

Phase 3: Project Design Phase

[Problem-Solution Fit]

DATE	4JUNE 2025
TEAM ID	LTVIP2025TMID29184
Project Name	Lease Management
Maximum Marks	4/5

Objective

To establish a clear alignment between the identified problems in the lease management lifecycle and the proposed Salesforce-based solutions. This ensures that the technology implementation directly addresses operational pain points and business goals.

Identified Problems in Lease Management

- Manual Inquiry Tracking – Leads are lost or delayed due to lack of centralized tracking.
- Paper-Based Applications – Delays due to physical documentation and manual verification.
- Unstructured Approval Workflows – Lease approvals vary by department and lack standardization.
- Disconnected Communication Channels – Tenants, agents, and departments operate in silos.
- Lack of Visibility in Lease Lifecycle – No real-time insights into lease stages, renewals, or expirations.
- Inefficient Rent Collection – No automated reminders or integrated payment systems.
- Limited Reporting and Audit Trail – Difficult to track performance or meet compliance needs.

Salesforce-Based Solution Overview

Problem	Salesforce Solution
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Manual Inquiry Tracking	Web-to-Lead forms + Lead Management in Sales Cloud
Paper-Based Applications	Experience Cloud Portals for Digital Applications
Unstructured Workflows	Flow Builder and Process Builder for Automation
Disconnected Communication	Omnichannel support via Service Cloud & Email Integration
Lack of Lifecycle Visibility	Custom Objects and Dashboards for Real-Time Tracking
Inefficient Rent Collection	Integration with Payment Gateways & Scheduled Workflows
Limited Reporting	Einstein Analytics and Standard Salesforce

Solution Benefits

- Process Efficiency: Automates lease processing from inquiry to termination.
- Centralized Data: One source of truth for tenants, properties, and agreements.
- Compliance Ready: Built-in audit trails, approval history, and encryption.
- Enhanced User Experience: Portals for tenants, dashboards for agents, and notifications for all roles.
- Data-Driven Decisions: Real-time reports and AI-powered forecasting with Salesforce Einstein.

Problem-Solution Fit Validation

To ensure problem-solution fit, the following were conducted:

- Stakeholder Workshops to map workflows and identify redundancies.
- User Interviews with tenants, leasing agents, and finance users.
- Prototype Testing of Experience Cloud portal and automation flows.
- KPI Definition: Lease approval time, rent collection success rate, and NPS scores tracked post-implementation.

Conclusion

This phase confirms that the Salesforce-based architecture directly addresses the real operational and user challenges of traditional lease management. The problem-solution fit provides confidence that further investment in customization and deployment will drive measurable business value.

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[Proposed Solution]

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Overview

The proposed solution aims to digitize and automate the entire lease management lifecycle using Salesforce. It leverages Salesforce's Sales Cloud, Service Cloud, Experience Cloud, and platform automation capabilities to create a centralized, user-friendly, and scalable lease management system.

Key Features of the Proposed Solution

Centralized Lease Management System

Custom objects for lease contracts, tenants, properties, and payment schedules.
Relationship mapping between tenants, lease agreements, and properties.

Digital Application & Onboarding

Experience Cloud portals for tenants to apply online, upload documents, and track their lease status. Automated email/SMS notifications for application status, approvals, and onboarding steps.

Automated Approval Workflows

Use of Flow Builder to automate lease approval based on custom business rules. Multi-level approval processes involving legal and finance departments.

Lease Agreement Generation & E-signature

Integration with DocuSign or Adobe Sign to generate lease agreements directly from Salesforce templates. Secure e-signature collection and storage within the lease record.

Payment Management & Integration

Scheduled payment reminders via email/SMS. Integration with payment gateways for online rent collection and status tracking. Logging of payment history within Salesforce.

Maintenance and Service Management

Case management using Service Cloud for tenant complaints and maintenance requests. Automated case routing to the appropriate maintenance team with SLAs.

Renewals, Extensions, and Terminations

Configurable workflows to handle renewals and termination notices. Notification engine to remind tenants and agents of key dates.

Dashboards and Analytics

Custom dashboards for management to view lease performance, occupancy rates, revenue, and issue resolution times. Advanced reporting with Einstein Analytics for predictive insights (e.g., renewal likelihood, churn risk).

Architecture Summary

Layer	Tools & Features
UI/UX	Lightning Web Components, Experience Cloud
Application Logic	Flows, Apex Classes, Approval Processes
Data Management	Custom Objects, Salesforce Files, Record Types
Integrations	DocuSign, Payment Gateway API, Email/SMS Providers
Security & Access	Profiles, Permission Sets, Field-Level Security
Reporting	Dashboards, Reports, Einstein Analytics
Automation	Process Builder, Flow Builder, Scheduled Flows

Benefits of the Proposed Solution

- Improved Efficiency: Automation significantly reduces manual intervention.
- Better Visibility: Central dashboards provide real-time insights into leases.
- Tenant Satisfaction: Self-service portals and transparent workflows enhance user experience.
- Regulatory Compliance: Audit logs, encryption, and standardized workflows ensure compliance.
- Scalability: The solution supports multiple properties, lease types, and business units.

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[Solution Architecture]

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1. Architecture Overview

The solution uses a modular, cloud-native architecture built on Salesforce’s multi-cloud ecosystem. It integrates Sales Cloud, Service Cloud, Experience Cloud, Flow Builder, and custom Apex logic, along with external systems like payment gateways and e-signature platforms.

2. Architecture Layers

Layer	Components	Purpose
Presentation Layer	Lightning App, Experience Cloud Portal, Salesforce Mobile App	Tenant, agent, and admin interfaces
Business Logic Layer	Apex Classes, Flow Builder, Process Builder	Workflow automation, approvals, custom logic
Data Layer	Salesforce Custom & Standard Objects, Files, Field-Level Security	Stores lease data, documents, user details
Integration Layer	Salesforce APIs, Named Credentials, MuleSoft	Connects to payment gateways, e-signature tools
Security Layer	Profiles, Permission Sets, Sharing Rules, Salesforce Shield	Data access control, encryption, audit
Analytics Layer	Reports, Dashboards, Einstein Analytics	Visual insights, forecasting, compliance monitoring

3. Key Salesforce Objects (Data Model)

Object	Purpose
Tenant (Custom)	Stores tenant personal & contact information
Property (Custom)	Contains details about property/unit
Lease Agreement (Custom)	Core record linking tenants and properties
Payment (Custom)	Tracks rent, due dates, and payment status
Service Request (Case)	For managing maintenance and support
Document (File)	Attachments for lease, ID proofs, etc.

4. Workflow & Automation Components

- Flow Builder for lease initiation, approval, and renewal automation
- Apex Triggers for complex business logic like late fee calculations
- Scheduled Flows for rent reminders and follow-ups
- Approval Processes for legal and financial clearance

5. Integration Touchpoints

System	Integration Method	Purpose
DocuSign/Adobe Sign	REST API, Apex SDK	E-signatures for lease agreements
Payment Gateway (e.g., Razorpay, Stripe)	Webhooks, REST API	Online rent payment
SMS/Email Services (e.g., Twilio, SendGrid)	Apex callouts	Automated notifications
External ERP or Property Tools	MuleSoft / Named Credentials	Sync property or finance data

6. Security & Compliance

- Field-Level & Object-Level Security: Role-based data access
- Shield Platform Encryption: For sensitive documents
- Audit Trail & Event Monitoring: For compliance tracking
- Multi-Factor Authentication: For admin users and critical roles

7. High-Level Diagram Description

Users (tenants, agents, admin) interact via Lightning UI / Experience Cloud. Business logic (flows, Apex) operates over the object model. Data flows into and out of Salesforce through API integrations (DocuSign, Payments). Reports and dashboards provide live insights. Security is enforced at every layer.