

CHAPTER 1

INTRODUCTION



1.1 BACKGROUND OF THE RESEARCH

The 1997 economic crisis has an important effect on decreasing investment in and outside in Thailand. One of main causes of the crisis appears to be the information in investment or doing business effective and updates enough to support investor to make decision to investment in Thailand. Thailand has high investment opportunities and advantages in terms of raw material and labor compare to countries. So it is not difficult to persuade investor both of Thai and foreigner to investment in the country if information available is effective and up to date.

For a business to be successful and profitable investor must have a clear understanding of their customers, their strengths, their weakness, their competition, and future plan effectiveness and efficiency. The best plant location selection has important problem of doing business or organization process. When investors select a poor site location, high cost may be happen to the manufacturer in the first day of operation. The best plant location will help investors to get lowest overall costs of production and maximization of profits. The poor plant location will make high costs in any production factors and will reduce capability to layout development and plant operations. First of all, most investors have planned to set the new business or expand existing business; they must take the time to select the plant location before build plant. The plant location selection has effect on plant layout and cost of plant if the company has select the best plant location helps investor to gain competitive advantage. However, there are many factors to select plant location that effect on production cost, start from raw material source into production process until sent product or goods to the customer. Each location has good point and bad point compare with other site location.

Industrial location of Thailand was classified into six regions, Central Region, Northern Region, Northeastern Region, Eastern Region, Western Region and Southern Region. Each region has different factor such as labour cost, transportation cost, raw material source and so on. Any factors are important to the plant selection location decision, more subjective factors, such as labour facility should be considered. It is difficult and takes a long time for investor to select suitable plant location. However, though each business needs a unique to set up their business such as different skill of labour cost, capital cost, space area to do the business. To complete an effective their business, they must to get and receive investment information completely and effectively that help them to focus ideas to make decision to plant location selection. Investors must feel confident that investment business and has the ability to gain competitive advantage their product or service over the competition.

In the research, we use a decision support system that help most of investors to focus ideas and easily to decision making process in plant location selection by analyze information from any factors and any related information. The plant location selection decision can be more effectively by using decision support system.

"Decision support systems are computer-based information systems designed to help users select one of many alternate solutions to a problem and to help corporations increase market share, reduce costs, increase profitability, and enhance product"¹. The objective of decision support systems is to provide information and decision support techniques needed to solve specific problems.

1.2 STATEMENT OF THE PROBLEM

The plant location has effect on the plant layout and cost or capital investment of industrial that may help company gain competitive advantage or disadvantage on the production and operation process. The important thing for plant location selection is analysis of the high amounts of information from any factors such as raw materials, availabilities of labour, transportation, availabilities of utilities. The investors have to analyse of the high amounts of information from any factors or any information that related to plant location selection before they make decision to buy or rent that area. There are many factors, such as raw material, availability and cost of labour, availability of utilities (water, electricities), accessibility of raw material and so on.

Investors may use high cost and spent a long time to do the research for find or select the suitable location. There are many ways to select or choose the plant location for each industrial requirement; it depends on each manufacturer requirement from any factors.

1.3 OBJECTIVE OF RESEARCH

To develop the decision support system for plant location selection in case of plastic industry and concrete industry that can be used to guide investors in making to plant location decision before setting up a new plant.

1.4 SCOPE OF RESEARCH

The research will focus on plant location selection in the case of plastic industry and concrete industry. Information and factors on plant location selection in plastic industry and concrete industry in Thailand will be analyzed. The data will be collected in the database system to directly

meet the investor's requirements. The investor must input or key any detail (factors) that they want to select the plant location into the system. The system will process and show the recommendation of suitable plant location in the display at the final process.

1.5 EXPECTED BENEFITS

1. Enable any investors to understand the process of plant location selection and benefit them setting up a new plant.
2. Make it easy for investors to conduct plant location selection.
3. Accumulate knowledge and understand about decision support system step by step.

Help investors and any interested people to save time and cost to collect, analyse and make decision from volume of information about plant location selection.

1.6 RESEARCH METHODOLOGY

1. Study from document, research and topic that relate to plant location selection.
1. Study and analyze any factors that relate to plant location selection.
2. Collect and analyze the data of plant location for each area and any factor that effect on plant location selection.
3. Study and understand about decision support system.
4. Develop program, database system and interface design.
5. Test and implement program.
6. Write up thesis and submit thesis form
7. Make conclusion and recommendation.