Configurations and implementation of payroll system using open source erp: a case study of Koperasi PT Sri

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Abstract. Enterprise Resource Planning (ERP) is an integrated information system to manage business processes of companies of various business scales. Because of the high cost of ERP investment, ERP implementation is usually done in large-scale enterprises. Due to the complexity of implementation problems, the success rate of ERP implementation is still low. Open Source System ERP becomes an alternative choice of ERP application to SME companies in terms of cost and customization. This study aims to identify characteristics and configure the implementation of OSS ERP Payroll module in KKPS (Employee Cooperative PT SRI) using OSS ERP Odoo and using ASAP method. This study is classified into case study research and action research. Implementation of OSS ERP Payroll module is done because the HR section of KKPS has not been integrated with other parts. The results of this study are the characteristics and configuration of OSS ERP payroll module in KKPS.

Keywords: ERP, ODOO Payroll, ASAP, Open Source System, Human Resource Management

1. Introduction
The everlasting business environment necessitates that most of business activities are supported by integrated Information Systems (IS). ERP is a software which completely integrates IT and core and basic business functions [1]. The object of this research is Koperasi Karyawan PT Suryaraya Rubberindo Industries (KKPS) which a retail business entity established to develop member welfare. KKPS has a store and saving-loan business unit. Various kinds of store activities such as ordering goods, receipt, storage, sales, delivery, payment invoice supplier and receipt of customer invoice. KKPS has several problems in running business processes, especially in Human Resources (HR) that is: the absence of an integrated payroll system in supporting the running of business processes. Information and data between each department is not accurate. Payroll calculation and management is still done manually without any management or database system adopted and the output cannot real time. Based on the existing problems in KKPS, Enterprise Resource Planning (ERP) HR system as one of the integrated application solutions, becomes the framework to change and help the process of building the foundation of information systems within the company [2]. The method used is the ASAP (Accelerated SAP) method, because according to the research the method significantly accelerates the deployment process of Enterprise Resources Planning and can directly end up in accordance with the project plan and in accordance with the needs of existing resources [3]. This study has scope up to Go Live and Support stage.
Purposes to be achieved in this research are the improvement of HR business process workflow of PT SRI Cooperative, the implementation of ERP Payroll systems to enable the process to be integrated with other sections, and the adjustment of the Salary Rule and Structure in Payroll module in features of selected ERP Software.

2. Methods

2.1. Determination of Problems and Purposes
The company's current business system is less able to support the information in company's activities to run smoothly. It require a new system in accordance with the current condition of the company, especially in the HR division. The solution will be implemented is to use an ERP system so that business processes can be integrated and adjustment of Salary Rule and Structure into the Payroll module could be done in near future. The identification of business processes could be done by using Business Process Management (BPM) by analyzing existing procedures and activities inside company to evaluate the relation between divisions so that business processes can be improve to be more efficient than ever. The identification of business processes is also done to facilitate the implementation of business processes against Software ODoo. Information on the flow of data is obtained through interview to all stakeholder and observation with related divisions.

2.2. Identification of Research Framework
This study is classified into case study research as it requires a special focus on a particular area, which is a KKPS retail business which has two business units with different characteristics. In addition to case study research, this study is also included in action research (Action Research). Data is collected from users to assess or improve ongoing processes. This action research is very relevant because in this research resulted identification, configuration and implementation of OSS ERP from various parts of business function.

2.3. Integrating ODOO system and ASAP Method
This research is done using ASAP (Accelerate SAP) method, because in Odoo does not have a special method then adopt method of SAP which significantly accelerate the process of Enterprise Resources Planning deployment and can directly end in accordance with project plan and according to requirement of existing resources. This study is limited to Go Live and Support stage, because at this stage is the final stage of implementation and maintenance while the research is limited to the design of its Enterprise Resources Planning.

2.4. Odoo Design and ASAP Implementation
In order to succeed this Project to be implement, there is several step to be adapted:

2.4.1. Project Preparation. This stage is adapted to identify the background of the problems that occur and raises the problem that needs to be done research and determined also the stages undertaken in the work of this project. Based on the problems found, the goal set is to build an HR system using Odoo on KKPS so that the HR system in the company is not centralized and each part is integrated with the HR department.

2.4.2. Business Blueprint. This stage is adapted to identify the company's business processes by understanding the current business processes and business processes target and then conducted an analysis of existing gaps and generate system design to be developed.

2.4.3. Realization. This stage is done by creating project work in accordance with the established goals and stages of workmanship
2.4.4. Final Preparation. At less precise founded then it need to be repaired. Next step is make the transfer of existing data from the old system to the new system. After doing so, it need to provide training for users who will use the system.

2.4.5. Go Live and Support. This stage is the last stage in the ASAP method. Once the system is implemented, supervision of the system is already in place.

3. Result and Discussion

3.1. Project Preparation

Project Preparation stage will be executed before applying ERP system into KPPS by preparing related things to do, that are project goals, project scope, project team, and project timeline.

3.2. Analysis of the Current State

In Payroll Process, KPPS also still uses a system of feed that excel in employee paycheck. Plot by looking at data from excel file containing employee name data, employee contract and calculated in excel file to make paycheck. The problem is most of it didn’t integrated and it was applied by calculating salary of employee one by one, starting from arrival allowance, wage, income tax, insurance cost, and other components, all of this done by calculating manually. This manual method allows for large space of errors when calculating and payroll, it also will take a lot of time because before printing paycheck, the slip calculations should be checked back to avoid any errors. The payroll system uses the excel system with the following process:

a. Collecting Overtime and Debt Form. Overtime data from each employee written on overtime form, at the end of each month will be collected in order to be calculated with the payment to be paid. In addition, existing forms related to employee debts are also collected to be taken together.

b. Calculates Employee Debt. Last month's debt coupled with this month's debt which could possibly arise with a cash-out form in the form of Cash Receipt will result in new debt. This new debt is then reduced by the amount of various obligations to be paid, eventually resulting in outstanding debt.

c. Make a Payroll Recapitulation. The calculation of overtime and deductions from each employee combined with basic salary will ultimately result in a net salary to be received in the month. The results of such calculations are written on a piece of paper, and repeated again so that all the net salaries for each employee can be reported on a piece of paper.

d. Creating Pay Slip For Each Employee. After a salary recapitulation can be generated, the next step is to make a paycheck for each employee. This pay slip is made in 2 (two) copies, in one of this sheet will be delivered to the employees along with the money they receive, and the next one will be deposited as financial records.

e. Transferring money to employees via bank

f. After the transfer Every Employee already. Employees are then summoned one by one to receive their salary, and are asked to sign the two paychecks already provided.

3.3. Payroll Function in implementing Odoo

In order to implement ASAP to PT SRI Cooperation, it needs to details the function the payroll cycles corresponding to the Odoo workflow. It can be viewed in figure bellow:

![Figure 1. Payroll Business Process](image-url)
3.4. Technical Configuration in Odoo Payroll

After the general picture of the Payroll business process has been described, the next step is how to configure the Payroll module in Odoo. In order to create Employee salary first thing to do is setting salary rule and salary structure. (Human Resource>Payroll>Salary Structure>Create)

![Salary Structure](image)

**Figure 2. Salary Structure**

An example from figure above here are layouts the existing salary structure in KPPS, i.e. Warehouse Staff salary structure. There are several components of the Warehouse Staff salary structure that were used by company, as well as the explanation;

| Name               | Information                                                                 |
|--------------------|------------------------------------------------------------------------------|
| Basic Salary       | Salary according to work contract                                           |
| Bonus              | An additional bonus of 10% from basic salary                                |
| Meal Allowance     | Additional meal allowance, fixed value for example 200,000 per month         |
| Overtime           | Additional overtime pay, the value is 10,000 per hour                        |
| Absent Cuts        | Absentee deduction, the value of basic salary divided by 173 then it times to the number of abscess hours, so the number of hours of absentee inputted at the time of his pay slip issued |
| PPH 21             | Indonesian Income Tax from Governance                                       |

3.5. Creating Salary Paycheck

Once employee data, salary structure, and contracts are established, then we can start making pay slips of each employee. Go to menu: Human Resources> Payroll> Employee Payslip. It will seen layout list of employee salary slip data that already exist. Click the Create button to create new pay slip data.
Figure 3. Employee Payslip in Odoo

An example from figure above here are layouts the existing salary payslip of one employee whose name is Hasti Hartini. There are several components of the detail in salary payslip with specified term that were used by company, as well as the explanation:

- **Employee**: select the employee name to make the paycheck.
- **Period**: select the start and end date of the payroll, or leave as is, for this period of the month e.g. 12/01/2016 - 12/31/2016.
- **Contract**: automatically filled with selected employee contract data, e.g. Hasti.
- **Reference**: will be automatically filled with the payroll document number.
- **Structure**: automatically selected employee salary structure selected in accordance with his contract, eg Warehouse Staff.
- **Payslip Name**: automatically filled with pay slip information, e.g. Salary Slip of Hasti for December-2016. Editable if necessary.
- **Credit Note**: check if this slip is a deduction from the previous slip.
- **Click the Compute Sheet button.** Salary calculations will be made by Odoo according to the pay structure and the results can be seen on the Salary Computation tab.

4. Conclusion

This project report will shows that Implementation the human resource module using the Odoo is expected to assist in the processing of employee data which will could make cooperatives to provide information easily, cheaply and accurately related to the Human Resources section like every employee profile is recorded with accurate data. It also employee salary management could be done easily without fear of error data in the calculation, the existence of Payroll module with Odoo on KPPS will facilitate the employee in searching about information of their salary details, Salary Structure and Salary role in Payroll module can reduce the miscalculation significantly and reduce the human error inputs, and Last, the existing system in Odoo can be integrated with the attendant in company local database such as update the status of employee attendance. This project report will conclude that the ERP Payroll System should be implemented by KPPS in order to solve several problems in running business processes, especially in Human Resources (HR).
5. References

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