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Customizing Odoo CRM for Pipeline, Opportunity, Project Delivery, and After-Sales Management in a Project-Based Service Company: A Case Study of PT XYZ

Ferri Fatra[1*], Fadhil Muhammad Akbar[1], Rohimin Imani Arti[1], M. Galih Fikran Syah[1]

[1]Telkom University, Bandung, Indonesia

*Corresponding Email: ferrifatra@student.telkomuniversity.ac.id

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ABSTRACT

Project-based service companies manage long sales cycles, multi-channel prospects, quotation revisions, project handover, delivery monitoring, and after-sales opportunities. This study designs and demonstrates a customized Customer Relationship Management (CRM) artifact using Odoo CRM for PT XYZ, an anonymized project-based service company, following Design Science Research. The artifact instantiates an end-to-end pipeline (New Lead, Qualified, Needs Analysis, Proposal/Quotation Sent, Negotiation, Won/Contract Signed, Handover to Delivery, Project Delivery, After Sales/Retention, and Lost) together with opportunity fields, stage-gated documents, activity-based follow-up, quotation conversion, lost-reason capture, and reporting dashboards. Rather than treating the configuration as the result, the study abstracts it into six transferable design principles: stage completeness, stage-gated evidence, mandatory next action, commercial-to-delivery continuity, loss-as-learning, and decision-support reporting. The associated benefits, such as follow-up discipline, quotation traceability, handover quality, delivery visibility, and forecasting support, are presented as design propositions with proposed measurement indicators rather than empirically demonstrated outcomes, and the artifact is evaluated ex ante against defined criteria. The contribution is twofold: a replicable Odoo configuration and a nascent set of design principles for project-based service CRM. Because the evaluation is ex ante, future work should validate the artifact through user acceptance testing and longitudinal performance data.

1. INTRODUCTION

Digital transformation drives service organizations to stop managing prospects and customers only through spreadsheets, private conversations, or scattered documents. In project-based service companies, the sales process is generally longer than retail transactions because each opportunity requires understanding customer needs, clarifying scope, preparing proposals, negotiating, approving contracts, and handing over to the delivery team. When these processes are not well documented, organizations may lose opportunities, follow up inconsistently, and struggle to forecast future revenue.

PT XYZ is a project-based service company positioned in this study as an anonymized object for CRM development and simulation. The characteristics of PT XYZ's business processes require a system capable of managing leads, opportunities, proposals/quotations, negotiations, win/loss status, and after-sales. Common conditions in service selling include prospects arriving from many channels, communication histories not consolidated in one system, proposal status being difficult to monitor, and management lacking a quick overview of pipeline value. These problems indicate the need for a CRM that not only stores customer data but also controls the sales workflow from the beginning through the post-contract stage.

Customer Relationship Management (CRM) is understood as a strategy and system for managing interactions with customers and prospects in a structured, data-driven manner oriented toward long-term relationship value [1][2][11][12]. In the context of sales management, CRM helps organizations turn sales opportunities into a pipeline that can be monitored through stages, probabilities, expected revenue, activity logs, and performance reports. Odoo CRM was selected because it provides pipeline, opportunity, activities, quotation, lost reason, and reporting functions that can be configured to fit business processes [3][4][5][6][7].

The practical gap addressed in this article is the limited availability of CRM customization models that explicitly map the concepts of pipeline and opportunity sales management to the needs of project-based service companies. Much of the CRM discussion focuses on marketing, customer loyalty, or retail, whereas project-based service businesses require control over quotation, follow-up, negotiation, and handover to delivery. Therefore, this article focuses on how Odoo CRM configuration can be adapted to support these processes. A summary of the research gap and the contribution of this article is presented in Table 1 and elaborated in Subsection 2.5.

The research question is: how can Odoo CRM be designed and adapted to support the management of pipeline, opportunity, project delivery, and after-sales at PT XYZ? The objective of this study is to formulate an Odoo CRM customization model covering the end-to-end process from prospect to post-project service, to demonstrate the configuration results using actual application screenshots, to evaluate the artifact ex ante against defined criteria, and to abstract the configuration into transferable design principles for project-based service CRM. The study thus offers a dual contribution: a replicable configuration and a set of design principles, rather than implementation documentation alone.

Table 1. Research gap and contribution of the article

Aspect	Common Condition	Contribution of This Article
CRM focus	Many studies treat CRM as a customer database, digital marketing, or loyalty tool.	Positions CRM as an operational tool to control the pipeline, opportunity, quotation, and follow-up of service sales.
Business context	CRM implementation is often presented in retail, MSMEs, or product sales.	Raises the context of project-based service companies with longer and more complex sales cycles.
System artifact	Studies often stop at general concepts or designs.	Presents an actual Odoo CRM configuration of stages, activity, quotation, lost reason, and reporting.
Evaluation	CRM assessment is often limited to general benefits.	Proposes evaluation indicators such as pipeline traceability, follow-up discipline, forecasting, and win/loss analysis.

2. LITERATURE REVIEW

2.1. Customer Relationship Management

CRM is a combination of business processes, technology, and organizational culture aimed at creating value through better relationships with customers. Buttle and Maklan explain that CRM encompasses strategic, operational, and analytical perspectives [1]. Strategic CRM emphasizes the customer as the center of business strategy, operational CRM supports marketing, sales, and service processes, while analytical CRM uses data to support segmentation, prioritization, and decision making.

In service companies, CRM plays an important role because customer decisions are determined not only by price but also by trust, reputation, competence, and the quality of communication. Customer relationships must be built from the early prospecting stage, needs understanding, proposal, and delivery, up to repeat-order opportunities. Therefore, a good CRM must be able to store interaction histories, customer needs, proposal documents, and lessons learned from each opportunity.

2.2. Pipeline and Opportunity Sales Management

A pipeline is a visualization of sales stages from lead until a transaction is won or lost. An opportunity is a specific sales prospect managed within the pipeline and has attributes such as customer, estimated value, probability, closing date, PIC, and follow-up activities. The pipeline provides a macro view of all opportunities, whereas opportunity management provides micro control over each opportunity so that sales do not miss important follow-ups.

In project-based service businesses, an opportunity does not always immediately become a transaction. A prospect must pass through qualification, needs analysis, proposal/quotation preparation, negotiation, customer approval, contract, handover to the delivery team, project execution, and after-sales. Therefore, the pipeline stages must reflect the real end-to-end process, namely New Lead, Qualified, Needs Analysis, Proposal/Quotation Sent, Negotiation, Won/Contract Signed, Handover to Delivery, Project Delivery, After Sales/Retention, and Lost. With this design, CRM not only helps sales close deals but also ensures that commercial information, work scope, and customer commitments can be passed on in an orderly manner to the delivery process.

2.3. Odoo CRM as a Customization Platform

Odoo CRM provides features to manage leads and opportunities through a pipeline, schedule activities, and produce sales pipeline analysis [3]. The Odoo documentation explains that pipeline analysis can be used to view pipeline effectiveness as leads or opportunities move from one stage to the next, until they become won or archived/lost [4]. Odoo also provides an expected revenue report through the Reporting - Pipeline menu using the Expected Revenue measure [5].

Within the sales flow, Odoo allows an opportunity to be linked to a quotation. After the quotation is approved and confirmed, the process can continue into a sales order and invoice [6]. Odoo also provides lost opportunities and lost reason mechanisms to archive failed opportunities and analyze the causes of failure [7]. These features make Odoo CRM relevant to be customized for pipeline and opportunity sales management processes.

2.4. Design Science Research

This study uses Design Science Research (DSR) because its main objective is to produce an information system artifact that solves a practical organizational problem. Hevner et al. explain that DSR is oriented toward the creation and evaluation of artifacts that are relevant to environmental needs and contribute to knowledge [8]. Peffers et al. formulate the DSR stages comprising problem identification, solution objectives, design and development, demonstration, evaluation, and communication [9][10].

The artifact in this article is not a new application built from scratch, but an Odoo-based CRM configuration that translates the concepts of pipeline and opportunity sales management into operational features. This approach is appropriate because the value of the research lies in adapting processes, data, features, and dashboards to the needs of project-based service businesses.

2.5. Previous Studies and Research Position

Several previous studies have discussed CRM adoption from various perspectives. Chen and Popovich emphasize that CRM success is determined not only by technology but also by the integration of people and business processes [11]. Ngai classified the CRM literature and showed that most studies focus on marketing and customer analytics, while sales-force automation and the management of the sales process are still relatively rarely discussed [12]. In the business-to-business sales context, Rodriguez and Honeycutt found that CRM utilization positively affects sales effectiveness and performance through improved team collaboration [13].

In the Odoo environment, Terminanto et al. demonstrated the implementation of the Odoo Sales and CRM modules in an Indonesian company through business process modeling and user acceptance testing [14]. However, these studies generally stop at customer management, marketing, or product sales, and have not explicitly mapped the project-based service pipeline stages covering needs analysis, negotiation, handover to delivery, project execution, and after-sales. This study positions itself to fill that gap by developing an end-to-end Odoo CRM configuration that unifies the sales, delivery, and customer-retention processes for project-based service companies, as summarized in Table 1.

3. RESEARCH METHODS

This study uses a Design Science Research approach with PT XYZ as a case study. Research data are sourced from business needs analysis, business process documentation, Odoo CRM configuration documents, and screenshots of the Odoo CRM application used as evidence of artifact demonstration. To make the status of the demonstration explicit, the screenshots are of two kinds. The first kind shows the actual customized artifact: the redesigned pipeline, the custom end-to-end stages, and an opportunity populated with realistic project data representative of a public-works tender (Figures 1-3). The second kind shows generic Odoo platform features that are independent of the specific customization, such as activity scheduling, the quotation-to-sales-order conversion, the lost-reason dialog, and reporting (Figures 4-12); these retain Odoo's built-in demo dataset because they illustrate platform behavior rather than the customized configuration. In all cases, customer names and monetary values are treated as simulated/dummy data for confidentiality and academic purposes, and the proposed custom stages, fields, and lost reasons are specified in Table 4, Table 5, and Table 8.

Consistent with the demonstration status above, the artifact is evaluated ex ante rather than ex post. Following the Framework for Evaluation in Design Science (FEDS), an artificial, formative, ex-ante evaluation is appropriate when the goal is to assess the design of an artifact before its deployment in a naturalistic setting [15]. Accordingly, this study evaluates the artifact through a criteria-based argument supported by the demonstration, and operationalizes the expected benefits as proposed indicators for a subsequent ex-post evaluation. The evaluation criteria consist of four dimensions: functional fit (the extent to which the Odoo configuration supports the pipeline and opportunity sales process), traceability (the system's ability to record the history of follow-ups, documents, quotations, and opportunity status), decision support (the ability of reporting to help management read the pipeline, expected revenue, and lost reasons), and adoption readiness (the ease of use for sales, management, and the delivery team).

Table 2. Research stages based on Design Science Research

DSR Stage	Activity in the Study	Output
Problem identification	Analyzing the condition of the project-based service sales process: scattered prospect data, inconsistent follow-up, unmonitored quotation status, and forecasting not based on the pipeline.	List of problems and CRM needs.
Solution objectives	Defining system requirements: a structured pipeline, activity plan, quotation, lost reason, reporting, and dashboard.	CRM artifact design objectives.
Design and development	Configuring stages, opportunity fields, activity, quotation flow, lost reason, and reporting in Odoo CRM.	Odoo CRM configuration artifact.

DSR Stage	Activity in the Study	Output
Demonstration	Showing the use of Odoo through actual screenshots of the pipeline, activity list, opportunity, quotation, lost reason, and reporting.	Application demonstration evidence.
Evaluation	Evaluating the artifact ex ante against four criteria (functional fit, traceability, decision support, adoption readiness) using a criteria-based argument supported by the demonstration.	Ex-ante evaluation and proposed measurement indicators.
Communication	Compiling the results in a scientific article format for publication.	Manuscript ready to be adapted to the journal template.

4. RESEARCH FINDINGS

4.1. Business Process Context of PT XYZ

In this article, PT XYZ is represented as a project-based service company. The sales business process does not stop at receiving a lead but covers needs qualification, needs analysis, scope discussion, proposal preparation, negotiation, customer approval, contract, handover to delivery, project execution, billing, and after-sales. Accordingly, the CRM must be designed as an end-to-end process control system, not merely a digital address book or a list of sales opportunities.

The main problems addressed through the CRM configuration include prospects arriving from many sources, follow-ups that are not always documented, difficulty in monitoring proposal status, a lack of information on opportunity value, and the absence of systematic recording of reasons for losing opportunities. These problems are the main focus of pipeline and opportunity sales management at PT XYZ.

4.2. Business Needs and Odoo CRM Configuration

Table 3. Mapping of business needs to Odoo CRM configuration

Business Need	Odoo CRM Configuration/Feature	Expected Benefit
Leads and opportunities recorded in one system.	Kanban pipeline with stages New Lead, Qualified, Needs Analysis, Proposal/Quotation Sent, Negotiation, Won/Contract Signed, Handover to Delivery, Project Delivery, After Sales/Retention, and Lost.	Management can see the position of each opportunity in real time, from early prospect to post-project.
Every prospect has a clear follow-up.	Activity and follow-up, Mark as Done, Chatter, and Done & Schedule Next.	More disciplined follow-up and stored communication history.
Proposals or quotations are easy to trace.	Opportunity converted into quotation, sales order, and invoice.	More transparent proposal status and fewer lost documents.
Handover from sales to delivery is documented.	Handover to Delivery stage, handover form, quotation/contract attachments, and link to Project.	Reduces miscommunication between sales commitments and project execution.
Project execution and after-sales can be monitored.	Project Delivery and After Sales/Retention stages connected with Project, Helpdesk, or follow-up activities.	Management can monitor delivery, BAST, invoicing, support, maintenance, and renewal/upsell opportunities.
Reasons for failure can be analyzed.	Lost Reason and closing note on opportunities lost from several stages.	The organization can improve pricing, scope, timeline, and communication strategies.
Management needs pipeline reports.	Odoo reporting: bar chart, line chart, pie chart, stacked, list, and pivot.	Sales decisions, forecasting, delivery status, and after-sales can be more data-driven.

4.3. Pipeline Stage Configuration

The pipeline stages in Odoo CRM are modified from the initial flow of Lead, Qualified, Proposal, Negotiation, and Won into a more complete flow that matches the needs of a project-based service business. The proposed pipeline is New Lead → Qualified → Needs Analysis → Proposal/Quotation Sent → Negotiation → Won/Contract Signed → Handover to Delivery → Project Delivery → After Sales/Retention, with a Lost status that can occur from several stages. Adding Needs Analysis prevents a proposal from being created before the customer's needs are clear; Negotiation separates the revision of price, scope, schedule, and payment terms from the closing stage; Handover to Delivery ensures sales information is passed on to the execution team;

Project Delivery monitors kick-off, execution, UAT, BAST, and invoicing; while After Sales/Retention records support, maintenance, customer satisfaction, and renewal or upsell opportunities. Technically, Odoo CRM remains the center of opportunity management, while delivery and after-sales can be connected to the Sales, Project, Invoicing, and Helpdesk modules. To make the pipeline an auditable control instrument rather than a passive view, each stage is gated by a minimum set of evidence: the document or work product that justifies entering and leaving the stage. Table 4 therefore defines each stage together with its meaning, the key input-to-output documents, and the role accountable for it. These documents need not be separate files; many are fields, attachments, Chatter notes, quotations, sales orders, invoices, or project tasks within Odoo.

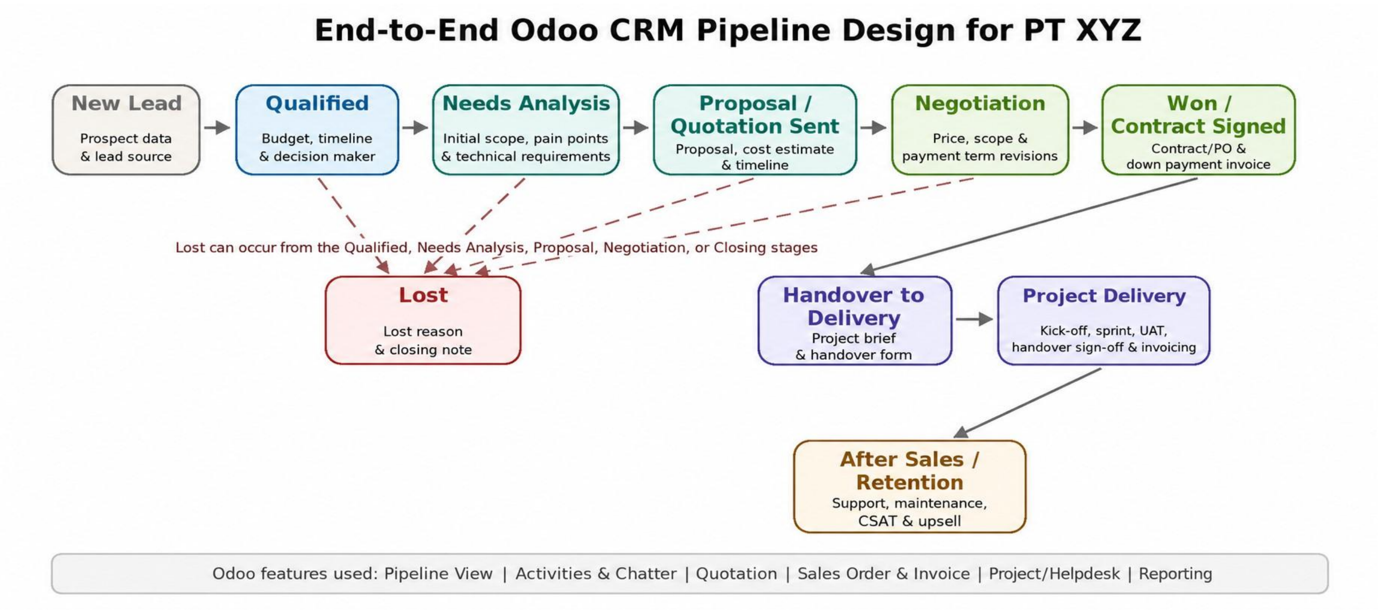

Figure 1. End-to-end Odoo CRM pipeline design for PT XYZ, from New Lead to After Sales/Retention with a Lost path

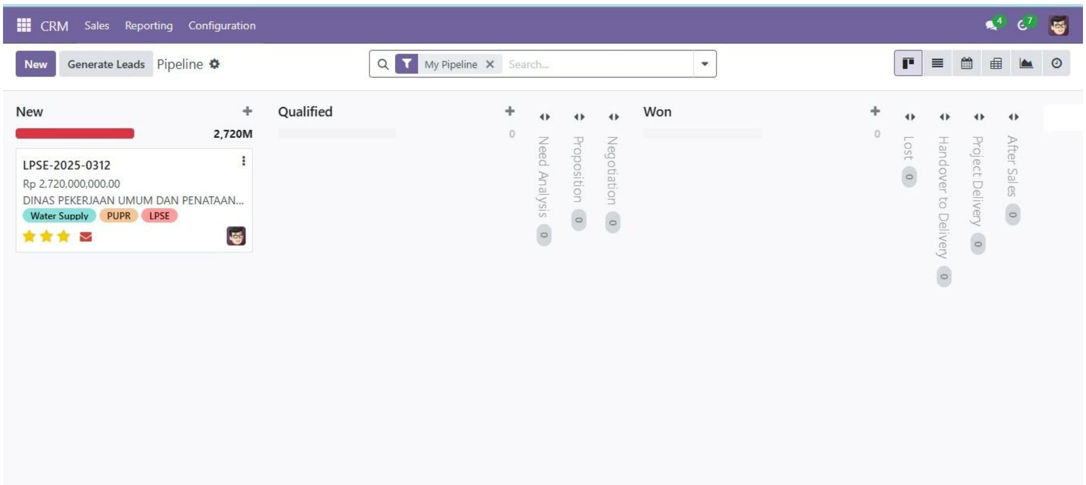

Figure 2. Kanban pipeline in Odoo CRM showing the customized end-to-end stages with a sample project opportunity

Table 4. End-to-end pipeline stages: meaning, stage-gated documents, and accountable role

Stage	Process Meaning	Key Documents (Input → Output)	Owner
New Lead	New prospect from the website, referral, cold email, social media, an event, or project information.	Lead form, company data, lead source → new opportunity with first next activity.	Sales / CRM PIC

Stage	Process Meaning	Key Documents (Input → Output)	Owner
Qualified	Prospect assessed as worth pursuing based on needs, budget, timeline, authority, and closing potential.	Qualification checklist → Qualified status, expected revenue, probability, target closing date.	Sales / Sales Manager
Needs Analysis	Sales/consultant explore pain points, scope, technical needs, constraints, and assumptions.	Meeting minutes, needs list → needs/initial-scope document as the basis for the proposal.	Sales + Consultant
Proposal / Quotation Sent	The team prepares and sends the proposal, quotation/BoQ, timeline, resources, and payment terms.	Proposal template, BoQ, resource plan → quotation sent with delivery proof and follow-up date.	Sales / Pre-sales
Negotiation	The customer requests clarification or revision of price, scope, schedule, or payment terms.	Negotiation notes, customer feedback → revised/final-offer quotation and a proceed/stop decision.	Sales / Sales Manager
Won / Contract Signed	The customer approves the quotation, contract, work order (SPK), or PO.	Final quotation, contract/SPK/PO, internal approval → sales order, down-payment invoice, start date.	Sales + Finance + Legal
Handover to Delivery	Sales hand commercial and technical information to the delivery/project team.	Handover form, final scope, stakeholder list, RACI → internal kick-off, action items, initial task.	Sales + Project Manager
Project Delivery	The delivery team runs kick-off, execution, monitoring, UAT, BAST, and invoicing.	Project charter/plan, issue log, change requests → UAT, BAST, milestone invoices, lessons learned.	Project Manager / Delivery
After Sales / Retention	The company maintains the relationship through support, maintenance, satisfaction, renewal, and upsell.	SLA/support log, maintenance checklist, CSAT → support reports, renewal/upsell opportunities.	Customer Success
Lost	The opportunity fails or is stopped at any stage.	Lost reason, closing note → win/loss learning record and a nurturing plan if still potential.	Sales / Sales Manager

4.4. Opportunity Data Structure

Each opportunity in the CRM must contain enough data for process control and decision making. The minimum fields recommended for PT XYZ are opportunity name, customer, contact person, service type, expected revenue, probability, expected closing date, salesperson/PIC, lead source, customer needs, priority, next activity, quotation status, and lost reason. With this structure, an opportunity contains not only the prospect's name but also the business value and the next steps that must be taken.

Table 5. Recommended opportunity fields

Data Group	Field	Use
Customer identity (project owner)	Customer, contact person, email, phone, industry.	Facilitates communication and customer segmentation.
Opportunity value	Expected revenue, probability, prorated revenue, expected closing date.	Supports forecasting and follow-up prioritization.
Service needs	Service type, initial scope, customer needs, pain points.	Keeps the proposal aligned with the needs.
Process control	Stage, salesperson, priority, next activity, tags.	Encourages accountability and pipeline control.
Documents and decisions	Quotation, sales order, contract/SPK/PO, down-payment invoice, handover form, UAT/BAST, invoice, lost reason, after-sales note.	Makes the opportunity, delivery, billing, and after-sales history traceable.

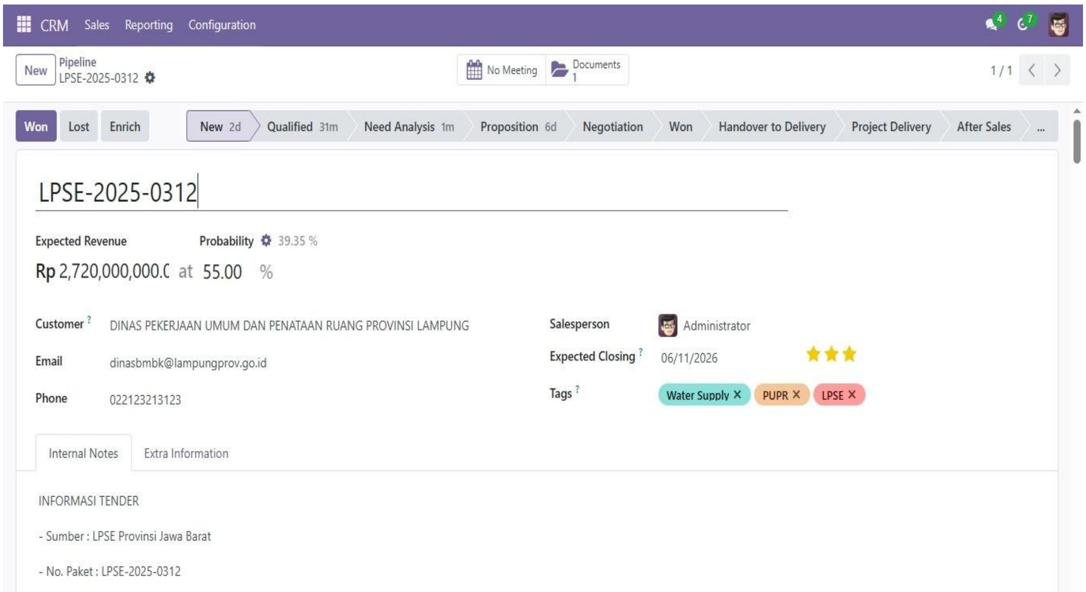

Figure 3. Opportunity form in Odoo CRM showing expected revenue, customer data, and the customized pipeline stages.

4.5. Activity and Sales Follow-Up

The activity and follow-up features are important controls so that an opportunity does not stall without a follow-up. In the tested configuration, when an activity is completed, sales use the Mark as Done function. Odoo then provides space to record the activity result, which enters the Chatter as a permanent history. After that, sales can use Done & Schedule Next to create the next activity. This mechanism encourages follow-up discipline because each opportunity is directed to have a clear next step.

Table 6. Activity plan for the project-based service pipeline

Time	Activity	Purpose
Day 0	Input the lead, introductory call/email, and validate the contact person.	Confirm the initial needs, lead source, and customer PIC.
Day 1-2	Lead qualification and an initial needs meeting.	Assess budget, timeline, decision maker, and closing potential.
Day 3-5	Needs analysis and preparation of the needs minutes.	Explore scope, pain points, technical needs, assumptions, and initial risks.
Day 5-7	Send the proposal/quotation/BoQ.	Provide a formal offer containing scope, timeline, resources, cost, and terms.
Day 8-14	Quotation follow-up and negotiation.	Answer questions, revise price/scope, and reduce the risk of no response.
At closing	Confirm the contract/PO, sales order, and down-payment invoice.	Convert the opportunity to Won and validate the transaction value.
D+1 after Won	Internal handover to the delivery team.	Hand over final scope, quotation, contract, stakeholders, risks, and action list.
During the project	Progress meetings, UAT, BAST, and milestone invoicing.	Ensure delivery matches the commitment and billing runs in order.
D+7/D+30 after project	After-sales follow-up, CSAT, maintenance, renewal, or upsell.	Maintain the customer relationship and open repeat-order opportunities.

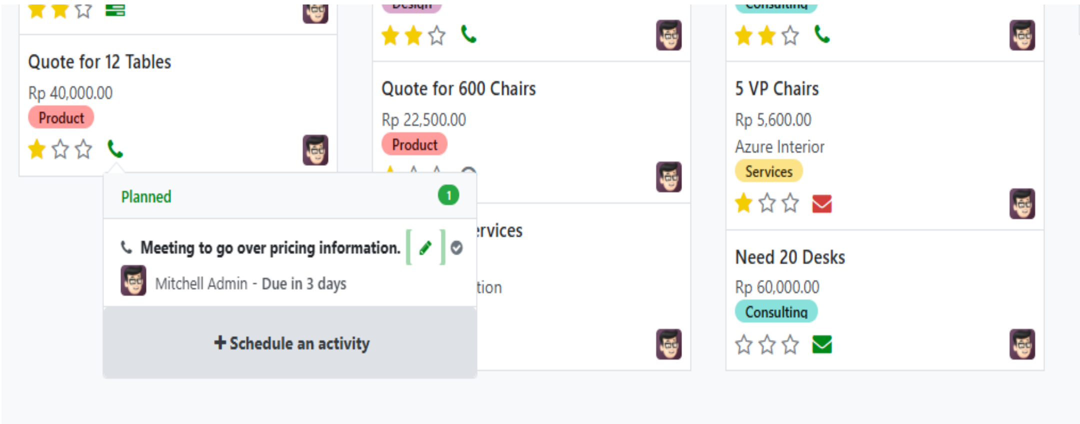

Figure 4. Scheduling an activity on an opportunity (planned meeting and the Schedule an Activity option) in the Kanban view

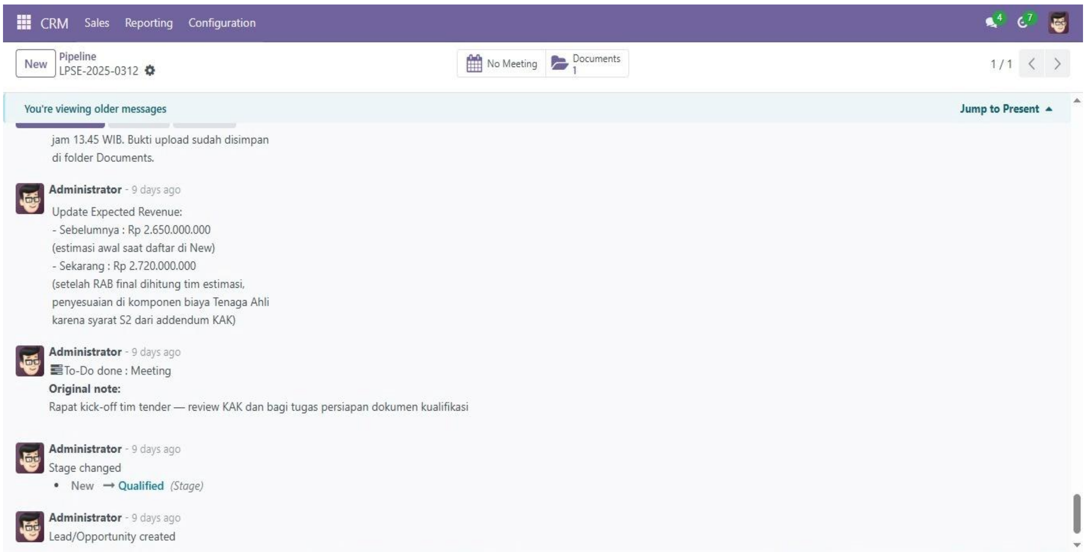

Figure 5. Activity log and Chatter history recording follow-up notes on an opportunity

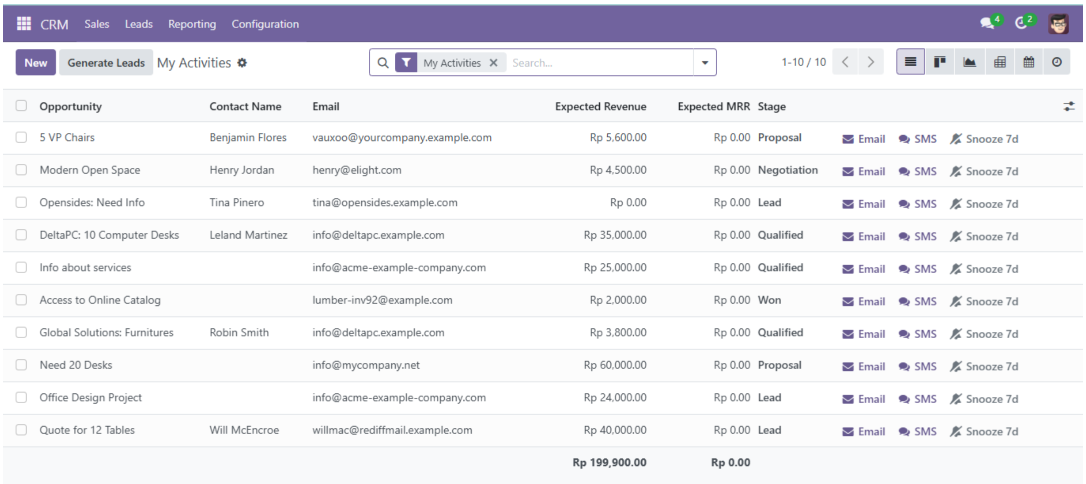

Figure 6. List of opportunities requiring follow-up based on the planned next activities

4.6. Converting Opportunity into Quotation and Sales Order

In service businesses, a quotation is not merely a price list but an offer document containing the service scope, deliverables, timeline, cost, resources, assumptions, exclusions, and payment terms. Odoo supports the opportunity-to-quotation flow by creating a quotation from an opportunity. When the customer approves the quotation through the customer portal or it is confirmed by the sales team, the quotation can become a sales order and the opportunity changes to Won. For PT XYZ's needs, this flow must continue with a down-payment invoice, handover to delivery, project delivery, UAT/BAST, milestone invoicing, and after-sales. In this way, the relationship among the prospect, offer document, contract, project work, handover, billing, and post-project service is stored in a single traceable cycle.

Table 7. Opportunity-to-quotation flow at PT XYZ

Step	Activity in Odoo	Control Gained
Opportunity	Sales open the opportunity and review the customer's needs, opportunity value, PIC, and next activity.	The context of needs and opportunity value is visible.
Needs Analysis	Sales record meeting results, pain points, initial scope, and needs documents in the opportunity/Chatter.	Customer needs are documented before the proposal is made.
New Quotation	Sales create a quotation from the opportunity with service items, scope, timeline, resources, and terms.	The proposal/offer is linked to the opportunity.
Send by Email / Portal	The quotation is sent to the customer or accessed through the customer portal.	The delivery status is documented.
Negotiation / Revision	Revisions of price, scope, schedule, and terms are recorded as a quotation revision and Chatter note.	The negotiation history is traceable.
Confirm Order	The quotation is approved and confirmed into a sales order.	The opportunity changes to Won and the transaction value is validated.
DP Invoice	A down-payment or initial-milestone invoice is created as agreed.	Control of the initial payment before delivery starts.
Handover to Delivery	Order information, final scope, contract/PO, and initial risks are passed to the project/delivery team.	Reduces the risk of miscommunication between sales and delivery.
Project Delivery	The delivery team runs kick-off, progress, UAT, BAST, and milestone invoicing through the Project/Invoicing modules.	Project status and billing can be monitored.
After Sales / Retention	The team performs support, maintenance, satisfaction surveys, renewal reminders, and upsell opportunities.	The customer relationship continues after the project is completed.

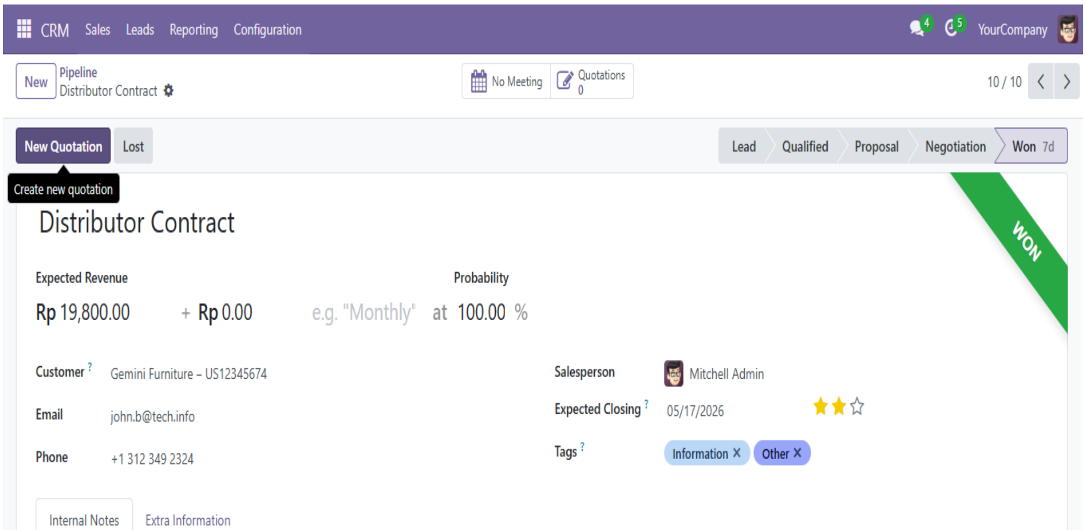

Figure 7. An opportunity that has reached the Won/Contract Signed status after the approval/confirmation process

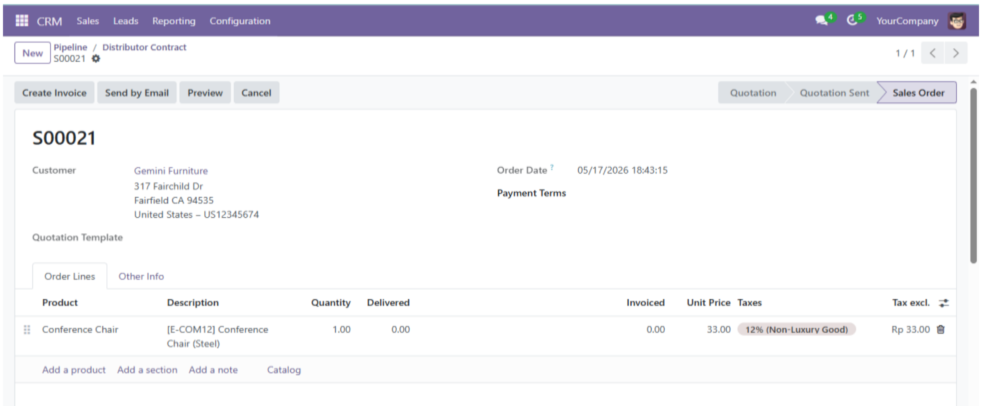

Figure 8. Example of a quotation converted into a sales order in Odoo

4.7. Lost Reason and Win/Loss Learning

Not all opportunities will end as Won. Therefore, the Lost Reason configuration is an important feature for organizational learning. In the updated pipeline, the Lost status appears not only after the proposal but can be used from the Qualified, Needs Analysis, Proposal/Quotation Sent, Negotiation, or Closing stages. When the user presses the Lost button, the system asks for the reason for failure and a closing note. The reasons recommended for PT XYZ include price too high, customer budget unavailable, stronger competitor, no response, unsuitable timeline, changed scope, and customer needs not matching the company's services. These data can be used to analyze failure patterns and improve sales strategy, proposals, resource planning, and customer communication.

Table 8. Recommended lost reason taxonomy

Lost Reason	Meaning	Corrective Action
Price too high	The customer considers the price unsuitable for the budget or the value proposition is not yet strong enough.	Review the cost structure, package options, payment terms, and value-benefit explanation.
Budget unavailable	The customer is interested but the budget is not yet available or is postponed.	Add to the nurturing pipeline and schedule follow-up in the next period.
Lost to competitor	The customer chooses another provider.	Analyze competitor advantages and improve the proposal, experience evidence, and service differentiation.
No response	The customer does not respond after several follow-ups.	Set a follow-up limit, use alternative channels, and create a nurturing reminder.
Unsuitable timeline	The customer's schedule does not match internal capacity or delivery-team readiness.	Improve resource planning, alternative scheduling, and availability communication.
Changed scope	The customer's needs change significantly from the initial requirements.	Create a quotation revision or a new opportunity if the scope changes substantially.
Needs not matching	The customer's needs do not match PT XYZ's services.	Provide alternative recommendations, record lessons learned, and avoid irrelevant proposals.

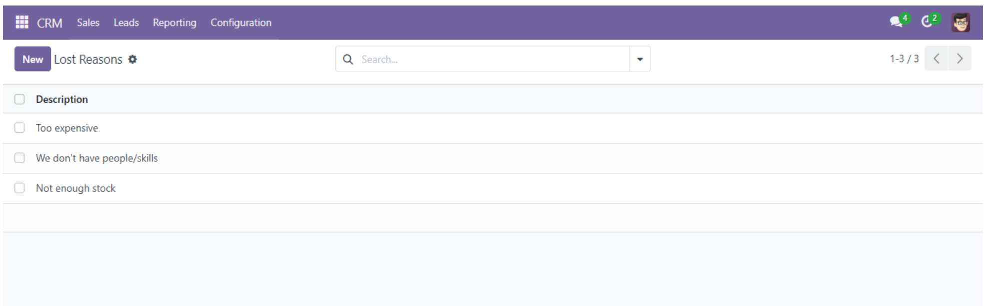

Figure 9. The lost reason feature in Odoo CRM showing the default values (Too expensive; We don't have people/skills; Not enough stock). The lost reason taxonomy proposed for PT XYZ is detailed in Table 8 and should be configured to replace these default values

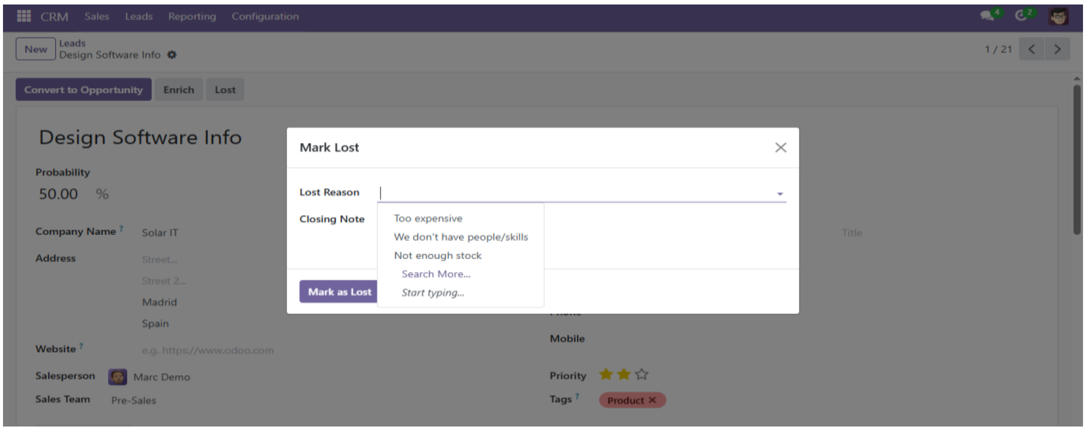

Figure 10. The Mark Lost dialog that asks the user to record a lost reason and a closing note

4.8. Reporting and Dashboards for Decision Making

Odoo reporting provides bar chart, line chart, pie chart, stacked chart, list, and pivot visualizations. In the PT XYZ context, dashboards can be used to monitor the number of opportunities per stage, pipeline value, expected revenue, prorated revenue, win rate, lost reasons, and salesperson performance. These dashboards bridge the operational needs of sales with the strategic needs of management.

Table 9. Recommended CRM dashboard indicators

Indicator	Definition	Managerial Use
Pipeline value	Total value of all active opportunities.	See the potential future revenue.
Expected revenue	Opportunity value weighted by probability.	Support a more realistic revenue forecast.
Opportunity aging	How long an opportunity stays in one stage.	Identify stagnant opportunities.
Quotation cycle time	Time from needs analysis until the quotation is sent/approved.	Assess the response speed of sales and pre-sales.
Win rate	Percentage of opportunities that become Won.	Measure the effectiveness of the sales process.
Lost reason distribution	Distribution of the causes of lost opportunities.	Improve pricing, proposal, timeline, and communication strategies.
Sales activity compliance	Percentage of opportunities that have a next activity.	Measure sales follow-up discipline.
Delivery handover completion	Percentage of Won deals that have a handover form and final-scope documents.	Assess delivery readiness before the project starts.
After-sales follow-up rate	Percentage of completed projects that have CSAT, support, maintenance, or renewal follow-up.	Increase customer retention and upsell opportunities.

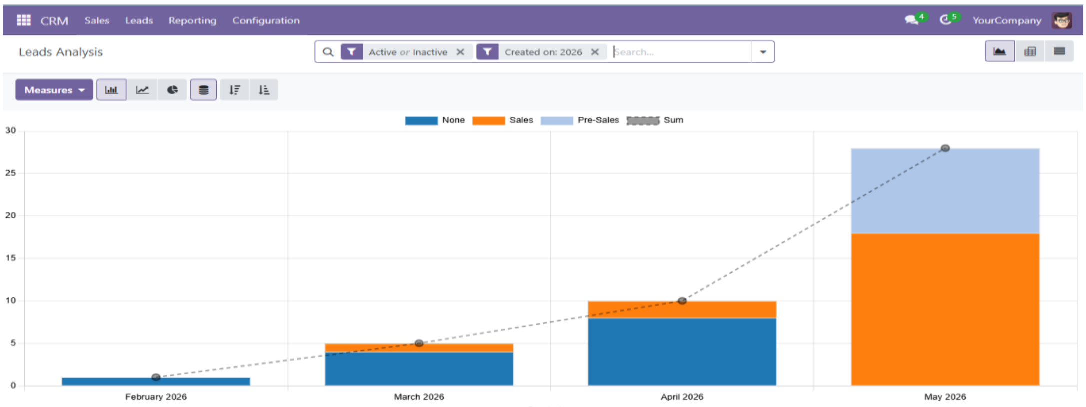

Figure 11. Example Odoo CRM reporting chart for monitoring pipeline development over time

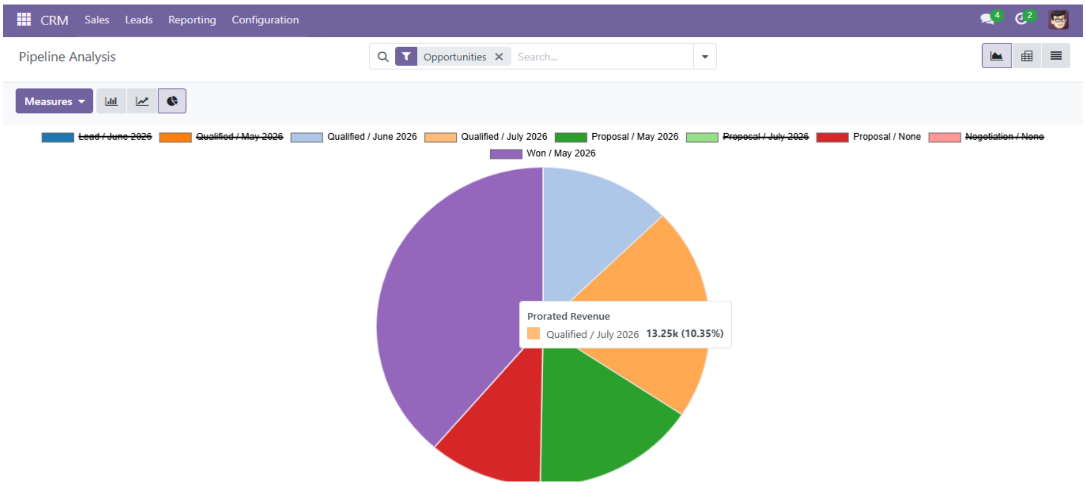

Figure 12. Pipeline analysis presented as a pie chart by stage and period

4.9. Artifact Evaluation (Ex-Ante)

Following the evaluation design stated in Section 3, the artifact is assessed ex ante: the verdict concerns whether the demonstrated configuration is, by construction, capable of supporting the four criteria, not whether it has produced measured improvement in practice. On functional fit, the demonstration shows that the configured pipeline, opportunity fields, activity flow, quotation conversion, lost-reason capture, and reporting jointly cover the required pre-sale-to-post-sale process. On traceability, every artifact is linked to its opportunity and recorded in the Chatter, so the history of follow-ups, documents, and status changes is, by design, auditable. On decision support, the reporting views expose pipeline value, expected revenue, and lost-reason distribution. Adoption readiness, by contrast, cannot be claimed from the demonstration and remains the weakest dimension, since it depends on user discipline that only an ex-post study can confirm. Table 10 therefore restates each initial problem as a design proposition and pairs it with a proposed indicator that a future ex-post evaluation should measure; the percentage targets are intended thresholds, not observed results.

Table 10. Ex-ante artifact evaluation: design propositions and proposed indicators

Initial Problem	Design Proposition (configuration)	Proposed Indicator for Ex-Post Measurement
Prospects scattered and hard to monitor.	Centralized Kanban pipeline and opportunity list.	100% of active prospects recorded as opportunities.
Follow-up relies on sales memory.	Activity plan, Mark as Done, Chatter, Done & Schedule Next.	At least 90% of active opportunities have a next activity.
Proposal status is hard to trace.	Opportunity to quotation, quotation revision, and sales order.	Every quotation is linked to an opportunity.
Commercial and delivery documents are not collected.	Required-document list per stage and attachment/Chatter on the opportunity.	At least 95% of Won deals have a contract/PO, final quotation, and handover form.
Sales-to-delivery handover risks being incomplete.	Handover to Delivery stage and a final-scope document checklist.	100% of new projects have a handover before kick-off.
After-sales is not monitored as a business opportunity.	After Sales/Retention stage and renewal/upsell activities.	At least 80% of completed projects have CSAT or support/renewal follow-up.
Reasons for losing are not documented.	Mandatory lost reason and closing note.	At least 95% of lost opportunities have a reason.
Management struggles to forecast.	Expected-revenue reporting, pipeline analysis, delivery status, and after-sales follow-up.	Pipeline reports can be generated automatically every week.

5. DISCUSSION

The configuration results show that Odoo CRM can be adapted to support the sales process of project-based services. The main value of the customization lies not only in the availability of a pipeline view but in the connection between stages, activity, quotation, lost reason, and reporting. With this connection, the CRM becomes a process control system rather than merely a place to store customer data.

The activity and Chatter features have an important implication for accountability. Every call, email, meeting, and follow-up can be documented so that managers do not have to rely on verbal sales reports. The Done & Schedule Next option also promotes the principle of "no opportunity without next action", namely that every active opportunity must have a clear follow-up step.

Converting an opportunity into a quotation strengthens commercial traceability while also bridging to delivery. In many organizations, proposals are sent through separate emails, offer revisions are not documented, and scope commitments are often not carried over intact to the execution team. With a quotation flow equipped with a sales order, down-payment invoice, handover form, project delivery, UAT/BAST, and after-sales note, the relationship among customer needs, offer documents, approval, execution, handover, billing, and renewal opportunities can be seen in a single cycle.

Adding the Project Delivery and After Sales/Retention stages also makes the CRM more aligned with the character of project-based service businesses. Although delivery can operationally be managed through the Project module and after-sales through Helpdesk or follow-up activities, their presence in the pipeline design helps management see that the customer relationship does not end at the Won status. With this approach, the CRM functions as a bridge among the sales, delivery, finance, and customer-success processes.

Lost reason provides analytical value for the organization. Without recording lost reasons, sales failures remain only informal information. With consistent categories, the organization can see whether lost opportunities are caused more by price, budget, competitors, timeline, or a lack of customer response. This information can become a basis for improving the offer strategy, customer segmentation, and resource prioritization.

Nevertheless, CRM success still depends on user discipline. A good system will not produce useful data if sales do not update stages, do not write follow-up notes, or do not fill in lost reasons. Therefore, CRM implementation needs to be accompanied by standard operating procedures, user training, data-quality audits, and weekly pipeline reviews.

5.1. Design Principles

Beyond the specific Odoo configuration, the findings can be abstracted into a set of design principles that generalize to CRM customization for project-based service firms. These principles state, in platform-independent terms, what the artifact does and why it works, and they constitute the study's primary analytical contribution: a move from a single instantiation toward nascent design knowledge. Table 11 summarizes six principles together with their rationale and their concrete instantiation in this study.

Table 11. Design principles for project-based service CRM

Design Principle	Rationale	Instantiation in This Study
DP1 – Stage completeness	A pre-sale-only pipeline cannot govern commitments that mature after the deal is won.	Extends the default pipeline into a New Lead-to-After Sales/Retention lifecycle with an explicit Lost path.
DP2 – Stage-gated evidence	Pipeline movement is trustworthy only when each transition is backed by an auditable work product.	Defines minimum input-to-output documents and an accountable role per stage (Table 4).
DP3 – Mandatory next action	Opportunities stall when follow-up depends on individual memory.	Enforces "no opportunity without next action" via Activity, Mark as Done, and Done & Schedule Next.
DP4 – Commercial-to-delivery continuity	Scope and commitments are lost when sales and delivery use disconnected tools.	Links opportunity, quotation, sales order, handover, project, and after-sales into one traceable cycle.
DP5 – Loss as learning	Unrecorded losses cannot inform strategy.	Makes lost reason and closing note mandatory to build a structured win/loss knowledge base.
DP6 – Decision-support reporting	Operational data create value only when aggregated for management decisions.	Configures pipeline, expected-revenue, win-rate, and lost-reason views to bridge operational and managerial needs.

5.2. Managerial Implications

For PT XYZ, these principles translate into several managerial implications. Sales process control improves because management can see the position, value, owner, documents, and next action of each opportunity without waiting for manual reports, while sales staff work from a single follow-up priority list rather than searching scattered channels. Revenue forecasting becomes more disciplined as expected and prorated revenue weight opportunities by probability, and document and handover quality rise because each Won deal carries its scope, quotation, contract, stakeholder, and negotiation history into delivery. The same structure gives management visibility over project delivery (kick-off, progress, UAT, BAST, invoicing, and scope changes), turns lost reasons into input for pricing and segmentation strategy, and keeps after-sales support, renewal, and upsell alive as scheduled activities.

Realizing these implications, however, requires governance rather than software alone. PT XYZ needs mandatory-data rules (for example customer, decision maker, expected revenue, probability, closing date, salesperson, lead source, next activity, quotation and contract status, handover form, project and invoice status, lost reason, and after-sales note) and a weekly review cadence, so that the pipeline operates as an active control instrument for sales, delivery, finance, and customer success rather than a passive dashboard.

6. CONCLUSION

6.1. Conclusion

This article designed and demonstrated the customization of Odoo CRM to support Pipeline and Opportunity Sales Management at PT XYZ as a project-based service company. The resulting configuration was expanded into an end-to-end pipeline covering New Lead, Qualified, Needs Analysis, Proposal/Quotation Sent, Negotiation, Won/Contract Signed, Handover to Delivery, Project Delivery, After Sales/Retention, and Lost. In addition, this paper adds a minimum-document structure per stage so that each pipeline transition has clear process evidence.

Because the evaluation is ex ante, the demonstration indicates what the configured artifact is designed to do rather than a measured outcome: in principle it helps the organization turn previously scattered prospects and opportunities into a more structured and monitorable pipeline. By design, the Mark as Done, Chatter, and Done & Schedule Next features are intended to support follow-up discipline; the quotation and sales order features to support offer traceability; the handover and project delivery features to maintain continuity between sales and execution; the after-sales features to support retention and upsell; the lost reason feature to enable win/loss learning; and reporting to support data-driven decisions. Whether these intended effects materialize is the subject of the proposed ex-post evaluation.

The main contribution of this study is therefore twofold: a practical and replicable Odoo-based CRM configuration for project-based service companies, and a set of six design principles (DP1-DP6) that abstract this configuration into transferable design knowledge. To strengthen scientific validity, the next implementation should complement this ex-ante work with an ex-post evaluation, including UAT, measurement of actual sales and delivery performance, document-quality evaluation, and after-sales evaluation once the system is used routinely.

6.2. Limitations and Future Research

This study has several limitations that follow directly from its ex-ante design. First, the artifact is evaluated before deployment, so the reported benefits are design propositions rather than measured effects on long-term sales, delivery, or after-sales performance. Second, the demonstration combines screenshots of the actual customized configuration (Figures 1-3) with screenshots of generic platform features that retain Odoo's built-in demo data (Figures 4-12), and all customer names and values are dummy for confidentiality. Third, adoption readiness, the dimension most dependent on user behavior, could not be assessed and remains open. The artifact has also not yet been validated through formal User Acceptance Testing with respondents from sales, management, and delivery.

Future research should therefore move from the ex-ante evaluation reported here to an ex-post, naturalistic evaluation in line with FEDS [15], conducting UAT with instruments measuring perceived usefulness, perceived ease of use, data quality, intention to use, and per-stage document completeness. In addition, subsequent research can compare indicators before and after implementation, such as pipeline-report preparation time, the number of opportunities with a next activity, forecast accuracy, win rate, quotation cycle duration, handover completeness, invoicing accuracy, project completion time, and the after-sales follow-up rate. Integration with the Sales, Invoicing, Project, and Helpdesk modules also needs to be examined so that the CRM becomes part of the end-to-end process.

REFRENCES

[1] F. Buttle and S. Maklan, Customer Relationship Management: Concepts and Technologies, 4th ed. London, U.K.: Routledge, 2019.

[2] A. Payne and P. Frow, Strategic Customer Management: Integrating Relationship Marketing and CRM. Cambridge, U.K.: Cambridge University Press, 2013.

[3] Odoo S.A., "CRM," Odoo 19.0 Documentation, 2026. [Online]. Available: https://www.odoo.com/documentation/19.0/applications/sales/crm.html (accessed May 25, 2026).

[4] Odoo S.A., "Pipeline Analysis," Odoo 19.0 Documentation, 2026. [Online]. Available: https://www.odoo.com/documentation/19.0/applications/sales/crm/performance/win_loss.html (accessed May 25, 2026).

[5] Odoo S.A., "Expected Revenue Report," Odoo 19.0 Documentation, 2026. [Online]. Available: https://www.odoo.com/documentation/19.0/applications/sales/crm/performance/expected_revenue_report.html (accessed May 25, 2026).

[6] Odoo S.A., "Quotations," Odoo 19.0 Documentation, 2026. [Online]. Available: https://www.odoo.com/documentation/19.0/applications/sales/sales/send_quotations.html (accessed May 25, 2026).

[7] Odoo S.A., “Lost Opportunities,” Odoo 19.0 Documentation, 2026. [Online]. Available: https://www.odoo.com/documentation/19.0/applications/sales/crm/pipeline/lost_opportunities.html (accessed May 25, 2026).

[8] A. R. Hevner, S. T. March, J. Park, and S. Ram, “Design science in information systems research,” MIS Quarterly, vol. 28, no. 1, pp. 75-105, 2004, doi: 10.2307/25148625.

[9] K. Peffers, T. Tuunanen, M. A. Rothenberger, and S. Chatterjee, “A design science research methodology for information systems research,” Journal of Management Information Systems, vol. 24, no. 3, pp. 45-77, 2007, doi: 10.2753/MIS0742-1222240302.

[10] PT XYZ internal document, “Odoo CRM configuration,” configuration materials and actual Odoo CRM screenshots, 2026.

[11] I. J. Chen and K. Popovich, “Understanding customer relationship management (CRM): People, process and technology,” Business Process Management Journal, vol. 9, no. 5, pp. 672-688, 2003, doi: 10.1108/14637150310496758.

[12] E. W. T. Ngai, “Customer relationship management research (1992-2002): An academic literature review and classification,” Marketing Intelligence & Planning, vol. 23, no. 6, pp. 582-605, 2005, doi: 10.1108/02634500510624147.

[13] M. Rodriguez and E. D. Honeycutt, “Customer relationship management (CRM)’s impact on B-to-B sales professionals’ collaboration and sales performance,” Journal of Business-to-Business Marketing, vol. 18, no. 4, pp. 335-356, 2011, doi: 10.1080/1051712X.2011.574252.

[14] A. Terminanto et al., “Implementation of enterprise resource planning using Odoo module sales and CRM: Case study PT Ecosains Hayati,” IOP Conference Series: Materials Science and Engineering, vol. 277, art. 012034, 2017, doi: 10.1088/1757-899X/277/1/012034.

[15] J. Venable, J. Pries-Heje, and R. Baskerville, “FEDS: a framework for evaluation in design science research,” European Journal of Information Systems, vol. 25, no. 1, pp. 77-89, 2016, doi: 10.1057/ejis.2014.36.