community web board
- Web site users training

Strategy: EDI development

The measure used in this strategy is improving logistics communication. The KPI used for this measure is the percentage of improvement in term of time.

Strategic planning: Improve business-to-business communication

Estimated budget: 80,000 Baht **Timing:** Q1

KPI: % time reduction **Target:** 25%

Present performance: N/A

Measure

- Improve communication by using EDI
- EDI users training

Objective: Product and service quality**Strategy: Improve service**

The measure used in this strategy is service excellence. The KPI used for this measure is number of customer complaint.

Strategic planning: Service excellent

Estimated budget: 30,000 Baht **Timing:** Q1

KPI: Customer complaint **Target:** 0 complaint/ month

Present performance: 4 complaints per month

Measure

- Customer handling training
- Product training
- Call center set up

Objective: Costing**Strategy: Improve logistics cost**

The measures used in this strategy are reducing finished goods transportation cost and reducing finished goods inventory cost. The KPI used for this measure are percentage of transportation cost and percentage of inventory cost compared to the overall cost. Since reducing inventory cost measure is already included in the finished goods inventory turnover per year measure from improving logistics performance strategy, there is only one measure left in this part.

Strategic planning: Just In Time to reduce inventory cost

Estimated budget: 90,000 Baht **Timing:** Q2

KPI: % inventory cost **Target:** 15% cost reduction

Present performance: 1,000,000 per month

Measure

- Improve communication by using EDI
- Improve on-time delivery
- Logistics improvement training

Strategic planning: Reduced finished goods transportation cost**Estimated budget:** 40,000 Baht **Timing:** Q2**KPI:** % transportation cost **Target:** 20% cost reduction**Present performance:** 300,000 per month**Measure**

- Cooperative with alliance
- Getting more alliance
- Driving training
- Logistics improvement training

Objective: Cooperate with suppliers**Strategy: Improve suppliers on-time delivery**

The measure used in this strategy is on-time delivery from suppliers. The KPI used for this measure is percentage of on-time delivery.

Strategic planning: On-time delivery from suppliers**Estimated budget:** 90,000 Baht **Timing:** Q3**KPI:** % on-time delivery **Target:** 100%**Present performance:** 95%**Measure**

- Improve communication by using EDI
- Getting more suppliers
- Improve suppliers' on-time delivery

Objective: Customer behavior understanding**Strategy: Customer relationship development**

The measure used in this strategy is relationship development and improved customer satisfaction. The KPI used for this measure are average time spend on customers and customer satisfaction index.

Strategic planning: Customer relationship development**Estimated budget:** 40,000 Baht **Timing:** Q4**KPI:** Average time spends on customer**Target:** 6 days per year **Present performance:** N/A**Measure**

- Customer data base
- After sale service (Free of charge)
- Direct mail on special occasions
- Loyalty card
- Newsletter

Strategic planning: Improve customers' satisfaction**Estimated budget:** 40,000 Baht **Timing:** Q4**KPI:** Customer satisfaction index**Target:** 80% satisfaction **Present performance:** N/A**Measure**

- Call center set up
- Customer satisfaction index
- Delivered as promise
- Name tag on employees
- Service improvement training

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Strategy	Measure	Action/Activity															
		Standard time improvement	Call center set up	Improve communication by using EDI	Aptitude test	Performance evaluation	Rotate department	Improve on-time delivery	Get more suppliers	Cooperative with alliance	Get more alliances	Website construction	Search engine ranking	Banner renting	Set up environmental web board	Delivery preparation	Improve suppliers' on-time delivery
Improve logistics cost	Reduce finished goods inventory cost																
	Reduce finished goods transportation cost																
Improve customers responsiveness	Set responsive target																
	Improve responsive time																
Improve service	Service excellent																
Customer relationship development	Relationship builder																
	Customer relationship development																
Improve logistics performance	On-time delivery to customers																
	Improve finished goods inventory																
Improve supplier on-time delivery	On-time delivery from suppliers																
Improve labor utilization	Put the right man on the right job																
Website development	Improve communication to target market																
EDI development	Improve logistics communication																
HR continuous improvement	Improve employee skill																

Fig. 5-1: The relationship of strategic planning and action/ activities (1)

Strategy	Measure	Action/Activity															
		Customer database	After sale service (Free of charge)	Direct mail on special occasion	Loyalty card	Newsletter	Customer satisfaction index	Delivered as promise	Name tag on employees	Service improvement training	Product training	Customer handling training	Driving training	Departments training	Website users training	EDI users training	Logistics improvement training
Improve logistics cost	Reduce finished goods inventory cost																
	Reduce finished goods transportation cost																
Improve customers responsiveness	Set responsive target																
	Improve responsive time																
Improve service	Service excellent																
Customer relationship development	Customer relationship development																
	Improve customer satisfaction																
Improve logistics performance	On-time delivery to customers																
	Improve finished goods inventory																
Improve supplier on-time delivery	On-time delivery from suppliers																
Improve labor utilization	Put the right man on the right job																
Website development	Improve communication to target market																
EDI development	Improve logistics communication																
HR continuous improvement	Improve employee skill																

Fig. 5-2: The relationship of strategic planning and action/ activities (2)

5.2.2 Measures in details

The action plans that are generated in the company will be described in detail in this section.

Standard time improvement

It is expected to improve utilize the time usage in each process and to standardize the time usage in order to calculate precise lead time to customer response.

1. Meeting to conduct responsive time measurement

The meeting is conducted in order to explain the purpose of this strategy to all concerned departments. The other purpose is to plan for the responsiveness measurement steps.

2. Set responsive time measurement audit team and audit list

The responsible person of this strategy has to form audit teams. The assigned teams have to prepare the audit list and audit their responsible process.

3. Measure present responsive standard time in each process

The audit teams also have to measure the standard time of each process to compare with the result after improving the process.

4. Set target for responsive time reduction in each process

The audit teams conduct a meeting with managers to report auditing results, to solve the problems from auditing list, and to set new targets for each process.

5. Improve the responsive time

Each department has to improve its responsive time according to the corrective actions and target set.

6. Check new responsive standard time and compared with target

Verify the results with the target set and take action for further steps.

จุฬาลงกรณ์มหาวิทยาลัย

Call center set up

Call center is expected to be a direct line for customer to send messages to the company. The call center will receives any complaints from customers and transfer the complaints to the concerned department in order to take action. The call center also has to follow the case and feedback the results to the customers.

1. Meeting to conduct customer feedback center

The meeting is conducted in order to explain the purpose of this strategy to all concerned departments and set the action team to conduct the action.

2. Collect complaints in computer data base

The action team has to collect the customer complaints in computer data base to use as reference.

3. Get corrective and preventive action for every complaints

The team has to analyze the complaint and conduct meeting with concerned departments to generate corrective and preventive action plan.

4. Follow up on the corrective and preventive action

The team has to follow up on the corrective and preventive action that has been generated.

5. Verify the results of the corrective and preventive actions

The team has to verify the results with the target set and take action for further steps.

Improve communication by using EDI

EDI is expected to improve the communication among the company, suppliers, and customers.

1. Meeting to prepare EDI development

The meeting is conducted in order to explain the purpose of this strategy to all concerned departments and set the action team to conduct the action.

2. Meeting with suppliers to verify the system needed

The action team has to conduct a meeting with suppliers who already have the EDI system and who have planned to develop EDI to verify the needs and also to verify the system.

3. Meeting to locate vender

The team has to conduct the meeting with purchasing department to locate EDI vender.

4. Meeting with vender to verify needs

The team has to conduct meeting with vender to verify the needs.

5. Build the system

The vender builds the system according to the company needs.

6. Verify the results

The team has to verify the results with the target set and take action for further steps.

Aptitude test

It is expected to measure the aptitude of every employee toward their jobs and also their interested jobs. The result of the test would help HR department to evaluate the positioned assigned of each employee.

1. Prepare the aptitude test

HR department has to prepare the aptitude exam for every employee to analyze their aptitude.

2. Perform aptitude test

Conduct the exam for every department according to the time frames.

3. Analyze the results

HR department checks the results of the exams and evaluate each employees performance.

4. Rearrange position

Rearrange the position of employees according to the exam results

5. Conduct training for every reassigned departments

Each department has to conduct training for every reassigned position to optimize the performance of the employees.

Performance evaluation

It is expected to measure the performance of the employees with respect to time. The result of the test would reveal performance of the employees between periods of time. This evaluation is conducted to verify the assumption of aptitude test and the rotate department.

1. Meeting to prepare performance evaluation

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the evaluation

Human resource department has to conduct the evaluation according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Rotate department

The purpose of this action is to rotate staff to all departments. All staff can experience working in different department to match their skill with the job.

1. Meeting to prepare department rotating

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the rotating

Human resource department has to conduct the rotating according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Logistics improvement training

The purpose of this action is to conduct logistics training to concerned department in order to improve logistics knowledge.

1. Meeting to prepare logistics improvement training

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the training

Human resource department has to conduct the training according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Product training

The purpose of this training is to give product information in detail to employees who need this information to directly contact with customers.

1. Meeting to prepare the product training

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the training

Human resource department has to conduct the training according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Customer handling training

The purpose of this training is to train how to handle customers since different customers need different style of handling.

1. Meeting to prepare customer handling training

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the training

Human resource department has to conduct the training according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Driver training

The purpose of this training is to train company driver to drive safety and to drive save in order to reduce chances of accidents and to reduce fuel cost.

1. Meeting to prepare the driving training

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the training

Human resource department has to conduct the training according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Service improvement training

The purpose of this training is to conduct the training to improve the company service since service is very important to the company.

1. Meeting to prepare the service improvement training

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the training

Human resource department has to conduct the training according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Department training

The purpose of this training is to conduct the training to every department after the suitable assigned position is arranged.

1. Meeting to prepare the departments training

The meeting is conducted in human resource department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the training

Human resource department has to conduct the training according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Website users training

The purpose of this training is to train website users and website editors in the company after the system is built.

1. Meeting to prepare the website training

HR department has to cooperate with the website creator to prepare the proper training to support website users.

2. Conduct the training

The creator has to conduct the training to the user of the website in order to use, to correct, and to update the information.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Improve on-time delivery

The purpose of this action is to improve on-time delivery of the company product to the customers by correcting delivery problems and providing short term and long term solution to those problems.

1. Meeting to prepare logistics performance improvement

The meeting is going to conduct in order to explain the purpose of this strategy to all concerned departments and set improvement team to conduct the action.

1. Perform on-time delivered performance checking

The action team has to check the current performance of each of the company.

2. Analyze problems

The action team has to analyze the problems and find the solution to solve them.

3. Get corrective action for every problems that have not been solved

The action team has to conduct a meeting with concern departments to generate corrective action to solve those problems.

4. Check the validity for previous preventive action

The action team has to check the validity of the preventive action that has been taken whether they are still valid. The valid preventive actions will be reviewed and used to prevent the problems that should not happen again.

5. Get preventive action for every problems that have not been set

The action team has to study the problems and conduct meeting to generate the preventive action for the problems that have not been set to assure that they will not happen again.

6. Verify the results of the corrective and preventive actions

The team has to check the result of the actions by comparing the percentage of on-time delivery of the company, the inventory turns, and the percentage of inventory cost improvement. The team has to verify the results with the target set and take action for further steps.

EDI users training

The purpose of this training is to train EDI users the company after the system is built.

1. Meeting to preparing the EDI users training

HR department has to cooperate with the EDI builder to prepare the proper training to support EDI users.

2. Conduct the training

The builder has to conduct the training to the EDI user in order use the system.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Getting more suppliers

The purpose of this action is to gain bargaining power to the suppliers.

1. Meeting to locate suppliers

The meeting is conducted in purchasing department to locate the possible suppliers of the materials used.

2. Contacting new suppliers

Purchasing department has to order sample materials from suppliers, test the quality of samples, discuss the conditions of buying materials, and audit the suppliers' factories. This action is done to reduce the bargaining power of supplier and, to compare their performances, and to motivate them for better performance.

3. Comparing the performances

Purchasing department has to record the suppliers' performance and sorting the reliable ones to do business with.

4. Verify the results

The team has to verify the results with the target set and take action for further steps.

Cooperative with alliance

The purpose of this action is to gain benefits to the company by sharing facilities with the company alliances.

1. meeting to prepare the alliance cooperation

The meeting is conducted in an assigned team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the cooperation

The team has to conduct the preparation according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Getting more alliances

The purpose of this action is to locate more alliances to the company to cooperate their works.

1. Meeting to locate suppliers

The meeting is conducted in an assigned team to locate the possible alliances of the company.

2. Contacting alliances

The team has to contact the potential alliances, and discuss the benefits and conditions.

3. Alliances agreement

The team has to set the agreement with new alliances.

4. Verify the results

The team has to verify the results with the target set and take action for further steps.

Website construction

The purpose of this action is to construct website to the company in order to improve communication to target market.

1. Meeting to prepare the website development

The meeting is going to conduct in order to explain the purpose of this strategy to all concerned departments and set the action team to conduct the action.

2. Meeting to locate vender

The first step is to locate the Website creator. The make of buy decision has to be made in this step.

3. Meeting with the creator to verify needs

The action team has to explain the concept and the need of the website to the creator.

4. Build the system

The action team has to give necessary information to the creator to create the website.

5. Promote to customers

The next step is to promote the company website to target market.

6. Verify the results

The team has to verify the results with the target set and take action for further steps.

Improve suppliers' on-time delivery

The purpose of this action is to improve supplier's on-time delivery performance. This action would improve finished good inventory since the company could plan manage inventory precisely.

1. Perform on-time delivery performance checking

The purchasing department has to perform the supplier on-time delivery performance checking to analyze the suppliers' performance.

2. Issue corrective action report to suppliers

The corrective action report has to be issued to supplier in case of late delivery.

3. Follow up on the results

The purchasing department has to follow up on the response of corrective action report.

4. Audit suppliers' processes to verify results

The purchasing department has to audit suppliers to verify the results.

5. Verify the results

The team has to verify the results with the target set and take action for further steps.

Customer database

The purpose of this action is to collect customer database and use them to build relation with those customer.

1. Meeting to conduct customer relation development

The meeting is conducted in order to explain the purpose of this strategy to all concerned departments and set the action team to conduct the action.

2. Collect customers personal information in computer data base

The action team has to collect customer information that will be used as a reference to develop the relationship.

3. Send card or gift to customers on every occasions

The card and gift will be sent to customers according to the reference information.

4. Verify the results

The team has to verify the results with the target set and take action for further steps.

Customer satisfaction index

The purpose of this action is to create satisfaction index to collect feedback from customers.

1. Meeting to improve customer satisfaction index

The meeting is conducted in order to explain the purpose of this strategy to all concerned departments and to analyze customer satisfaction index.

2. Issue customer satisfaction index

The customer satisfaction index is issued to prepare for customer survey.

3. Conduct customer satisfaction survey

The marketing team uses standardized forms to conduct survey on customers by using the customer satisfaction index.

4. Analyze the results

The meeting has to be conducted to analyze the survey results.

5. Get corrective and preventive action

Each concerned department has to generate preventive and corrective actions according to the analysis.

6. Verify the results

The team has to verify the results with the target set and take action for further steps.

Search engine ranking

The purpose of this action is to get better position in the website search engine.

1. Meeting to prepare the buying of ranking position

The meeting is conducted in R&D department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the buying

The assigned team has to conduct the buying according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Banner renting

The purpose of this action is to rent banner from relate and well know website to promote the company website.

1. Meeting to prepare the banner renting

The meeting is conducted in R&D department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the renting

The assigned team has to conduct the renting according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Set up environmental community web board

The purpose of this action is to build environmental community in the company website to attract visitor and also to give knowledge to everyone who needs.

1. Meeting to prepare the web board

The meeting is conducted in R&D department to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the setup

The assigned team has to conduct the web board setup according to the plan

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Delivery preparation

The purpose of this action is to prepare the route, the vehicles size, and the delivery schedules to optimize time and minimize cost of the transportation.

1. meeting to prepare the delivery preparation

The meeting is conducted in an assigned team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the preparation

The team has to conduct the preparation according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

After sales service (Free of charge)

The purpose of this service is to keep contact and relation to the customers in order to keep selling parts and goods in the future.

1. meeting to prepare the after sales service

The meeting is conducted in an assigned team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the service

The team has to conduct the service according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Direct mail on special occasions

It is expected to build good relation and to deliver good impression to the customers.

1. meeting to prepare the direct mail

The meeting is conducted in an assigned team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the direct mail

The team has to conduct the preparation according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Loyalty card

It is expected to offer special offers to the customers of the company and also to attract these customers to continue buying product from the company.

1. meeting to prepare the loyalty card

The meeting is conducted in an assigned team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the loyalty card

The team has to conduct the preparation according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Newsletter

The news letters will give the up to date news of the company in order to update the company information and also to deliver special messages to the customers.

1. meeting to prepare the newsletter

The meeting is conducted in an assigned team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the news letter

The team has to conduct the preparation according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

Delivered as promised

It is expected to ensure the customer for the conditions offered by the company. This will guarantee to customers that they will receive what they have been offered at the first time.

1. meeting to prepare the delivery as promised

The meeting is conducted in a production and sales cross functional team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the deliver

The team has to conduct the preparation according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Name tag on employees

The name tag will show the name of every employees when they contact the customers. The customers would know and the name when they want to feedback any message whether it is a satisfaction or a complaint to the company.

1. meeting to prepare the nametag

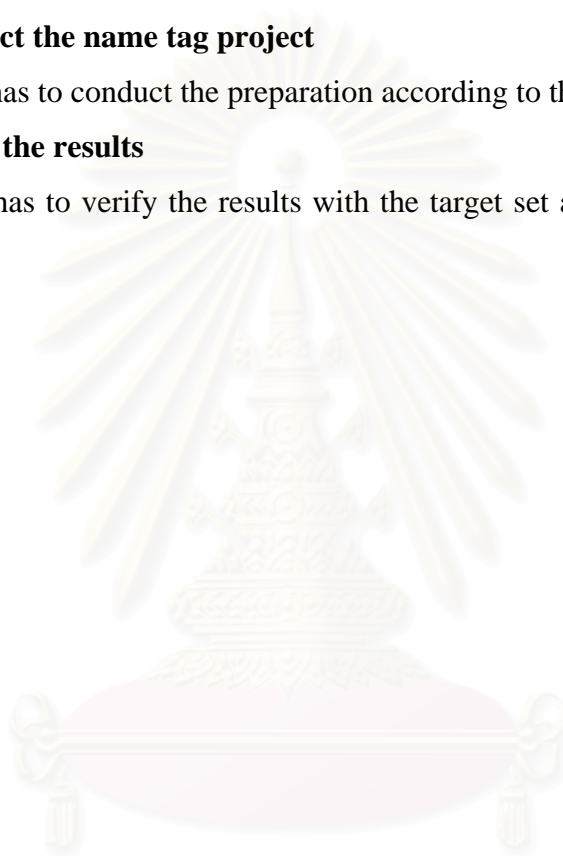
The meeting is conducted in an assigned team to explain the purpose of this strategy and set the action team to conduct the action.

2. Conduct the name tag project

The team has to conduct the preparation according to the plan.

3. Verify the results

The team has to verify the results with the target set and take action for further steps.



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

5.3 Action plan schedule

The actions plans schedules are shown in this section



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Customer responsive improvement

Measure Set responsive target

KPI % actual vs. planned

Target 100%

Present N/A

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																				
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																									
1. Standard time improvement		Plan																		Actual																1.1 Meeting to conduct responsive time measurement	Sales manager	Plan	■																	Actual																1.2 Set responsive time measurement audit team and audit list	Sales manager	Plan		■																Actual																1.3 Measure present responsive standard time in each process	Audit team	Plan			■															Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual															
		Actual																1.1 Meeting to conduct responsive time measurement	Sales manager	Plan	■																	Actual																1.2 Set responsive time measurement audit team and audit list	Sales manager	Plan		■																Actual																1.3 Measure present responsive standard time in each process	Audit team	Plan			■															Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																	
1.1 Meeting to conduct responsive time measurement	Sales manager	Plan	■																	Actual																1.2 Set responsive time measurement audit team and audit list	Sales manager	Plan		■																Actual																1.3 Measure present responsive standard time in each process	Audit team	Plan			■															Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																			
		Actual																1.2 Set responsive time measurement audit team and audit list	Sales manager	Plan		■																Actual																1.3 Measure present responsive standard time in each process	Audit team	Plan			■															Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																					
1.2 Set responsive time measurement audit team and audit list	Sales manager	Plan		■																Actual																1.3 Measure present responsive standard time in each process	Audit team	Plan			■															Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																							
		Actual																1.3 Measure present responsive standard time in each process	Audit team	Plan			■															Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																									
1.3 Measure present responsive standard time in each process	Audit team	Plan			■															Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																											
		Actual																1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																													
1.4 Set target for responsive time reduction in each process	Audit team	Plan				■														Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																															
		Actual																1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																	
1.5 Improve the responsive time	Audit team	Plan					■													Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																			
		Actual																1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																					
1.6 Check new responsive standard time and compare with target set	Audit team	Plan						■												Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																																							
		Actual																		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																																																									
		Plan																		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																																																																											
		Actual																2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																																																																																													
2. Follow up and compare with target set	Audit team	Plan															■			Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																																																																																																															
		Actual																3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																																																																																																																																	
3. Review performance indicator to improve	Audit team	Plan															■			Actual																																																																																																																																																																																																																																																																																																																																																			
		Actual																																																																																																																																																																																																																																																																																																																																																																					

Table 5.1: Action Plan for Customer responsive improvement (1)

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Customer responsive improvement

Measure Improve responsive time
 KPI Average time from customer contact to response

Target 1 day
 Present 3 days

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
1. Standard time improvement		Plan																	Actual															1.1 Meeting to conduct responsive time measurement	HR manager	Plan	■																Actual															1.2 Set responsive time measurement audit team and audit list	HR team	Plan		■															Actual															1.3 Measure present responsive standard time in each process	HR team	Plan			■														Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■
		Actual															1.1 Meeting to conduct responsive time measurement	HR manager	Plan	■																Actual															1.2 Set responsive time measurement audit team and audit list	HR team	Plan		■															Actual															1.3 Measure present responsive standard time in each process	HR team	Plan			■														Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																	
1.1 Meeting to conduct responsive time measurement	HR manager	Plan	■																Actual															1.2 Set responsive time measurement audit team and audit list	HR team	Plan		■															Actual															1.3 Measure present responsive standard time in each process	HR team	Plan			■														Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																		
		Actual															1.2 Set responsive time measurement audit team and audit list	HR team	Plan		■															Actual															1.3 Measure present responsive standard time in each process	HR team	Plan			■														Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																			
1.2 Set responsive time measurement audit team and audit list	HR team	Plan		■															Actual															1.3 Measure present responsive standard time in each process	HR team	Plan			■														Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																				
		Actual															1.3 Measure present responsive standard time in each process	HR team	Plan			■														Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																					
1.3 Measure present responsive standard time in each process	HR team	Plan			■														Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																						
		Actual															1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																							
1.4 Set target for responsive time reduction in each process	HR team	Plan				■													Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																								
		Actual															1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																									
1.5 Improve the responsive time	HR team	Plan					■												Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																										
		Actual															1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																											
1.6 Check new responsive standard time and compare with target set	HR team	Plan						■											Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																												
		Actual															2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																													
2. Call center set up		Plan																	Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																														
		Actual															2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																															
2.1 Meeting to conduct customer feedback center	Sales manager	Plan		■															Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																
		Actual															2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																	
2.2 Collect complaints in computer data base	Call center team	Plan			■														Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																		
		Actual															2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																			
2.3 Get corrective and preventive action for every complaints	Call center team	Plan				■													Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																				
		Actual															2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																					
2.4 Follow up on the corrective and preventive action	Call center team	Plan					■												Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																						
		Actual															2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																							
2.5 Verify the results of the corrective and preventive actions	Call center team	Plan						■											Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																								
		Actual															3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																									
3. Improve communication by using EDI		Plan																	Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Actual															3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
3.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Actual															3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
3.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
		Actual															3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
3.3 Meeting to locate vender	R&D manager	Plan			■														Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Actual															3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
3.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Actual															3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
3.5 Build the system	R&D manager	Plan					■												Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Actual															3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
3.6 Verify the results	R&D manager	Plan						■											Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		Actual															4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
4. Follow up and compare with target set	All manager	Plan							■										Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Actual														■	5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
5. Review performance indicator to improve	All manager	Plan								■									Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Actual														■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

Table 5-2: Action Plan for Customer responsive improvement (2)

สถาบันวิทยบริการ

Action Plan for Improve labor utilization

Target 250,000 per year

Present 180,000 per year

Measure Put the right man on the right job

KPI Revenue per employee

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
1. Aptitude test		Plan																		Actual	■															1.1 Prepare the aptitude test	HR manager	Plan																		Actual		■														1.2 Perform aptitude test	HR team	Plan																		Actual			■													1.3 Analyze the results	HR team	Plan																		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■
		Actual	■															1.1 Prepare the aptitude test	HR manager	Plan																		Actual		■														1.2 Perform aptitude test	HR team	Plan																		Actual			■													1.3 Analyze the results	HR team	Plan																		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																		
1.1 Prepare the aptitude test	HR manager	Plan																		Actual		■														1.2 Perform aptitude test	HR team	Plan																		Actual			■													1.3 Analyze the results	HR team	Plan																		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																				
		Actual		■														1.2 Perform aptitude test	HR team	Plan																		Actual			■													1.3 Analyze the results	HR team	Plan																		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																						
1.2 Perform aptitude test	HR team	Plan																		Actual			■													1.3 Analyze the results	HR team	Plan																		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																								
		Actual			■													1.3 Analyze the results	HR team	Plan																		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																										
1.3 Analyze the results	HR team	Plan																		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																												
		Actual				■												1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																														
1.4 Rearrange position	HR team	Plan																		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																
		Actual					■											2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																		
2. Performance evaluation		Plan																		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																				
		Actual																2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																						
2.1 Meeting to prepare performance evaluation	HR manager	Plan																		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																								
		Actual	■															2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																										
2.2 Conduct the evaluation	HR team	Plan																		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																												
		Actual		■														2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																														
2.3 Verify the results	HR team	Plan																		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																
		Actual					■											3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																		
3. Rotate department		Plan																		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																				
		Actual																3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																						
3.1 Meeting to prepare department rotating	HR manager	Plan																		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																								
		Actual			■													3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																										
3.2 Conduct the rotating	HR team	Plan																		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																												
		Actual				■	■	■										3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																														
3.3 Verify the results	HR team	Plan																		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Actual						■										4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
4. Departments training		Plan																		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Actual																4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
4.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
4.3 Verify the results	HR team	Plan																		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Actual																5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
5. Follow up and compare with target set	HR manager	Plan																		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Actual																6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
6. Review performance indicator to improve	HR manager	Plan																		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Actual															■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

Table 5-3: Action Plan for Improve labor utilization

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Human resource continuous improvement

Measure Improve employee skill

Target 7 days

KPI Training day per year

Present 2 days

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
1. Service improvement training		Plan																		Actual																1.1 Meeting to prepare the service improvement training	HR manager	Plan																		Actual																1.2 Conduct the training	HR team	Plan																		Actual																1.3 Verify the results	HR team	Plan																		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual															
		Actual																1.1 Meeting to prepare the service improvement training	HR manager	Plan																		Actual																1.2 Conduct the training	HR team	Plan																		Actual																1.3 Verify the results	HR team	Plan																		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																	
1.1 Meeting to prepare the service improvement training	HR manager	Plan																		Actual																1.2 Conduct the training	HR team	Plan																		Actual																1.3 Verify the results	HR team	Plan																		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																			
		Actual																1.2 Conduct the training	HR team	Plan																		Actual																1.3 Verify the results	HR team	Plan																		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																					
1.2 Conduct the training	HR team	Plan																		Actual																1.3 Verify the results	HR team	Plan																		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																							
		Actual																1.3 Verify the results	HR team	Plan																		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																									
1.3 Verify the results	HR team	Plan																		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																											
		Actual																2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																													
2. Product training		Plan																		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																															
		Actual																2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																	
2.1 Meeting to prepare the product training	HR manager	Plan																		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																			
		Actual																2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																					
2.2 Conduct the training	HR team	Plan																		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																							
		Actual																2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																									
2.3 Verify the results	HR team	Plan																		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																											
		Actual																3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																													
3. Customer handling training		Plan																		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																															
		Actual																3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																	
3.1 Meeting to prepare the customer handling training	HR manager	Plan																		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																			
		Actual																3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																					
3.2 Conduct the training	HR team	Plan																		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																									
3.3 Verify the results	HR team	Plan																		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																													
4. Driving training		Plan																		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
4.1 Meeting to prepare the driving training	HR manager	Plan																		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
4.2 Conduct the training	HR team	Plan																		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4.3 Verify the results	HR team	Plan																		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
5. Departments training		Plan																		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
5.1 Meeting to prepare the departments training	HR manager	Plan																		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
5.2 Conduct the training	HR team	Plan																		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
5.3 Verify the results	HR team	Plan																		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
6. Website users training		Plan																		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
6.1 Meeting to prepare the website user training	HR manager	Plan																		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
6.2 Conduct the training	HR team	Plan																		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
6.3 Verify the results	HR team	Plan																		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
7. EDI users training		Plan																		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
7.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
7.2 Conduct the training	HR team	Plan																		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
7.3 Verify the results	HR team	Plan																		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
8. Logistics improvement training		Plan																		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
8.1 Meeting to prepare the EDI user training	HR manager	Plan																		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
8.2 Conduct the training	HR team	Plan																		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
8.3 Verify the results	HR team	Plan																		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
9. Follow up and compare with target set	HR manager	Plan																		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
10. Review performance indicator to improve	HR manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

Table 5-4: Action Plan for Improve labor utilization

Action Plan for Improve logistics performance

Target 100%

Present 87%

Measure On-time delivery to customers

KPI % on-time delivery

Activity	Duty	Status	2004													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1. Improve on-time delivery		Plan														
		Actual														
1.1 Meeting to prepare logistics performance improvement	Production manager	Plan														
		Actual														
1.2 Perform on-time delivered performance checking	Production team	Plan														
		Actual														
1.3 Analyze problems	Production team	Plan														
		Actual														
1.4 Get corrective action for every problems that have not been solved	Production team	Plan														
		Actual														
1.5 Check the validity for previous preventive action	Production team	Plan														
		Actual														
1.6 Get preventive action for every problems that have not been set	Production team	Plan														
		Actual														
1.7 Verify the results of the corrective and preventive actions	Production team	Plan														
		Actual														
2. Getting more suppliers		Plan														
		Actual														
2.1 Meeting to locate suppliers	Purchasing manager	Plan														
		Actual														
2.2 Contacting new suppliers	Purchasing team	Plan														
		Actual														
2.3 Comparing the performances	Purchasing team	Plan														
		Actual														
2.4 Verify the results	Purchasing team	Plan														
		Actual														
3. Cooperative with alliance		Plan														
		Actual														
3.1 meeting to prepare the alliance cooperation	Production manager	Plan														
		Actual														
3.2 Conduct the cooperation	Production team	Plan														
		Actual														
3.3 Verify the results	Production team	Plan														
		Actual														
4. Getting more alliances		Plan														
		Actual														
4.1 Meeting to locate alliances	Production manager	Plan														
		Actual														
4.2 Contacting alliances	Production team	Plan														
		Actual														
4.3 Alliances agreement	Production team	Plan														
		Actual														
4.4 Verify the results	Production team	Plan														
		Actual														
5. Follow up and compare with target set	Pro/Pur managers	Plan														
		Actual														
6. Review performance indicator to improve	Pro/Pur managers	Plan														
		Actual														

Table 5-5: Action Plan for Improve logistics performance (1)

Action Plan for Improve logistics performance

Measure Improve finish goods inventory
KPI Inventory turns

Target 12 turns
Present 8 turns

Activity	Duty	Status	2004													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1. Improve communication by using EDI		Plan														
		Actual														
1.1 Meeting to prepare EDI development	R&D manager	Plan	■													
		Actual														
1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■												
		Actual														
1.3 Meeting to locate vender	R&D manager	Plan			■											
		Actual														
1.4 Meeting with vender to verify needs	R&D manager	Plan				■										
		Actual														
1.5 Build the system	R&D manager	Plan					■									
		Actual														
1.6 Verify the results	R&D manager	Plan						■								
		Actual														
2. Improve on-time delivery		Plan														
		Actual														
2.1 Meeting to prepare logistics performance improvement	Production manager	Plan					■									
		Actual														
2.2 Perform on-time delivered performance checking	Production team	Plan						■								
		Actual														
2.3 Analyze problems	Production team	Plan							■							
		Actual														
2.4 Get corrective action for every problems that have not been solved	Production team	Plan								■						
		Actual														
2.5 Check the validity for previous preventive action	Production team	Plan									■					
		Actual														
2.6 Get preventive action for every problems that have not been set	Production team	Plan										■				
		Actual														
2.7 Verify the results of the corrective and preventive actions	Production team	Plan											■			
		Actual														
3. Logistics improvement training		Plan														
		Actual														
3.1 Meeting to prepare logistics improvement training	HR manager	Plan	■													
		Actual														
3.2 Conduct the training	HR team	Plan		■												
		Actual														
3.3 Verify the results	HR team	Plan			■											
		Actual														
4. Follow up and compare with target set	All manager	Plan								■						■
		Actual														
5. Review performance indicator to improve	All manager	Plan									■					■
		Actual														

Table 5-6: Action Plan for Improve logistics performance (2)

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Website development

Target 100,000 visitors per year

Present N/A

Measure Improve communication to target market

KPI No. of visitors

Activity	Duty	Status	2004														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1. Website construction		Plan															
		Actual															
1.1 Meeting to prepare the website development	R&D manager	Plan															
		Actual															
1.2 Meeting to locate vender	R&D manager	Plan															
		Actual															
1.3 Meeting with the creator to verify needs	R&D manager	Plan															
		Actual															
1.4 Build the system	R&D manager	Plan															
		Actual															
1.5 Promote to customers	R&D manager	Plan															
		Actual															
1.6 Verify the results	R&D manager	Plan															
		Actual															
2. Search engine ranking		Plan															
		Actual															
2.1 Meeting to prepare the buying of ranking position	R&D manager	Plan															
		Actual															
2.2 Conduct the buying	R&D manager	Plan															
		Actual															
2.3 Verify the results	R&D manager	Plan															
		Actual															
3. Banner renting		Plan															
		Actual															
3.1 Meeting to prepare the banner renting	R&D manager	Plan															
		Actual															
3.2 Conduct the renting	R&D manager	Plan															
		Actual															
3.3 Verify the results	R&D manager	Plan															
		Actual															
4. Set up environment community web board		Plan															
		Actual															
4.1 Meeting to prepare the web board	R&D manager	Plan															
		Actual															
4.2 Conduct the setup	R&D manager	Plan															
		Actual															
4.3 Verify the results	R&D manager	Plan															
		Actual															
5. Web site users training		Plan															
		Actual															
5.1 Meeting to prepare the website user training	HR manager	Plan															
		Actual															
5.2 Conduct the training	HR manager	Plan															
		Actual															
5.3 Verify the results	HR manager	Plan															
		Actual															
6. Follow up and compare with target set	R&D/HR managers	Plan															
		Actual															
7. Review performance indicator to improve	R&D/HR managers	Plan															
		Actual															

Table 5-7: Action Plan for Website development

จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for EDI development

Target 25%

Present N/A

Measure Improve logistics communication

KPI % time reduction

Activity	Duty	Status	2004														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1. Improve communication by using EDI		Plan															
		Actual															
1.1 Meeting to prepare EDI development	R&D manager	Plan	■														
		Actual															
1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■													
		Actual															
1.3 Meeting to locate vender	R&D manager	Plan			■												
		Actual															
1.4 Meeting with vender to verify needs	R&D manager	Plan				■											
		Actual															
1.5 Build the system	R&D manager	Plan					■										
		Actual															
1.6 Verify the results	R&D manager	Plan						■									
		Actual															
2. EDI users training		Plan															
		Actual															
2.1 Meeting to prepare the EDI user training	HR manager	Plan					■										
		Actual															
2.2 Conduct the training	HR team	Plan						■									
		Actual															
2.3 Verify the results	HR team	Plan							■								
		Actual															
3. Follow up and compare with target set	R&D/HR managers	Plan								■							
		Actual															
4. Review performance indicator to improve	R&D/HR managers	Plan															■
		Actual															

Table 5-8: Action Plan for EDI development

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Improve service

Target 0

Present 4 per month

Measure Service excellent
KPI Customer complaint

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
1. Customer handling training		Plan																	Actual															1.1 Meeting to prepare the customer handling training	HR manager	Plan																	Actual															1.2 Conduct the training	HR team	Plan																	Actual															1.3 Verify the results	HR team	Plan																	Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual														
		Actual															1.1 Meeting to prepare the customer handling training	HR manager	Plan																	Actual															1.2 Conduct the training	HR team	Plan																	Actual															1.3 Verify the results	HR team	Plan																	Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																															
1.1 Meeting to prepare the customer handling training	HR manager	Plan																	Actual															1.2 Conduct the training	HR team	Plan																	Actual															1.3 Verify the results	HR team	Plan																	Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																
		Actual															1.2 Conduct the training	HR team	Plan																	Actual															1.3 Verify the results	HR team	Plan																	Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																	
1.2 Conduct the training	HR team	Plan																	Actual															1.3 Verify the results	HR team	Plan																	Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																		
		Actual															1.3 Verify the results	HR team	Plan																	Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																			
1.3 Verify the results	HR team	Plan																	Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																				
		Actual															2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																					
2. Product training		Plan																	Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																						
		Actual															2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																							
2.1 Meeting to prepare the product training	HR manager	Plan																	Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																								
		Actual															2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																									
2.2 Conduct the training	HR team	Plan																	Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																										
		Actual															2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																											
2.3 Verify the results	HR team	Plan																	Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																												
		Actual															3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																													
3. Call center set up		Plan																	Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																														
		Actual															3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																															
3.1 Meeting to conduct customer feedback center	Sales manager	Plan																	Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																
		Actual															3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																	
3.2 Collect complaints in computer data base	Call center team	Plan																	Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																		
		Actual															3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																			
3.3 Get corrective and preventive action for every complaints	Call center team	Plan																	Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																				
		Actual															3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																					
3.4 Follow up on the corrective and preventive action	Call center team	Plan																	Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																																						
		Actual															3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																							
3.5 Verify the results of the corrective and preventive actions	Call center team	Plan																	Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Actual															4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4. Follow up and compare with target set	HR/sales managers	Plan																	Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Actual															5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
5. Review performance indicator to improve	HR/sales managers	Plan																	Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

Table 5-9: Action Plan for Improve service

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Improve logistics cost

Target 15%

Present 20%

Measure Reduce finished goods inventory

KPI % inventory cost

Activity	Duty	Status	2004													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1. Improve communication by using EDI		Plan														
		Actual														
1.1 Meeting to prepare EDI development	R&D manager	Plan	■													
		Actual														
1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■												
		Actual														
1.3 Meeting to locate vender	R&D manager	Plan			■											
		Actual														
1.4 Meeting with vender to verify needs	R&D manager	Plan				■										
		Actual														
1.5 Build the system	R&D manager	Plan				■	■	■								
		Actual														
1.6 Verify the results	R&D manager	Plan					■									
		Actual														
2. Improve on-time delivery		Plan														
		Actual														
2.1 Meeting to prepare logistics performance improvement	Production manager	Plan					■									
		Actual														
2.2 Perform on-time delivered performance checking	Production team	Plan						■								
		Actual														
2.3 Analyze problems	Production team	Plan							■							
		Actual														
2.4 Get corrective action for every problems that have not been solved	Production team	Plan								■						
		Actual														
2.5 Check the validity for previous preventive action	Production team	Plan									■					
		Actual														
2.6 Get preventive action for every problems that have not been set	Production team	Plan										■				
		Actual														
2.7 Verify the results of the corrective and preventive actions	Production team	Plan											■			
		Actual														
3. Logistics improvement training		Plan														
		Actual														
3.1 Meeting to prepare logistics improvement training	HR manager	Plan	■													
		Actual														
3.2 Conduct the training	HR team	Plan		■												
		Actual														
3.3 Verify the results	HR team	Plan			■											
		Actual														
4. Follow up and compare with target set	All manager	Plan								■						■
		Actual														
5. Review performance indicator to improve	All manager	Plan									■					■
		Actual														

Table 5-10: Action Plan for Improve logistics cost (1)

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Improve logistics cost

Measure Reduced finished goods transportation cost
 KPI % transportation cost

Target 20%
 Present 30%

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1. Cooperative with alliance		Plan																	Actual															1.1 meeting to prepare the alliance cooperation	Production manager	Plan					■												Actual					■										1.2 Conduct the cooperation	Production team	Plan					■												Actual					■										1.3 Verify the results	Production team	Plan						■											Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■
		Actual															1.1 meeting to prepare the alliance cooperation	Production manager	Plan					■												Actual					■										1.2 Conduct the cooperation	Production team	Plan					■												Actual					■										1.3 Verify the results	Production team	Plan						■											Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																	
1.1 meeting to prepare the alliance cooperation	Production manager	Plan					■												Actual					■										1.2 Conduct the cooperation	Production team	Plan					■												Actual					■										1.3 Verify the results	Production team	Plan						■											Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																		
		Actual					■										1.2 Conduct the cooperation	Production team	Plan					■												Actual					■										1.3 Verify the results	Production team	Plan						■											Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																			
1.2 Conduct the cooperation	Production team	Plan					■												Actual					■										1.3 Verify the results	Production team	Plan						■											Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																				
		Actual					■										1.3 Verify the results	Production team	Plan						■											Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																					
1.3 Verify the results	Production team	Plan						■											Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																						
		Actual						■									2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																							
2. Getting more alliances		Plan																	Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																								
		Actual															2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																									
2.1 Meeting to locate suppliers	Production manager	Plan					■												Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																										
		Actual					■										2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																											
2.2 Contacting alliances	Production team	Plan						■											Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																												
		Actual						■									4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																													
4.3 Alliances agreement	Production team	Plan							■										Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																														
		Actual							■								2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																															
2.4 Verify the results	Production team	Plan								■									Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																
		Actual								■							3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																	
3. Driving training		Plan																	Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																		
		Actual															3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																			
3.1 Meeting to prepare the driving training	HR manager	Plan						■											Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																				
		Actual						■									3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																					
3.2 Conduct the training	HR team	Plan							■										Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																						
		Actual							■								3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																							
3.3 Verify the results	HR team	Plan								■									Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																								
		Actual								■							4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																									
4. Logistics improvement training		Plan																	Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Actual															4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
4.1 Meeting to prepare the logistics improvement	HR manager	Plan	■																Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Actual	■														4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
4.2 Conduct the training	HR team	Plan		■															Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
		Actual		■													4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
4.3 Verify the results	HR team	Plan			■														Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Actual			■												5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
5. Follow up and compare with target set	All managers	Plan									■					■			Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Actual									■					■	6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
6. Review performance indicator to improve	All managers	Plan										■				■			Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Actual										■				■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

Table 5-11: Action Plan for Improve logistics cost (2)

สถาบันวิทยบริการ
 จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Improve suppliers on-time delivery

Measure On-time delivery from suppliers

Target 100%

KPI % on-time delivery

Present 95%

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
1. Improve communication by using EDI		Plan																	Actual															1.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															1.3 Meeting to locate vender	R&D manager	Plan			■														Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual														
		Actual															1.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															1.3 Meeting to locate vender	R&D manager	Plan			■														Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																															
1.1 Meeting to prepare EDI development	R&D manager	Plan	■																Actual															1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															1.3 Meeting to locate vender	R&D manager	Plan			■														Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																
		Actual															1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															1.3 Meeting to locate vender	R&D manager	Plan			■														Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																	
1.2 Meeting with suppliers to verify the system needed	R&D manager	Plan		■															Actual															1.3 Meeting to locate vender	R&D manager	Plan			■														Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																		
		Actual															1.3 Meeting to locate vender	R&D manager	Plan			■														Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																			
1.3 Meeting to locate vender	R&D manager	Plan			■														Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																				
		Actual															1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																					
1.4 Meeting with vender to verify needs	R&D manager	Plan				■													Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																						
		Actual															1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																							
1.5 Build the system	R&D manager	Plan				■	■												Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																								
		Actual															1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																									
1.6 Verify the results	R&D manager	Plan						■											Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																										
		Actual															2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																											
2. Getting more suppliers		Plan																	Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																												
		Actual															2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																													
2.1 Meeting to locate suppliers	Purchasing manager	Plan						■											Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																														
		Actual															2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																															
2.2 Contacting new suppliers	Purchasing team	Plan							■										Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																
		Actual															2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																	
2.3 Comparing the performances	Purchasing team	Plan								■									Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																		
		Actual															2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																			
2.4 Verify the results	Purchasing team	Plan									■								Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																				
		Actual															3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																					
3. Improve suppliers' on-time delivery		Plan																	Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																						
		Actual															3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																							
3.1 Perform on-time delivery performance checking	Purchasing manager	Plan									■								Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Actual															3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
3.2 Issue corrective action report to suppliers	Purchasing team	Plan										■							Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Actual															3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
3.3 Follow up on the results	Purchasing team	Plan											■						Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Actual															3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
3.4 Audit suppliers' processes to verify results	Purchasing team	Plan												■					Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
		Actual															3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
3.5 Verify the results		Plan																	Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Actual															4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
4. Follow up and compare with target set	All managers	Plan														■			Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Actual															5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
5. Review performance indicator to improve	All managers	Plan														■			Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

Table 5-12: Action Plan for Improve suppliers on-time delivery

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Customer relationship development

Measure Relationship builder

Target 6 days per year

KPI Average time spend on customer

Present N/A

Activity	Duty	Status	2004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
1. Customer data base		Plan																		Actual																1.1 Meeting to conduct customer relation development	Sales manager	Plan																		Actual																1.2 Collect customers personal information in computer data base	Sales team	Plan																		Actual																1.3 Send card or gift to customers on every occasions	Sales team	Plan																		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual															
		Actual																1.1 Meeting to conduct customer relation development	Sales manager	Plan																		Actual																1.2 Collect customers personal information in computer data base	Sales team	Plan																		Actual																1.3 Send card or gift to customers on every occasions	Sales team	Plan																		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																	
1.1 Meeting to conduct customer relation development	Sales manager	Plan																		Actual																1.2 Collect customers personal information in computer data base	Sales team	Plan																		Actual																1.3 Send card or gift to customers on every occasions	Sales team	Plan																		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																			
		Actual																1.2 Collect customers personal information in computer data base	Sales team	Plan																		Actual																1.3 Send card or gift to customers on every occasions	Sales team	Plan																		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																					
1.2 Collect customers personal information in computer data base	Sales team	Plan																		Actual																1.3 Send card or gift to customers on every occasions	Sales team	Plan																		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																							
		Actual																1.3 Send card or gift to customers on every occasions	Sales team	Plan																		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																									
1.3 Send card or gift to customers on every occasions	Sales team	Plan																		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																											
		Actual																1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																													
1.4 Verify the results	Sales team	Plan																		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																															
		Actual																2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																	
2. After sale service (Free of charge)		Plan																		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																			
		Actual																2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																					
2.1 meeting to prepare the after sale service	Sales manager	Plan																		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																							
		Actual																2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																									
2.2 Conduct the service	Sales team	Plan																		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																											
		Actual																2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																													
2.3 Verify the results	Sales team	Plan																		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																															
		Actual																3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																	
3. Direct mail on special occasions		Plan																		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																			
		Actual																3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																					
3.1 meeting to prepare the direct mail	Sales manager	Plan																		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																									
3.2 Conduct the direct mail	Sales team	Plan																		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																													
3.3 Verify the results	Sales team	Plan																		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
4. Loyalty card		Plan																		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
4.1 meeting to prepare the loyalty card	Sales manager	Plan																		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4.2 Conduct the loyalty card	Sales team	Plan																		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
4.3 Verify the results	Sales team	Plan																		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
5. Newsletter		Plan																		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
5.1 meeting to prepare the newsletter	Sales manager	Plan																		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
5.2 Conduct the news letter	Sales team	Plan																		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Actual																5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
5.3 Verify the results	Sales team	Plan																		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Actual																6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
6. Follow up and compare with target set	Sales manager	Plan																		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Actual																7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
7. Review performance indicator to improve	Sales manager	Plan																		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Actual																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

Table 5-13: Action Plan for Customer relationship development

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Action Plan for Customer relationship development

Measure Improve customer satisfaction
 KPI Customer satisfaction index

Target 100% satisfaction
 Present N/A

Activity	Duty	Status	2004														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
1. Call center set up		Plan Actual															
1.1 Meeting to conduct customer feedback center	Sales manager	Plan Actual		■													
1.2 Collect complaints in computer data base	Call center team	Plan Actual		■	■	■											
1.3 Get corrective and preventive action for every complaints	Call center team	Plan Actual		■	■	■											
1.4 Follow up on the corrective and preventive action	Call center team	Plan Actual		■	■	■											
1.5 Verify the results of the corrective and preventive actions	Call center team	Plan Actual		■	■	■											
2. Customer satisfaction index		Plan Actual															
2.1 Meeting to improve customer satisfaction index	Sales manager	Plan Actual												■			
2.2 Issue customer satisfaction index	Sales team	Plan Actual												■			
2.3 Conduct customer satisfaction survey	Sales team	Plan Actual												■			
2.4 Analyze the results	Sales team	Plan Actual												■			
3. Delivered as promise		Plan Actual															
3.1 meeting to prepare the delivery as promised	Sales manager	Plan Actual												■			
3.2 Conduct the deliver	Sales team	Plan Actual												■	■	■	■
3.3 Verify the results	Sales team	Plan Actual												■			■
4. Name tag on employees		Plan Actual															
4.1 meeting to prepare the nametag	Sales manager	Plan Actual												■			
4.2 Conduct the name tag project	Sales team	Plan Actual												■			
4.3 Verify the results	Sales team	Plan Actual												■			
5. Service improvement training		Plan Actual															
5.1 Meeting to prepare the service improvement training	HR manager	Plan Actual		■													
5.2 Conduct the training	HR team	Plan Actual		■	■												
5.3 Verify the results	HR team	Plan Actual		■	■												
6. Follow up and compare with target set	Sales/HR managers	Plan Actual															■
7. Review performance indicator to improve	Sales/HR managers	Plan Actual															■

Table 5-14: Action Plan for Customer relationship development

จุฬาลงกรณ์มหาวิทยาลัย

5.4 Measure and action plan verification

The purpose of this section is to verify the action plan results by the company owners.

These actions will be sort according to its

Strategic planning	KPI	Target	present	Timing	Budget	Verification
Just In Time to reduce finished goods inventory cost	% inventory cost compared to sales	15%	20%	Q2	90,000	
Reduce finished goods transportation cost	% transportation cost compared to sales	20%	30%	Q2	40,000	pass
Set customer responsive target	% actual vs. planned	100%	N/A	Q1	10,000	pass
Improve customer responsive time	Average time from customer contact to response	With in 1 day	With in 3 days	Q1	100,000	
Service excellent	Customer complaint	0 per month	4 per month	Q1	30,000	pass
Relationship builder	Average time spend on customer	6 days per year	N/A	Q4	40,000	pass
Improve satisfaction to customers	Customer satisfaction index	85% satisfaction	N/A	Q4	40,000	pass
On-time delivery to customers	% on-time delivery	95%	87%	Q2	30,000	pass
Just In Time to improve finished goods inventory	Inventory turns	12 turns	8 turns	Q2	90,000	
On-time delivery from suppliers	% on-time delivery	100%	95%	Q3	90,000	
Put the right man on the right job	Revenue per employee	250,000	180,000	Q1	40,000	pass
Improve logistics business-to-customer communication	No. of visitors	100,000 per year	N/A	Q2	100,000	pass
Improve logistics business-to-business communication	% time reduction	25%	N/A	Q1	80,000	
Improve employee logistics skill	Training day per year	7 days per year	2 days per year	Q1	80,000	pass

Table 5-15: Measure and action plan verification

According to the owners' decision, there are 9 measures that are verified, which are reduce finished good transportation cost, set responsive target, service excellent, customer relationship development, improve customer satisfaction, on-time delivery to customers, put the right man on the right job, improve communication to target market, and improve employees' skill.

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The purpose of this thesis is to generate proper logistics strategy and action plan for on-site waste water treatment system based on Balanced Scorecard Approach.

There are four major sections in this thesis. In the first section, a meeting with company board of directors is conducted to verify corporate vision, mission, objective, and strategy of the company and also to introduce the concept of the Balanced Scorecard approach.

The second section is the analysis of current internal and external logistics environment of the company. At the first step in this section, the author analyzes the internal and external environment of the company. These environments are being used as a reference for the author to generate two set of questionnaires that used to analyze the company outbound logistics related internal and external environments. The logistics related environment analysis is done by the four directors of the company. Using the SWOT analysis, the logistics related internal and external environment are used to find strength, weakness, opportunity, and threat of the company. The logistics related critical success factors of the company is found by the analysis of the company strength and weakness. There are 9 critical success factors generated from the strengths and the weaknesses in this section.

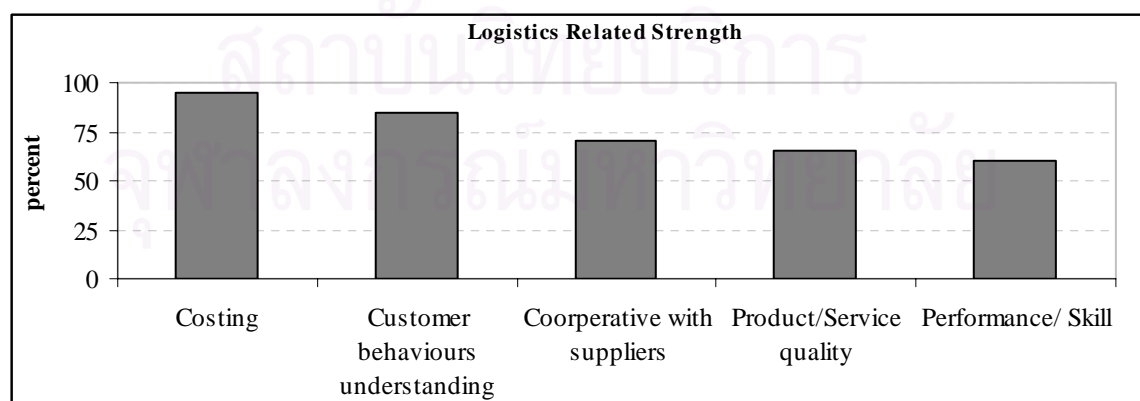


Fig. 6-1: the company logistics related strength

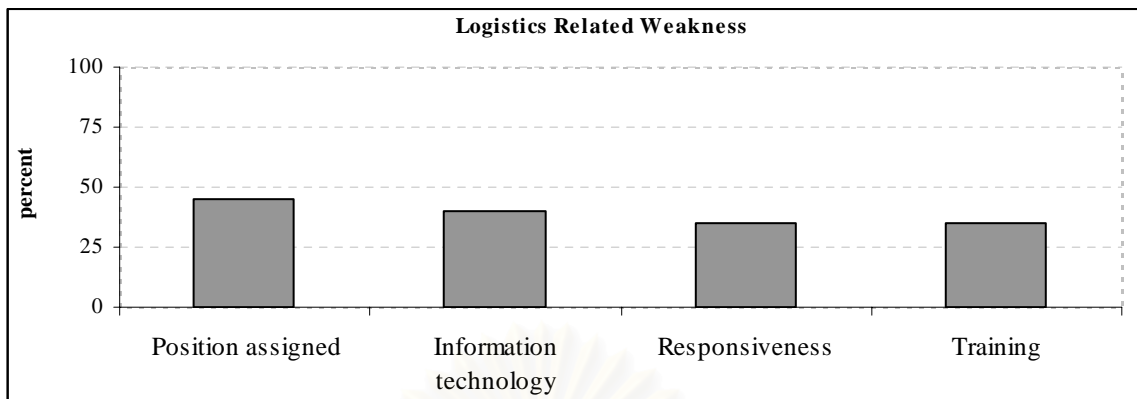


Fig. 6-2: the company logistics related weakness

At the second step, the author has created a form to collect the needs of the company logistics from customer point of view. Each member of the company board would be requested to analyze the relation of each customer's requirement with the logistics critical factors by using Matrix data analysis from the 7 new QC tools. The critical success factors in term of company capability and the critical success factors in term of customers' requirement are compared in Order winning and order qualifying to analyze the priority of each critical success factor.

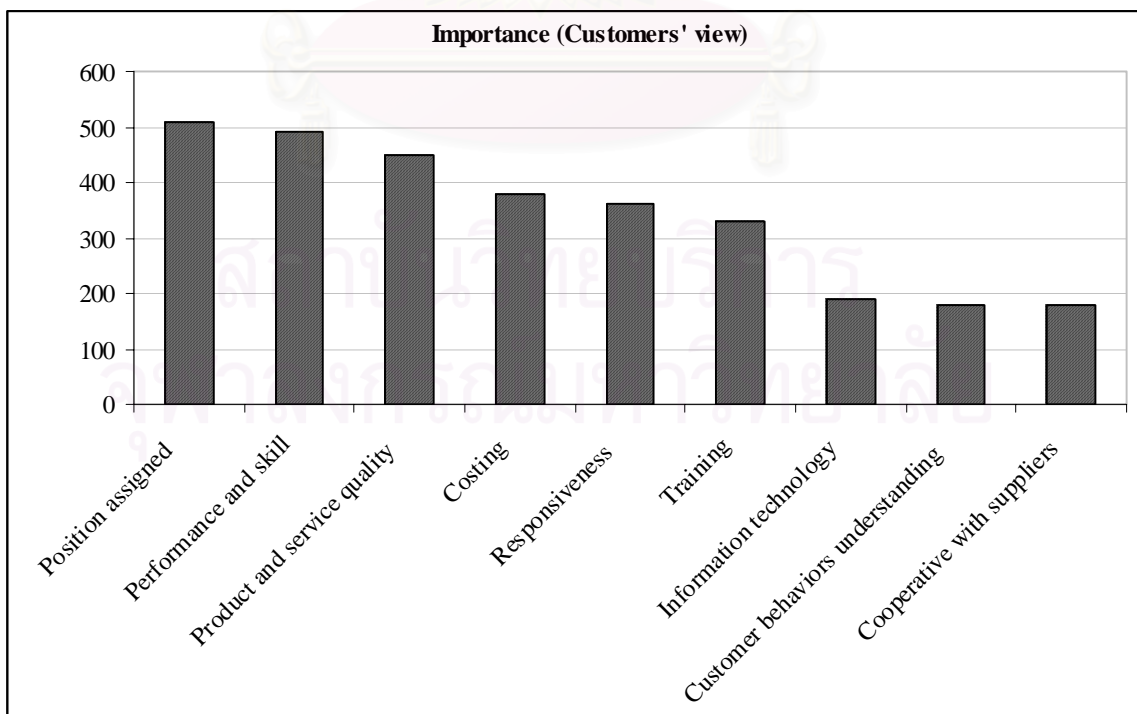


Fig. 6-3: Importance in term of customers

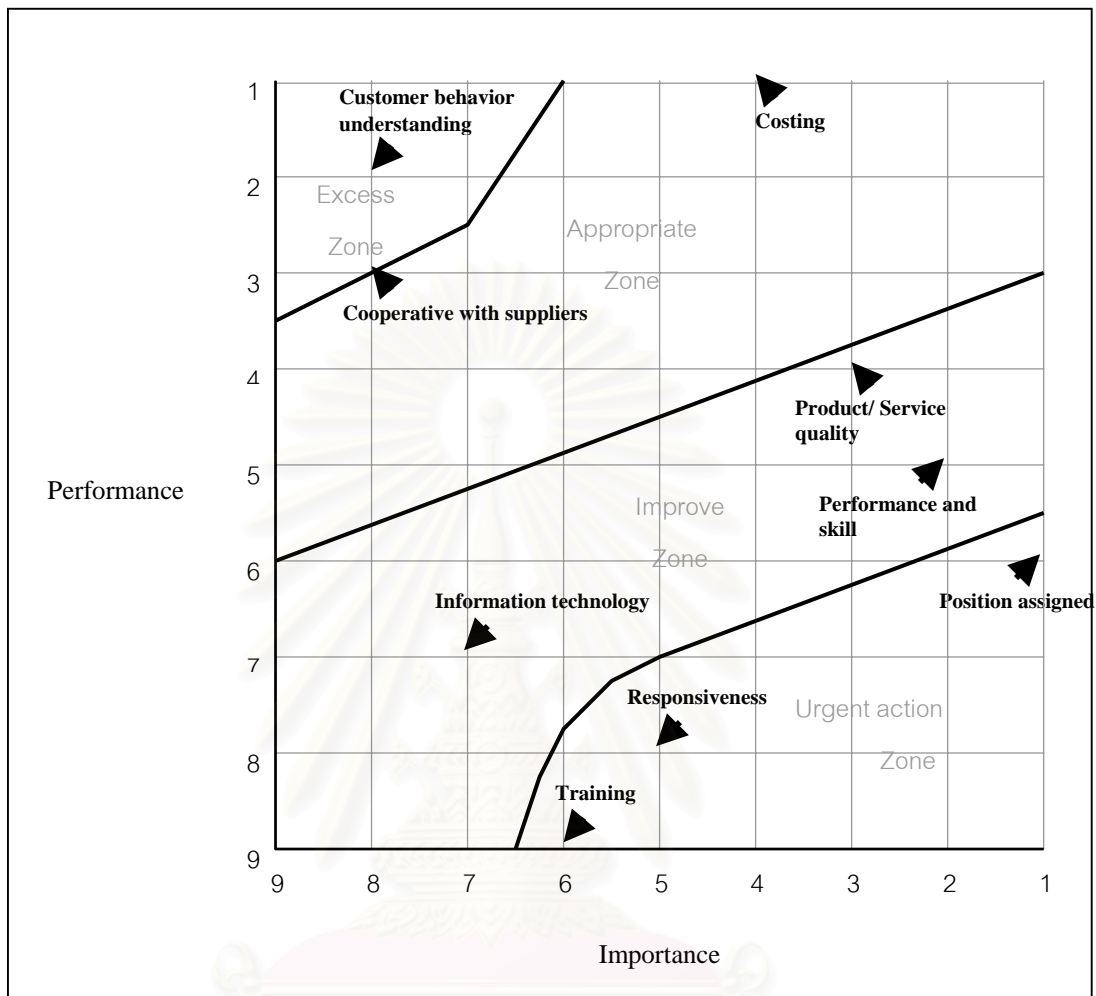


Fig. 6-4: Slack's Interpretation of Performance (Slack, 1990)

In the third section, the logistics strategy map is created by the company logistics related critical factors according to the Balanced Scorecard approach. The meeting with the company owners is conducted again to generate outbound logistics strategy from the objects in the strategy map. These strategies are then translated into measures. There are 14 measures generated from 10 strategies in this section. For each measure, the key result areas are generated at the meeting and only one key result area is chosen to use as a key performance indicator. The strategies, measures, and key performance indicators are related into the concerned departments by using matrix diagram.

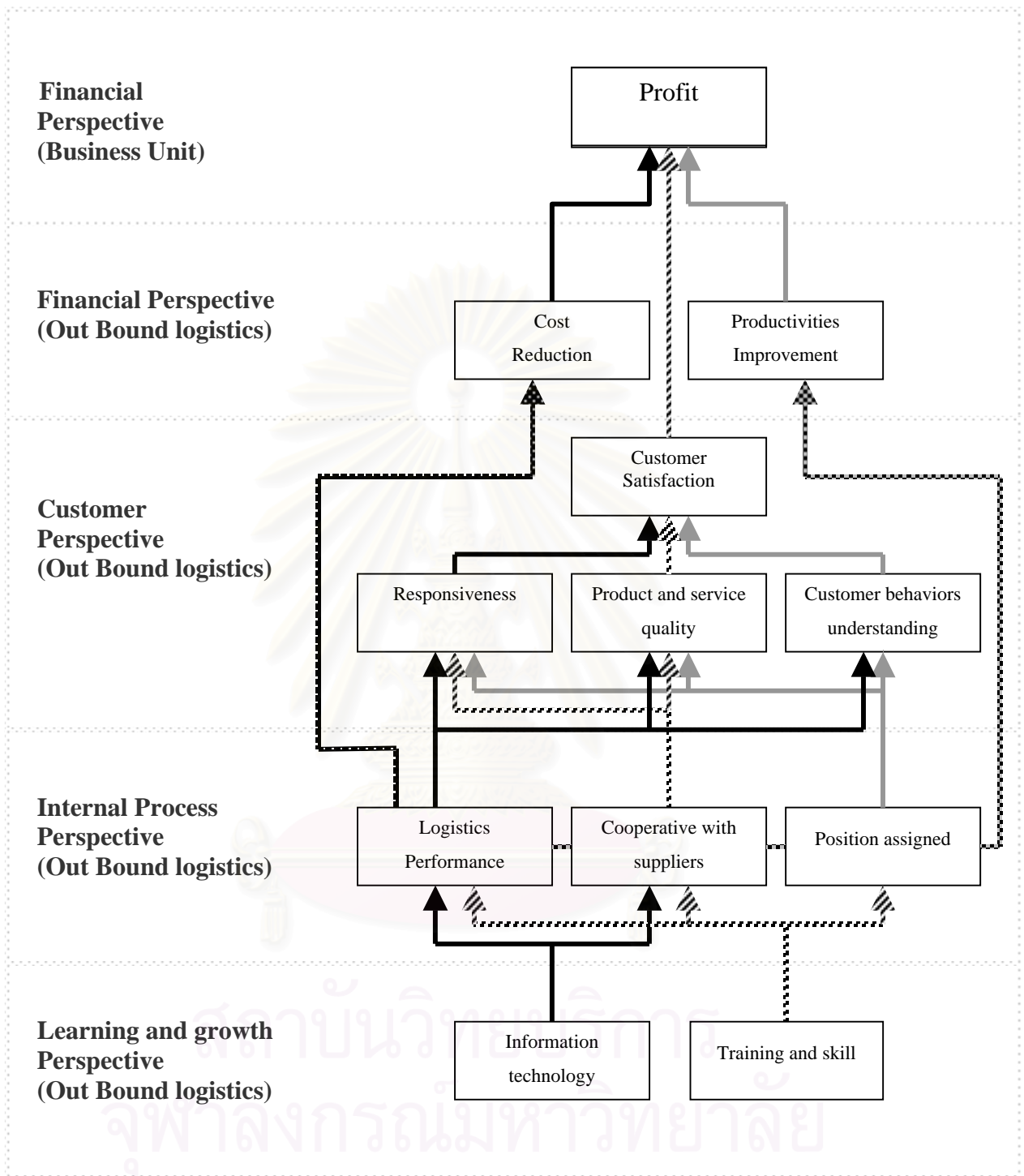


Figure 6-5: Strategy map

Perspective	Strategy	Strategic planning	KPI
Financial	Improve logistics cost	Just In Time to reduce finished goods inventory cost	% Inventory cost
		Reduce finished goods transportation cost	% Transportation cost
Customer	Improve customer responsiveness to customers	Set responsive target	Actual versus plan
		Improve responsive time	Average time from customer contact to response
	Improve service	Service excellent	Customer complain
	Customer relationship development	Relationship builder	Average time spend on customer relation
		Improve satisfaction to customers	Customer satisfaction index
Internal Process	Improve logistics performance	On-time delivery to customers	Number of on-time delivery
		Just In Time to improve finished goods inventory	Inventory turn
	Improve supplier on-time delivery	On-time delivery from suppliers	On-time delivery
	Improve labor utilization	Put the right man on the right job	Revenue per employee
Learning and Growth	Website development	Improve business-to-customer communication	Number of visitors
	EDI development	Improve business-to-business communication	% improvement
	HR continuous improvement	Improve employee skill	Training day per year

Table 6-1: The strategies, measures, and key performance indicators of the company

In the last section, action plans are generated according to the strategy, measures, and key performance indicators. There are 32 action plans generated from 14 measures in this section. Some of these action plans are supporting more than a measure and some are supporting only one. Every measure is supported by at least one action plan. The time line of these action plans are arranged according to their priority. The priority is set by the level of urgency according to the result from the section 2. These measures have to be verified by the company owners according to their cost, feasibility, and benefits. The results of the verification are showed below.

Strategic planning	KPI	Target	present	Timing	Budget	Verification
Just In Time to reduce finished goods inventory cost	% inventory cost compared to sales	15%	20%	Q2	90,000	
Reduce finished goods transportation cost	% transportation cost compared to sales	20%	30%	Q2	40,000	pass
Set customer responsive target	% actual vs. planned	100%	N/A	Q1	10,000	pass
Improve customer responsive time	Average time from customer contact to response	With in 1 day	With in 3 days	Q1	100,000	
Service excellent	Customer complaint	0 per month	4 per month	Q1	30,000	pass
Relationship builder	Average time spend on customer	6 days per year	N/A	Q4	40,000	pass
Improve satisfaction to customers	Customer satisfaction index	85% satisfaction	N/A	Q4	40,000	pass
On-time delivery to customers	% on-time delivery	95%	87%	Q2	30,000	pass
Just In Time to improve finished goods inventory	Inventory turns	12 turns	8 turns	Q2	90,000	
On-time delivery from suppliers	% on-time delivery	100%	95%	Q3	90,000	
Put the right man on the right job	Revenue per employee	250,000	180,000	Q1	40,000	pass
Improve logistics business-to-customer communication	No. of visitors	100,000 per year	N/A	Q2	100,000	pass
Improve logistics business-to-business communication	% time reduction	25%	N/A	Q1	80,000	
Improve employee logistics skill	Training day per year	7 days per year	2 days per year	Q1	80,000	pass

Table 6-2: Measure and action plan verification

6.2 Thesis Support & Constraint

- 6.2.1 Team work** – if it was not because of the support provided by the company owners and member of company staff, author would not be able to analyze, identify, and propose solution to the problems this quickly.
- 6.2.2 Time constrain** – The study of this thesis is limited to only the outbound logistics of the company due to the time constrain. The strategic planning of other sections can be developed based on this study.
- 6.2.3 Evaluation constrain** - most of the evaluations in this thesis are conducted by the directors of the company therefore some score may not be as accurate as it should be according to the internal point of view. The further evaluation may include some external auditors from certificated firm in order to balance the evaluation point of view.

6.3 Recommendation

- 6.3.1** The critical success factors of the company in this thesis are the strengths and weaknesses at the present time. If the company continues to analyze it environments, the company could find the up to date strengths and weaknesses that can be use to analyze the critical success factors for further improvement according to the procedure of this thesis.
- 6.3.2** The strategic planning and the data analysis of this thesis is only the initial guidance used as basic foundation for further improvement. More studies and detailed information are required. Learning from this information would improve the system and business of the company. The more accurate the data is, the more precise the strategy will be to hit the target. Therefore the company has to develop the strategic planning by collecting further information and also has to benchmark its planning with its competitors.
- 6.3.3** The key performance indicators of the actions plan in this study are the initiation for the complementation of the planning. In the further year, some key performance indicators may have to adapt to the new condition of the company performance.

REFERENCES

- Bowersox, Donald J.; Closs, David J. Logistics Management, The Integrated Supply Chain Process, International Edition, McGraw-Hill, 1996.
- Chandrachai, Achara, คู่มือการวางแผนกลยุทธ์ และการจัดทำ Balanced Scorecard, 5th edition, Chulalongkorn University, 2002.
- Chopra, Sunil; Meindl, Peter Supply Chain Management; Strategy, Planning, and Operation; Prentice-Hall., 2001.
- Christopher, Martin Logistics and Supply Chain Management, Strategies for Reducing Cost and Improving Service, Second Edition, Financial Times Prentice Hall, 1998.
- Dacharin, Pasu Balanced Scorecard, Implementing Balanced Scorecard, 3rd edition, Chulalongkorn University, 2003.
- Dacharin, Pasu Balanced Scorecard and Key Performance Indicators, From Strategy to Action with Balanced Scorecard and Key Performance Indicators, 7th edition, 2002.
- Han Y., Wild J., and Wild L. International Business and Integrate Approach, International Edition, Prentice Hall, 2000.
- Handfield Robert B.; Nichols, Jr., Ernest L. Supply chain Redesign, Transforming Supply Chains in to Integrated value systems, Prentice-Hall, 2002.
- Harrison, Alan; Hoek, Remko Van Logistics Management and Strategy, Prentice-Hall, 2002.
- Hunger, J. David; Wheelen, Thomas L. Strategic Management and Business Policy, International Edition, Eight Edition, Prentice Hall, 2002.
- Kaplan, Robert S.; Norton, David P. Norton The Strategy- Focused Organization, How Balanced Scorecard Companies Thrive in the New Business Environment, Harvard Business School Press, 2001.
- Kaplan, Robert S.; Norton, David P. Norton The Balanced Scorecard, Translating Strategy in to action, , Harvard Business School Press, 1996.
- Lambert, Douglas M.; Stock, James R.; Ellram, Lisa M. Fundamental of Logistics Management, International Edition, McGraw-Hill, 1998.
- Nayatani , Yoshinobu; Eiga, toru; Miyakawa, Hiroyuki 7 New Qc Tools, 1998.

Niven, Paul R. Balanced Scorecard, Step-by-Step: Maximizing performance and maintaining results, Wiley & Son, Inc., 2002.

Olve, Nils-Goran; Roy, Jan; Wetter, Magnus; Performance Drivers: A practice guide to use a Balanced Scorecard, John Willey and Son, 2002.

Slack, N. “Manufacturing Advantage”, Mercury Books, 1990.

Wright, Peter; Kroll, Mark J.; Parnell, John Strategic Management, Concept and Cases, Prentice-Hall, 1996.



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย



Appendices

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย



Appendix A

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

This appendix shows the logistics strategic planning form, which refer to Chandrachai, 2002.

	Performance					Importance in term of logistics				
	1(low)	2	3	4	5(high)	1(low)	2	3	4	5(high)
Customer										
Marketing										
Product development										
Customer loyalty										
Sales performance										
Promotion/Advertisement										
Market information										
Customer behaviors understanding										
Internal Process										
Product/Service quality										
Responsiveness										
Cooperative with suppliers										
Employee Satisfaction										
Position assigned										
Payment										
Performance										
Learning and growth										
Information technology										
Training and skill										
Performance measurement										
Financial										
Profitability										
Profits growth										
Liquidity										
Costing										

Table A-1: Internal and External analysis (Form 1)

External Environment	Possible trends	effect		Level of Importance				
		Opportunities	Threat	1(low)	2	3	4	5(high)
Political	Patent							
	WTO							
Economics	Environment Legal							
	GDP							
	Interest rate							
	Inflation rate							
	Exchange rate							
Socials/Cultures	Population							
	Brand Attractive							
	Relation priority							
	collectism							
	power distance							
Technologies	Uncertainty avoidance							
	Website							
	EDI							
	CAD/CAM							
Task Environment	New entrants							
	Suppliers							
	Buyer							
	Substitute product							
	Existing firm							

Table A-2: Opportunity and threat analysis (Form 2)

จุฬาลงกรณ์มหาวิทยาลัย

Customers	Market size	Factors to persuades
Current Customers		
1) Small size group		
2) National Park		
3) Local Projects		
4) International Projects		

Table A-3: Customer analysis (Form 3)

CUSTOMERS' NEED	Importance	Costing	Customer behaviors understanding	Cooperative with suppliers	Product and service quality	Performance and skill	Position assigned	Information technology	Responsiveness	Training
On time delivery	10									
Transportation safety	10									
Short installation time	10									
Short order cycle time	10									
Good service	10									
Satisfaction guarantee	10									
Low cost	10									
Installation in rural areas	10									
Importance										

Table A-4: Relation of customers' needs and the company critical success factors analysis (Form 4)

BIOGRAPHY

Mr. Ukrit Chotinantasaeth was born in Bangkok, 1978. He graduated from the faculty of Electronics Engineering, Assumption University of Thailand in 2000. After he worked as a quality assurance engineer at Delta Electronics Component Company for almost a year, he went to study Engineering Business Management for Master degree at Regional Centre for Manufacturing System Engineering, Chulalongkorn University of Thailand and University of Warwick from England.



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย