MANAGEMENT INFORMATION SYSTEMS HUMAN RESOURCES IN HOLIDAY INN HOTEL BANDUNG PASTEUR

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ABSTRACT

Holiday Inn Bandung Pasteur is a modern four-star hotel located on Jl. Dr. Djunjunan No. 96 Bandung. The more complete and development of the company, management is not supported by adequate resources. According to the results of interview with the Mrs. Dewi as the Training Manager HR states that have difficulties in determining employee performance evaluation, employee leave control and decision-making in the recruitment of employees who are still not able to produce objective results is due to the increasing number of employees at the Holiday Inn and unfulfilled performance assessment based on the criteria of Hotel Holiday Inn Pasteur Bandung.

Based on the problems describe above, it is needed a system to handle the management of Human Resources at the Hotel Holiday Inn Bandung Pasteur which include performance appraisal, management employees leaves and decision making recruitment, then built a system called "System Information Human Resource Management at Hotel Holiday Inn Bandung Pasteur. " AnalyticalHierarchy Process is a method to take decisions effectively over a complex issue with simplify and speed up the decision making process by solving the parts in an arrangement of hierarchy.

Keywords: *Management Information Systems, Human Resources, Employee Performance, Employee Leave of Absence,Analytical Hierarchy Process*

1. INTRODUCTION

Training Manager (Human Resource Development)is a field that organize and manage human resources at the Holiday Inn Hotel Pasteur. According to the results of the interview with Mrs Dewi as the Training Manager HRD Hotel Holiday Inn Pasteur States that still feel difficulty in determining employee performance appraisal, is caused due to the growing number of employees at the Holiday Inn Hotel, which currently has reached 125 employees and 85 employees contract until December 2016. In addition problems that arise according to Mrs. Dewi , namely in terms of the assessment of the performance of the employees felt unable to produce objective results because the performance assessment are still based on the assessment of employee attitudes and daily valuation based on an assessment based HRM is not based which consider criteria appropriate with companies such as technical skills, appearance, communication in teams and the ability Menejerial

Another issue raised by the Mrs. Dewi as the Training Manager of the Hotel Holiday Inn Pasteur is related employee leave of absence application, which is still considered difficult by many types of leave and leave due to rule leave application must be in accordance with the operational needs of the company. Currently recording employee leave prone to error because there is still a separate document so that when an employee will ask leave of absence, the HRD must check the documents one by one, then HR may decide decision to furlough employees. As for recruitment, this time Mrs. Dewi as the Training Manager of the Hotel Holiday Inn Pasteur still experiencing problems in selecting each prospective employees who apply to the company. Recruitment is done when a vacancy occurs or when the need for additional manpower. Recruitment of employees is measured and matched to the company's criteria and assessed by three assessors, namely HRM, Dept. Head and GM. Mrs Dewi consequently take longer to determine the decision of prospective new employees.

The purpose of this study, to build the

information system of human resources management at the Hotel Holiday Inn Pasteur in order to facilitate the HRD in the field of personnel. While the purpose of the research is as follows:

1. *Assist HRM in assessing employee performance make it easier to take decisions and make an assessment based on the criteria in accordance with the Hotel Holiday Inn Pasteur.*
2. *Helps Trainning Manager to simplify the control off and determine the decision on the approval of the leave.*
3. *Helps Trainning Manager make decisions on recruitment in order to get the results directly so that information on the results can be directly conveyed to prospective employees.*

2. RESEARCH CONTENTS

2.1 Management Information System

Management Information System is a collection of management system or systems that provide information aimed at supporting operations management and decision-making in an organization. SIM tend to be associated with the processing of information-based computer (computer base in formation processing) to consider what information, to whom, and when it should be presented in

Information Systems Management is an integrated system to present information that supports the functions of the operation, management, and decision-making within the organization. The system uses hardware, software, procedures manuak, management and decision models, as well as databases. MIS is a complete management of the process of providing information to support the operations and decision-making within an organization. in addition, the MIS is also a series of information subsystems comprehensive, coordinated and rational. Integrated MIS capable of transforming data into information through a series of ways. MIS aims to improve productivity in accordance with the style and nature of the manager on the basis of established quality

2.2. POAC(Planning Organizing Actuating Controlling)

Management is the achievement of the goals set in advance using the activities of others comprising the actions of planning, organizing, mobilization (actuating), and control. The functions of Management POAC is as follows:



Figure 2. 1 POAC Management

a. *Planning Is an activity associated with choosing alternative - the alternative, wisdom - wisdom, procedures - procedures, and program - the program as a form of business to achieve the goals to be achieved. 4 (four) levels of basic skills in planning activities:*
   1. *Insight: the ability to gather facts by way of an investigation on matters related to the planned issue.*
   2. *Forsight: the ability to project or depict the way or ways that will be pursued, estimates the circumstances that may arise as a result of activities undertaken.*
   3. *Explorative study: the ability to see all sesuau as a whole, in order to obtain an integral picture of existing conditions.*
   4. *Doorsight: the ability to find any way to disguise the view, making it possible to be able to take decisions.*

b. *Organizing (organizing) Represents an action or activity combine the existing potentials of all parts within a group of persons or organizations to work together in order to achieve predetermined objectives together, either for personal or group goals and organization. In organizing the technical term KISS (coordination, integration, simplification and synchronization) in order to create harmony in the organization's activities.*

c. *Implementation or application (actuating) Is the implementation of planning and organizing, where all the components are in one system and one of the organization work together in accordance with their respective fields in order to realize the goal.*

Supervision (controlling) Represents controlling all activities of the process of planning, organizing and execution, whether all these activities provide an effective and efficient results and are valuable and effective.

2.3. Analytical Hierarchy Process

AHP method was developed by Thomas L. Saaty, a mathematician. This method is a framework for making decisions dengann effective on complex matters dengann simplify and accelerate the decision-making process to solve the problem into its parts, arranging parts or variables in a hierarchical arrangement, giving a numerical value to the consideration of the subjective importance of each variable and synthesize these considerations to set the variables which have the highest priority and act to affect the outcome of the situation.

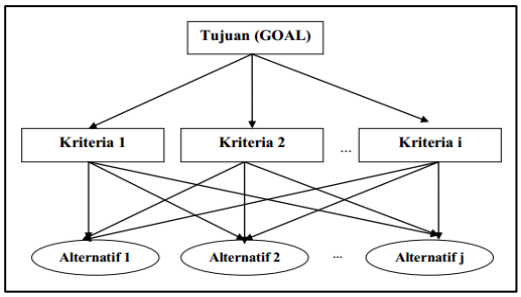


Figure 2.2 Hierarchy AHP Decision

According to Saatyin (Sumiati, 2007) AHP helps solve complex issue dengann structuring a hierarchy of criteria, stakeholders, results and dengann attract a variety of considerations in order to develop a weight or priority. This method also combines the strength of feeling and logic are concerned on various issues, and then synthesize a variety of diverse considerations into the matching results dengann we intuitively estimate as presented to the considerations that have been made. To make decisions in an organized way to make a priority we need to decipher the decision in the following steps.

1. *Define the problem and determine the type of knowledge sought.*
2. *Decision hierarchical structure starting from the top with the purpose of the decision, then the purpose of the broad perspective, through the intermediate level (Criterion where elements of subsequent dependent) to the lowest level (usually an alternative).*
3. *Make a set of pairwise comparison matrix. Each element in the upper level is used to compare the elements directly on the lower level with respect to it.*
4. *Use the priority obtained from comparisons to weigh priorities in the level immediately below. Do this for each element. Then for each element in the lower level add values are weighed and obtain an overall or global priorities. Continue this process and add weighting to obtain the final priority of the alternatives below the lowest level.*

Basically AHP is a general theory of measurement used to find the best ratio scale of the paired comparisons of discrete and continuous. AHP is suitable and flexible is used to determine the decision to help a decision maker to make decisions efficiently and effectively by all its aspects. Types of AHP among others (Bound in Setiawan, 2009: 4):

1. *Single-criteria is to choose one of the alternatives with the criteria.*
2. *Multi-criteria is a decision that involves several alternatives with more than one criterion and choose an alternative by many criteria*

2.4. Priority Setting

In setting a priority by drafting a paired comparison which compares all the elements for each hierarchy If in a subsystem operation there are n elements of the operation, namely A1 , A2, ..., an the result of the comparison of the elements of the operation will form a matrix of size n × n as follows:

	A_1	A_2	⋯	A_n
A_1	a_{11}	a_{12}	⋯	a_{1n}
A_2	a_{21}	a_{12}	⋯	a_{2n}
⋮	⋮	⋮	⋱	⋮
A_n	a_{n1}	a_{n2}	⋯	a_{mn}

Figure 2.3 Pairwise comparison matrix

matrix an × n is thematrix, reciprocalwhich is assumed there are n elements of w1, w2 ,. , , , wn that form of comparison. Value comparison in pairs between wi, wj presented in a matrix wi, wj = aij the ij = 1, 2, 3, ..., n while the value of aij is the value

matrix of the comparison that reflects the value of interest Ai to Aj in question in order to obtain the matrix normalized , Value aij = 1, for i = j (diagonal matrix has a value of 1), or if the operating element Ai to Aj have the same importance, the value aij = aji = 1. If the weighting vector elements represented by W operation, with W = (w1, w2, ..., wn), the intensity of the interest of the operating elements A1 to A2 is $\frac{w1}{w2} = a_{12}$ *so that the pairwise comparison matrix can be expressed as follows:*

	A_1	A_2	⋯	A_n
A_1	$\frac{w_1}{w_1}$	$\frac{w_1}{w_2}$	⋯	$\frac{w_1}{w_n}$
A_2	$\frac{w_2}{w_1}$	$\frac{w_2}{w_2}$	⋯	$\frac{w_2}{w_n}$
⋮	⋮	⋮	⋱	⋮
A_n	$\frac{w_n}{w_1}$	$\frac{w_n}{w_2}$	⋯	$\frac{w_n}{w_n}$

Figure 2.4 comparison of intensity interests matrix element operations

Based on pairwise comparison matrix then be normalized by steps as follows:

1. *the weight of each column j added together, the total value of the column is denoted by Sij.*

$$S_{ij} = \sum_{i=1}^{n} a_{ij} \quad (2.1)$$

2. *The value of each column divided by the total value of the column. The results of the division are denoted by Vij*

$$V_{ij} = \frac{a_{ij}}{s_{ij}}$$

$$ij = 1,2,3,\dots,n \quad (2.2)$$

3. *Furthermore, by calculating vectors relative priority of each criterion by averaging the weights have been normalized with line-I Priority criteria for all i denoted by Pi.*

$$P_i = \sum_{i=1}^{n} \frac{Q_i}{n} \quad (2.3)$$

2.5. Calculated Consistency Index

Assessment matrix In pairs often lead to small changes that cause changes in the value of aij maximum eigenvalues. Eigenvalues maximum deviation is a change in the size of consistency. Indicators on the consistency measured by the index of consistency as follows:

$$CI = \frac{\lambda_{maks} - n}{n-1} \quad (2.4)$$

AHP measuring the consistency assessment using consistency ratio (CR) were formulated:

$$CR = \frac{CI}{RI} \quad (2.5)$$

A certain degree of consistency which is required in determining the priority to get the best results. CR value ≤ 0.100 is consistent if not then need to be revised. Below is a table 2.1 of niai random indexes:

Table 2. 1 Random Value Index (RI)

N	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
RI	*0,000*	*0,000*	*0,580*	*0,900*	*1,120*	*1,240*	*1,320*	*1,410*

N	*9*	*10*	*11*	*12*	*13*	*14*	*15*
RI	*1,450*	*1,450*	*1,510*	*1,480*	*1,560*	*1,570*	*1,590*

2.6.Employee Performance Assessment Analysis Method Using AHP

Reviewing the performance of employees is one way to become a reference for HR to be able to make a decision what action should be given to the employee. The method used for the assessment of AHP which is a result of this method is a ranking employees.

Stages of employee performance assessment calculations using AHP can use POAC cycle is presented in Table 2.2 below.

Table 2.2 Assessment of Employee Performance

Using AHP

Phase	***Planning***	***Organizing***
Rate Employee Performance Method Using AHP	*Party HRD planning criteria and their weights, the system of values, and the period or time to conduct employee performance evaluation*	*Organising or create a structure for every part involved in the system , determine responsibility or access the system, and organizing the results of the prioritization of each - each criteria and sub-criteria*

Table 2.2 assessment of Employee performance Using AHP (Continued)

Stage	***Actuating***	***Controlling***
performance appraisal Employee Using AHP method	*Perform or carry out an assessment of performance in accordance with the planning and organizing that's been made.*	*Control or supervise the performance assessment is being conducted, evaluating the results of performance assessment, planning to make repairs if needed, and maximize the activities.*

1. *Planing*

This stage is the stage of planning the manufacture of employee performance evaluation. Performance appraisals are conducted to a three-month contract workers once and for all permanent employees in addition to the leadership and the top level is done once a year. Evaluate the performance of which is promotion to the employee example and conduct training and supervision to employees who have less than satisfactory ratings. The results of the assessment of the performance of contract workers in the form of new contracts or the hiring of contract workers into permanent staff and no extension of the contract, while for permanent employees is shown in Table 2.3 below:

Table 2.3 Assessment of Performance of Permanent Employees

No	***Rating***	***Information***
1	*1*	*Getting Bonus 2x salaries and promotion*
2	*2-5*	*Getting 1x Bonus salaries and promotions*
3	*6-10*	*Getting Bonus 1x salary*
..	*..*	*Following Training*
n 10 - n	*n 10 - n*	*Following Training and Control Systems*

Table 2.4 Performance Assessment Criteria and sub-criteria

No	***Criteria***	***subcriteria***	***code***
1	*Technical Skills*	*Maturity in charge*	*KT1*
		speed completion of tasks	*KT2*
		Crafts	*KT3*
2	*Personality / Appearance*	*Behavior / Honesty*	*KP1*
		Discipline and loyalty	*KP2*
		Health and Appearance	*KP3*
		Attendance	*KP4*
3	*Communication on Team*	*Teamworking*	*KDT1*
		Communication s team	*KDT2*
		attitude of teamwork	*KDT3*
4	*Capability Managerial*	*Capabilities Leading*	*KM1*
		Decision	*KM2*

		Communication ability	*KM3*

Based on Table above then create a hierarchy as follows:

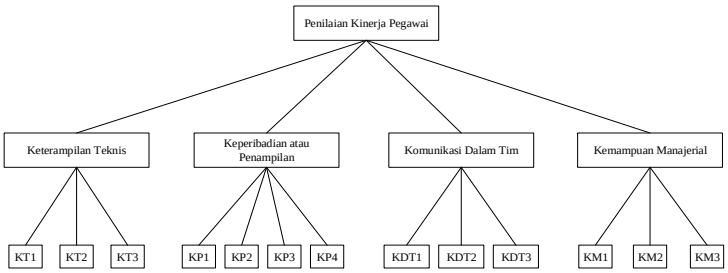


Figure 2.5 HierarchyAssessment Criteria

2. *Organizing*

this step is organizing a result of the prioritization of each - each criteria and sub-criteria that has been done in previous stages. The results of prioritization in the form of value can be seen in Table 2.5 below:

Table 2.5 List of Tables Priority

No.	***Criteria***	***Code***	***Priority Value***
1	*Technical Skills*	*KT1*	*6:00*
		KT2	*2:20*
		KT3	*12:22*
2	*Personality / Appearance*	*KP1*	*7.95*
		KP2	*2.89*
		KP3	*0.71*
		KP4	*12:24*
3	*Communication on Team*	*KDT1*	*0:28*
		KDT2	*6:30*
		KFT3	*1:39*
4	*Managerial Ability*	*KM1*	*6:00*
		KM2	*0:30*
		KM3	*2:02*

3. Actuating

this stage is the stage of implementation, which employees will leave control in the system, after controlling the proposed furlough employees will receive pemberithuan through the system. The system would then check the history of the leave, the type of leave is taken and the requirements of other leave, after which the system will give a message to the Training Manager through the system. Then the Training Manager will confirm approval of leave, if leave is approved Training Manager feeding system will give a message to HRM, Dept .. Head and GM to approve leave requests. And employees can do on leave after the application is approved

2.7 Analysis of Recruitment Agencies

Stages of recruitment and selection of employees for which accounts using rules created by the Training Manager can use POAC cycle, which is listed in Table 2.6 below.

Table 2.6 Employee Recruitment and Selection

Phase	***Planning***	***Organizing***
Recruitment and selection of employees according to the rule of Companies	*Define the terms of the employee criteria are required by the company, determine the weight value of the employee criteria and determine the amount of labor required.*	*Organize or create a structure for every part involved in the system, determine the duties, responsibilities, and access systems.*

Table 2.7 Recruitment and Selection of Employees (continued)

Phase	***Actuating***	***Controlling***
Recruitment and selection of employees according to the rule of Companies	*Conducting the recruitment and selection of employees in accordance with the planning and organizing.The selection process is done by the procedure according to the rules of the company, where HRM, Dept. Head and GM are doing assessment in*	*Controlling or oversee the recruitment and selection of employees that are being implemented, evaluating the results of the recruitment and selection, planning to make improvements if needed, and maximize the activities.*

	selection.	

2.8 Non-Functional Requirements Analysis

Analysis of non-functional requirements are analysis needed to determine system requirements specification.

2.8.1 Analysis of Hardware

The hardware used to run the web-based management information system.

A. *The hardware specifications are contained in the Holiday Inn Hotel Pasteur is as follows:*
   a. *Processor with a speed of 2.6 GHz*
   b. *RAM 4 GB of*
   c. *hard drive capacity of 500 GB*
   d. *LAN / WAN network for internet access.*

B. *Needs minimal hardware required to run this system are as follows:*
   a. *minimum 1.8 GHz processor speed*
   b. *RAM is used at least 512 MB of*
   c. *hard drive used a minimum of 10 GB*
   d. *Network for internet access.*

C. *Conclusion analysis of hardware*
   After analyzing the existing hardware at the Holiday Inn Hotel Pasteur turned out to meet the specification requirements for using the system to be built.

2.8.2 Analysis Software

Analysis software needs to use to be able to support the passage of the system.

A. *Software specifications contained in the Holiday Inn Hotel Pasteur is as follows:*
   a. *Operating System Windows 7 Professional*
   b. *WAMP Server / XAMPP*
   c. *Web Browser Google Chrome, Mozilla Firefox, Internet Explorer*
   d. *Adobe Reader to view the report as a PDF*

B. *software needed to run based management information system website on the system to be built requirements following specifications, :*
   a. *OS(operatingsystem):in this case to run the system to be built minimal operating system used is Windows XPoperating system professional with SP3.*
   b. *WAMP Server / XAMPP*
   c. *web browser (Mozilla Firefox, Google Chrome)*
   d. *Adobe Reader to view the report as a PDF*

C. *Conclusionsoftware analysis*

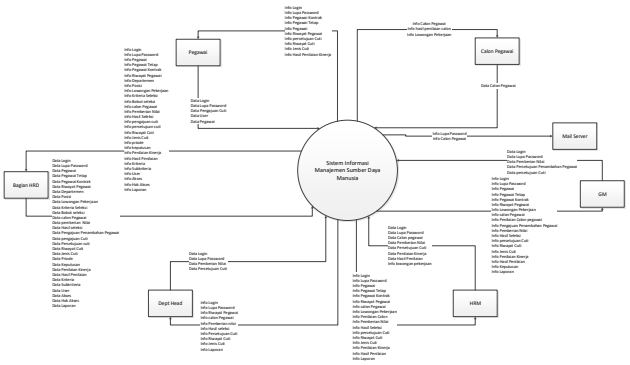
Based on theresults of the comparison between the results and the analysis of non-functional requirements then the company has been qualified to run the system.

2.9 Functional Needs Analysis

Functional Needs Analysis is an analysis that explains the flow of data or information that includes depictions, planning and making of sketches or arrangement of several separate elements into a unified whole and functioning in the process of making software that will be built.

2.9.1 Context Diagram

Diagram Contextis a simple diagram that illustrates the relationship between external entities, input and output of the system. Direpsentasikan context diagram with a single circle that represents the whole system. Diagram context is also a data flow diagramData Flow Diagram (DFDor) to the top level (top level). Diagram context of the system of human resource management information can be seen in the image below.



Context Diagram Figure 2.6

2.9.2DFD Level 1

DFD level 1 Management Information Systems at the Holiday Inn Primer Pasteur can see in the picture

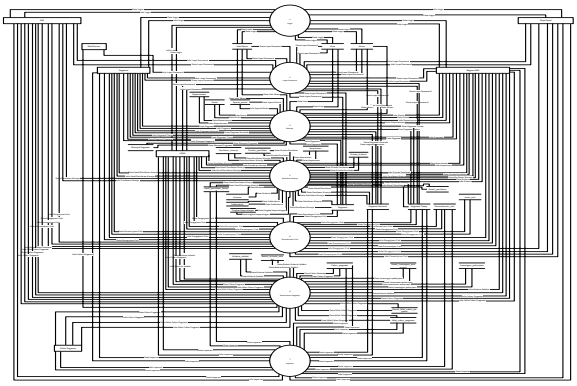


Figure 2.7 DFD Level 1

2:10 Implementation and Testing

System testing aims to determine the errors or deficiencies in system Human Resource information at the Hotel Holiday Inn Bandung tested

2.10.1 Black Box Testing

Black box testing focuses on functional requirements of software built. Based on test results withcases sample testthat have been done can be concluded that the process is correct. Filtering processing errors in the form of landing page display messages is fairly maximum. Functional system can already produce the expected output.

2.10.2 Beta Testing

Beta testing is testing that is directly the actual environment. Users make an assessment of the software using interviews. Based on thetesting beta above it can be concluded that: The

1. *system can manage employee data properly.*
2. *The system can manage data service candidates who applied properly.*
3. *The system is already manage data related leave requests well.*
4. *The system is quite helpful in assessing performance.*
5. *The system helps in taking decisions on the assessment results.*
6. *The system is quite helpful in controlling the leave, with a system of rescheduling leave including monitoring employees who leave more easily and quickly.*
7. *The system is quite helpful in the recruitment and selection of employees.*
8. *The system helps in assessing candidates.*
9. *This system is quite easier to look at an employee in any position who are doingleave*
10. *this dothe system with the assessment criteria in accordance with the company. Because the results of the assessment can be made in reference to the evaluation of employee performance.*
11. *This system is very helpful to give a decision on leave to employees.*
12. *This system helps in doing the leave application.*
13. *This system helps in monitoring the vacant position.*
14. *This system is quite easy to learn and use,*
15. *this system has an interface that is quite good.*

3. Conclusion

In this section, describes the conclusions which contains the results obtained after the study. Results are not the things that are raw but used as a reference and a reference in future system improvements.

3.1 Conclusion

Based on the description of the discussion of the analysis and testing that has been done, it can be a conclusion to the Management Information System Human Resources At the Hotel Holiday Inn Bandung Pasteur is as follows:

a) Management Information Systems Human Resources At Hotel Holiday Inn Pasteur, is enough to help section HRM in assessment based on the criteria in accordance with the Hotel Holiday Inn Pasteur

b) Information Systems Human Resources at the Hotel Holiday Inn Pasteur is enough to help the Training Manager in the control furlough employees, determining the decision or approval of leave an employee

c) of Information Systems Human Resources at the Hotel Holiday Inn Pasteur, was enough to help the Training Manager in the decision to recruit workers directly.

3.2 Recommendations

Based on the conclusions that have been described above, it is expected in the future is for the Management Information System Human Resources At Hotel Holiday Inn Pasteur can be developed broader and covers other areas so it is possible to synchronize the data, so as to facilitate the Holiday Inn hotels in managing the company.

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