

CHAPTER 7

CONCLUSION & RECCOMENDATION

7.1 Conclusion

7.1.1 Conclusion of implementation plan

The implementation plan of Data Mart in this thesis followed Wetherbe's four stages model of IT planning. It is divided into 4 stages; strategic planning, information requirement analysis, resource allocation, and project planning. Strategic planning was implemented to identify information system application that is suitable with current environment and restriction of organization. In this stage, the SWOT was used to analyse the organizational environment to develop information system strategies and objectives. It was ensured that Data Mart complies with organisational strategies and environment. Otherwise, the company might invest in wrong information system that cannot really reach the organisation requirements and it might not solve the current problems of the company. Then information requirements analysis had conducted to know the design scope of Data Mart before resource allocation and project planning were developed. Information requirement analysis is consisted of 2 key steps; system requirements determination and information technology architecture. The system requirements determination was conducted to collect the business scopes and requirements of employees and managers in each department that are necessary for their business analysis and decision-making. Then all requirements were brought to develop high-level data model in step of information technology architecture. Information requirements analysis is one of the most important of designing and developing Data Mart because the project were not successful if the finished Data Mart system can not serve the users

and business requirements. Many projects have good IT experts but they were failed because IT experts did not really understand business scopes and user needs. In the Data Mart project of AAA Company, representatives of each department have good understanding of business process and organizational requirements and they also pay excellently attention and cooperation to Data Mart project implementation so project team had the completed information to design and develop the Data Mart. As a result, the Data Mart was completely successful. However, key gaps were found during information requirement analysis as follows.

- The business scopes and requirements of each department are so diversified and different because each department has different business processes, products, customers, payment term and others. Therefore, all business scopes and users' requirements were standardized in order to serve all departments as same format. Unique requirement which served only a few selected departments were not implemented. Each departments had to mutually agree approach to build the standard format of the data model.
- SAP system did not contain all of the required data for developing Data Mart that could provide the users the business analysis and decision-making. Therefore, additional external data was needed to complete data for developing the Data Mart. There are a number of data originated from self-maintained spread sheet format (Microsoft Excel) which had not been standardized across the department; such as, the report of actual sales against forecast. Since the forecast data is not provided by SAP, users currently prepared such reports by Microsoft Excel. Therefore the project staffs have to design a standard format to input this kind of data into Data Mart.

Implementation plan of Data Mart was developed after strategic planning and information requirement analysis had completed. There are 3 groups of key successful factors that concerned with the success of Data Mart's implementation as follows.

1. Management
2. Business knowledge
3. Infrastructure

1. Management

□ **Executive support:** executive support is one of the most important factors for implementing the Data Mart project since he is the one who allocates resources; such as, budget, place, people, and others for project implementation. Project may be failure if lack of support and sponsor from the top management. Without this support, issues are go unresolved at a high level, consequently, the scopes of the project were reduced or corrupted. The executive must be kept informed of the project. Issues that require their attention must be clearly stated and optional answers provided. Normally, the executive ensures that the outcomes of project comply to the business strategy, ensure resource priority, clarify business terms and roles.

□ **Clearly defined plan:** Data Mart project needs a documented plan to provide structure, schedule, timeline, and resource. It should clarify roles and responsibilities of each human resource with specific time.

□ **Management of project scope:** In order to successfully implement the Data Mart within the expected timeframe, we must continuously manage the project scope of project. Additional requirements which beyond the Data Mart area and existing scopes must be addressed promptly to ensure that these changes do not affect the project timeline.

□ **Management of budget and timeliness:** The restriction of budget and timeliness should be periodically considered to control and adjust the contents and speed of the project implementation.

□ **Experience project team and manager:** The project team and manager should have long experience and good knowledge on designing and developing the Data Mart project.

2. Business knowledge.

□ **Completed business scopes and requirements for developing Data Mart:** The representatives from each department should well understand about business scopes and requirements of organisation and their departments since all information that collected from them are brought to design Data Mart.

□ **User participation:** The users participation is required in many steps of implementing the Data Mart; such as, interviewing, meeting, system testing, training, etc. so they have big roles to support the success of project. The users should share a lot of ideas to create their own system. Prompt actions and participation from users are required to ensure the information gathered and confirmed within the specified timeframe.

3. Infrastructure

□ **Insufficient network or software capability:** Normally network capability consists of traffic, rate, and time. The traffic is the amount of information being transferred. The rate is speed at which information is moving. The time is how long that it takes to get the information needed. The sufficiency of network or software capability is very important against the success of Data Mart. If Data Mart provide users with completed and correct information to users but it is running very slow. The efficiency of system is low. So the development team should aware this point.

□ **Unanticipated growth and supporting the upcoming system in future:** Unanticipated growth and supporting the upcoming system in future should be considered in the design of system. Successful Data Mart implementation create more demand than anticipated and it is designed to support the upcoming system in future. The system should be also allowed for adjustments in business needs.

7.1.2 Conclusion of the Evaluation of Effectiveness of Data Mart Implementation

According to the mean score of performance by groups of attributes, the quality of project staffs has good performance with average score of 3.83 from 5. The system

performance and the ability of system to develop the organisation have fairly good performance with average score of 3.42 and 3.31 respectively. However, training before using the system, completeness of working manual, and the understanding of the users toward the usefulness and use of system are low performance with average score of 2.68, 2.76, 2.87, and 2.96 respectively.

When the comments and suggestions from users were considered, the most users want have periodic training of using the Data Mart and the second most users want more facilities and computers to access the Data Mart. In addition, many users still not understand the use of Data Mart. They suggested that customer support team should create new a manual that contains a lot of details and examples more than the exiting one, should have better announcement to persuade users to use the Data Mart, and should create the ready format of all required reports from the users.

Obviously, although project staffs have good quality of IT staffs and system performance are also quite good, many users still use the traditional way to create the report and many users still don't understand the use of Data Mart and its benefits since the post implementation of the project was not good. As a result, the benefits which the company should be received from Data Mart are less than that it should be.

7.2 Recommendations

□ **The implementation after the completion of project:** According to the conclusion of evaluation, the project should rearrange full training course to provide the use of Data Mart step by step and also provide the basic knowledge about usefulness, the capability, and scope of the Data Mart for target users who still don't understand about the Data Mart. The announcement and some activities of publishing about usefulness of the Data Mart are required to persuade the users to change the methods of creating the report to use the Data Mart. This is look easy but changing the behavior of human being is very difficult and it is very important to the success of project.

A manual that contains a lot of details and examples is also required to be a guideline of creates the report so that users that still don't understand in some concepts of using the Data Mart after training can practice and create reports by themselves.

In addition of the training and publishing of the Data Mart, the ready format of reports often used should be created and prepared for all requirements of the users. This helps users reduce the time of creating the report and when users are more convenient to use the Data Mart, they are more likely to change their behavior from creating reports by traditional way to the Data Mart.

□ **The recommendations for other researchers:**

The researchers can apply the procedures and concepts of the evaluation of effectiveness of the Data Mart implementation in this thesis with other information systems by adjusting the questions and criterions that are suitable with the environments and situations of those information system.

The researchers can study the factors that make occurring the problems and obstacles of implementing the information system and developing the methods to protect and control the causes of problems. This helps increase the effectiveness of implementation of Information System.

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