

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

7.1 General

The external environmental factors of the auto mobile business are changing rapidly. According to this assumption, however, many small to medium businesses in Thailand may not have effective techniques to manage or modify their business strategies due to a changing business environment. Moreover, they can lack effective methods to evaluate strengths and weakness, which can be used to identify their position in the market. Customer satisfaction level is important in competence as well. Because of the differences in the nature of businesses, however, an organizational performance evaluation tool must be appropriately designed with the nature of the auto mobile business in Thailand.

This study has applied organizational strategic for auto inobile organizations in Thailand using the concept of a Balanced Scorecard. For this study, the maintenance department of ABC Co., Ltd., Auto mobile was the core business unit that was selected as an application for the Balanced Scorecard concept.

According to the study, the business unit Key Performance Indicator (KPI) is developed conforming to the business unit strategy by using the balanced scorecard framework. Thereafter, executive management of the company and the management levels of the business unit were asked to join in the validation process in order to ensure the relevancy and appropriateness of the business unit KPIs. Afterwards, operation time was selected as a key area for improve the quality and performance. Finally, in order to measure the performance of improved key area, questionnaires were conducted. Therefore, the person responsible in managing the garage and customer were involved in the process of performance evaluation. Due to the lack of the data, the study covers from beginning of April to the end of November 2004.

7.2 Performance Measurement System for ABC Co., Ltd.

According to the objectives of the study, which is to develop and apply performance measurement system into maintenance operation unit upon the concept of the Balanced Scorecard. The corporate and business strategy of ABC Co., Ltd. was clarified as follow From the literature review, the researcher has studied the concept of the balanced scorecard. Therefore, from the information at the phase of business perspective, the researcher has followed the concept of the balance scorecard by translate the business unit strategies into financial, customer, internal business process, and learning and growth perspectives. Therefore, the business unit scorecard of the maintenance is shown in figure 7-1. Next the business unit strategic map is developed as shown in figure 7-2

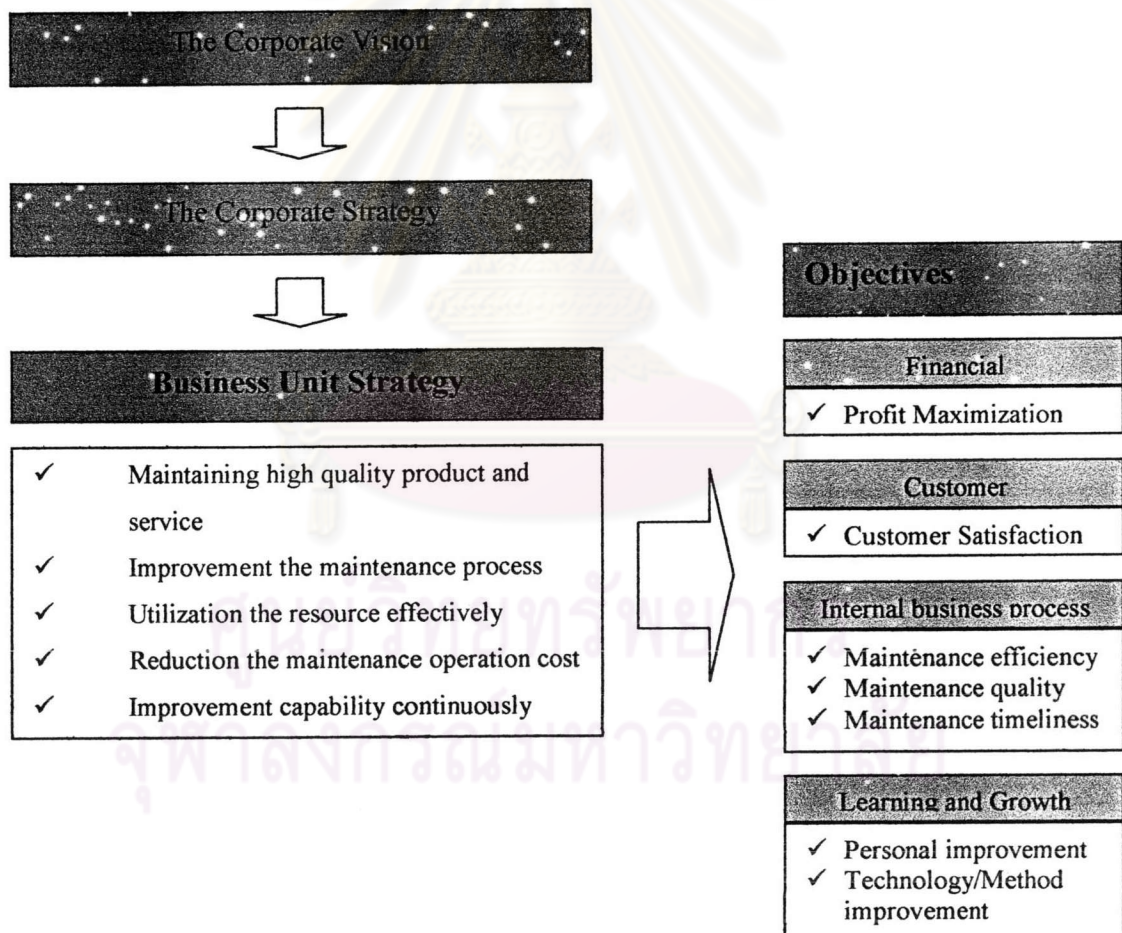


Figure 7-1: Translation business unit strategies

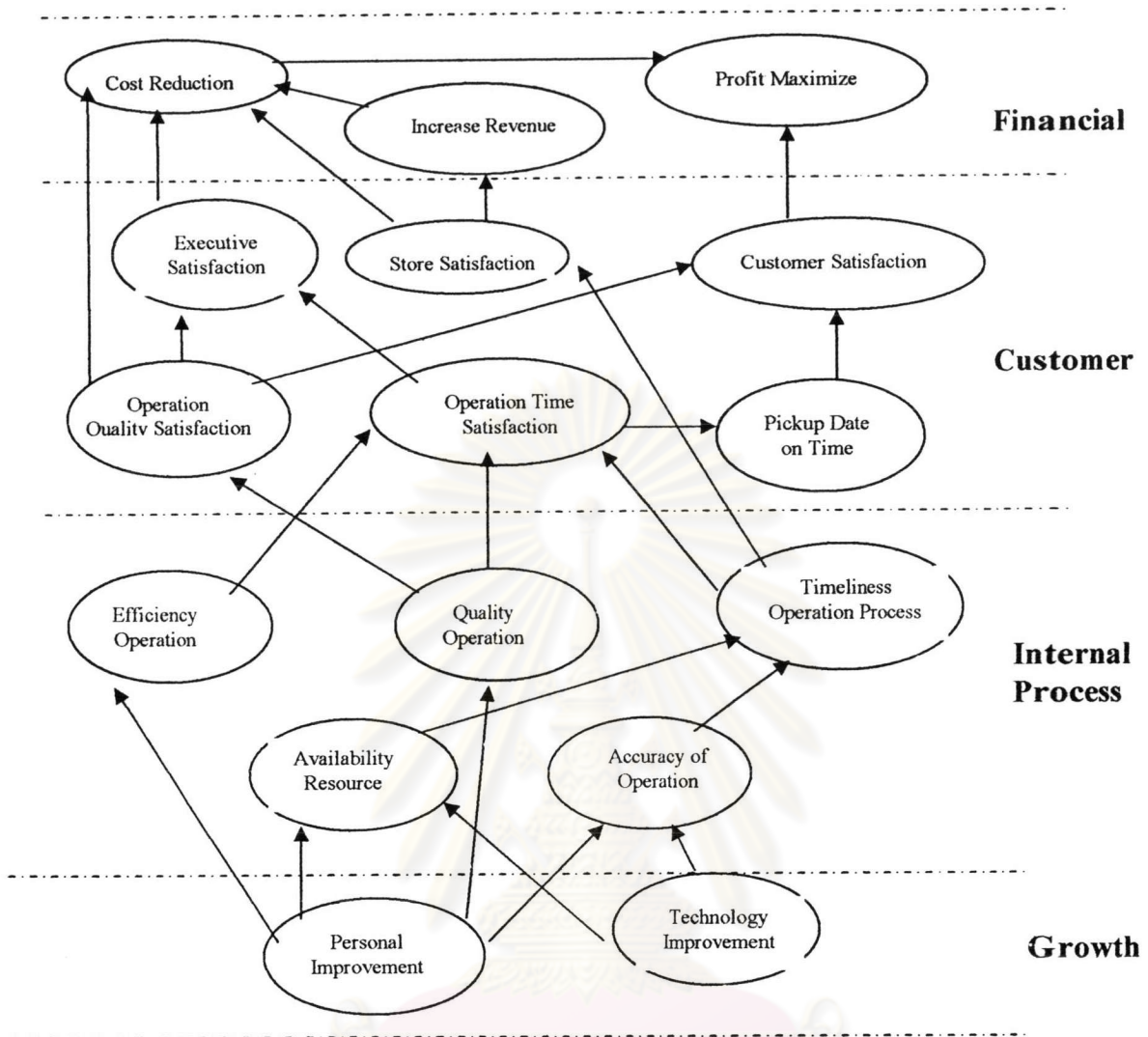


Figure 7-2: Business unit strategic map

According to the business unit strategic map, the researcher has developed business unit KPI of the maintenance unit based on their businesses objectives (see Table 7-1). Therefore, the KPIs are used as the guideline for the performance evaluation phase.

Goal	Objective	KPIs
Financial Perspectives		
Profit Maximization	Management Cost Reduction	Percentage of management cost from operation cost
Customer Perspectives		
Executive/Customer Satisfaction Store Function Satisfaction	Operation Cost Satisfaction Minimize the storage	Percentage of operation cost variance Average number of day on storing spare part
Internal Business Process Perspective		
Efficiency Operation Providing Quality Maintenance Timeliness of Operation Process	Waste Reduction Quality Increasing Accuracy of operation time	Percentage of value of material lost from used material Average percentage of work quality Number of the job delay (daily)
Learning/Growth Perspective		
Personal Improvement	Employee Skill Improvement Employee Satisfaction	Frequency training of employee Percentage increasing of employee's income

Table 7-1: Business unit KPIs

7.3 Key area Improvement of ABC Co., Ltd.

According to the objectives of the study, which is to improve the quality and performance of the key area for the maintenance operation unit? As the result of informal interview with the person, who involves in the management of maintenance unit and as well as the data collected from customer satisfaction survey. Operation time process is selected as a key area for improvement.

Furthermore, the researcher had informal interview with the manager of management information system function, who is responsible for designing database of every function of the company. With the help of manager, the researcher had then selects mileage check process as an example for key area improvement.

The researcher had clearly stated the tools use in analyzes key process for quality and performance in research procedure of chapter 1.6. These tools are flow chart, process activities mapping, and E-C-R-S.

After the researcher been through the study, data collection, and as well as data analyses, the result has show a satisfaction improvement to the management team. The number of steps has reduced from 42 steps to 27 steps, which the improvement is worked out to decrease at 36%. The number of distance needed in operation also has reduced from 293 meters to 203 meters, which the improvement is worked out to decrease at 31%. Moreover, the number of time needed for the operation has greatly reduced from 143 min to 96 min, which the improvement is worked out to decrease at 23%.

Moreover, the trend of both distance traveled and time used for mileage check process are varied in the same direction as below. Both Figures 7-3 and 7-4 showed the 20 different data collected from June 2004(before implementation) till the end of September 2004. These figure show the satisfactory trend for the improvement of both distance and time used in mileage check

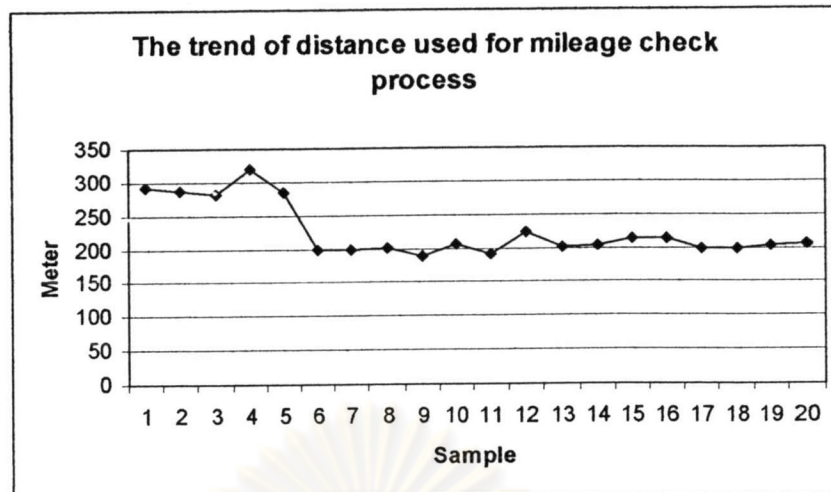


Figure 7-3: Trend of distance traveled for mileage check process

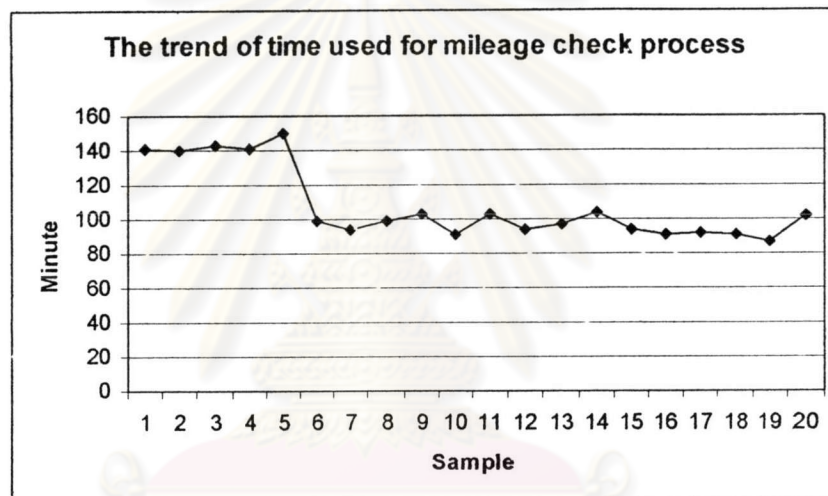


Figure 7-4: Trend of time used for mileage check process.

7.4 Customer Perception with the improved key Area

Despite the completion of the following activities: analyzing situation; identifying problems; and proposing solution, it would however had not practically proven that all those activities done in the early chapter of this thesis have taken the right path in resolving problem. The main purpose of this implementation is to prove that solutions proposed are effective in the way that it helps improve and reduce the problem of customer complaint.

Problem Long waiting time during payment is selected and being employed by Cause and Effect diagram technique. After the Cause and Effect diagram has been completed, the possibly root cause of the effect are being circles. Then Why-Why analysis is being employed in order to identify the real root cause and to see the relationship of causes that lead towards the effect.

To sum up, the root cause(s) and possible solution to this problem - Customers are unhappy with long payment time, is down to:

Root Cause	Possible Solution or Prevention
Ineffective recruitment	<p>Instead of employing inexperienced and irresponsible staffs company should spend time doing some serious recruitment base on the experience each applicant had in the past. In additional to that applicants are to be status as trainees, where their work shall be assesses base on the first 3 months probation period</p> <ul style="list-style-type: none"> ➤ Interview to identify knowledge, skills, abilities, and traits ➤ On the job training ➤ Performance appraisal (after the first 3 months)
Staff training	<p>Company must cultivate basis of quality to everyone in the company enabling them to understand the nature and concept of quality in ability to perform quality throughout operation. Company should seek for external guest speaker of practitioner to visit company on a regular basis to educate and share thought and share experiences.</p>
Printer	<p>Company need to put more attention in printer. A newer and more user friendly model are needed to replace an old one. Print the receipt in advance is other alternative solution. It can greatly reduce the waiting time and as well as increase the level of customer satisfaction</p>

The research was developed a questionnaire and conducted a short-term implementation period lasted four months. After the implementation, researcher then calculate and summaries the Mean rating of eight categories on both BEFORE and AFTER implementation. Mean Mean Rating can also be calculated by through summing up Mean rating of all eight categories and divide by 8 (total number of categories). Mean Mean rating of Before is valued at 2.6, while After is at 4.1, which the improvement is worked out to be at 42%. The levels of improvements are clearly shown in radar chart below.

There were five categories which improved greatly. Two categories were improved moderately and one had little improvement. The greatly improved categories were opinion in overall time, job completed on arrangement, payment time, time waiting for car after payment, and effort in trying to improve. These show that the researcher had successfully improved the customer satisfaction level. Customers are happy with the faster service that the company had provided. Customer also happy with the effort of trying to improved a better service, and this help the company to gain more trust and as well as increase the image of the company. The two categories that had little improvement were category 6 and 7. In order to increase the customer satisfaction for this category, the company must do more than just improvement of one department. The last categories that do not have much change were cleanliness. Because the company tends to use the same method in washing the car, so not much changes has been taken care off.

Figure 6-7 shows the radar chart on improvement of category 1 to 4. These categories are opinion in overall time use since customer arrive till have their car back, the job completed on arrangement, opinion in payment time, and opinion in waiting for your car after payment. Figure 6-7 again shows that these four categories has increase greatly, which assure the success of implementation and as well as increase in customer satisfaction as stated in thesis objective.

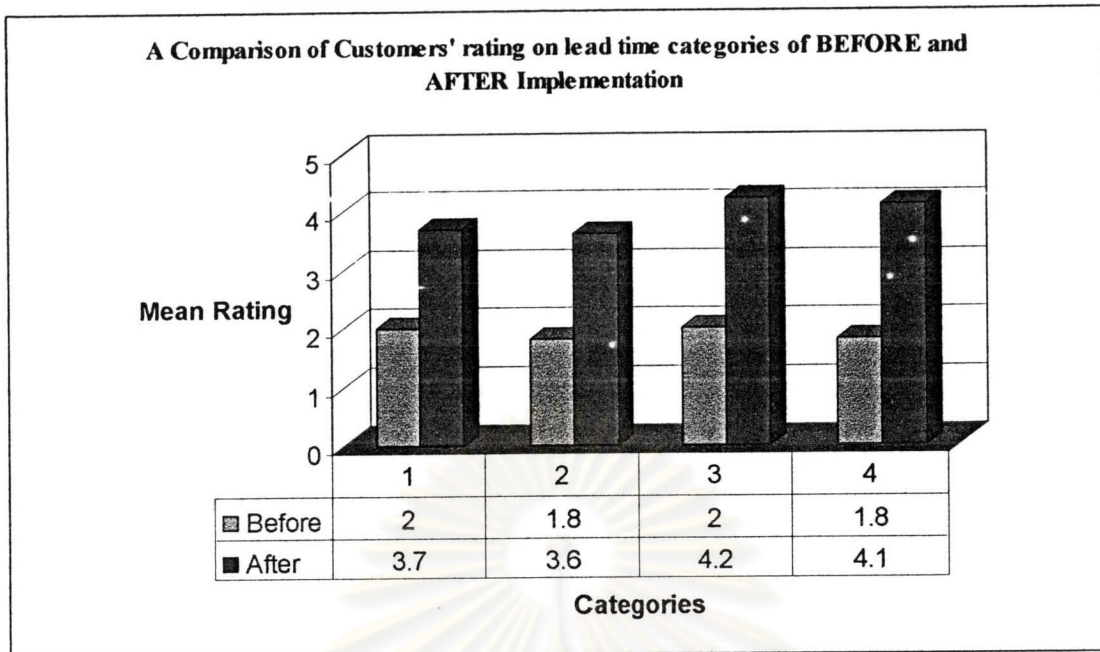


Figure 7-5: The improvement of customer satisfaction after the implementation

7.5 Recommendation for Implementation

According to this study, many obstructions and problems were found during the implementation for maintenance department. To effectively apply the balance scorecard concept as an effective performance management system for the maintenance department, these obstructions and problems must be addressed for effective implementation. This section recommends strategies to help avoid or minimize these problems and obstruction during the implementation phase for both balance score card and key area improvement. Therefore, the recommendations can be used as a guideline for company preparation due to applying of both implementations. The following is a detailed discussion of the recommendation of each stage of implementation. Moreover, a summary of problems and recommendations at each implementation phase is presented in Table 7-2

Formulation corporate strategy:

For the implementation of the balanced scorecard concept, the corporate vision and strategy should be defined collectively by agreement from all of executive management of company. Therefore, a strong commitment from all executive management is required for the verification of corporate vision and strategy. During the verification of the business unit strategy, a strong commitment from the management team of the maintenance department is required for participation. In order to effectively introduce the balance scorecard concept to all participants, the researcher should perform a complete pre-study of the organization and business unit.

Development business unit strategy:

To effectively develop a business unit KPI, a corporation form management team of the maintenance department is required. Therefore, the researcher should study the business process of the maintenance to effectively translate business unit strategies into a business unit KPI. Therefore, the business unit KPI should be validated by the management team of the department. Moreover, during the business unit KPOI validation, a strong commitment from all management team of the department is required for the participation.

Key area improvement

The researcher should perform a pre-study of business process. The researcher must have a clear understanding of the tools selected for key area improvement. The method used in collecting the data must be accuracy and reliable. During the evaluation of key area improvement, in order to effectively implement this process, strong commitment from the management team and customer is required. Therefore, everyone in management team and customer should participate for the evaluation of the key area improvement.

		Implementation Phase	Problem Identify	Recommendation
Implementation Stage	Corporate Strategy Formulation	Corporate vision and strategy clarification	<ul style="list-style-type: none"> ➤ Executive commitment ➤ Limited experience of concept practitioner to introduce BSC 	Required strong commitment from executive for concept implementation, and required organization pre-study for concept practitioner
		Business unit pre-survey	<ul style="list-style-type: none"> ➤ Management level of all business unit commitment 	Required strong commitment from all management team to identify performance measurement
		Business unit strategy clarification	<ul style="list-style-type: none"> ➤ Commitment of management team in business unit ➤ Limited experience of concept practitioner to translate business unit strategy into KPI 	Require strong commitment from Management team for concept implementation, and required business unit pre-study for concept practitioner
	Key Performance Indicator Development	Business unit KPI development	<ul style="list-style-type: none"> ➤ Corporation of management team in business unit ➤ Limited experience of concept practitioner to translate business unit strategy into KPI 	Required corporation from management team, allow business process pre-study for concept practitioner, and review business unit objective and KPI by among of management team
		Business unit KPI validation	<ul style="list-style-type: none"> ➤ Commitment of management team in business unit 	Required strong commitment form Management team for validation
	Key Performance Indicator Implementation	Preparation of method and data collection	<ul style="list-style-type: none"> Corporation of management team in business unit Limited experience of concept practitioner to identify type, source of data/ develop formulas 	Required corporation from management team, allow business process pre-study for concept practitioner, review type, source, formula of data by among of management team
		Data collection	<ul style="list-style-type: none"> Limited of time during data collection Unavailability of data 	Required strong commitment from data collector for data collection, extension period of time during data collection for preparing required data
		Evaluation	<ul style="list-style-type: none"> Commitment of management team in business unit and customer 	Required strong commitment from both the management team and customer for evaluation

Table 7-2: The summary of problem identification and recommendation during the implementation

7.6 Recommendation for Further Study

The study provides a performance evaluation of the maintenance department of ABC Co., Ltd. However, due to time constraints during the study, the performance evaluation was based on information from October to November 2004. Therefore, further studies should examine additional time. Results from performance evaluation of the maintenance department based on information from more than six months, would provide more comprehensible results.

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. Due to time constraints during the study, the research can only improve one key area. Therefore, further studies on other key area are needed.

