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Employee Performance Target Management System to Support Work Performance Assessment

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Abstract—Assessment of the implementation of employee work is a process of activities carried out to evaluate the level of execution of work or an employee's performance appraisal. The purpose of this paper discusses the development of an employee performance target data management system abbreviated as SKP. Software analysis and design methods use Unified Modeling Language modeling for object visualization, with a Model View Controller approach based on an open source Framework. SKP assessment analysis refers to the Indonesian Government Regulation that measures the level of performance achievement based on aspects of quantity, quality, time and cost aspects that compare the realization of the work with the planned target. The results of the study have developed software products for SKP data management systems, built in accordance with the applicable assessment process model. (Process of planned target data and work realization activities). The contribution of the application for optimization of the SKP data management system as an effort to improve management performance in overcoming the issue of data availability, monitoring needs, evaluation of employee performance and material in making decisions for policymakers.

Keywords—performance-appraisal, employee work, civil servant, performance-target, work-performance

I. INTRODUCTION

According to regulation [1] concerning Personnel Principles in Indonesia, explains that Public Servants (Private and State) are every citizen who has fulfilled the specified requirements, appointed by an authorized official and entrusted with other state duties, and paid according to applicable laws and regulations. As a state apparatus, of course civil servants have government and development duties. On this basis, every civil servant is required to be able to provide the best service to the community. To carry out the duties of the government and development properly, it demands civil servants who are professional, honest, fair and responsible.

Assessment of the implementation of Civil Servants' work is an activity carried out to evaluate the level of execution of an employee's work. Assessment of the implementation of the work of civil servants is described in the form of "the list of appraisals for implementation of civil servants". or better known as DP3 PNS, then regulated in the Indonesian Government Regulation [2]. In fact, DP3 PNS.

Which incidentally is a list of assessments in which evaluation uses closed principles is often questionable because objectivity is confidential and assessors have absolute authority in evaluating one's performance. With this confidential assessment, it is possible that employees who are judged, to be less satisfied with the results of the assessment due to lack of indicators are used clearly. For current conditions, many things that make DP3 unsuitable for use in civil servant performance appraisals. One of them is DP3 tends to assess the performance of civil servants only from the viewer's point of view, not based on performance achievements.

Broadly speaking according to, DP3 cannot be used to assess and measure the productivity and contribution of civil servants to the organization. This is due to the assessment of employee work performance using the DP3 method is not based on specific targets. Because measurement and assessment of work performance are not based on a particular target, the assessment process tends to be subjective. In the case of a direct supervisor as an appraiser, he merely assesses and does not necessarily provide clarification from the results of the assessment and follow-up assessment of the assessed employee.

From various empirical studies on DP3 performance, it was generally concluded that (Empirical Problems):

- Empirical facts show that the process of evaluating the implementation of civil servant work tends to be trapped into the process of formality.
- DP3 cannot be substantively used as an assessment and measurement of the productivity and contribution of civil servants to the organization. How much success and or failure of civil servants in carrying out their work duties.
- Evaluation DP3 is more oriented to the assessment of personality and behavior focused on the formation of individual characters using behavioral criteria, has not focused on performance, improved results, productivity (end result) and the development of potential utilization.
- Regulation of the appraisal officer only as the legality of the assessment results has not functioned as a motivator and evaluator to evaluate how effective and

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 consistency of the appraisal officials in carrying out the assessment process.

Observing the many weaknesses that exist in the Employee appraisal system in the form of DP3, the demand for improvement in the performance of public officials is greater if it is associated with government efforts to increase the competitiveness of countries in global competition [3], the Indonesian government tries to make a new way of assessing the work performance of civil servants by using the Job Performance Assessment method approach.

Employee performance appraisal combines the assessment of the Civil Servants Work Target and Work Behaviour Assessment. The performance appraisal consists of two elements, namely SKP (employee work target) and Work Behaviour with an assessment weight of each element of SKP of 60% and Work Behaviour of 40%. An employee performance appraisal results are used as a basis for consideration.

This paper discusses the development of data management systems and information on SKP, which refers to the Government Regulation of the Republic of Indonesia concerning Civil Servants Work Performance Assessment (Amendment to Government Regulation of the Republic of Indonesia Number 10 of 1979 concerning Assessment of Implementation of Civil Servants' Work (DP3). SKP data management process with the use of Information and Communication Technology as part of Indonesian e-government, which until now is still being pursued in various aspects of governance implementation.

II. METHODOLOGY

A. Software Development Process Model

The SKP Software Development Process uses a Throw-away Prototyping [4], [5] model approach in preparing the system requirements specification analysis (SRS). In "Fig. 1" is the Throw away Prototyping model approach used.

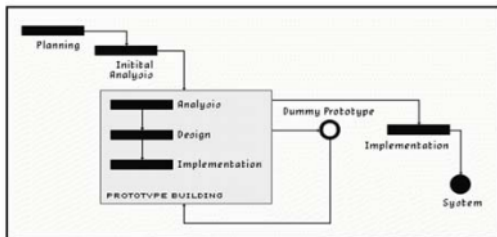


Fig. 1. Throw Away Prototyping Model

Throw away Prototyping model approach is used before building a final system, a prototyping model by making a temporary design that focuses on serving the customer. Because it has a relatively analysis phase that is used as information and developing ideas for the concept of a system, so it is cheaper and faster to provide a feedback. Software developers must pay attention to the stages in the prototyping method so that, the final software can be accepted by the user. The stages in prototyping as in "Fig. 1" are as follows:

1) *Planning*, these stages include understanding the concept of the SKP system, the stages of analysis of the

system interface model, timeline and work targets, as well as the processes related to the end product of the system..

2) *Initial analysis*, customers and developers jointly define the format of all SKP software, identify all needs, and the outline of the system to be created, the variables that become elements of SKP, analysis of quantity and quality data, methods of calculating achievement ratings, and others.

3) *Sub-Prototyping Buiding*, Build prototyping by making a temporary design that focuses on presenting to customers such as making input and output formats, validating input and output values, assessment results, and others related to the development stage: analysis-design-implementation of prototypes, SKP prototype products dummy.

4) *Implementations*, this implementation phase is carried out by the customer whether the prototyping that has been built is in accordance with the customer's wishes (feedback). If it is appropriate, the step will be followed by the implementation stages of the SKP system development. If not, then prototyping is revised again.

5) *System*. The end result of a real work system which is a software product Target Employee Performance that refers to the Government Regulation of the Republic of Indonesia concerning Civil Servants Work Performance Assessment.

B. Data Analysis Software Method

Based on the results of the analysis of data collection, it can be explained that filling out the SKP form manually consists of three stages, i.e.

- Phase 1, the stage of proposing an action plan within one year to its supervisor (Appraiser).
- Phase 2, is the employee's superior checking the proposed action plan and making an agreement if the proposed action plan is appropriate. The employer can propose improvements to the proposed action plan and even reject the proposed action plan of the assessed employee.
- Phase 3, is that if the supervisor has verified or approved the proposed plan, then the employee who is assessed can fill in the proposed action plan in one month. Furthermore, to measure employee performance realization, employees first fill in the field of performance realization. SKP assessment results are stated in the report. The appraisal report will be reported again to the employer for verification. Charging procedure and SKP assessment can be seen in Fig. 2.

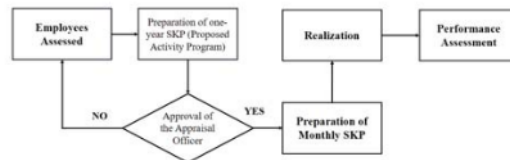


Fig. 2. SKP Preparation and Assessment Flow

SKP assessment is carried out by calculating the level achievement of the SKP that has been set for each

The 2nd East Indonesia Conference on Computer and Information Technology (EIConCIT) 2018 implementation of the activity program, as measured by four (4) aspects, i.e. the aspect of quantity, quality, time and cost. To calculate the performance appraisal is done by calculating the following equation:

1) *Quantity aspect*, Assessment of the achievement of the quantity aspect of SKP, calculated using the equation:

$$(Output\ Realization / Output\ Target) \times 100 \quad (1)$$

2) *Assessment of achievement of SKP*, calculated using equation:

$$(Realization\ Quality / Target\ Quality) \times 100 \quad (2)$$

3) *Aspects of Time*, in the event that activities are not carried out then time realization of 0 (zero), calculation of the achievement value of the SKP of the time aspect using the equation:

$$\frac{(1,76 \times TT - TR)}{TT} \times 0 \times 100 \quad (3)$$

Where, *TT* is Time Target, and *TR* is Time Realization. For the aspect of time efficiency level 24 of the target specified then to calculate the achievement value of SKP by using the equation:

$$\frac{(1,76 \times TT - TR)}{TT} \times 100 \quad (4)$$

For the time aspect of the efficiency level of the specified target, to calculate the achievement value of the SKP by using the equation:

$$76 - \left(\frac{1,76 \times TT - TR}{TT} \times 100 \right) - 100 \quad (5)$$

To calculate of the time efficiency level percentage of the time target used in equations (4) and (5), the calculation uses the equation:

$$100 - \left(100 \frac{Time\ Realization}{Time\ Target} \times 100 \right) \quad (6)$$

4) *Cost aspect*, Calculation of SKP achievement value and efficiency percentage on cost aspect using the same equation in calculating SKP achievement value and efficiency percentage in time aspect.

C. Software Analysis and Design

The design and development of SKP application determined as hard procedure regarding technical phases such as software programming, interface designing, and familiarity. The analysis and design software used in the development of this system using object-oriented modeling Unified Modeling Language (UML) for object visualization [6-10]. In "Fig. 3" is Use case diagram of SKP.

"Fig. 3", is a use case diagram on a web-based employee performance target of system (SKP). There are five actors, namely Admin, are the main actors to manage employee data, assessment criteria, user management. Appraisers are direct appraisals of civil servants are assessed with the lowest provision of structural officials of echelon five or certain other officials. Assessed Officials are civil servants who are assessed by echelon structural five or other certain officials.

SKPD staffing subdivision is a sub division of the work unit realization of the Regional Work Unit and Head of Department. The Workflow System description is presented in Fig. 4.

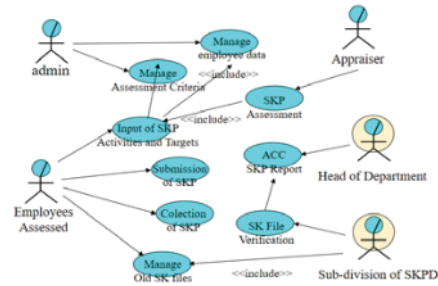


Fig. 3. Usecase diagram of SKP



Fig. 4. Workflow management system employee performance assessment with User

III. RESULT AND DISCUSSION

The employee Performance Target Management system was built using a Model-View-Controller (MVC) base on the LARAVEL Framework [11]. Referring to [12] MVC usually consists of three classes as stated in its name. The controller is an intermediate class between the model and view class. This controls the flow of information by accepting user input from the display and instructing both the model and the view to take action based on that information.

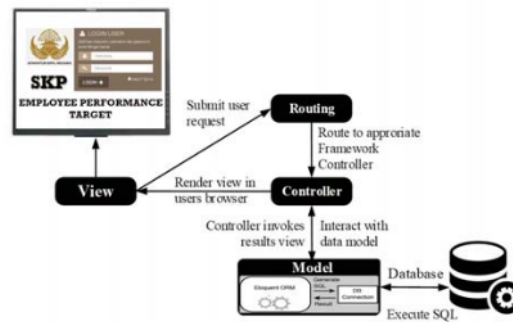


Fig. 5. The architecture of the Employee Performance Target System MVC framework.

The model is responsible for data management routines in the application. These are usually created, read, update, and delete (CRUD) database operations. The view is responsible for presenting data from the model, and usually contains mostly markups displayed as web pages [9], [10]. The system framework architecture for Employee Performance Target is presented in Fig. 5.

A. Implementation of Employee Performance Target System

1) User Type

Employee Performance Target management system is an online application that is used to provide convenience for employees, appraisers, and supervisors of appraisers in making, assessing and verifying employee work targets every month. This application is web-based and uses technology that continues to grow in the hope that it can function properly in accelerating the SKP reporting process. Increasing data insurance and information relevance, increasing the transparency of the implementation of assessments, increasing the effectiveness of SKP implementation in terms of cost and time, employee data providers up to date, and high integration capabilities with other applications. Table I is a list of users of the Employee Performance Target system.

TABLE I. USER TYPE AND JOB DESCRIPTIONS

User Type	Descriptions
Admin	is someone who is fully responsible for the system and has the task of managing such systems, adding user accounts, resetting passwords, and resetting SKP
Operator	Is a faculty employee whose task is to manage SKP data in faculty or department
Appraisal Supervisor	The appraisal's supervisor is the direct supervisor of the appraiser
Appraiser	Appraiser is someone who has the authority and responsibility in the implementation of employee / lecturer assessment
Lecturer/ Employee	Lecturers or Employees are users who compile and realize SKP

2) User Interface Charging Performance Targets

In general, the data and information management system of employee performance targets developed consists of four elements that are packaged in each module. The modules are elements of Education, Research elements, elements of Service, and Supporting elements. The page user interface in the SKP data management system is presented in Fig. 6.



Fig. 6. Screenshot user interface in the SKP data management system

Input activities in the module and description of activities that will be made into employee performance target plans,

such activities include filling in activities that will be used as performance targets, inputting the amount in one activity that will be carried out in 1 period, inputting Quality, and inputting duration with units which is determined.



Fig. 7. Screenshot of user interface input plan for employee performance targets

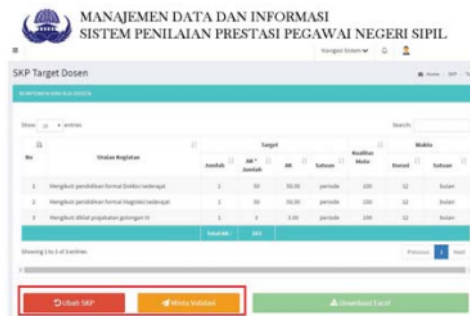


Fig. 8. Screenshot of submission of the target performance plan to the appraisal officer and the supervisor of the appraiser

3) User Interface Fill in Performance Realization

The realization menu is input at the end of the period which is determined as the result of the target on SKP, or in other words the realization is filled in as the achievement of the results of the SKP made at the beginning of the period. User interface charging realization of employee performance is presented in Fig. 9.

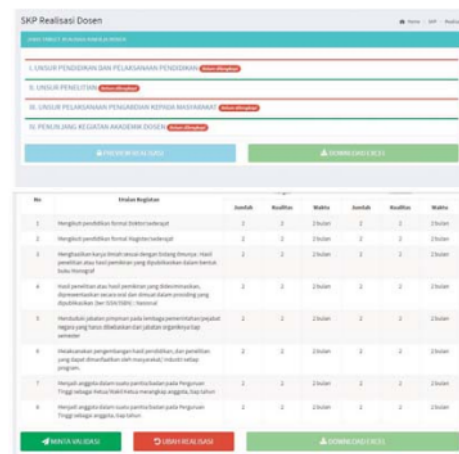


Fig. 9. Screenshot interface charging realization of employee performance

4) *Assessment Implementation*

The appraiser is obliged to submit the results of the work performance appraisal to the appraisal official at the latest 14 (fourteen) days from the date of receipt of the work performance assessment. The results of the work performance appraisal come into effect after the approval of the appraisal official has been approved. Appraisal officials based on the results of the work performance assessment can provide recommendations to officials who are functionally responsible in the field of employment as a material for guidance to civil servants who are assessed.

Appraisal system for the implementation of employee work is a form of measurement of the organization, especially the results achieved regarding the quality and quantity of employees. The system that has been built is a data and information management system that targets employee performance, the assessment process is all done within the system, which is carried out by the appraisal official (superior) directly from the employee who is assessed. While the methods that are used are the prototype modeling software development method, using the UML modeling diagram Use case diagram. For the SKP measurement data analysis consists of four aspects, namely the quantity aspect, quality aspect, time aspect, and cost aspect. then the assessment of SKP by comparing the realization of the work with the planned target (employment contract). As for the Guidelines in determining the realization of Quality presented in Table II.

TABLE II. USER TYPE AND JOB DESCRIPTIONS

Criteria	Descriptions
91 – 100	Perfect work, no errors, no revisions, and services above the standards specified etc.
76 - 90	The work has 1 or 2 minor mistakes, there are no major mistakes, revisions, and services according to predetermined standards etc.
61 - 75	The work has 3 or 4 minor errors, and there are no major mistakes, revisions, and the service simply meets the specified standards
51 -60	The work has 5 minor errors and there are major mistakes, revisions, and the service does not adequately meet the standards specified etc.
< 50	The work has more than 5 minor errors and there are major errors, unsatisfactory, revised, services under the standards specified etc.

The appraiser can provide recommendations based on the results of work performance assessments such as; For capacity building by including technical training, e.g. computer training, promotion, retirement, public relations, secretary, etc. To increase knowledge in the field of work, it is necessary to rotate employees. For development needs, it is necessary to increase education and increase career (promotion).

IV. CONCLUSION

Performance management an approach in the management and development of human resources in an effort to improve career paths in the long term and for organizational development. One form of performance management is performance appraisal, which is a system that is used by management to evaluate individual performance within a certain period, providing feedback and fostering individuals so that each individual is expected to improve its performance. Improving individual performance will certainly improve organizational performance.

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