

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Nowadays, Information Technology has improved rapidly, taking us to a new level yet great impact towards business and industry. This field holds an enormous and important role as a tool that helps to improve company effectiveness in providing information that are needed in its operational, so that the business itself can survive against the global era's competition and business expansions.

Information Technology's application and implementation holds a great role in information providing and processing. In business and industry, Information Technology is a must, because company's vital data and information need to be provided and processed between each of the department so that in the end, company can also survive against the global era's competition and business expansions.

With the rapid advancement of technology, where in the past, business were still managed manually by writing all down on the paper, nowadays, has been advancing to a computerized system. As computerized system gives a lot more ease for the company in a great number of aspects throughout company's departments, because data and information can be stored in a greater amount efficiently, more reliable security, and

information can be provided more accurately. The other benefit of the computerized system is the shortened access time. With such great benefits, then they will increase company's effectiveness and efficiency indirectly.

PN. Marga Jaya is one company that does not apply any information technology into its system, while as it is written above that information technology holds a great role in the business process. Therefore, it is a great opportunity for the author to use PN. Marga Jaya as a case study for this thesis by analyzing, designing, and implementing the solutions to the company.

This thesis will focus on analyze, design, and implement of a web based tracking system as the computerized system for the company. By doing the analysis, designs, and implementations throughout the company's needs for the computerized system, then it will produce a computerized system that can be used by the company for their data and information flows.

## **1.2 Perceived Problem**

The general problem faced by PN. Marga Jaya is the low response of the current system which is mainly due to several causes such as: (i) inefficient process, (ii) manual process causing human error, and (iii) ineffective internal control.

### **1.3 Proposed Approach**

General approach and methodology for this research is the Model-driven approach and the Waterfall methodology.

Model-driven approach provides great advantages over speed and simplicity, as it can provide a modeling before we can build our software.

The Waterfall methodology can be advantageous as phases of development in the waterfall model are discrete and there is no jumping back and forth or overlap between them. However, the drawback is there is one phase that should be completed before a subsequent phase can be started, meaning that there cannot be any parallel job while a work has been initiated.

### **1.4 Scope of the Thesis**

The scope of the thesis is creating a web-based application to support tracking of the delivery, and received goods. The application will be implemented on three tier client/server architecture, which is to provide information for management and customer with the business logic that is supported with adequate database management.

However, the scope of the system that will be developed in this thesis will be limited as:

- It is not intended as a paper replacement oriented system, as it cannot replace the paper usage totally, but to reduce it.
- It is not meant to replace the existing system, but to enhance it with web-based tracking system.
- The tracking system is functioned more into the operation activities, and not deals with economic aspects.

### **1.5 Aimed Benefits and Purpose**

The aims of implementing this system are:

- Improving the company's performance by providing the most up-to-date information provided by the system for internal company organization and customers.
- Improving data and information transfer in internal company. Strengthening company internal control by improving database integrity and security. Improving process efficiency as the unnecessary processes are removed and eliminated, resulting on full access on the available resources.

The objectives to be achieved from implementing the system are:

- Improving the process of finding (tracking) the status of the good delivery.
- Improving the preparation process, dissemination process, and information quality of the reports.