ANALYSIS AND DESIGN OF EMPLOYEE PERFORMANCE MEASUREMENT SYSTEM USING BALANCED SCORECARD METHOD (CASE STUDY PT. DOCOTEL TEKNOLOGI)

Rosalin Samihardjo[1], Wiwik Tri Hapsari[2]

[1,2]Program Studi Sistem Informasi, UniversitasWidyatama, Jl. Cikutra No.204A Bandung

E-mail: [1]rosalin.samihardjo@widyatama.ac.id, [2]wiwik@docotel.com,

ABSTRACT

This study entitled Analysis and Design of employee performance measurement systems at PT Docotel Technology using the Balanced Scorecard method. The concept of performance can basically be seen from two aspects, namely employee performance (individual) and organizational performance. Employee performance is the result of individual work in an organization. While organizational performance is the totality of the work achieved by an organization. The design of a performance measurement system is made so that it can assist companies in measuring the performance of each employee using the system, so that the performance measurement of each employee does not need to be done through charging the form that continues to be done regularly. Analysis of information system performance measurement of employee performance is done by analyzing the current system represented by using system modeling tools equipped with 4 perspective analysis available in the BSC method, namely financial perspective, customer perspective, internal business process perspective, and learning and growth perspective. The results of the balanced scorecard approach of PT. Docotel Teknologi's performance are considered to be very good in carrying out all the activities of its business processes. The ability that must be considered by companies to support future performance is to maintain customer trust. In addition, training / training is also more important which plays an important role in employee job satisfaction. The design of an employee performance measurement system conducted at PT Docotel Technology is done by designing data, procedures, architecture and interfaces. The results of the system design analysis are in the form of information system requirements for measuring

employee performance that can be used as system design materials, namely Form a Performance Appraisal and Form B Performance Appraisal.

INTRODUCTION

Performance measurement is one of the important factors in the company, which is used as a tool to assess the success of the company and as a basis for determining the reward system within the company, for example to determine the level of employee salaries and appropriate rewards. The performance measurement system that has been implemented by many companies is a performance measurement system based on a traditional approach, namely viewing and assessing performance from a financial aspect only. But basically, today's increasingly competitive business environment also demands a performance measurement from the non-financial aspects of the company.

Performance is the result of an evaluation of the work that has been done compared to the performance that has been mutually determined. So it can be said that company performance is a display of the condition of the results of the evaluation of activities or work that has been done by looking at the comparison of the target achievement against the existing criteria prepared by the previous company [1].

PT DocotelTekologi is a company engaged in Information Technology in Indonesia which was founded on October 1, 2011. PT. Docotel Teknologi is based in the Jakarta area and has branches in various areas, namely Bandung, Jogjakarta and Makassar. Increasingly competitive business competition has spurred PT. Docotel Technology in improving company quality. One way to improve the quality of the company is to improve the quality of human resources. To improve the quality of human resources, a method or technique is needed. One of the techniques used by company management in improving the quality of human resources is by conducting performance appraisals.

Assessment of employees is expected to know precisely the success in completing work. This employee performance appraisal is also useful for the company in providing feedback to employees and can be used as the basis for the company to promote employees.

The problems that occur include the absence of a computerized system for measuring employee performance where the employee performance measurement process is currently still done manually by HRD, namely employees fill out forms regularly so that employee performance appraisals that are carried out require a lot of time and inaccurate assessments are obtained every time. Employees because the performance measurement parameters are made based on the results of the performance appraisal form and the review form is subjective, causing the output of filling out the form to generate many perceptions between superiors and other superiors that make it difficult to issue final decisions. One of the solutions offered is how to analyze and design a performance measurement information system for employees in the software engineering division at PT DocotelTeknologi? The purpose of

this study is to analyze and design information on employee performance measurement in the software engineering division.

LITERATURE REVIEW

Information system

Information systems are organized ways to collect, enter, and process and store data, and organized ways to store, manage, control and report information in such a way that an organization can achieve its stated goals [3]. An information system is a system within an organization that brings together the needs of daily transaction processing that supports the managerial function of the organization's operations with the strategic activities of an organization to be able to provide reports required by certain external parties.

Information system as a system that can produce the required information optimally. The data processing process can be carried out effectively and results in improved information quality in the sense that it can help an organization optimize all activities or processes that are ongoing [4].

System analysis can be interpreted as a process to understand the existing system, by analyzing positions and job descriptions (business users), business processes, provisions or rules (business rules), problems and finding solutions (business problems and business solutions), and company plans (business plan) [5].

Balanced scorecard

Balanced scorecard is a strategic planning and management system that is widely used both in profit-oriented organizations and in non-profit organizations around the world in business activities to align organizational vision and strategy, improve internal and external communication, and monitor organizational performance in accordance with corporate strategic objectives [6].

RESEARCH METHOD

In this study, the method used by researchers is descriptive quantitative method because this research describes, explains, or summarizes various conditions, situations, phenomena, or various research variables according to events as they are which can be photographed, interviewed, observed, and which can be expressed through materials. - documentary material [2]. The following are the stages in conducting research as follows:

Problem identification

At this stage, what is done is to determine the cause of the problems that exist in the company PT. DocotelTeknologi regarding employee performance appraisal.

Setting goals

At this stage, what is done is designing a web-based system that can be used to input, store, process, and produce reports on the performance evaluation of each employee at PT Docotel Teknologi.

Determining problem limits

At this stage, what is done is to determine the problem boundaries that are applied to the design of the performance measurement information system using the balanced scorecard method.

Collection of data sources

1. At this stage, research is carried out in collecting data sources, namely using:

Observation

Conduct direct observations in the HRD (Human Resource Department) division for the process of measuring employee performance.

Interview

Namely, the technique of collecting data by direct questioning with interested parties, in this case the HRD (Human Resource Department) staff, interviews were conducted 5 times with the aim of obtaining information related to existing problems and obtaining the data needed to design the system.

Documentation

Collecting data in the form of documentation related to information and parameters used as material for performance appraisals and employee evaluations from each section such as employee performance appraisal forms, company SOPs, company profiles and organizational structures.

Questionnaire

Data collection techniques through structured questions inserted by the author by considering the problem being researched and will be answered by parties related to the problem to assess employee satisfaction at PT. Docotel Technology.

STAGES OF SYSTEM ANALYSIS

Before the analysis is carried out, the writer needs several stages for the implementation of the analysis so that the results of the evaluation and design are more accurate. The stages of the analysis are as follows:

a)   The author selects and determines the research method using the Balanced Scorecard method in accordance with the application of the information system under study.

b)   Designing and making questionnaires that aim to support more accurate data collection, processing and analysis.

c)   Determining CSF (Critical Success Factor), KPI (Key Performance Indicators) and KGI (Key Goal Indicator) to determine the objectives of control over the performance of information systems at PT. Docotel Technology.

d)   Making a mapping of the position of the company information system performance PT. Docotel Technology using the balanced scorecard calculation method.

Analysis of measurement methods with the balanced scorecard

The aspect of analysis used to implement the Balanced Scorecard method in measuring the performance of employees of PT. DocotelTeknologi quantitatively consists of 4 (four) perspectives, namely:

a) The perspective of internal business processes, which is one of the Balanced Scorecard performance measures which includes: SOP for employee performance appraisal made by the company.

b) Financial perspective, which is a performance measurement viewed from the company's point of view, giving such a reward if a division achieves the targets set by the company in a year.

c) Customer perspective is an analysis that looks from the perspective of employees on employee satisfaction in employee performance appraisals carried out by the company. How to find out employee satisfaction using analysis instruments in the form of questionnaires and interviews.

d) Learning and growth perspective, namely identifying the structure that must be built in creating growth and improving employee performance, including the company holding training

The design of the performance appraisal information system

In this stage, the researcher conducts the design and modeling of system architecture that focuses on designing data structures, software architecture, and interface displays.

ANALYSIS AND DESIGN

Balanced scorecard performance measurement analysis

The method of measurement in the Balanced Scorecard is to measure the balance between other perspectives and the benchmarks for each perspective. According to Mulyadi (2001), the balance criteria are used to measure the extent to which our strategic goals are balanced in all perspectives. The score in the balance criteria table is the standard score, if the performance of all aspects of the company is "good". Scores are given based on a rating scale as in the table below:

Table1.RatingScale

Score	Value
-1	Less
0	Enough
1	Good

SWOT ANALYSIS
SWOT analysis is carried out to identify the strategic factors of the company which consist of strengths, weaknesses, opportunities and threats. Following are the results of a SWOT analysis based on observations and interviews with PT. Docotel Technology.

Strengths

a.   Experienced Leadership Top Management
b.   Employees who are highly dedicated to their duties
c.   The company is familial in nature creating high employee loyalty to the company.

Weaknesses

a.   Name of company PT. Docotel technology has not been widely known as an IT consultant.

b.   Collaborating with several partners in completing the project will lead to an increase in the cost structure, so that the products produced by the company will be more expensive.

Opportunities

a.   Fast pace of information technology development has made many companies seek IT consultant services.

b.   The development of information technology brings many changes from each company in line with its need to provide convenience in obtaining, creating, processing, and distributing data

Threats

a.   Many other IT consultants have big names

b.   Systems / applications are not completed on time and software technology changes force the solution to be changed quite frequently.

Strategic objectives

In the strategic objectives of the balanced scorecard, the authors set out the determination based on the vision, mission strategy in SWOT analysis, and also the key to success on the balanced scorecard which then refers to the determination of the strategic objectives framework which will be the goals of the strategic referring to Balanced- Scorecard perspectives.

Causality

In the picture below, it explains the cause-effect relationship, including the various goals that PT. Docotel Technology. The measurement system used in making causal relationships must refer to multiple objectives from the four balanced scorecard perspectives. The figure below also shows that changing strategic objectives from a certain perspective will also have an impact on changes in other objectives.
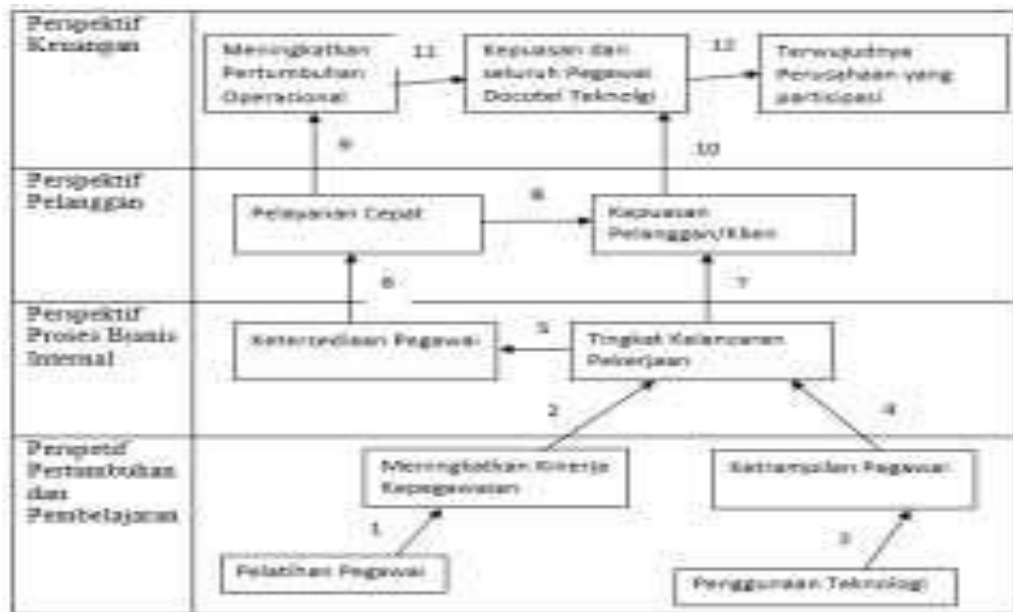
Figure 1 Changes strategic objectives in perspective

System design

Based on the modeling of business processes and identification of software requirements that have been carried out, this chapter will discuss the stages of designing and modeling the architecture of information systems for measuring employee performance at PT. Docotel. The goal is to better understand the big picture of what will be done in designing an employee performance measurement information system made.

Figure 2 Use Case Diagram of Employee Performance Measurement System

Figure 3 Class Diagram of Employee Performance Measurement System

Design interface

In the picture below is the login page interface design. Login page is the earliest page used by a user to enter the system. The user enters the username and password as the password, then presses the login button to enter the main menu and use the application.

Figure 4 Home Page

When the user has successfully logged in, it will display the main page. The image below is the system main page interface design.

Figure 5 Login Page

In the picture below is the interface design of the employee PA results management page where this page can be accessed by the HRD department. The manage employee PA results page functions to manage the employee's PA results that have been measured by supervisors and managers.

Figure 6 Management Result Page

In the picture below is the design result of the review interface for Form PA A which function to approve the results of the review form PA A, this approve process is carried out by the manager.

Figure 7 Page Review

CONCLUSION
Based on the descriptions that have been described in the previous chapters, the authors can draw the following conclusions:

1   The analysis of employee performance measurement information systems is carried out by analyzing the running system represented using system modeling tools equipped with analysis of 4 existing perspectives in the BSC method, namely financial perspective, customer perspective from internal business process perspective, and learning and growth perspective. The results of the balanced scorecard approach, the performance of PT.Docotel Teknologi is considered to be very good in carrying out all of its business process activities. The ability that must be considered by companies to support future performance is to maintain customer trust. In addition, there will be more training / training that plays an important role in employee job satisfaction.

2   The design of the employee performance measurement system carried out at PT DocotelTeknologi is done by designing data, procedures, architecture and interfaces. The results of the system design analysis are in the form of an employee performance measurement information system requirement document that can be used as a system design material, namely, Form A Performance Appraisal and Form B Performance Appraisal.

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