

# Business Requirements Document

## Condominium Collection Management System with WhatsApp Integration

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Company: 360Capital

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### 1. Executive Summary

This document outlines the comprehensive business requirements for a condominium collection management system that automates billing, payment collection, and communication processes. The system will primarily interface with residents (condôminos) through WhatsApp chatbot integration, with email as the initial communication channel during Phase 1.

The solution addresses the critical need for automated condominium fee collection in Brazil, reducing manual administrative work while improving payment compliance and resident satisfaction through modern communication channels.

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### 2. Project Scope and Objectives

#### 2.1 Primary Objectives

- Automate billing and collection processes for condominium fees
- Reduce payment delinquency through proactive communication
- Streamline administration tasks for property managers
- Improve resident experience through modern communication channels
- Ensure regulatory compliance with Brazilian condominium laws
- Provide comprehensive financial reporting and analytics

#### 2.2 Success Metrics

- Reduction in payment delinquency by 40%
  - Decrease in administrative time by 60%
  - Increase in first-attempt payment success by 35%
  - Resident satisfaction score above 8.5/10
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### 3. User Personas and Roles

#### 3.1 Primary Users

##### Condômino (Resident)

- **Description:** Property owner or tenant responsible for condominium fee payments
- **Demographics:** Adults aged 25-70, varying tech-savviness, smartphone users
- **Pain Points:** Forgotten payment dates, difficulty accessing payment methods, unclear fee breakdowns
- **Goals:** Easy payment process, clear communication, payment history access

##### Síndico (Property Manager)

- **Description:** Elected or appointed individual responsible for condominium administration
- **Demographics:** Adults aged 35-65, moderate to high tech skills, time-constrained
- **Pain Points:** Manual collection tracking, difficult resident communication, complex reporting
- **Goals:** Automated processes, clear financial oversight, efficient problem resolution

#### **Administradora (Property Management Company)**

- **Description:** Professional company managing multiple condominiums
- **Demographics:** Business professionals, high tech skills, efficiency-focused
- **Pain Points:** Managing multiple properties, standardization across buildings, scalability
- **Goals:** Centralized management, automated workflows, comprehensive reporting

#### **Porteiro/Zelador (Concierge/Caretaker)**

- **Description:** On-site staff handling day-to-day operations
- **Demographics:** Adults aged 25-60, basic to moderate tech skills
- **Pain Points:** Resident inquiries about payments, lack of information access
- **Goals:** Quick access to resident payment status, simple interface

#### **Contador (Accountant)**

- **Description:** Financial professional handling condominium accounting
- **Demographics:** Finance professionals, high attention to detail
- **Pain Points:** Manual reconciliation, complex reporting requirements
- **Goals:** Automated financial reports, easy reconciliation, audit trails

### **3.2 System Users**

#### **360Capital Operations Team**

- **Description:** Internal team managing system operations and client support
- **Goals:** System monitoring, client success, issue resolution

#### **System Administrator**

- **Description:** Technical team managing system configuration and maintenance
- **Goals:** System reliability, security, performance optimization

## **4. Detailed User Stories**

### **4.1 Resident (Condômino) Stories**

#### **Payment Management**

##### **US-001: View Current Balance**

- **As a resident**
- **I want to** check my current balance and payment status
- **So that** I can understand what I owe and when payments are due
- **Acceptance Criteria:**
  - Display current month balance
  - Show overdue amounts with penalties
  - Present payment due date
  - Include detailed fee breakdown
  - Show payment history for last 12 months

#### **US-002: Make Payment via WhatsApp**

- **As a resident**
- **I want to** pay my condominium fees through WhatsApp
- **So that** I can complete payments quickly without leaving the chat
- **Acceptance Criteria:**
  - Generate PIX payment code in chat
  - Provide boleto link for download
  - Send payment confirmation
  - Update balance in real-time
  - Support partial payments

#### **US-003: Set Payment Reminders**

- **As a resident**
- **I want to** receive customizable payment reminders
- **So that** I never miss a payment deadline
- **Acceptance Criteria:**
  - Allow custom reminder timing (1-10 days before due)
  - Support multiple notification channels (WhatsApp, Email, SMS)
  - Enable/disable reminder preferences
  - Send payment link with reminder

#### **US-004: Request Payment Installments**

- **As a resident with financial difficulties**
- **I want to** request payment installment plans
- **So that** I can manage my payments according to my budget
- **Acceptance Criteria:**
  - Submit installment request through WhatsApp
  - Receive automatic response with options
  - Track installment plan progress
  - Receive modified payment schedules

#### **Communication and Support**

##### **US-005: Access Payment History**

- **As a resident**
- **I want to** view my complete payment history
- **So that** I can track my payments and resolve discrepancies
- **Acceptance Criteria:**
  - Display payments for last 24 months
  - Show payment method and date for each transaction
  - Provide downloadable payment receipts
  - Include pending and overdue payments

##### **US-006: Report Payment Issues**

- **As a resident**
- **I want to** report payment problems or discrepancies
- **So that** issues can be resolved quickly
- **Acceptance Criteria:**
  - Submit issue description via WhatsApp
  - Attach payment proof images

- Receive ticket number and estimated resolution time
- Get status updates on issue resolution

#### **US-007: Update Contact Information**

- **As a resident**
- **I want to** update my contact details
- **So that** I receive communications reliably
- **Acceptance Criteria:**
  - Update phone number, email, WhatsApp number
  - Verify new contact information
  - Receive confirmation of changes
  - Maintain communication preference settings

#### **Information Access**

#### **US-008: View Building Announcements**

- **As a resident**
- **I want to** receive important building announcements
- **So that** I stay informed about condominium matters
- **Acceptance Criteria:**
  - Receive notifications for urgent announcements
  - Access announcement history
  - Filter announcements by category
  - Confirm receipt of important notices

#### **US-009: Access Building Financial Information**

- **As a resident**
- **I want to** view summary financial information about my building
- **So that** I understand how condominium fees are used
- **Acceptance Criteria:**
  - Display monthly expense summaries
  - Show major maintenance projects
  - Present annual budget information
  - Provide expense category breakdowns

## **4.2 Property Manager (Síndico) Stories**

#### **Collection Management**

#### **US-010: Monitor Payment Status Dashboard**

- **As a property manager**
- **I want to** view real-time payment status for all units
- **So that** I can identify and address collection issues promptly
- **Acceptance Criteria:**
  - Display payment status overview (paid, pending, overdue)
  - Show collection percentage by month
  - Highlight problematic accounts
  - Provide drill-down capabilities to unit details

#### **US-011: Configure Collection Rules**

- **As a property manager**

- **I want to** customize penalty and interest rates
- **So that** collection terms match our condominium regulations
- **Acceptance Criteria:**
  - Set custom penalty percentages
  - Configure interest calculation methods
  - Define grace periods
  - Establish payment deadline preferences

#### **US-012: Initiate Manual Collection Actions**

- **As a** property manager
- **I want to** manually trigger collection communications
- **So that** I can address specific situations as needed
- **Acceptance Criteria:**
  - Send custom messages to residents
  - Schedule follow-up actions
  - Override automatic collection flows
  - Document manual interventions

### **Financial Management**

#### **US-013: Generate Financial Reports**

- **As a** property manager
- **I want to** create comprehensive financial reports
- **So that** I can present accurate information to residents and authorities
- **Acceptance Criteria:**
  - Generate monthly collection reports
  - Create annual financial summaries
  - Export reports in multiple formats (PDF, Excel)
  - Include comparative analysis with previous periods

#### **US-014: Manage Emergency Assessments**

- **As a** property manager
- **I want to** create and distribute emergency assessments
- **So that** urgent building expenses can be covered promptly
- **Acceptance Criteria:**
  - Create custom assessment charges
  - Set specific due dates
  - Distribute via all communication channels
  - Track assessment payment status

#### **US-015: Reconcile Bank Transactions**

- **As a** property manager
- **I want to** automatically match payments with resident accounts
- **So that** payment processing is accurate and efficient
- **Acceptance Criteria:**
  - Auto-match payments to resident accounts
  - Flag unmatched transactions for review
  - Handle partial payment allocations
  - Maintain detailed transaction logs

### **Communication Management**

#### **US-016: Broadcast Building Announcements**

- **As a** property manager
- **I want to** send announcements to all residents
- **So that** important information reaches everyone promptly
- **Acceptance Criteria:**
  - Compose messages with rich formatting
  - Schedule announcement delivery
  - Track message delivery and read receipts
  - Categorize announcements by type and urgency

#### **US-017: Manage Resident Communication Preferences**

- **As a** property manager
- **I want to** configure how residents receive communications
- **So that** messages reach them through their preferred channels
- **Acceptance Criteria:**
  - Set default communication channels
  - Override preferences for urgent messages
  - Track communication effectiveness by channel
  - Maintain opt-out and privacy compliance

### **4.3 Property Management Company (Administradora) Stories**

#### **Multi-Property Management**

##### **US-018: Consolidated Dashboard View**

- **As a** property management company administrator
- **I want to** view performance across all managed properties
- **So that** I can identify trends and optimization opportunities
- **Acceptance Criteria:**
  - Display collection performance by property
  - Show comparative analytics across buildings
  - Highlight underperforming properties
  - Provide portfolio-level financial summaries

##### **US-019: Standardize Collection Processes**

- **As a** property management company administrator
- **I want to** apply consistent collection rules across properties
- **So that** all buildings benefit from best practices
- **Acceptance Criteria:**
  - Create standardized rule templates
  - Apply templates to multiple properties
  - Monitor compliance with standard processes
  - Override standards for special cases

##### **US-020: Manage Multiple Client Accounts**

- **As a** property management company administrator
- **I want to** efficiently switch between different condominium accounts
- **So that** I can manage multiple properties effectively
- **Acceptance Criteria:**
  - Quick property switching interface
  - Maintain separate data contexts

- Provide aggregated reporting options
- Support role-based access controls

## **Business Intelligence**

### **US-021: Generate Portfolio Analytics**

- **As a** property management company administrator
- **I want to** analyze performance trends across my portfolio
- **So that** I can make data-driven business decisions
- **Acceptance Criteria:**
  - Create custom analytics dashboards
  - Export data for external analysis
  - Set up automated reporting schedules
  - Benchmark against industry standards

### **US-022: Monitor System Performance**

- **As a** property management company administrator
- **I want to** track system usage and performance metrics
- **So that** I can ensure optimal service delivery
- **Acceptance Criteria:**
  - Monitor response times and uptime
  - Track user engagement metrics
  - Identify technical issues early
  - Generate service quality reports

## **4.4 Support Staff (Porteiro/Zelador) Stories**

### **Resident Assistance**

#### **US-023: Quick Payment Status Lookup**

- **As a** building concierge
- **I want to** quickly check a resident's payment status
- **So that** I can answer their questions immediately
- **Acceptance Criteria:**
  - Simple search by unit number or resident name
  - Display current balance and payment status
  - Show recent payment activity
  - Access payment history summaries

#### **US-024: Assist with Payment Issues**

- **As a** building concierge
- **I want to** help residents resolve simple payment problems
- **So that** they can complete payments without delays
- **Acceptance Criteria:**
  - Generate new payment codes on request
  - Resend payment notifications
  - Update contact information with verification
  - Create issue tickets for complex problems

## **4.5 Accountant Stories**

### **Financial Reporting**

#### **US-025: Generate Compliance Reports**

- **As a** condominium accountant
- **I want to** create reports required by Brazilian accounting standards
- **So that** the condominium remains compliant with regulations
- **Acceptance Criteria:**
  - Generate standardized Brazilian accounting reports
  - Include all required financial data fields
  - Support multiple export formats
  - Maintain audit trails for all transactions

#### **US-026: Perform Monthly Reconciliation**

- **As a** condominium accountant
- **I want to** reconcile all payment transactions monthly
- **So that** financial records are accurate and complete
- **Acceptance Criteria:**
  - Automated matching of payments to invoices
  - Identification of discrepancies and exceptions
  - Integration with accounting software systems
  - Generation of reconciliation reports

#### **US-027: Track Tax and Legal Obligations**

- **As a** condominium accountant
- **I want to** monitor tax payments and legal compliance
- **So that** the condominium meets all fiscal obligations
- **Acceptance Criteria:**
  - Calculate applicable taxes automatically
  - Generate tax filing reports
  - Track legal fee obligations
  - Alert for upcoming compliance deadlines

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## **5. System Administration and Automation Stories**

### **5.1 System Operations**

#### **US-028: Automated Billing Generation**

- **As the** system
- **I want to** automatically generate monthly bills
- **So that** residents receive consistent, timely billing
- **Acceptance Criteria:**
  - Generate bills on D-5 schedule automatically
  - Include all applicable fees and adjustments
  - Apply penalty calculations correctly
  - Distribute via configured channels

#### **US-029: Payment Processing Automation**

- **As the** system
- **I want to** process payments in real-time
- **So that** resident balances are always current
- **Acceptance Criteria:**



- Process PIX payments instantly
- Handle boleto payments within 24 hours
- Apply payments to correct accounts
- Send confirmation notifications automatically

#### **US-030: Collection Workflow Automation**

- **As the system**
- **I want to** execute collection activities according to predefined schedules
- **So that** delinquent accounts are managed consistently
- **Acceptance Criteria:**
  - Send reminders at D-1 automatically
  - Execute overdue notices at D+2, D+7, D+10
  - Escalate to legal collection at D+30
  - Document all collection activities

### **5.2 Data Management**

#### **US-031: Data Synchronization**

- **As the system**
- **I want to** maintain synchronized data across all channels
- **So that** users see consistent information everywhere
- **Acceptance Criteria:**
  - Real-time updates across WhatsApp, email, and web
  - Conflict resolution for simultaneous updates
  - Data integrity validation
  - Audit logging for all changes

#### **US-032: Backup and Recovery**

- **As the system**
- **I want to** maintain secure, recoverable data backups
- **So that** information is protected against loss
- **Acceptance Criteria:**
  - Daily automated backups
  - Point-in-time recovery capabilities
  - Encrypted backup storage
  - Regular recovery testing

### **5.3 Integration Management**

#### **US-033: Banking System Integration**

- **As the system**
- **I want to** integrate with Brazilian banking systems
- **So that** payments are processed efficiently
- **Acceptance Criteria:**
  - PIX payment processing integration
  - Boleto generation and tracking
  - Bank file import/export capabilities
  - Real-time payment confirmation

#### **US-034: WhatsApp Business API Integration**

- **As the system**

- **I want to** provide seamless WhatsApp communication
  - **So that** residents can interact naturally via chat
  - **Acceptance Criteria:**
    - Rich media support (images, documents, buttons)
    - Conversation flow management
    - Message template compliance
    - Delivery and read receipt tracking
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## **6. Additional Features (Based on Brazilian Real Estate Context)**

### **6.1 Regulatory Compliance Features**

#### **Legal Document Management**

- Storage and distribution of condominium bylaws
- Meeting minutes and voting records
- Legal notices and compliance documentation
- Resident agreement and consent tracking

#### **Brazilian Tax Integration**

- IPTU (property tax) tracking and allocation
- ISS (service tax) calculation for applicable fees
- Income tax documentation for residents
- Municipal compliance reporting

### **6.2 Enhanced Communication Features**

#### **Multi-language Support**

- Portuguese as primary language
- Spanish support for international residents
- English support for expatriate residents
- Automated translation for critical messages

#### **Emergency Communication System**

- Urgent building notifications (elevator outages, water shutoffs)
- Security alerts and building access issues
- Weather-related building advisories
- Emergency contact distribution

### **6.3 Advanced Financial Features**

#### **Reserve Fund Management**

- Automatic reserve fund contributions
- Major maintenance project budgeting
- Emergency fund allocation tracking
- Long-term financial planning tools

#### **Vendor Payment Integration**

- Automatic payment to service providers
- Vendor invoice processing and approval

- Service contract management
- Maintenance scheduling and payment

## 6.4 Resident Community Features

### Digital Building Directory

- Resident contact information (opt-in)
- Service provider recommendations
- Community bulletin board
- Event coordination and announcements

### Maintenance Request System

- Common area maintenance requests
  - Individual unit issue reporting
  - Service provider coordination
  - Request status tracking
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## 7. Technical Requirements Summary

### 7.1 Performance Requirements

- **Response Time:** < 2 seconds for payment queries
- **Availability:** 99.5% uptime minimum
- **Scalability:** Support 10,000+ residents per instance
- **Concurrent Users:** 500+ simultaneous WhatsApp conversations

### 7.2 Security Requirements

- **Data Encryption:** End-to-end encryption for all communications
- **PCI Compliance:** Full PCI DSS compliance for payment processing
- **LGPD Compliance:** Full compliance with Brazilian data protection law
- **Authentication:** Multi-factor authentication for administrative users

### 7.3 Integration Requirements

- **Banking APIs:** Integration with major Brazilian banks
  - **WhatsApp Business API:** Official WhatsApp integration
  - **Email Services:** SMTP and API-based email delivery
  - **Accounting Systems:** Export capabilities for popular accounting software
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## 8. Implementation Phases

### Phase 1: Email-Based MVP (Months 1-3)

- Core billing and collection functionality
- Email communication system
- Basic web dashboard for administrators
- Payment processing via PIX and boleto

### Phase 2: WhatsApp Integration (Months 4-6)

- WhatsApp Business API implementation
- Chatbot conversation flows
- Rich media support
- Migration from email to WhatsApp primary channel

### Phase 3: Advanced Features (Months 7-9)

- Advanced analytics and reporting
- Multi-property management capabilities
- Mobile application for administrators
- Enhanced automation rules

### Phase 4: Ecosystem Expansion (Months 10-12)

- Third-party integrations
  - API for external developers
  - Advanced community features
  - AI-powered insights and recommendations
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## 9. Success Measurement

### 9.1 Key Performance Indicators (KPIs)

- **Collection Efficiency:** Percentage of on-time payments
- **Communication Effectiveness:** Message open and response rates
- **User Satisfaction:** Regular user feedback surveys
- **System Performance:** Technical performance metrics
- **Business Impact:** Reduction in administrative costs

### 9.2 User Acceptance Criteria

- **Resident Adoption:** 80%+ active usage within 6 months
  - **Administrator Satisfaction:** 4.5/5 average rating
  - **Payment Success Rate:** 90%+ first-attempt success
  - **Support Ticket Reduction:** 50% decrease in payment-related inquiries
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*This business requirements document serves as the foundation for developing a comprehensive condominium collection management system that addresses the specific needs of the Brazilian real estate market while providing modern, user-friendly communication channels.*