

# Implementation of Odoo ERP with SCRUM Method in a Telecommunication Company

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**Abstract**—A small company that will transform into a medium company needs to improve the effectiveness and efficiency of the business processes. It will be parallel with an increase in the number of employees, customers, the various products, etc. An option to increase productivity is to implement an ERP (Enterprise Resource Planning) application where every linked part of the application on the company will integrate. This article will describe the implementation of ERP Odoo 14 at PT. Wahana Mandiri (PTWM). The implementation of ERP Odoo 14 will use the Scrum Method as a choice to the previous method used by PTWM (waterfall). This Scrum method is one part of the Agile Method which has helped many companies to get quality and fast product quality. At the end of the Odoo 14 ERP development period, it can be applied according to the stages in each Sprint in the Scrum Method.

**Keywords**— ERP, Odoo, Scrum.

## I. INTRODUCTION

A grown-up telecommunication provider company PT. Wahana Mandiri (PTWM) needs to speed up the process of business from what they were doing before. Nowadays every department processes the task manually with paper document movement for the process. And this made the duration of processes mostly dependent on the person in charge. An improvement will be implemented for particular departments to support the speedup process. The ERP (Enterprise Resource Planning) is the chosen solution to improve productivity by implementing Odoo. As a starting stage Odoo has a complete solution for the company, but as an open source platform it will be possible for some changes in the future.

This implementation will be supported by SCRUM Method as Development method for the flexibility to change and faster development time than waterfall.

## II. LITERATURE REVIEW

### A. Current Business Flow

PTWM currently has Business Flow has 4 (four) line processes: Sales department which promote the product, provide quotations of the product to customer and receive the Purchase Order (PO) from customer. When the PO has been received, the sales department will send the copy of PO to the warehouse to prepare the product requested then send the process to Finance for invoicing to the customer.

When the product is ready, Warehouse Department will send the product with Delivery Order (DO) to the customer. If the product is not found, Warehouse will create Purchase Request (PR) to Purchase Department.

The Purchase Department will process the purchasing to the supplier, and send the document to Finance.

All the transactions of the three departments will follow with the Finance Department who releases and/or receives the flow of funds based on the type of transaction.

### B. SCRUM Method

SCRUM Framework as one of Agile Methods which was defined by Jeff Shuterlan and Ken Schwaber [5], has solution-adaptive work patterns. That is by doing an iterative development cycle with a focus on the product. The Waterfall method which prioritizes documentation before doing work has a different way with SCRUM.



Fig. 1. SCRUM Framework

The frame works are:

- (i). Project Owner creates Product Backlog Artifacts
- (ii) Product Backlog transformed into Multiple Sprint Backlog Artifacts
- (iii)Sprint execution controlled by Daily Scrum Event
- (iv) Sprint Review Event
- (v) Sprint Retrospective Event then back to (iii) Sprint Execution until last Sprint.

Figure 2 shows the components of implementation by SCRUM framework.

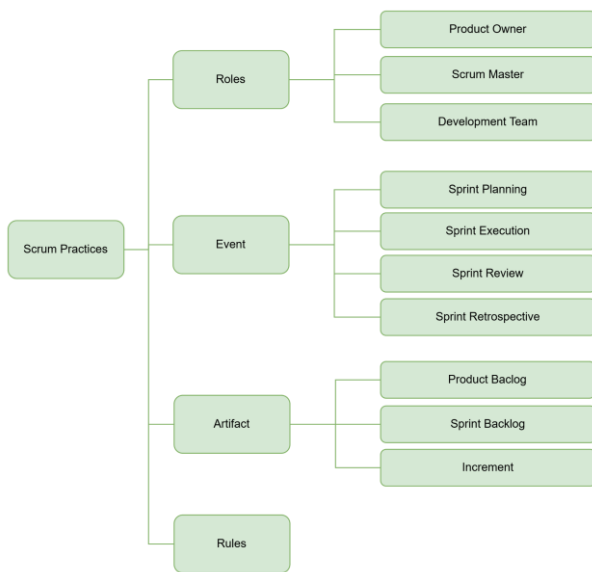


Fig. 2. SCRUM Components

### III. DESIGN AND IMPLEMENTATION

#### A. Use Case of the Business Processes

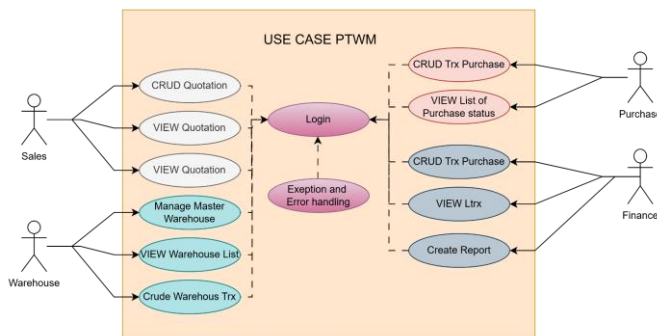


Fig. 3. Use Case of Business Process

#### B. Activity Diagram of the Business Processes

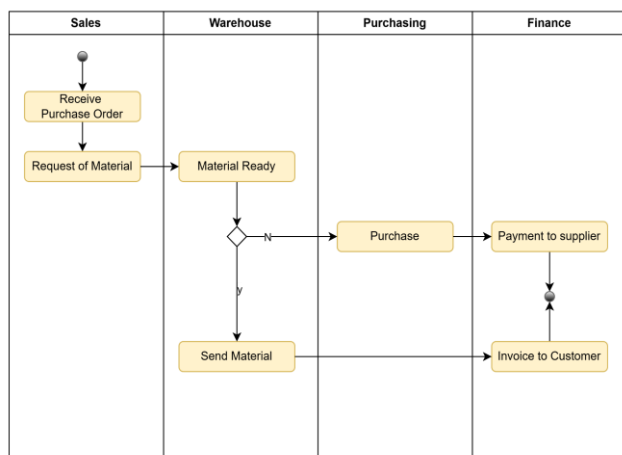


Fig. 4. Activity Diagram of Business Process

#### C. Implementation of Odoo

Firstly the Product Owner has made the Backlog Product to define the product that needs to be implemented.

TABLE I. Backlog Product.

No .	Backlog Product	Description	Notes	How To Est	Priority (1-3)
1	User Credential	User login and Access right	User Groups : 1.Admin 2.Sales 3. Warehouse 4. Finance and Purchase	Test per Role	3
2	Module Sales	Sales can manage quotation and view invoice	Sales can monitor the quotation and customers	Input Sales and monitor ed.	3
3	Module Warehouse	Warehouse can manage and monitored Material flows	Activity: 1.Request from Sales 2. Receive goods 3. Request to Purchase	All activity can be done.	3
4	Module Purchase	Purchase Flow to Vendor	Purchase activity	Running purchasing process	3
5	Module Finance	All Activity of Finance: 1.From other module 2.From Finance	All Activity of Finance	All Finance process and report	3
6	Reporting	Report For All Modules	Report needed	Run all designated report	2

Then SCRUM Master and Development team discussed to follow up the Backlog Product into Sprint Backlog Plan. The result can be noted in the Monitoring Board as below Picture.

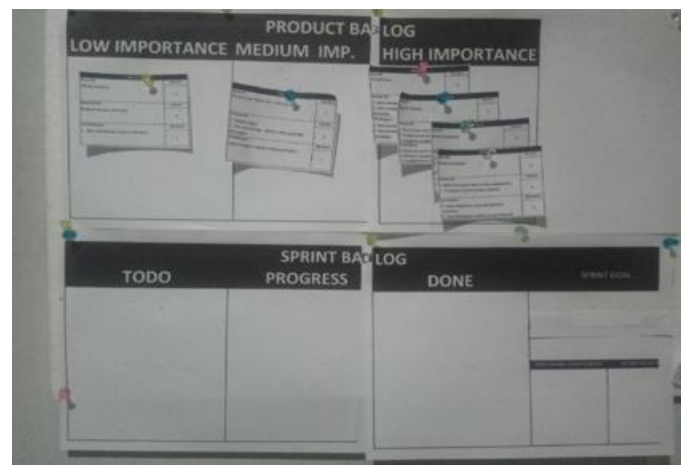


Fig. 5. Product Backlog

After All Product has scheduled, then the Development Team starts to Develop, test and deploy as Sprint phase monitored by SCRUM Master.

The Monitored Board indicates the Sprint Backlog is running on the track or not. It will be shown by these picture:

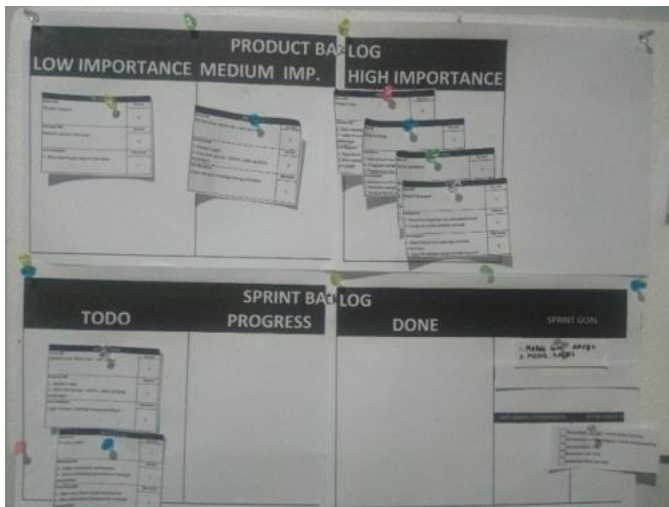


Fig. 6. Sprint Backlog

Each Sprint has these activity: Sprint Execution, Daily Scrum, Sprint Review and Sprint Retrospective.

IV. RESULT

The Implementation of Odoo project using SCRUM Method in this case consumes 6 weeks after Product Backlog by Product Owner. Total time to implement this application is 8 weeks including Training and documentation.

This implementation is faster than prior projects that take 3-6 months.

Below is some screenshot of the apps:

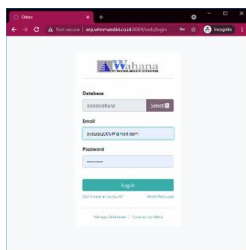


Fig. 7. PTWM Odoo Login Page

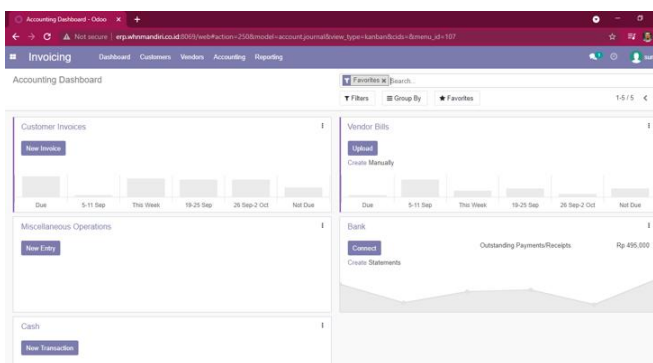


Fig. 8. PTWM Odoo Main Dashboard

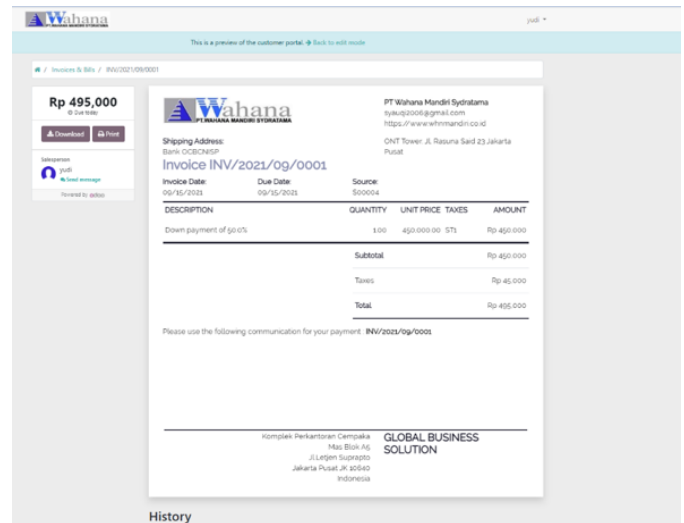


Fig. 9. PTWM Odoo Invoice Page

V. CONCLUSION

Developing an ERP system utilizing Odoo and Scrum helped streamline the application creation process. The Scrum methodology yields higher team engagement than the Waterfall method typically used by PTWM. As a complete application suite, Odoo is highly applicable to PTWM’s operations in telecommunications equipment distribution, moving beyond standard manufacturing use cases. Based on this successful implementation.

VI. RECOMMENDATIONS

The implementation Odoo using SCRUM process in this project necessitates documentation and end-user training during each sprint. PTWM should continuously apply this methodology to strengthen its values and benefits within the company's work culture. Additionally, the Scrum Master needs to ongoingly promote this method so that all stakeholders can fully comprehend its workflow.

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