

# CHAPTER I

## INTRODUCTION



### 1.1 Introduction

“The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measure of performance, such as cost, quality, service, and speed” that was definition of Reengineering by *Hammer and Champy (1993)*.

The right reengineering implementation can make the company have more competitive advantage. Several times reengineering is used with information technology implementation because this implementation needs for the change both working processes and people behaviour. Therefore reengineering is the best force in order to implement information technology efficiently. Over the past decade, reengineering was used in the system correction process in manufacturing sectors only. Nowadays, reengineering was used in widespread use throughout sectors including to service sector. The Firms more realized on the important of service than selling that causes Customer Relationship Management that will keep the company survive and be able to fight in the market.

It is asserted that defining information requirements is perhaps the most neglected aspect of the information management process. One explanation is that the high costs of implementing information technology generally focuses management's attention on the technology (hardware and software) and preempts discussion of issues concerned with the information itself. It is contended that, because of the failure to focus on information issues, few organizations know what information they have or need. Identification is made of the information requirements needed to deliver quality service in high customer-contact businesses.

Within manufacturing industry, where the concepts of quality were developed, poor quality increases costs due to rework, market opportunity costs and lower employee morale. Service industries suffer the same hidden costs. It is always possible to return a manufactured product for repair, and recover some lost customer credibility in the process. It is not possible to send back a legal argument. To this extent the necessity to provide a service that is "right first time" is imperative.

## 1.2 Background

Over the past decade, the automotive manufacturing industry in Thailand has growth by response of an increasing demand from automobile users with higher purchasing power.

The company (will be referred to as “ABC” company throughout this thesis) started producing and distributing Nissan vehicles in the kingdom over 50 years ago. Since then, the company has grown rapidly and become a fully integrated player in automotive industry. Standing on a site of over 800 rai at Bangna Trad km. 21, the centre consists of a passenger car assembly plant, a small truck assembly plant, a large truck assembly plant, and a spray painting facility. These plants incorporate state-of-the-art machinery and the most sophisticated technology.

Due to the increasing sale volume of Nissan vehicles, demand for parts and service has increased accordingly. Therefore, ABC decides to establish its new parts centre and service center to ensure continue supply of parts and prepare prompt after-sales service to customers and dealer. Service Department was divided into three divisions; Technical (Engineering) Centre, Warranty Centre and Training Centre.

The Technical Centre was established especially for vehicles with unusual problems that require skillful technicians to solve. The company has advanced equipment with experienced staff for accurate and fast inspection of components. These specialists have undergone comprehensive training programs on component inspection and maintenance, both in-house and overseas. All problems are analyzed and information is recorded for future reference. This information will also be sent to service centers around the country in order to solve problem efficiently. The Technical Centre can be regarded as the technical information centre for Nissan vehicles.

Recently, the world has changed and information technology plays a big role in Thai industry. It not only helps company in production sector but also in service sector. Several automotive industries have been changing the way automotive business to a position of a service provider rather than a product seller. The profit from service section is the large proportion of overall, as a result of that, the management focus on cutting cost, reducing time and remaining premium quality to serve the customer’s satisfaction. Re-engineering is also the one of the considerable strategies to achieve the ABC Company’s objective. To attain good customer satisfaction, management level of company realizes the needs of improvement so he decided to do a big change in order to facilitate all the process in company, also technical centre.

## 1.3 Company Analysis

### 1.3.1 Competitive force analysis (External analysis)

Porter's five-force model is a very powerful approach to analyze and assess levels of competitive intense among companies with in particular industry. The model is also an effective means to understand and discover the main sources of competitive pressure and how strong each competitive pressure and how strong each competitive force is.

- *The rivalry among competitors*

This is the most intense force among all the five competitive forces. In some industry, rivalry is concentrated on price competition. But for automobile industry price is not the most influent factor. There are some other factors that customers usually focus on especially after-the-sale service.

There are several common factors that seem to influence the tempo of the rivalry among companies within industry. The following factors are all appear to ignite the already intense rivalry among the sellers to be much more competitive.

The numbers of the competitor increases and as the competitors become more equal in size and capability. The board of investment successfully issued encouraging policies to convince some foreign investors to invest in Thai automobile industry.

Rivalry is stronger when customer costs to switch brands are low. The lower the cost of switching, the easier it is for rival sellers to raid one another's company.

- *The competitive force of potential entry*

New comers commonly bring new production capacity, the desire to establish a secure place in the market, and sometime substantial resources. Normally, there are to factors that determine the level of competitiveness; barrier to entry and expected reaction of the existing companies to new entry. The barrier to entry can be separated into several factors in order to judge how serious the competitiveness.

Economic of scale: investment in automobile industry requires a huge amount of money and resources. The new entrants look for long-term profits. They need to build up many things such as strong dealer networks, reputation and creditability before they can gain benefit of scale.

Ability to gain access to technology, specialized know-how, and resources: the new entrants need to have high technologies, skill, know-how, excellent R&D, innovation and management.

Brand preferences and customer loyalty: buyers are often attached to certain brands such as Japanese and Europe brands.

Access to distribution channels: this is a very hard factor for new arrivals. An automobile dealer is a good combination of long financial support, a suitable location, a group of sales representative and mechanist, and an excellence of after-sale-service.

- ***Competitive pressure from substitute products***

Normally company in certain industry is competing with another company in different industry, because their products are substitutable.

Sky train is one of the many choices for Thailand transportation but it only place in Bangkok. Taxi and public busses are another choices but Thai people prefer to have own car because safety and conveniences. And both of them are also in automobile industry. As these results, it might conclude that there is no such a product that could build competitive pressure against automobile industry.

- ***The power of suppliers***

After Thai government's abolishment of local content laws, this means from now on Thai automobile manufacturers can purchase auto parts from anywhere that provide the highest quality with the lowest price. In addition, a lot of Thai auto part companies were forced to close down due to the recent crisis. For the remaining companies, they still have to cope with the consequence; slow market growth, competitors from foreign etc. Therefore, it can be summarized that the power of Thai suppliers is quite weak comparing to some other country suppliers.

- ***The power of buyers***

There are some factors that can analyze the power of buyers. The switching costs are relatively low. Buyers are well informed about seller products, prices and costs. According to the factors above it seems that power of buyers in this industry is relatively high.

### **1.3.2 Internal analysis**

For the internal analysis, SWOT was selected to be the best tool. The result of analyzing ABC is stated as below.

- ***Strengths***

- Good reputation in economic car.
- Leader of high technology Japan's car.
- Reliable suppliers.
- Many branches of service centers around Thailand.
- High performance new mainframe.

- **Weaknesses**

- Costly R&D operation.
- Customer satisfaction is not in the good level.
- Technical skill in some function is low.
- Too much operation time in after sale service.
- Too much documentation process.

- **Opportunities**

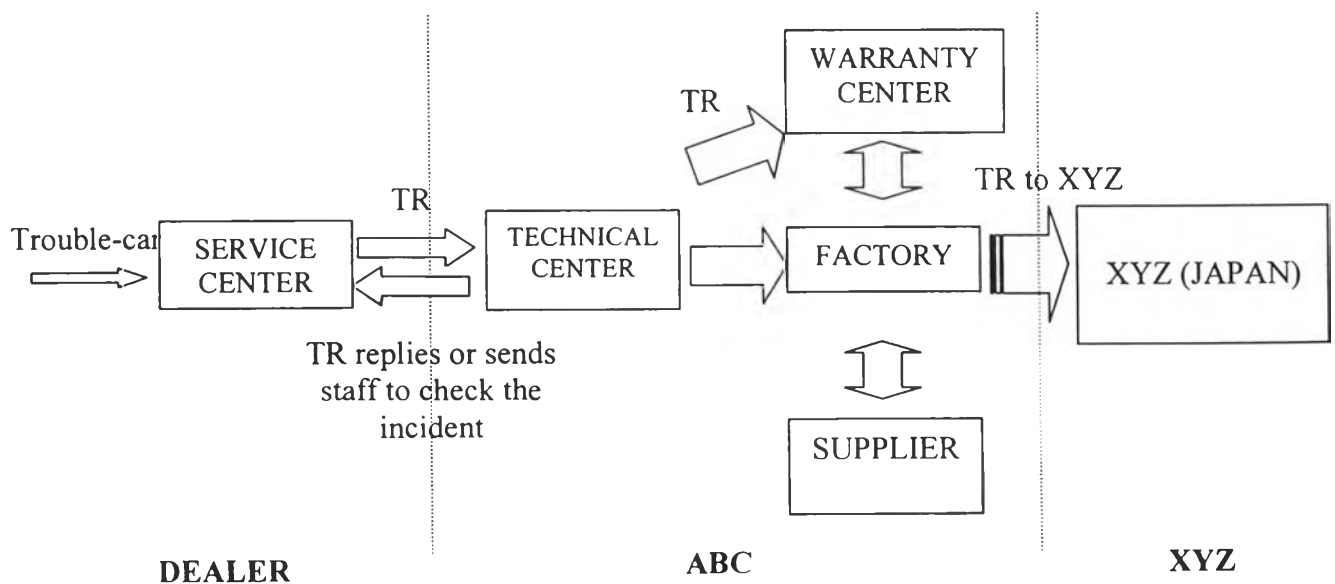
- ABC got subsidies from XYZ (Headquarter in Japan) for service campaigns.
- Most people think of value and saving first.
- Increasing of car users.

- **Threats**

- Increasing of fast service centers in Thailand now such as Max Autoserv, B-Quick etc.
- Intense competition in the same level cars.
- Increasing of used cars.
- Increasing of fuel price

## 1.4 Traditional Process

There are 159 service and part centres remaining operate by authorized ABC dealers in Bangkok, outlying areas and upcountry. This is very loading capacity for after-sale service centre to transfer information for all of them in prompt.



**Figure 1.1:** Information Flow Process

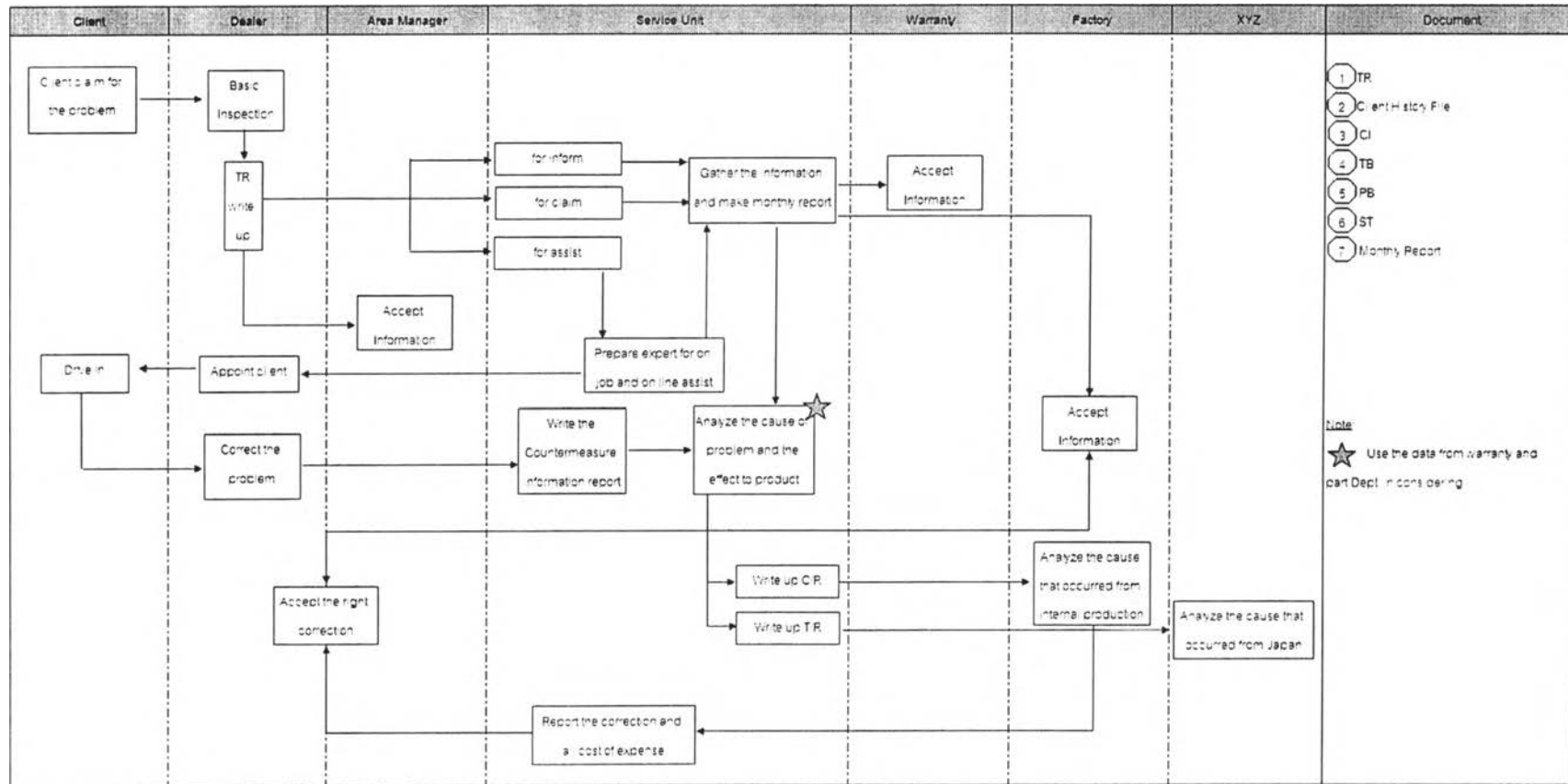
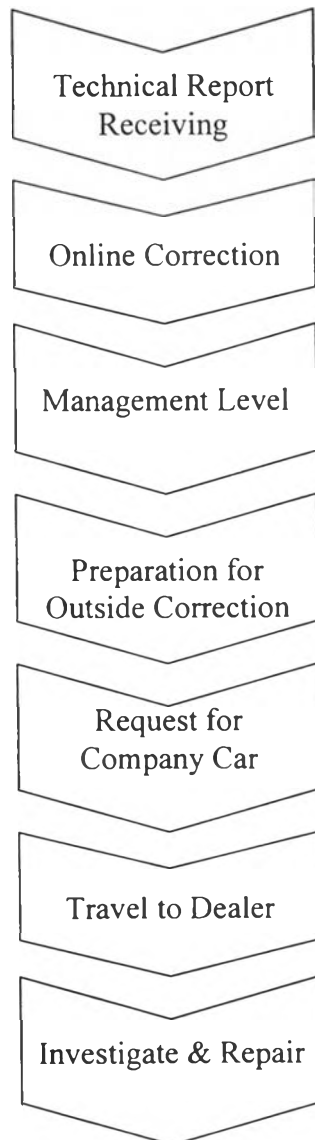


Figure 1.2: Route of Information Flow

Technical Report from dealer has three objectives

1. To inform
2. To request claim
3. To request for help

In case of the last objective, request for help, the main process, which called problem correction process, to deal with this case is below.



**Figure 1.3:** Problem Correction Process

## **Technical Report (TR) Receiving**

After the trouble-car comes to dealers, they will send technical report (TR) to Technical center for 3 purposes; to inform, to request claim approval and to request for help. The report will be transferred by fax machine and wait for reply.

Expert will manage TR in three cases.

1. TR to inform; He will consider report and post “APPROVED” ban on it before file it in the history folder.
2. TR to request claim; Expert will consider report whether it has reason suit with warranty condition or not. If there is suitable condition, he will post “APPROVED” ban on it and forward this report to warranty department. If not, expert will return it back, with comment, or connect to dealer about that case.
3. TR to request help; Online correction will be used. (detail in the next step)

## **Online Correction**

In case of request for help, Technical centre will call back to the dealer after the centre got TR. for basically help. They may teach how to correct the component or how to repair specifically case on phone.

## **Management Level Approval**

If the problem cannot be solved by themselves, dealer’s technicians, the report will be sent to manager to approve for sending expert to dealer. This process take too much of time because sometime there is no enough expert to standby the centre. The expert has to wait for the permission of manager. Especially if the problem occurs in upcountry, that takes very long time, manager has to realize how to choose expert and how much time to solve the problem due to the limit of experts in the centre. Sometimes the centre has not enough of expert so outside helping has been delayed.

## **Preparation for Outside Correction & Request for Company Car**

After manager approved the case which necessary to send expert to solve the problem, expert has to prepare for correction in that case: documentation, special tool, etc. During preparation process, he has to wait for permission of administrative department to borrow company’s car. Especially if the problem occurs in upcountry, it will take very long time because of the limitation of company’s cars. Sometime he has to wait for couple of days or week to get the car.

## **Travel to Dealer**

The time that be used in going to dealer depends on how far from centre dealer is. And also the traffic condition is effect to the travel to dealer so the appointment time may be extended.



## **Investigate and Repair**

The time which to be used in solving the problem depends on how difficult the problem is. Sometimes, It found that the problems are simple and basic which technicians of dealer should be able to correct by themselves so there is waste cost and time in case of sending expert to dealer. After Technical Centre found the problem, it has to report to 2 sections, factory and Warranty Centre to inform supplier what go wrong and to inspect that problem component.

### **1.5 Statement of problems**

1. Data transfer via fax machine very slow and not clearly sometime
2. Solving problem by phone may not accurate
3. Too much time to solve each of trouble-car due to more documentation process
4. Not enough expert technicians and time by sending them to solve simultaneous problems in many places.
5. More unnecessary costs by sending the expert to dealer.
6. Limit of company's car

### **1.6 Objective of the Study**

To reduce lead-time from Technical Report Receiving process to Investigate and Repair process at a car's technical centre.

### **1.7 Scope and Limitation**

1. Find out the most effective way to facilitate the process in Technical centre.
2. This thesis will focus on one or two of dealers under these conditions:
  - Located in Bangkok and outlying
  - Technical Centre has more power to control them
  - More technical problems to see clearly about the different between before and after implementation
3. This thesis will focus on Problem Correction Process in Technical Centre

## **1.8 Framework**

This thesis will be carried out by the following steps:

1. Academic study about reengineering, strategic information system, and customer relationship management.
2. Collect all necessary data and all information about process between technical centre and related department
3. Design the new process
4. Implementation
5. Analyze and evaluate results of implementation.
6. Summarize the result of study and recommend further studies
7. Thesis write-up and submission