

# CHAPTER I INTRODUCTION

## I.1 Background

Rapidness in technology development in nowadays already affect almost all part of our life. One part that is already affected is industry area. Survey result from “Pusat data dna sarana informatika kementerian komunikasi dan informatika Indonesia”, in 2011 from 8 big cities in Indonesia, 92% company who is surveyed already used computer to support their business activity (Hasil Survei Penggunaan Teknologi Informasi dan Komunikasi (TIK) di Sektor Bisnis Indonesia, 2011). Besides, some others technology already implemented inside industry sector in Indonesia.

PT Surveyor Indonesia (PTSI) is a state-owned enterprises which is run in the survey, inspection and consultation area. PTSI vision is to be world recognized national independent assurance company in total solution services while the mission is giving added value for all stakeholder using survey service provider, inspection and consultation independently and professionally. PTSI strategy in running the company is creating the optimal solution through innovation and competition, integrity and awareness.

PTSI already surveyed for some company in Indonesia, one survey conducted in hundreds of industries shipyard and ship components national in Indonesia. The data result in these survey is needed for ministry of industry in Indonesia for supporting in *Capabilities Mapping on Shipyard Industry and Ship Component National* activity as the effort to increase the development in maritime area. To support the programme, PTSI need to develop a system information application which can maximize the surveyor activity.

PTSI already has the existing website application for *Capabilities Mapping on Shipyard Industry and Ship Component National* survey and already used in 2015. By experiencing the website, there are some lack functionalities which obstruct the survey activity.

PTSI do the survey for the shipyard industry and ship component national one time in a year. The duration they need to finish the survey is about 2 months. In those periode, PTSI have to finish to gather all of the data from all shipyard company and component industry national which is distributed in all over area in Indonesia based on Table I.1. Using those reasons, we know that the PTSI need to coordinate the surveyor well to be able finish the target on time to keep the consumer trust.

Table I.1 *Survey distribution area*

<b>No</b>	<b>Provinsi</b>	<b>Jumlah</b>	<b>No</b>	<b>Provinsi</b>	<b>Jumlah</b>
1	Sumatera Utara	10	11	Jawa Barat	5
2	Sumatera Barat	1	12	Jawa Tengah	8
3	Sumatera Selatan	5	13	Jawa Timur	24
4	Lampung	4	14	Sulawesi Selatan	7
5	Kalimantan Barat	5	15	Sulawesi Utara	5
6	Kalimantan Timur	5	16	Maluku	3
7	Kalimantan Selatan	5	17	Papua Barat	2
8	Banten	5	18	Papua	2
9	DKI Jakarta	31	19	Kepulauan Riau	50

The surveyor performance is monitored by the administrator. Administrator need to control and plot the surveyor to the surveyed company also industry. Administrator have to make sure that the surveyor will finish the survey activity ontime and get the accurate data. The website already gave the report to the administrator, but there is some report that they need to be shown in the website and it is not available in the current website. The report to monitor survey progress also the surveyor performance calculation are not be able to be seen by the administrator. SoI propose to update the administrator function. Some lack functionality in administrator will be added in this research.

The survey application is need the real time function for the surveyor. They need to get the real time notification about their job and for the data verification. The surveyor also need to use the mobility function for gathering the data. From those case, we propose mobile application for supporting the website application. This

mobile application will be provide some functionality which is support surveyor job in the field.

In the previous application there are two active users. The first is surveyor as the user who input the survey data and administrator as the controller. Actually there is an vericator for verificating data from the surveyor. So the submitted data is the accurate information. But this function is not available in the website. This function is so important to make sure that the data is validated. Beside the functionality, this study will trace the previous development way to find some lackness inside the system, such as relational database and also the improper code in the system.

Those reasons become my background to arrange my research. This study will develop the combination of website and mobile application for support the survey activity in PTSI. For mobile application is handled by my partner. My scope in this study is to update and complete the functionality from the previous website. I also handle for the transaction data between server and mobile application.

## **I.2 Problem Identification**

Based on problem background has been described, we can identification some problems they are:

1. How to modify the system to improve the website application functionality?
2. What features which is needed for the future application to gain the verification feature?
3. What technology can be used for integrating the website application and mobile application?

## **I.3 Problem Limitation**

Some limitaton will be implemented in this research, they are:

1. This research scope is on the modification function in each role.
2. This research will handle the communication data between mobile and website application using API.

3. This research will build the webserver inside the Yii framework.
4. Security in API is not available in this study.

#### **I.4 Research Purpose**

The purpose from this research are:

1. Design and modify the previous application by adding verifactor as the new role to do verification function.
2. Adding monitoring features for administrator and verifactor.
3. Modified the design of the database system to get better performance.
4. Building the communicatin between website application and mobile application.

#### **I.5 Research Benefit**

Benefit which can be achieve from this research can be classified into two part:

##### **A. Scientific Benefit**

- a. Understanding the concept of software maintenance.
- b. Knowing in each activity in software maintenance

##### **B. Technical Benefit**

1. Available for giving the easiness to the dministrator in monitoring verifactor and surveyor activity.
2. Getting the verificate data from the survey activity using the verifactor function.
3. Available for using the data communication process between mobile application and website application.

#### **I.6 Writing Systematic**

This research is outlined using writing systematic as below:

##### **Chapter I Introduction**

In this chapter will describe some points, they are problem background, problem identification, problem limitation, research purpose, and writing systematic.

## **Chapter II Literature Review**

In this chapter included some information related with the research proment. This literature will be used as the reference for the implementation phase in the next chapter. Besides, there will be a discussion from the related previous research.

## **Chapter III Research Method**

In this chapter will describe about the method used in this research for developing the application.

## **Chapter IV System Analyze and Design**

In this chapter will describe the analysis and design from the system. Analysis and design will be illustrated in some diagram.

## **Chapter V Implementation and Testing**

Implementation will describe how the design will be implemented inside the system. This activity includes the implementation of the integration.

## **Chapter VI Conclusion and Suggestion**

In this chapter will give the conclusion from this study and the suggestion for the future study.