

CHAPTER I INTRODUCTION

I.1 Background

In this era of globalization, the role of information technology has become an important thing that should exist in the company. In terms of its application, the strategic plan of information technology should be adapted to the needs of the company in question, so applying the concept of technology that can be effectively used. In increasing the efficiency of business processes in the company we need a system that is integrated in terms of information needs so that data is not faced with an error at the moment handled by another unit whose task Catch (Wicaksono, Mulyo and Riantono, 2015).

In this case, the company must also consider the quality of the existing system. With that the company can maximize performance efficiently and also more effectively in its solution(Pawirosumarto, Katidjan and Mulyanto, 2015).

System quality is a process of analyzing information systems that focus on the results of user and system interactions, System quality has attributes such as equipment availability, equipment reliability, ease of use, and response time is a determining factor why an information system is used or not used. According to (Nielsen, 2000) in journals (Pawirosumarto, Katidjan and Mulyanto, 2015), system quality has several usability principles, namely online environment, namely, navigation, response time, credibility, and content. From various literature that there are four dimensions of system quality, namely: navigation, easy of use, response time, and security. According to (McKinney et al, 2002) in journals (Pawirosumarto, Katidjan and Mulyanto, 2015), suggesting that there are three dimensions of system quality, the three dimensions are: access, usability, and navigation.

The quality of the system can be measured by looking at the functional part of usability. Usability is part of the principle of interaction between human computers that provides a collection of important clues about learning design. According to (Nielsen, 2000) in journals (Pawirosumarto, Katidjan and Mulyanto, 2015) argues that usability consists of four basic principles in online activities, namely: navigation, timelines, credibility, and content. argues that some important

elements in the use of the system are consistency (concistency), ease of use (easy of use), clarity in interaction (clarity of interaction), ease of reading (easy to read), information settings (information arrangement), speed and UI design of the system.

With the increasing technological needs of companies that have good quality systems in terms of performance, *Enterprise Resource Planning* (ERP) is a system concept that has a resource management system that exists in the company. With *Enterprise Resource Planning* (ERP), which apply appropriately in the company, will integrate existing information data on each of the business processes are better and more effective, and can also provide analysis of reports required by the Department and Module Also Integrated into other faster and timely, as a well-supplemented database and reporting, is also sharing the management (Nwankpa, 2015). ERP-System strongly supports operations with any existing activities such as sales, Marketing, production, logistics, accounting, and personnel (Olson *et al.*, 2015)

In case research that has implemented the ERP system concept is PT Telekomunikasi Indonesia (Persero). PT Telekomunikasi Indonesia (Persero) Tbk is a State-Owned Enterprise (BUMN) which is engaged *In Information and Communication Technology* (ICT) services and telecommunications networks in Indonesia.

Telkom serves millions of customers throughout Indonesia with a complete range of telecommunications services that include fixed wireline and fixed wireless telephone, cellular communications, network, and interconnection services and internet and data communication services. Telkom also provides various services in the fields of information, media, and edutainment, including cloud-based and server-based managed services, e-Payment services and IT enablers, e-Commerce, and other portal services.

Telkom is one of the BUMNs whose 52.09% shares are currently owned by the Government of Indonesia, and 47.91% are owned by the public, the Bank of New York, and domestic investors.

PT Telekomunikasi Indonesia (Persero) Tbk which has implemented an Enterprise Resource Planning (ERP) system. In this case research, Telkom applies System Application and Product (SAP) software with ECC6 version. Telkom implemented SAP into its business functions since 2002 as a management information system application. SAP's implementation in Telkom aims to improve the integration of business units in it including logistics, HR, and finance. Modules that have been implemented at PT Telkom Indonesia (Persero) Tbk includes Controlling, Financial, Plant Maintenance, Materials Management, Production Planning, Quality Management and Sales and Distribution modules. SAP implementation in Telkom aims to improve the integration of business units in it (Logistics, HR, and Finance).

In PT Telekomunikasi Indonesia, does not possible that there is still a shortage in the application of ERP concepts with SAP tools, therefore to analyze the quality of the system used models that analyze the quality of the system and the author chooses to use ISO 9126 as a research standard, because it has a high and variable accurate structured to research, including analyzing Functionality, Reliability, Usability, Efficiency, maintainability, Portability (Djouab and Bari, 2016).

In this research researchers chose Maintainability and portability as the variables that became the focus of the Research.

Researchers choose maintainability as the variable in this research, because maintainability is included in the internal variable that analyzes the system if there is a change in conditions in the system, then what will happen if the system is changed, will have a positive effect of the user and also the quality of the system (Stefani and Xenos, 2008). Maintainability as a variable used to be able to correct defects or causes, analyze improvements or replace a system with a new system, prevent unexpected working conditions on existing systems, maximize the benefits of a system, maximize efficiency, reliability, and analyze environmental influences that changes (Chawla, 2015).

Researchers choose portability as the variable in this research, because portability is included in the internal variable that analyzes the new system if it is placed in a

different environment and different conditions, according to the environment applied, then what will happen if the system is changed, will have a positive effect for the user and also the quality of the process of the system (Stefani and Xenos, 2008). Portability is a set of Variable or Characteristics that supports the ability of a system to be applied in a different environment, with sub-variable Adaptability, conformance, Stability, Instalability and Replaceability (Wicaksono, 2016).

Its aim to analyze the the development of existing IT needs to support financial activities that exist at Telkom, which initially Telkom only used a manual system with the submission of files to the bank in collaboration with Telkom, it was felt that it was very time consuming, labor intensive and also increased expenditure, wholesale systems were created based on ERP systems, which are named One Gate Payment (Telkom OGP) Corporate Payable Telkom in collaboration with Bank Mandiri, BNI and BRI, where shipments are made directly from the Customer's host (as a client) to the host Bank Mandiri / BRI / BNI (as a server) through a secure network connection (dedicated leased line) and uses a payment instruction format that complies with the relevant technical specifications of the Bank.

So that it can connect the ERP system to the bank's finances to the financial part of Telkom that has used SAP as a supporter of the ERP system.

Judging from the background that has been described, the writer can conduct research with the “*ANALYSIS OF MAINTAINABILITY AND PORTABILITY IN ERP ONE GATE PAYMENT SYSTEM USING ISO 9126 MODEL (CASE STUDY: PT TELEKOMUNIKASI INDONESIA)*”. Research aimed to analyze the performance of the ERP system implementation at PT Telekomunikasi Indonesia.

I.2 Problem Formulation

Based on the background of the existing problems, so the author can take several key issues:

1. How to analyze the quality of an ERP system developed by Telkom, which is called the *corporate payable Telkom one gate payment* at PT Telekomunikasi Indonesia?
2. How to determine the results of the analysis maintainability and portability in the system with ISO 9126 standard?
3. What is the recommendation for *corporate payable Telkom one gate payment* system going forward?

I.3 Objectives

The purpose of this research is:

1. Using the ISO-9126 standard in analyzing the quality system of ERP *corporate payable Telkom one gate payment*.
2. Determine the variables Maintainability and Portability that are appropriate for *corporate payable Telkom one gate payment* with ISO 9126 standard.
3. Make a recommendation on the corporate payable system *corporate payable Telkom one gate payment* based on the lowest value of Measurement testing.

I.4 Limitations of Research

Obtained of the problem, while restrictions of scope are as follows:

1. The characteristics that are in the analysis in this research are the *maintainability, portability, satisfaction* and *quality system* with each of the sub-characteristics that are available by default ISO-9126.
2. Safety for Quality in Use was not discussed in this study because of limited access from PT Telekomunikasi Indonesia.
3. System recommendations are obtained based on the data processing results of questionnaires with measurement testing.
4. Data that is processed at the limit of data obtained based on the results of questionnaires and interviews.
5. The Software used in data processing is SPSS 25 And SmartPLS 3.

6. Research location is at PT Telekomunikasi Indonesia
7. Output results are only limited to recommendations

I.5 Research Benefit

1. Benefits for Company:
 - a. There is a system performance measurement that can be proposed for the company.
 - b. Can be a recommendation and evaluation of the company to help develop technology that is expected to be better in the future.
2. Benefits for Research:
 - a. As a reference in the same field for further research.

I.6 Systematics Writing

1. CHAPTER I Introduction

This chapter discusses an overview of the problems in the case research. And contains about the background, problem formulation, problem boundaries, goals and benefits, and systematic writing.

2. CHAPTER II Literature Review

This chapter discusses theories that support research needs that are relevant and appropriate to the subject matter of the case research.

3. CHAPTER III Research Methods

This chapter explains the conceptual and systematic models of research. The conceptual model provides an overview of the system from the input to the output process. Systematic research explains the relationship between the phase models used in this research.

4. CHAPTER IV Research Results and Analysis

This chapter the author explains the discussion of the problems that have been formulated and the results of research that has been done.

5. CHAPTER V Conclusions and Suggestions

This chapter will discuss the conclusions of this research and the advice given to the company and further research.