

Software Product Vision Document for the Condo Management System

1. Introduction

This vision document outlines the development of a comprehensive condo management system designed to streamline and enhance the operational efficiency of condo management, improve the living experience for condo residents, and foster stronger community engagement within condominium complexes. The system aims to address the needs of condo owners, tenants, and condo management companies by providing a unified platform for managing profiles, properties, financial transactions, facility reservations, and communication. By integrating key functionalities into a user-friendly interface accessible across multiple platforms, the project seeks to modernize condo management practices, ensuring that all stakeholders have easy access to critical information and services. The ultimate goal is to create a scalable, secure, and inclusive solution that meets the diverse needs of condominium communities.

2. Positioning

2.1 Problem Statement

The problem of	inefficient and fragmented condo management processes
affects	condo owners, tenants, and condo management companies
the impact of which is	increased administrative overhead, poor communication, and dissatisfaction among residents and property managers
a successful solution would be	a unified, intuitive platform that streamlines property management tasks, enhances communication and engagement within the condo community, simplifies financial management, and provides easy access to property-related information and services, thereby improving operational efficiency, resident satisfaction, and community well-being.

2.2 Product Position Statement

For	condo management companies, condo owners, and tenants
Who	need a comprehensive and integrated solution to manage their properties and enhance their living experience
The Condo Management System	is a property management platform
That	simplifies the complexities of condo administration, financial management, and community engagement
Unlike	fragmented and less user-friendly solutions currently dominating the market
Our product	provides a seamless, all-in-one platform designed to be accessible on multiple devices, offering intuitive user interfaces and features tailored specifically for the condo management ecosystem. Our product stands out by ensuring easy access to property information, financial data, and community resources, fostering a more connected and efficiently managed living environment

3. Stakeholder and User Descriptions

3.1 Stakeholder Summary

Name	Description	Responsibilities
<i>Condo Management Companies</i>	Organizations responsible for the day-to-day operations and management of condominium complexes.	<ul style="list-style-type: none">• Ensure the condo management system meets the operational needs of property management, including maintenance, financial management, and communication with residents.• Monitor the project's progress to ensure that the platform integrates seamlessly with existing processes and provides a return on investment.
<i>Property Developers</i>	Companies or individuals involved in the construction and sale of new condo developments.	<ul style="list-style-type: none">• Interested in the system's ability to attract buyers by offering an advanced management solution, thereby increasing the marketability of their properties.• Ensure that the system supports the transition from developer to owner-managed properties.
<i>Investors</i>	Individuals or entities that provide the capital necessary for the development of the condo management system.	<ul style="list-style-type: none">• Ensure a return on investment through the successful adoption and operation of the system.• Monitors financial performance and market penetration.
<i>Regulatory Bodies</i>	Government or industry organizations that set standards and regulations for property management and tenant rights.	<ul style="list-style-type: none">• Ensures that the system complies with legal and regulatory requirements, including data protection and privacy laws.

3.2 User Summary

Name	Description	Responsibilities	Stakeholder
<i>Condo Owners</i>	Individuals who own condominium units.	<ul style="list-style-type: none">• Use the system to manage their property information, financial transactions (e.g., condo fees), and access community features.• Captures details related to their units and produces reports on financial status.	Represented by condo management companies and owners' associations to ensure the system meets their specific needs for property management and investment monitoring.
<i>Renters</i>	Individuals renting units within a condominium complex.	<ul style="list-style-type: none">• Use the system for communication with management, access to amenities, and management of rental details.• Provides feedback on the system's usability	Condo owners and management companies represent tenants' interests, ensuring features like reservation systems and maintenance requests are user-friendly and efficient.

		and functionality regarding tenant needs.	
<i>Employees</i>	Employees or contractors responsible for the day-to-day operation of a condominium complex.	<ul style="list-style-type: none"> • Utilize the system for managing property maintenance, tenant inquiries, and financial management. • Captures details regarding maintenance requests, tenant interactions, and operational expenses. 	Condo management companies employ property managers, ensuring the system supports efficient property management practices.
<i>Condo Management Companies</i>	Organizations responsible for overseeing the management and operation of condominium complexes.	<ul style="list-style-type: none"> • Oversee the entire management process, including financial management, property maintenance, and communication between all parties involved. • Ensure compliance with laws and regulations. Implement and manage the condo management system to streamline operations. 	Directly responsible for ensuring the system meets the operational needs and legal requirements of managing a condominium complex, serving as the primary administrators of the system.
<i>Public Users</i>	Individuals who are not condo owners, renters, or employees but are interested in the condominium complex or its amenities.	<ul style="list-style-type: none"> • May use the system to explore condominium amenities, availability for rent or purchase, and general information. 	While not directly represented by any specific stakeholder group, their interests are considered by condo management companies to ensure the system is appealing and accessible to potential future owners or tenants.

3.3 User Environment

Condo Owners and Tenants

- **Number of People Involved:** Typically, tasks are completed individually, such as paying condo fees, booking amenities, or submitting maintenance requests. Family members or roommates may also be involved in decision-making or using the system's features.
- **Task Cycle:** The task cycle can range from a few minutes for booking amenities or submitting requests to longer periods for financial transactions or document review. The amount of time spent on each activity varies based on the complexity of the task.
- **Environmental Constraints:** Users may access the system in various environments, including at home, at work, or on the go, necessitating a mobile-responsive design that accommodates different devices and connectivity conditions.
- **System Platforms:** Currently, users might rely on a mix of emails, phone calls, and physical meetings for condo management. Future platforms include web and mobile applications accessible on Android, iOS, and web browsers.
- **Integration Needs:** The application may need to integrate with payment gateways for financial transactions, email systems for notifications, and possibly other community tools like forums or social networks.

Property Managers

- **Number of People Involved:** Property managers typically coordinate with a team, including condo management companies and service providers, to manage the property effectively.
- **Task Cycle:** Property managers engage in a variety of tasks ranging from quick administrative duties to longer-term planning and resident communication, requiring flexibility in time management and system support.
- **Environmental Constraints:** The work environment can include office settings, on-site locations within the condo complex, and mobile scenarios, necessitating access to the system through both mobile and desktop platforms.
- **System Platforms:** Existing systems might include specialized property management software and financial systems. The new system needs to support integration with these platforms and be accessible on future mobile and desktop devices.
- **Integration Needs:** Essential integrations include connecting with existing property management tools, financial software, and possibly CRM systems to ensure streamlined operations and accurate maintenance of records and communications.

3.4 Key Stakeholder or User Needs

Need	Priority	Concerns	Current Solution	Proposed Solutions
<i>Efficient Property Management</i>	High	Current systems are fragmented, leading to inefficient management of condo properties, including maintenance requests, financial transactions, and communication with residents.	Manual processes, multiple software solutions with limited integration, and physical paperwork.	An integrated platform that consolidates property management features, including a dashboard for real-time updates on maintenance, finances, and resident communications.
<i>Effective Communication Channels</i>	High	Lack of effective and direct communication channels between condo owners, tenants, and property managers, leading to delays and misunderstandings.	Emails, phone calls, and physical notices which are not always efficient or timely.	A built-in messaging system, notification features, and a community forum within the platform to facilitate timely and clear communications.
<i>Transparent Financial Management</i>	Medium	Difficulty in tracking and managing financial transactions such as condo fees, maintenance costs, and budget planning.	Separate financial software, spreadsheets, and manual record-keeping.	Integrated financial management tools within the system that offer transparent tracking of fees, payments, and budgets with reports and alerts.
<i>Convenient Booking of Amenities</i>	Medium	Inefficient reservation system for amenities, leading to conflicts and underutilization.	Manual booking through property management, physical sign-up sheets, or separate booking systems.	A digital reservation system embedded in the platform, with a calendar view, availability checks, and reservation management.

<i>Mobile Access and Usability</i>	High	Current systems may not be accessible or optimized for mobile devices, limiting access for users on the go.	Desktop-based systems or non-optimized mobile websites.	A mobile-responsive design or dedicated mobile apps that ensure full functionality across devices and platforms.
<i>Integration with Existing Systems</i>	Medium	The need to maintain data consistency and workflow continuity with existing external systems.	Manual data transfer or limited API integrations.	Robust API support for seamless integration with popular payment gateways, financial software, and other property management tools.
<i>User-Friendly Interface</i>	High	Users often find existing systems complex and not intuitive, leading to underutilization and frustration.	Standard web interfaces with limited consideration for user experience design principles.	Implementing a modern, clean, and intuitive UI/UX design, with user feedback loops to continually refine the interface.
<i>Real-Time Notifications and Updates</i>	Medium	Delayed notifications about important updates, events, and maintenance schedules can lead to missed opportunities and dissatisfaction.	Email blasts and physical bulletin boards.	Push notifications through the platform for instant updates on events, maintenance, and financial matters.
<i>Multi-Language Support</i>	Medium	Condo communities are increasingly diverse, and language barriers can hinder access to information and services.	Limited to the primary language of the region, with ad hoc translations as needed.	Offering multi-language support within the platform to cater to a diverse resident population.

<i>Secure Data Management</i>	High	Concerns over the privacy and security of personal and financial data within the condo management system.	Basic security measures, often lacking comprehensive data protection strategies.	Implementing robust security protocols, including encryption, secure login mechanisms, and compliance with privacy laws.
<i>Scalability</i>	Medium	As condo complexes grow and more units are managed, the system must be able to scale without performance degradation.	Static systems that require significant overhaul to support more users or functionalities.	Cloud-based architecture that allows for easy scaling and updates as the user base grows and needs evolve.
<i>Customization Capabilities</i>	Medium	Different condo management companies and communities have unique needs that may not be met by a one-size-fits-all solution.	Limited customization options, leading to workaround solutions or underutilization.	Allowing for modular customization of features and interfaces to meet specific community needs.

3.4 Alternatives and Competition

Based on the information available and some knowledge of the condo management software market, here is a short list of alternatives and competitive choices, including their perceived strengths and weaknesses:

Condo Manager

- **Strengths:** Offers an advanced accounting solution, integrated communications tools for property managers, and electronic document management capabilities. Known for its comprehensive financial management features.
- **Weaknesses:** May be complex to navigate for new users without prior training. The cost could be a barrier for smaller associations.

Yardi Breeze

- **Strengths:** An all-in-one, cloud-based property management software known for its scalability and comprehensive suite of services, from lead to lease management. Offers robust online payment options and is well-suited for companies of any size.
- **Weaknesses:** The breadth of features can be overwhelming for smaller properties or those with simpler needs. Pricing may be prohibitive for some.

Buildium

- **Strengths:** Highly rated for its user-friendly interface and excellent customer support. Offers a wide range of features including accounting, online payments, and maintenance request tracking.
- **Weaknesses:** Some users report limitations in customization options and report generation. Costs can accumulate with add-on features.

AppFolio

- **Strengths:** Known for providing a highly intuitive user experience and strong mobile support. Offers capabilities that cover the spectrum of property management needs, including modern online payment options.
- **Weaknesses:** Pricing structure (based on a per-unit basis) may not be cost-effective for smaller portfolios. Some reports of challenges with specific accounting functions.

Homegrown Solutions

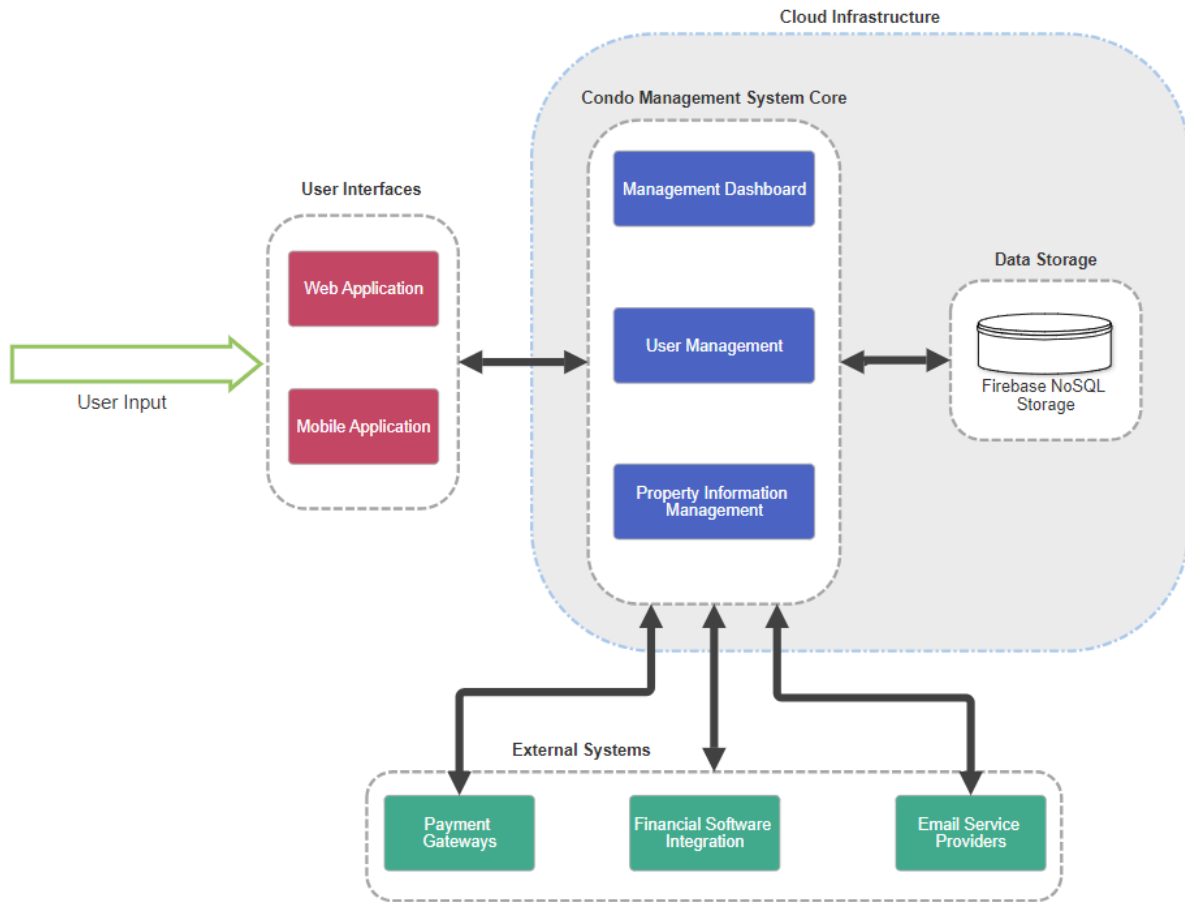
- **Strengths:** Custom-tailored to the specific needs and processes of the property or management company. Potential for lower upfront costs if developed in-house.
- **Weaknesses:** Requires significant time and resource investment. May lack scalability and robustness compared to commercial products. Ongoing maintenance and updates can become a burden.

Maintaining Status Quo (Manual/Non-Digital Management)

- **Strengths:** Familiarity and no need for stakeholders to learn new systems or processes. No immediate costs associated with software acquisition.
- **Weaknesses:** Inefficient, prone to human error, lacks real-time data and insights, and is not scalable. Inability to meet expectations of modern residents and property owners.

4. Product Overview

4.1. Product Perspective



4.2. Assumptions and Dependencies

- **Operating Systems Availability:** The assumption is that users will have access to modern operating systems on mobile and desktop platforms (iOS, Android, Windows, macOS, Linux) that can support web and potentially native applications of the condo management system.
- **Internet Connectivity:** The system assumes reliable internet connectivity for users to access cloud-based functionalities and for real-time data synchronization.
- **External System Integration:** It's assumed that third-party systems such as payment gateways, email service providers, and financial software offer stable APIs for integration and maintain compatibility with the system.
- **Compliance and Legal Requirements:** The development and deployment of the system are based on the assumption that it will comply with all relevant data protection and

privacy laws (e.g., GDPR, CCPA) as of the launch. Changes in legal requirements could necessitate system updates.

- **Cloud Infrastructure:** The system assumes the availability and reliability of cloud infrastructure (AWS) for hosting the application, ensuring scalability, and managing data securely.
- **User Adoption:** There's an underlying assumption that users (condo owners, tenants, management companies) will be receptive to adopting a digital solution for condo management, transitioning from manual or less integrated systems.

Changes to any of these assumptions could significantly impact the vision, design, development, and deployment of the condo management system, necessitating a revisit to the vision document and potentially altering the product scope or functionality.

5. Product Features

Feature Name	Description	Priority	Justification
<i>User Profile Management</i>	Allows users to create and manage their profiles with essential details.	High	Fundamental for identification, personalization, and facilitating access to services.
<i>Registration and Access Control</i>	Secure registration process for users to access specific roles and functionalities.	High	Ensures secure access and appropriate user-role association.
<i>Property and User Dashboard</i>	Central dashboard displaying key information for condo owners and management.	High	Centralizes crucial information for easy access, enhancing user experience.

<i>Property Profile Management</i>	Creation and management of detailed property profiles by condo management companies.	High	Organizes and makes property information readily accessible.
<i>Document Management</i>	Uploading, storing, and sharing of condo-related documents for access by condo owners.	High	Supports transparency and informed decision-making by ensuring document accessibility.
<i>Financial Management System</i>	Simplified module for managing finances, including condo fees and budgeting.	High	Critical for financial oversight and ensuring financial responsibilities are met.
<i>Reservation System</i>	System for booking and managing reservations for common facilities.	Medium	Improves the utilization of amenities and resident satisfaction.
<i>Maintenance and Request Tracking</i>	Allows users to submit and track requests, assigning them to appropriate staff.	Medium	Streamlines handling of requests and maintenance issues, ensuring prompt action.
<i>Notification System</i>	Updates and notifications for users regarding activities, requests, and information.	Medium	Enhances communication by keeping users informed of relevant updates.

<i>Community Engagement Features</i>	Forums, event tools, and sharing of discounts or offers to foster community interaction.	Low	Encourages community building, although not critical to core management functionalities.
<i>Cross-Platform Accessibility</i>	Ensures the app's accessibility across different devices and operating systems.	High	Vital for user accessibility and accommodating diverse user preferences.
<i>Multilingual Support</i>	Providing support in multiple languages to cater to a diverse user base.	Medium	Promotes inclusivity and increases accessibility for non-English speakers.
<i>Single Sign-On (SSO) Integration</i>	Facilitates easy and secure access through integration with existing accounts like Gmail.	Medium	Streamlines the login process, enhancing user convenience and security.

6. Other Product Requirements

Requirement Category	Description	Priority	Rationale
<i>Standards and Compliance</i>	Adherence to data protection, privacy laws, accessibility standards, and condominium management regulations.	High	Mandatory for legal use and user data protection.
<i>Hardware/Platform Requirements</i>	Accessibility on multiple platforms, including web browsers on PCs and mobile devices without high-end hardware requirements.	High	Ensures wide usability and accessibility.
<i>Performance Requirements</i>	Support for thousands of concurrent users with a response time not exceeding 2 seconds.	High	Key for user satisfaction and scalability.
<i>Environmental Requirements</i>	Operation in cloud environments for scalability and resilience, ensuring 24/7 availability.	Medium	Ensures availability and leverages cloud infrastructure advantages.

<i>Usability and Accessibility</i>	Intuitive UI/UX compliant with accessibility standards, including onboarding tutorials and clear navigation.	High	Reduces learning curve and enhances user engagement.
<i>Fault Tolerance and Robustness</i>	Error handling and recovery mechanisms for continuous operation.	High	Ensures system reliability and trustworthiness.
<i>Documentation Requirements</i>	Provision of comprehensive user manuals, online help, installation guides, and FAQs, available in multiple languages.	Medium	Supports user self-service and enhances satisfaction.
<i>Security Requirements</i>	Industry-standard security practices, including data encryption, regular audits, and user authentication (with 2FA options).	High	Critical for protecting user data and system integrity.
<i>Integration Requirements</i>	APIs for integration with external systems such as payment gateways and other property management tools.	Medium	Enhances system functionality and integration with existing digital ecosystems.

<i>Environmental Sustainability</i>	Design considerations for minimizing energy consumption and optimizing resource use, especially in cloud environments.	Low	Aligns with environmental goals and corporate social responsibility.
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