Design of Accounting System for Small and Medium Enterprises (SMEs) in the Information Technology Sector

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Abstract. In the digital era, the roles of information technology and information systems in the business world have become inseparable. One of the information system models that can be implemented is the Enterprise Resource Planning (ERP) system. Odoo is an open-source ERP system that supports various business processes, including customer relationship management, human resources, sales, purchase, project management, accounting, and inventory management. CV XYZ is currently facing several issues related to service management. CV XYZ still needs to implement an ERP system. Particularly in the accounting management department, all aspects of data recording and bookkeeping in the company still need to be integrated. Consequently, several issues include conventional financial transaction data recording, lack of integration in bookkeeping, and delayed submission of annual financial reports. Data recording and bookkeeping are the main accounting process. The solution that can be proposed for CV XYZ is the design of an integrated information system, namely the development of an ERP system using Odoo using the QuickStart Method to aid in the accounting management process. The result is Odoo system can fulfill the company's needs and desires in implementing the ERP system. The features provided by Odoo's accounting module offer solutions to issues related to financial transaction recording, and financial reporting can be directly generated within the system.

Keywords: ERP, Odoo, Accounting, QuickStart

1   Introduction

In the digital era, the roles of information technology and information systems in the business world have become inseparable. Nowadays, the role of information technology holds a significant influence on organizations or companies. Enterprises face an ever-changing and highly competitive business environment to attract customers. Therefore, implementing information technology and information systems within companies becomes exceedingly crucial to improving business processes and decision-making [1]. One of the information system models that can be implemented is the Enterprise Resource Planning (ERP) system. ERP is a business management system

solution that manages, automates, and integrates all organizational business functions. The ERP system integrates all business processes within a company, such as marketing, sales, payment, financial accounting recording, and resource handling [2].

Data from Panorama Consulting in 2018 states that 95% of companies improve their business processes after implementing an ERP system, where 49% improve all company business processes, and 46% improve main business processes [3]. In 2022 data states that 96.4% of companies improve their business processes after implementing an ERP system, where 51.4% improve the company's core business processes, and 45% improve all business processes [4]. The data shows that implementing an ERP system can increase the effectiveness and efficiency of companies in carrying out their business processes.

CV XYZ is an information technology-based service provider company providing solutions to information technology problems and procuring information technology goods. CV XYZ offers several types of solutions in the form of information system creation services, websites, and mobile applications. CV XYZ is also engaged in procuring goods in the Bogor City area. The need for information technology- based systems is increasing due to technological developments, which causes every businessperson to need a system that can facilitate their business processes to run better. Thus, various companies and organizations need information technology services to manage their business processes. CV XYZ is here to solve these problems to meet customers' needs.

Based on an interview with the company's director, CV XYZ still needs to implement an ERP system. Particularly in the accounting management department, all aspects of data recording and bookkeeping in the company still need to be integrated. Consequently, several issues include conventional financial transaction data recording, lack of integration in bookkeeping, and delayed submission of annual financial reports. One of the ERP systems that can be implemented is Odoo. Odoo is an ERP software that has a fairly complete module that can help companies in their operations from companies in their operations from CRM, Purchase Management, Accounting, and Sales Management [5]. Odoo can be a solution. The use of Odoo has a positive influence, such as the accounting recording process becoming more organized and detailed [6].

Based on the issues, the solution that can be proposed for CV XYZ is the design of an integrated information system, namely the development of an ERP accounting system using Odoo to aid in the accounting management process. The intended module to be utilized is the accounting module. The company can control and track all transactions and generate financial reports with an integrated accounting system.

2   Literature Review

2.1   Enterprise Resource Planning

Enterprise Resource Planning system is software that integrates, organizes, manages, and automates a significant portion of an organization's business processes. The primary purpose of adopting an ERP system is to address the issue of information

disintegration, where data is in different places within an organization. This system provides software encompassing activities across all organizational departments, including finance, sales, customer service, and resource management. The implementation of ERP systems involves the deployment and utilization of this software to enhance organizational processes [7].

2.2 Accounting

Accounting involves recording, managing, and presenting financial transaction data in a comprehensible manner for decision-making and other purposes; it also serves as a service that offers quantitative financial information to inform economic and rational choices [8].

2.3 Accounting Management

Managerial accounting involves the collection, analysis, interpretation, and utilization of financial information to assist management in decision-making, planning, control, and business performance evaluation. Its primary objective is to provide relevant and accurate information to management in order to efficiently and effectively achieve organizational goals. Accounting management entails identifying, measuring, analyzing, and interpreting relevant financial and non-financial data to aid management in making better decisions [9].

2.4 Odoo

OpenERP, now more commonly known as Odoo, is a comprehensive open-source business application suite encompassing various business application programs. It includes Sales, Customer Relationship Management, Project Management, Warehouse Management, Manufacturing, Finance and Accounting, Human Resources, and more [10]. Odoo is the only management system that is not only used by large companies only, but also used by small and independent companies [11].

3   System Development Method

3.1 Odoo QuickStart Methodology

Odoo provides the QuickStart methodology, formerly called the Odoo Implementation Method. QuickStart is especially fitting for Small and Medium Enterprises (SMEs) seeking to synchronize with established business processes. This approach is user-friendly and uniquely adapted to fulfil the operational demands of Odoo [12]. The following Figure 1 represents the QuickStart Methodology Phase.
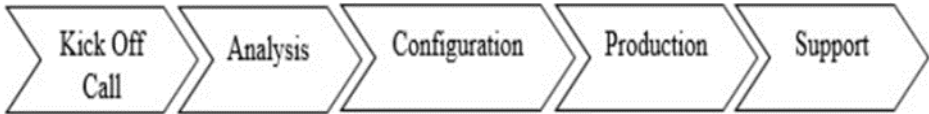
Fig. 1. QuickStart Methodology Phase

The following is an explanation of the stages in the QuickStart methodology:

Kick-Off Call, the research will be conducted by means of interviews with stakeholders of the company that tend to implement Odoo software concerning the explanation of the method and work steps to be implemented.

Analysis, the researcher will be focusing on analyzing the company's general business processes and comparing them with business processes in Odoo using GAP Analysis to determine the targeting business processes.

Configuration, the researcher will define and design the configuration and customization of the Odoo system to produce a system that can support the company's proposed business processes.

Production, the researcher implements the Odoo system for the company according to the configuration and design that is already defined at the configuration stages and closed by testing the system.

Support, the researcher will measure the performance of the system that has already been implemented in the company.

In this study, this research was only carried out until the configuration stages since the developed system was not implemented in CV XYZ yet.

3.2   Systematic Research

The systematics research is a framework used to delineate the stages that will be undertaken to address the research issues from beginning to end. These stages are aligned with the method to be employed in the research, namely the QuickStart method. The QuickStart method stages to be utilized include Kick-off call, Analysis, and Configuration. The following Figure 2 is the Odoo QuickStart Research Systematics.
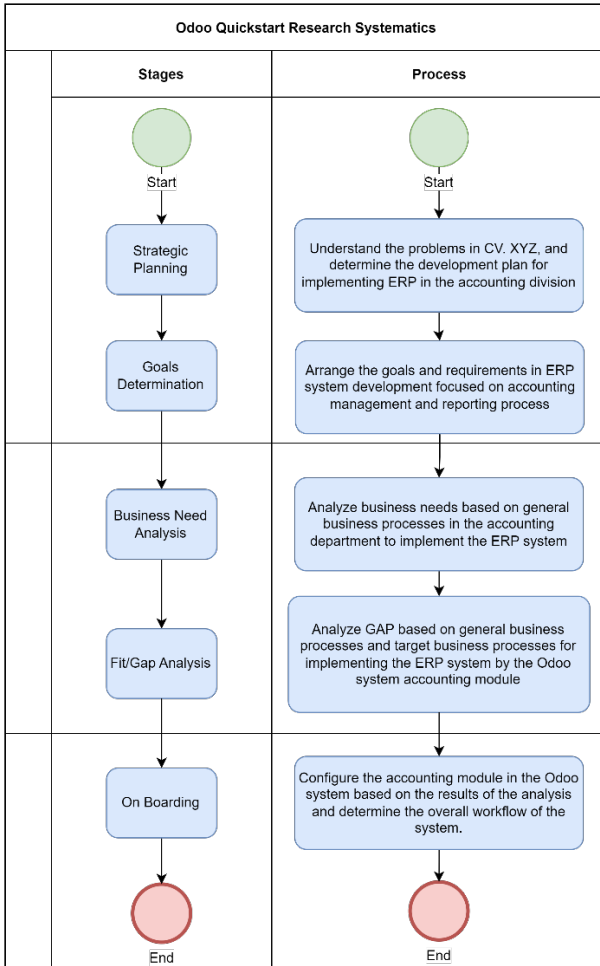
Fig. 2. Odoo QuickStart Research Systematics

4   Analysis and Design

4.1   Kick-off Call

During this phase, research analysis of the requirements of enterprise resource planning systems has been carried out. The results aim to facilitate CV XYZ's comprehension of research methodologies and phases, enabling the researcher to present conclusive outcomes that align with the stipulated needs. This process involves two distinct stages: Strategic Planning and Goal Setting. Table 1 below will describe the strategic planning of this research.

Table 1. Strategic Planning

Environment	Research	Basic Science
The company has yet to use a particular system to manage the company's business processes in the accounting department.	Design enterprise resource planning system on Odoo focusing on accounting module.	Enterprise Resource Planning Odoo QuickStart Odoo Accounting Module
Customer Invoice and Vendor Bills exchange and input are done personally by contacting employees via WhatsApp and Excel applications.		
No system can integrate processes from every unit in the company.		

4.2   Analysis

During this phase, the researcher identifies and analyzes the current business processes within the service procurement project at CV XYZ. This phase aids in establishing the intended business processes in alignment with the business requirements, aiming to accomplish the research objectives. Furthermore, this analysis is also carried out to formulate the system blueprint to be developed.

Fit & Gap Analysis
During this stage, the researcher will analyze to identify any alignment or disparity within the present business procedures. The objective is to ascertain the effectiveness of the current processes and address any deficiencies that may arise. This assessment enables the researcher to propose remedies for enhancing the suggested business procedures to adhere to system requisites. Table 2 will display Fit & Gap Analysis based on accounting business process in CV. XYZ.

Table 2. Fit & Gap Analysis

Business Process	Requirement	As-Is Business Process	To-Be Business Process
Website Project Payment Business Process	A system is required to validate customer invoices, and there needs to be a system capable of recording ordering and project	When creating sales order projects within the sales division, it's evident that we need a more seamless integration with the	There is a system to integrate sales order projects and customer invoices enables the accounting

	payment transactions in an integrated manner, aligning with orders received by the sales division and allowing direct inclusion into the company's accounting journal.	customer invoicing process. Therefore, it is essential to reevaluate the alignment between customer invoices and sales orders to streamline validation by the accounting division and facilitate manual entry into the journal for accurate record keeping.	division to validate each transaction for customer invoice payments and subsequently manage them.
IT Procurement Project Payment Business Process	A system is required for validating vendor bills and for recording each payment transaction to vendors.	In the creation of vendor bills, manual validation processes are still necessary. The recording of each payment transaction has yet to be integrated into the same system.	There is a system that can validate each Vendor bills transaction that are created for project purposes and can seamlessly integrate with the accounting division. The accounting division can enter the direct transaction recording into the accounting journal.
Financial Reporting Business Process	A system is needed to generate financial reports that can be seamlessly integrated with all departments within the company. The system would facilitate the company in creating financial reports directly from every financial transaction, resulting in comprehensive financial statements.	In creating financial reports, the company still relies on periodically inputting each transaction, which can be time-consuming and may lead to the possibility of human errors in financial report generation.	There is a system capable of generating financial reports directly and has been integrated with other departments to record the company's transactions.

Business Process by Odoo Implementation

The researcher analyzes the alignment of features provided by Odoo with the existing business processes within the company based on the Fit/Gap analysis outcomes. Below are the results of the business process analysis in correlation with the features offered by the Odoo Accounting Module

Website Project Payment Business Process

This business process design in Figure 3 will illustrate the sequence of steps involved in the payment process for the website project undertaken by CV XYZ. The main emphasiswill be on the payment workflow within Odoo for the websiteproject, along with the subsequent recording of all transactions within the Odoo accounting module.
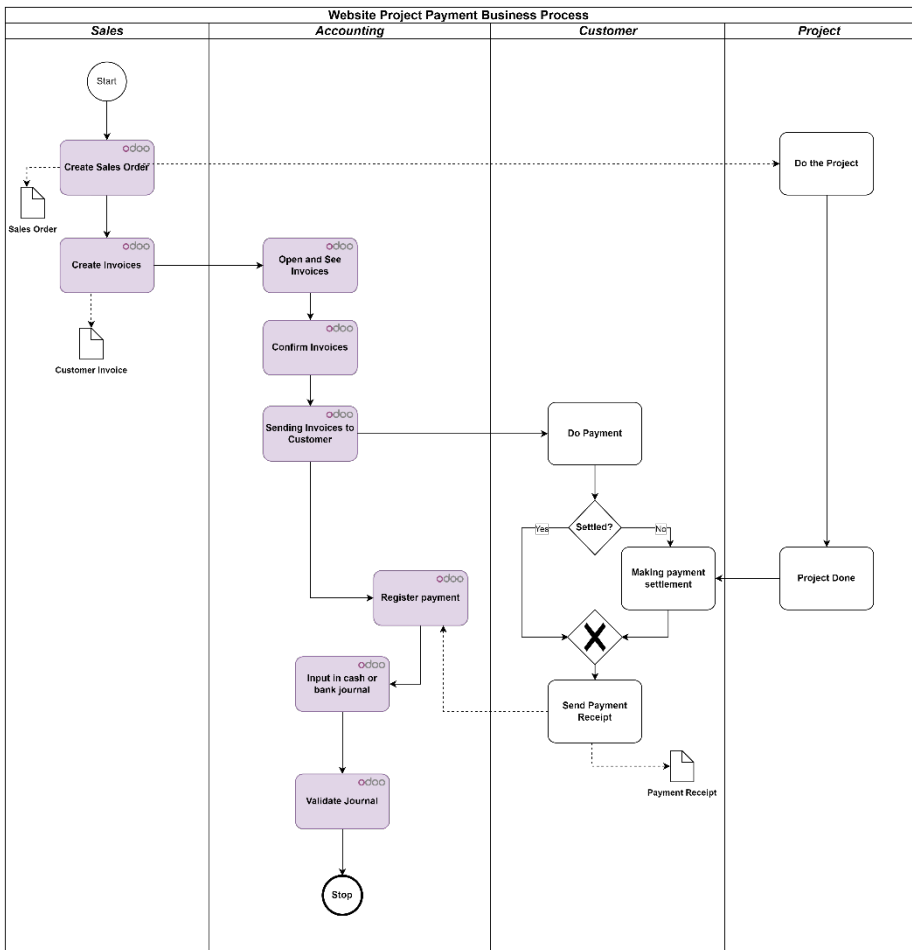
Fig. 3. Website Project Payment Business Process

IT Procurement Project Payment Business Process

This business process design in Figure 4 will illustrate the sequence of steps involved in the payment process for the website project undertaken by CV XYZ. The main emphasis will be on the payment workflow within Odoo for the IT procurement project, along with the subsequent recording of all transactions within the Odoo accounting module.
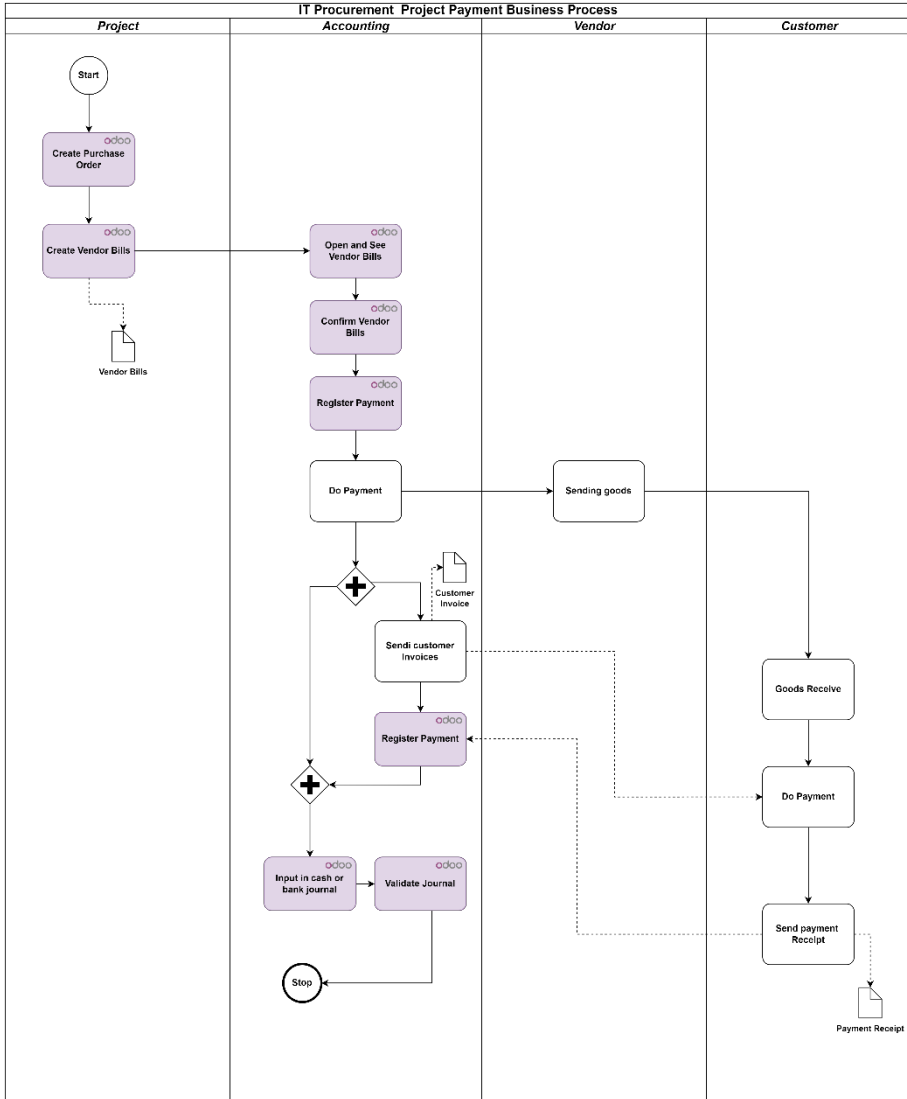
Fig. 4. IT Procurement Payment Business Process

Financial Reporting Payment Business Process

    This business process design in Figure 5 will illustrate the sequence of steps involved in the financial reporting process undertaken by CV XYZ. The main emphasis will be on the reporting workflow within Odoo for the reporting, along with all transactions that generate automatically by Odoo accounting module.
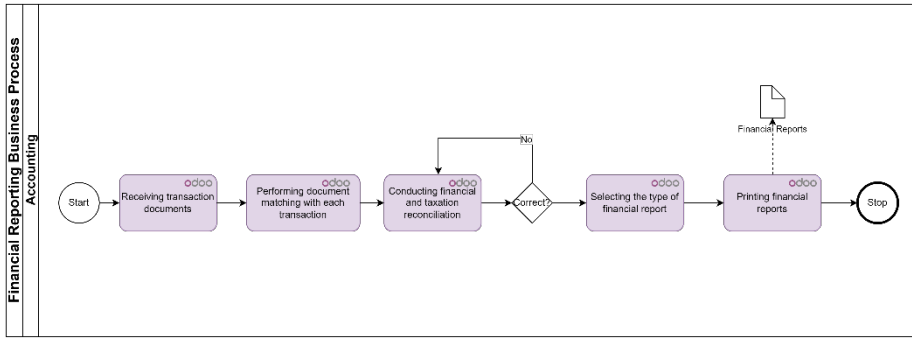
Fig. 5. Financial Reporting Business Process

Accounting System Design

Website Project Payment Business Process System Design

    In Figure 6 the design of the business process for Website projects payments in Odoo can align with the result of fit & gap analysis based on the company requirements. The accounting department receive the customer invoices based on the project request and entry the transaction to journal.

Fig. 6. Design of Odoo Accounting for Website Project Payment Business Process

IT Procurement Project Payment Business Process System Design

In Figure 7 the design of the business process for IT Procurement Payments in Odoo can align with the result of fit & gap analysis based on specific requirements of the company. The vendor bills that created in the system integrate with the project request. The accounting department able to entry vendor bills to journal accounts.
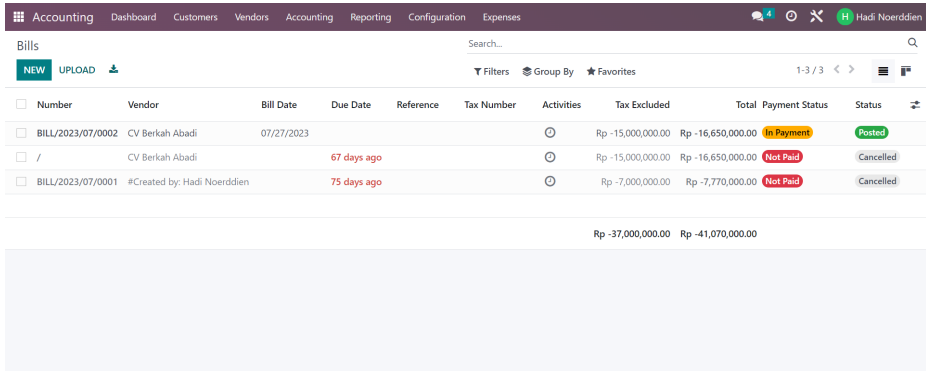

Fig. 7. Design of Odoo Accounting for IT Procurement Project Payment Business Process

Financial Reporting Business Process Design

Design of business process for Financial Reporting in Odoo align with the results of the fit & gap analysis based on the specific requirements of the company. The accounting department able to create the financial report based on all the company transactions in the Odoo accounting system.
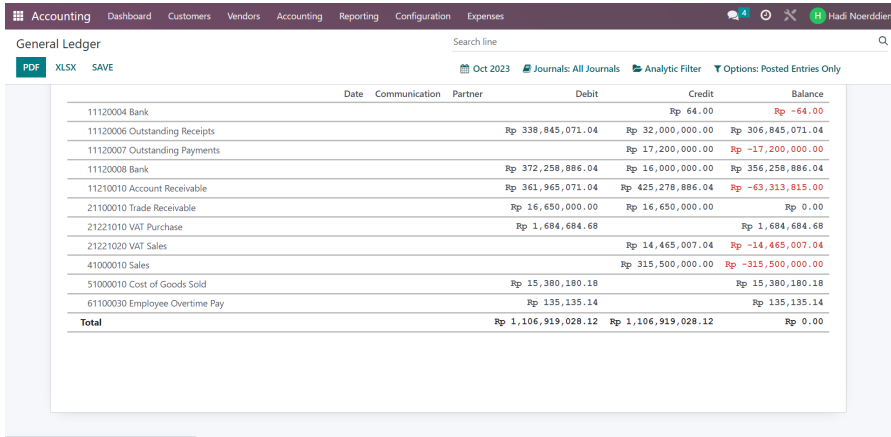

Fig. 8. Design of Odoo Accounting for Financial Reporting Business Process Design

5   Conclusion and Recommendation

5.1   Conclusion

The research carried out to develop an ERP system for accounting management processes at CV XYZ using the Odoo web application within the accounting module and employing the QuickStart method indicates that the system's design is aligned with the company's objectives and needs. The accounting module within the Odoo system can fulfil the company's needs and desires in implementing the ERP system. The features provided by Odoo's accounting module offer solutions to issues related to financial transaction recording, and financial reporting can be directly generated within the system.

5.2   Recommendation

Based on the research, the researcher proposes several recommendations for practical implementation. Firstly, there is a need for further research into the ERP system's accounting module, with a particular emphasis on extending it to implement the system directly into the company's operations. Secondly, it is advisable to prioritize the development of the accounting module's design, explicitly concentrating efforts on enhancing the taxes accounting report section. This approach aims to ensure that the financial reporting process remains robust and compliant with tax regulations, ultimately contributing to more efficient and accurate financial management within the organization.

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