Edisi. .. Volume. ... Bulan 20.. ISSN : 2089-9033

DEVELOPMENT SYSTEM OF INFORMATION MANAGEMENT HUMAN RESOURCE MANAGEMENT (SIMSDM) AT PT. TIRTA INVESTAMA BANDUNG

Aris Munandar

Teknik Informatika – Universitas Komputer Indonesia
Jl. Dipatiukur 112-114 Bandung
Email : arist.munandar46@gmail.com

ABSTRACT

PT. Tirta Investama Bandung *is a subsidiary of* PT. Wirabuana *Intrent East* Jakarta, *which is engaged in the distribution of bottled water (bottled water) Aqua for distribution areas of western Java.* The problem is still there is a discrepancy between the number of employees and the needs of employees criteria required by companies with employees who received and the results of the performance appraisal is still questionable results. Based on the problems described above, a system is needed to determine the HR planning and conducting an objective performance appraisal using 360 degrees.

.

Keyword : *Management Information Systems, Human Resources, Methods 360 Degrees.*

1. INTRODUCTION

PT . Tirta Investama Bandung is a subsidiary of PT . Wirabuana Intrent East Jakarta, which is engaged in the distribution of bottled water (bottled water) AQUA to the distribution area of western Java. Based on the results of interviews have been conducted with Mr. Toto Suranto as Head of Human Resources Department PT . Tirta Investama Bandung stated that there is a discrepancy between the number of employees needs along with the criteria required by companies with employees who received and the results of employee performance appraisal results are questionable because of the performance appraisal process is only judged by his superiors .

Based on the above for the goal to be achieved in the research and development of management information systems are :

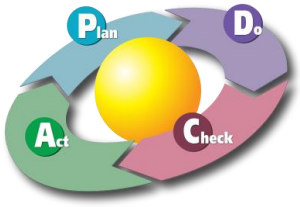
1. Assist the Human Resources Department to undertake human resource planning in determining the amount of the needs of employees as well as the criteria needed to avoid deficiency and excess employees , so that employees are accepted in accordance with the number of employees needed and criteria and ensure the availability of employees for the present and future.

2. Assist the Human Resources Department to conduct employee performance appraisal process objective so that the assessment is no doubt and facilitate decision-making for granting promotion , transfer and demotion of employees.

2. CONTENTS RESEARCH

2.1 Management Information System (SIM)

Management information system is a set of subsystems that are interconnected , gathered together and form a unity , mutual interaction and cooperation between the sections to one another with certain ways to perform data processing functions , receive input (input) in the form of data , then process (processing) , and produces output (output) in the form of information as a basis for decision making useful and have a real value that can be felt as a result either right then or in the future , support the operational , managerial , and strategic organizations , using various existing resources and available for these functions to achieve the goal . The stages in the management information system (SIM) using the PDCA cycle as in Picture 1.



Picture 1. Siklus PDCA

Edisi. .. Volume. .., Bulan 20.. ISSN : 2089-9033

2.2 Information System of Human Resource Management (SIMSDM)

Definition of an information system of human resource management , a term commonly known is a system of man / machine integrated (intregeted) to provide information to support the functions of the operation , management , and decision-making in an organization . The system uses hardware (hardware) and software (software) computer , procedure guidelines , models and decision management , and a " database " .

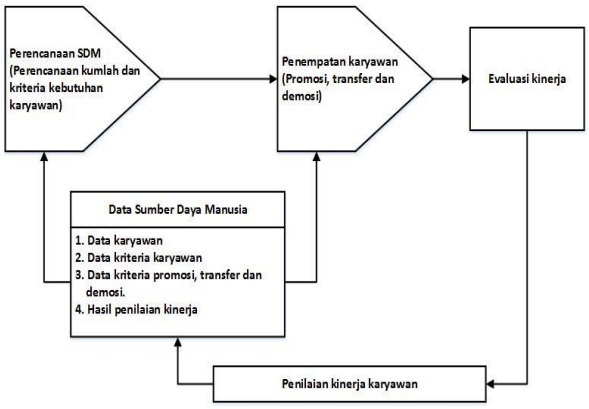
Information Systems Human Resource Management is a systematic procedure for collecting , storing , retaining , engaging and validate the data that is needed by a company to improve human resource decisions . In other words , human resources management information system has the ability to get the information needed or the choice of many people who are more in touch with the HR planning activities .

2.3 360 degree method

360 degree method is a method of performance assessment which allows employees to obtain ratings from all directions , from superiors , subordinates and colleagues . The workings of assessment methods 360 degrees is the assessment of an employee is not only drawn from the assessment of immediate supervisor or boss second on it , but also considered by colleagues one level or of subordinate concerned or the percentage of ratings largest fixed derived from the direct supervisor and the supervisor both on.

2.4 Stages SIMSDM

Stages SIM is used to provide an overview of the existing processes in the management information system human resources at PT . Tirta Investama Bandung . Here are the stages SIM in Picture 2.



Picture 2. Stages SIM

Based on Picture 2. SIM Stages above, the explanation of each - each stage of the above is sebegai follows:

1. Plan.

Human resource planning stage is the initial stage in the SIM stages SDM . Is assumed to have a vacancy occurred in a department , at this stage the HR department will do the planning by determining the number of employees needed and criteria . But before determining the amount and the criteria of employee needs , advance the department will evaluate whether to fill a vacancy can be done rotational positions such as promotion , transfer and demotion of office ? If it can be done , then the HR department will carry out the rotation position beforehand and if it can not be done rotation position again , then the HR department will determine the amount and the criteria of employee needs to be done by the company's recruitment center

2. Do

This stage is the implementation of all planned at this stage of the previous plan , at this stage the results of the performance appraisal and promotion criteria , transfer and demotion will be used as a basis in determining the provision acauan promotion , transfer and demotion of employees . Next will be the process of staffing or rotational position by determining which employees will get a promotion , transfer and demotion based on the results of the assessment and krirteria of each type of rotational positions . If the rotation position can no longer be done , then the HR department will determine the amount and the criteria employees needed to be done by the company's recruitment center.

3.Check

This stage is the stage of the examination and review and study the results of the application of ditahap do . At this stage will be to evaluate the results of the placement process and human resource planning that has been done before , that is by doing a comparison is the process of staffing has been done already fit , ie after placement , if the performance of the employee who moved already quite able to do his job , Furthermore, for the planning of human resources, will be evaluated whether the results of which form of the human resource planning recruitment center made by the company are in accordance with the requirements and criteria of the number of employees needed.

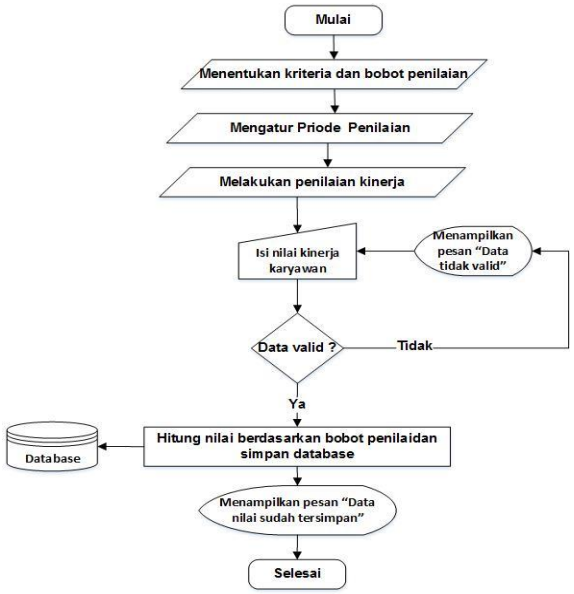
4.Act

This stage is the stage to take action if the results that have been obtained in the previous stage has been checked in accordance with the initial planning

, ranging from placement to HR planning . If the results are not in accordance with the initial planning in the form of employee performance results , it will be taken to make improvements through performance appraisal which later will be the performance evaluation results back to plan staffing and HR planning.

2.5 Stages of Assessment Work

Here are the steps in the employee performance appraisal system can be seen in Picture 3.



Picture 3. Assessment Work

1. *Plan*

This stage is the planning stage before the performance appraisal is done . Employee performance appraisal conducted at the end of the year and during the planning phase will be conducted to determine the criteria and weighting criteria along with the weight of each - each assessor , but this is done if there is a change to the criteria and previous weight . Barikut is the stage of the performance appraisal :

A. Determine weights and criteria

Before conducting performance appraisals, the administrator must first determine the weights and criteria , here are the weight and the assessment criteria in Table 1 , 2 , and 3 following :

Table 1. Weight Criteria

Nama Kriteria	Presentase bobot (%)
Disiplin kerja	35
Penampilan	10
Pekerjaan	30
Kemempuan pribadi	25

Table 2. Weight Appraisers

Level Penilai	Persentase (%)	Persentase (%)	Persentase (%)	Persentase (%)
Atasan	40	60	70	90
Rekan kerja	30	30	-	-
Bawahan	20	-	20	-
Diri sendiri	10	10	10	10

Table 3. The range of values

Edisi. .. Volume. ... Bulan 20.. ISSN : 2089-9033

Soal	Bobot (%)	Nilai
Menaati perintah / tugas dari atasan yang berwenang	10	70
Ketepatan waktu kehadiran	10	70
Sanksi	5	70
Kehadiran karyawan	10	70
Kerapihan	5	70
Kebersihan	5	70
Pekerjaan sesuai SOP	10	70
Kemampuan menyelesaikan tugas sesuai target dan tepat waktu	10	70
Kejujuran	10	70
Kemampuan menyelesaikan masalah	10	70
Motivasi kerja	10	70
Kemampuan kerja sama	5	70

81≤ n ≤ 100	Sangat Baik	***DIPERTIMBANGKAN UNTUK PROMOSI JABATAN*** Karyawan bersangkutan prestasi kerjanya sangat baik bahkan istimewa jauh di atas nilai rata-rata dan sudah melebihi harapan dan tujuan perusahaan. Sehingga karyawan tersebut dapat dipertimbangkan untuk di promosikan pada jabatan yang lebih tinggi level dan tanggung jawabnya.

2. Do

After determining the assessment criteria , criteria weights , weight assessors , and the time period of assessment , the next step is to conduct performance appraisals in accordance with the provisions that have been determined .

Below is a stage in the process of performance appraisal :

1. Conducting performance appraisals

Employee performance appraisal process that has a direct superior , peers , and subordinates can be assumed as follows :

Nama Penilai : Bentika Sinuraya
Jabatan : Finance Controller Department Head
Bobot Penilai : 40%
Nama yang dinilai : Andi Hidayat
Jabatan : AR /AP Section Head
Proses : Penilaian kinerja karyawan oleh atasan

Table 4. Employee assissment by superiors

2. Calculate the total value

After all employees from superiors , peers, subordinates and themselves already assessed the performance as in the tables above, the final results of the performance evaluation are as shown in Table 5.

Rentang Nilai	Uraian	Keterangan rekomendasi
10 ≤ n ≤ 27	Sangat Kurang	***TIDAK MAMPU / BISA DIPERTIMBANGKAN PEMUTUSAN HUBUNGAN KERJA*** Karyawan bersangkutan gagal/ tidak mampu dalam menyelesaikan pekerjaannya sehingga tidak dapat melanjutkan pekerjaannya dan akan dilakukan pemutusan hubungan kerja (PHK)
27 < n ≤ 45	Kurang	***DIPERTIMBANGKAN UNTUK DEMOSI JABATAN*** Karyawan bersangkutan prestasi kerjanya cukup namun masih belum memenuhi, maka karyawan tersebut dapat dipertimbangkan untuk demosi jabatan pada level yang lebih rendah.
45 < n ≤ 63	Cukup	***DIPERTIMBANGKAN UNTUK PELATIHAN*** Karyawan bersangkutan memerlukan perhatian khusus dan pengarahan untuk dilakukan pelatihan.
63 < n ≤ 81	Baik	***DIPERTIMBANGKAN UNTUK TRANSFER JABATAN PADA LEVEL YANG SAMA*** Karyawan bersangkutan prestasi kerjanya sudah lebih baik ada di atas nilai rata-rata dan sudah sesuai harapan dan tujuan perusahaan. Sehingga karyawan tersebut dapat dipertimbangkan untuk transfer jabatan pada level yang sama.

Table 5. Assessment Employees

Karyawan yang dinilai	Karyawan Penilai	Jabatan	Bobot Penilai	Subtotal Nilai
Andi Hidayat (AR /AP Section Head)	Bentika Sinuraya	Finance Controller Department Head	40 %	28
		Jumlah nilai		70
		Subtotal = Jumlah nilai x Bobot Penilai → Subtotal = 70 x 0.4		28
Andi Hidayat (AR /AP Section Head)	Andi Hidayat	AR /AP Section Head	10 %	8

Edisi. .. Volume. .., Bulan 20.. ISSN : 2089-9033

NIK	Nama	Jabatan	Nilai Akhir	Hasil Evaluasi
1019. 12.07	Bentika Sinuraya	Finance Controller Departmen t Head	82.5	Promosi
1020. 13.07	Andi Hidayat	AR / AP Section Head	75.5	Transfer
1021. 14.07	Banggariana	Cashier Section Head	60.5	Pelatihan
1022. 15.07	Erin Wulansari	Collector Adm Staff	70	Transfer
1023. 15.07	Yayan Setiawan	Collector Adm Staff	21	Pemutusan Hubungan Kerja
1024. 16.07	Didin muhtadin	Invoice Administrasi Staff	62	Pelatihan
1025. 16.07	Burhan nurhasan	Invoice Administrasi Staff	44.5	Demosi
	Banggariana	Cashier Section Head	30 %	24
	Erin Wulansari	Collector Adm Staff	20 %	4
	Yayan Setiawan	Collector Adm Staff		3.75
	Didin muhtadin	Invoice Administrasi Staff		4
	Burhan nurhasan	Invoice Administrasi Staff		3.75
			Nilai akhir	75.5

3. *Check*

This stage is the stage of examination of whether the results of performance assessment has been carried out in accordance with what is expected by the company . This check is performed by examining the results of the performance evaluation of each employee .

4. *Action*

This stage is the stage of evaluating the results of the performance appraisal for further evaluation results will be used as the basis for planning and placement.

Following the results of the HRD who carry out the implementation plan by staffing memalui promotion , transfer and demotion of employees . Here is a case study with the placement of the provision of promotion , transfer and demotion of employees in Table 6.

Tabel 6. Hasil evaluasi karyawan departemen finance operation support

Based on the results of performance appraisal in the department of finance operation support , the importance of the results of the decision while employees get a promotion , transfer and demotion .

2.6 Analysis of Non Functional Requirements

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

2.6.1 Hardware Analysis

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

A. The hardware specifications on PT . Tirta Investama Bandung is as follows :
   a. Processor dengan kecepatan 2.6 GHz
   b. RAM sebesar 4 GB
   c. Kapasitas Harddisk 500 GB
   d. Video Card yang dapat bekerja pada resolusi 4096 x 2160 Pixel
   e. Jaringan telepon untuk akses internet.

B. The need minimal hardware required to run this system are as follows :

a. Processor dengan kecepatan minimal 1,8 GHz
b. RAM yang digunakan minimal 512MB
c. Hardisk yang digunakan minimal 10 GB
d. Video Card yang dapat bekerja pada 1024 x 768 Pixel
e. Jaringan untuk akses internet.

C. Conclusions hardware analysis

After analyzing the existing hardware in the PT . Tirta Investama Bandung was already meets the specification requirements for using the system to be built .

2.6.2 Analisis Perangkat Lunak

Needs analysis software is used to support the passage of the system .

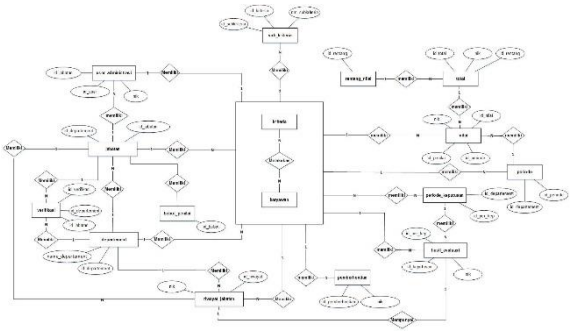
A. The software specifications on PT . Tirta Investama Bandung is as follows :
   a. Sistem Operasi Windows 7 *Professional*
   b. WAMP Server / XAMP
   c. Adobe Dreamweaver CS6
   d. Web *Browser Google Chrome, Mozila Firefox, Internet Explorer*
   e. Adobe Reader untuk melihat laporan bentuk PDF

B. The need minimal software required to run this system are as follows :
   a. OS (*Operating System*): dalam hal ini untuk menjalankan sistem yang akan dibangun minimal sistem operasi yang dipakai adalah Sistem Operasi Windows XP *professional with* SP3.
   b. WAMP Server / XAMP
   c. Adobe Dreamweaver CS5
   d. Web browser (Mozilla Firefox, Google Chrome , Opera All)
   e. Adobe Reader untuk melihat laporan bentuk PDF

C. Conclusions Analysis Software

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

2.6.3 Analisis Basis Data



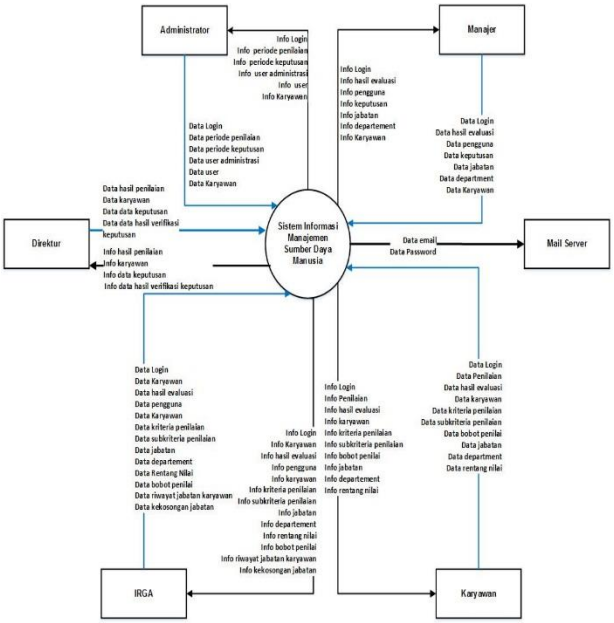
Picture 4. ERD

2.7 Analysis of Fuctional Requirements

2.7.1 Context Diagram

Context diagram is used for describe the system first in line big. Diagram context is also a diagram data flow (data flow diagram or DFD) with The top level (top level) .

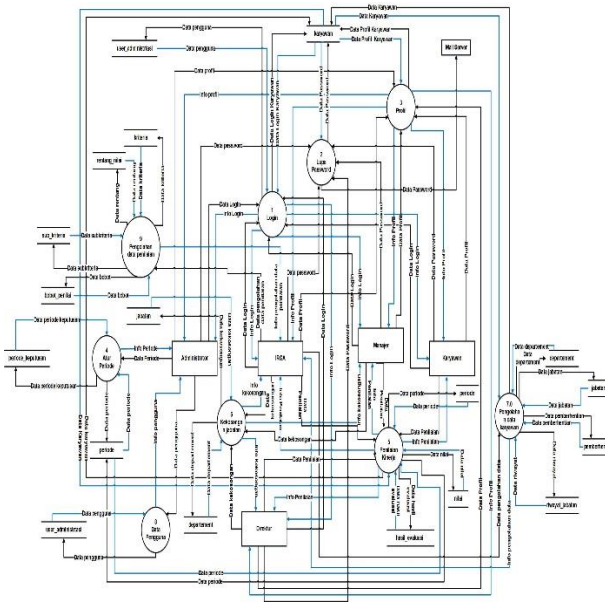
Here is a context diagram of the system of human resource management information can be seen in Picture 5.



Pciture 5. Context Diagram

2.7.2 DFD Level 1

DFD level 1 is the result of a decline in the context diagram management information system human resources. Here is the DFD level 1 in Picture 6.



Picture 6. DFD Level 1

2.8 Implementation and Testing System

2.8.1 Alpha Testing

This program testing methods black box. Black box testing is testing program based on the functions of the program.

The purpose of the black box method is to find fault function in the program. Black box testing methods carried out by giving some input on application program which is then processed in accordance with functional requirements to see whether application program produces output desirable and in accordance with the functions of the program The.

If from a given input produces output in accordance with functional requirements, then program the application in question has been true, but if the output produced no in accordance with the functional needs, then it is still There are errors in the application program.

Based on test results to the test case example above it can be concluded that in each process still allows for syntax errors, but functionally the system may issue the expected results.

2.8.2 Betha Testing

Beta testing is done in order to determine the extent to which the quality of software that is built, whether it is in line with expectations or not. For that in beta testing research by providing questions to prospective users of the software.

The research methods used were interviews. To determine the achievement of the desired objectives in the development of information systems, interviews of candidates submitted to the administrators, directors, managers and supervisors and employees at PT. Tirta Investama Bandung.

Based on the results of the testing that has been done, it can be concluded that:

1. This system is enough to help the HR department to perform pengolahan employee data and provide information about the needs of employees, thus simplifying the process of HR planning.
2. This system has been able to help the HR department in carrying out an objective assessment of performance.
3. The results of the assessment of the performance of this system is sufficient to be used as the basis for decision-making acauan promotion, transfer and demotion.
4. The system is fairly easy to use, but it should be noted again the use of language in its features.
5. This system has made it easier to see the performance ratings of each employee.
6. This system has been quite a positive impact on employees in improving morale.
7. This system has been helpful in providing information regarding the value and the decision to employees.
8. Display system is interesting, but there are some parts that need to be improved zoom.

3. CLOSING

3.1 Conclusion

Based on the description discussion of the analysis and testing that has been done , it can be a conclusion to the Management Information System of Human Resources at PT . Tirta Investama Bandung is as follows :

1. Information Systems Human Resource Management at PT . Tirta Investama Bandung this is enough to help part the Human Resources Department in determining the amount of the needs of employees and employee criteria required by the company .
2. Information System Human Resource Management at PT . Tirta Investama Bandung this is enough to help part the Human Resources Department to conduct performance appraisal more objective and facilitate decision-making for granting promotion , transfer and demotion position .

3.2 Suggestion

Based on the conclusions that have been described above, it is expected in the future is that the Management Information System of Human Resources at PT . Tirta Investama Bandung can be developed more broadly in order to further improve the performance of employees so as to provide benefits to the company and can certainly help the company to manage corporate data .

BIBLIOGRAPHY

[1] Prof. Dr. Sugiono. (2013). "Metode Penelitian Kuantitatif, Kualitatif, Dan Kombinasi(*Mixed Methods*)", Edisi Keempat, Bandung : ALFABETA.

[2] Roger, S Pressman. (1997). *Software Engineering, a Practitioner's Approach.* Fourth Edition. s.l. : McGraw Hill

[3] R. Veitzhal, R. Mansyur, M. Thoby, A. Willy. (2014). Manajemen Sumber Daya Manusia Untuk Perusahaan Dari Teori Ke Praktik, Edisi Ketiga, Jakarta : PT Raja Grafindo Persada,.

[4] Alwi, S. (2012) *Manajemen Sumber Daya Manusia Strategi Keunggulan Kompetitif.* Edisi Kedua, Yogyakarta:BPFE.

[5] Pardosi, J., Tambunan, M.M., dan Syahputri, K. Pengukuran Kinerja Dengan Menggunakan Integrasi 360° Feedback dan AHP di PT. S. *e-jurnal Teknik Industri FT USU.*

[6] Sulistyawan, F, Wurijanto, T, dan Subiyantoro, YY. (2013). Sistem Informasi Penilaian Kinerja Pegawai Menggunakan Metode *Graphic Rating Scales* dan 360 Derajat. *Jurnal Sistem Informasi.*