Real Estate Management System for SSE Business Process Documentation

1. Introduction

This document outlines the business processes for a Real Estate Management System to be implemented using the Power Platform and Dynamics 365. It includes real-time use cases that demonstrate how the system will operate.

2. Business Objectives

- **Enhance Property Management:** Streamline property management processes including tenant management, lease management, and maintenance requests.
- **Improve Customer Experience:** Provide a seamless experience for tenants and property owners through self-service portals and efficient communication.
- **Data-Driven Decisions:** Utilize data analytics to inform strategic decisions regarding property investments, maintenance, and tenant satisfaction.

3. Key Stakeholders

- Property Managers
- Tenants
- Maintenance Staff
- Property Owners
- Real Estate Agents

4. Business Processes and Use Cases

Requirement ID	Requirement Description	Priority	Use Case ID	Solution Component(s)
BR-001	Property Listing Creation	High	UC-001	Dynamics 365 CE, Power Apps
BR-002	Tenant Application Submission	High	UC-002	Dynamics 365 CE, Power Apps
BR-003	Application Review and Lease Agreement	High	UC-003	Dynamics 365 CE, Power Automate
BR-004	Rent Payment	High	UC-004	Dynamics 365 CE, Power Apps
BR-005	Maintenance Request Submission	High	UC-005	Dynamics 365 CE, Power Apps

BR-006	Maintenance Request Assignment	Medium	UC-006	Dynamics 365 CE, Power Automate
BR-007	Maintenance Request Resolution	Medium	UC-007	Dynamics 365 CE, Power Apps
BR-008	Generate Property Performance Report	High	UC-008	Dynamics 365 CE, Power BI
BR-009	Automated Lease Renewal Reminder	High	UC-009	Dynamics 365 CE, Power Automate
BR-010	Customer Feedback Collection	Medium	UC-010	Dynamics 365 CE, Power Automate
BR-011	Chatbot for Tenant Queries	Medium	UC-011	Power Virtual Agent
BR-012	Tenant Self-Service Portal	High	UC-012	Power Pages, Power Apps
BR-013	Tenant Onboarding Process Automation	High	UC-013	Power Automate
BR-014	Real-time Analytics Dashboard	High	UC-014	Power BI
BR-015	Validate Rent Payment Amount	High	UC-015	Dynamics 365 CE, Business Rules
BR-016	Ensure Lease Duration Compliance	High	UC-016	Dynamics 365 CE, Business Rules
BR-017	Automatic Maintenance Request Escalation	Medium	UC-017	Dynamics 365 CE, Power Automate, Business Rules
BR-018	Verify Tenant Eligibility for Lease Renewal	High	UC-018	Dynamics 365 CE, Business Rules
BR-019	Property Availability Status Update	High	UC-019	Dynamics 365 CE, Business Rules
BR-020	Capture Tenant Preferences	Medium	UC-020	Dynamics 365 CE, Power Apps
BR-021	Monitor Property Utility Usage	Medium	UC-021	Dynamics 365 CE, Power BI
BR-022	Lease Agreement Digital Signatures	High	UC-022	Power Automate, Power Apps
BR-023	Schedule Property Inspections	Medium	UC-023	Dynamics 365 CE, Power Automate
BR-024	Store Lease Documents	High	UC-024	Dynamics 365 CE, Power Apps
BR-025	Automate Late Payment Notices	High	UC-025	Dynamics 365 CE, Power Automate
BR-026	Calculate Total Rent Received	High	UC-026	Dynamics 365 CE
BR-027	Calculate Lease Duration	High	UC-027	Dynamics 365 CE
BR-028	Property Occupancy Rate Chart	Medium	UC-028	Dynamics 365 CE, Power BI
BR-029	Maintenance Request Trends Dashboard	Medium	UC-029	Dynamics 365 CE, Power BI

BR-030	Tenant Satisfaction Survey Results	Medium	UC-030	Dynamics 365 CE, Power BI

5. Use Cases

Use Case ID	Use Case Name	Actor	Description	Steps	Outcome	Data Types Utilized
UC-001	Property Listing Creation	Property Manager	Property managers list available properties with detailed descriptions and images.	1. Log into the system. 2. Navigate to the Property Management module. 3. Click on 'Add New Property'. 4. Fill in property details, upload images, and save.	The property is listed and visible to potential tenants.	Text, Number, Image, Option Set
UC-002	Tenant Application Submission	Potential Tenant	Potential tenants browse listings and submit applications online.	1. Browse property listings. 2. Select a property and click 'Apply'. 3. Fill in the application form and submit.	Application is submitted and pending review.	Text, Number, Lookup
UC-003	Application Review and Lease Agreement	Property Manager	Property managers review applications, conduct background checks, and generate lease agreements.	1. Receive application notification. 2. Review application and conduct background checks. 3. Approve application and generate lease agreement. 4. Send lease agreement for electronic signature.	Lease agreement is signed and stored.	Text, Date/Time, Lookup
UC-004	Rent Payment	Tenant	Tenants log into a self-service portal to make rent payments.	1. Log into the tenant portal. 2. Navigate to 'Payments'. 3. Select the payment method and enter payment details. 4. Confirm payment.	Rent payment is processed and recorded.	Text, Number, Date/Time, Option Set
UC-005	Maintenance Request	Tenant	Tenants log into a self-service portal to submit	1. Log into the tenant portal. 2. Navigate to	Maintenance request is logged	Text, Date/Time

	Submission		maintenance requests.	'Maintenance Requests'. 3. Fill in the request form with issue details. 4. Submit the request.	and assigned to maintenance staff.	
UC-006	Maintenance Request Assignment	Property Manager	Property managers receive and assign maintenance requests to staff.	1. Receive maintenance request notification. 2. Review request details. 3. Assign the request to a maintenance staff member.	Maintenance request is assigned and scheduled.	Text, Lookup
UC-007	Maintenance Request Resolution	Maintenance Staff	Maintenance staff receive, update, and resolve maintenance requests.	1. Log into the system. 2. Navigate to 'Assigned Requests'. 3. Update the status of the request to 'In Progress' or 'Completed'. 4. Add resolution details and close the request.	Maintenance request is resolved and closed.	Text, Date/Time
UC-008	Generate Property Performance Report	Property Manager	Property managers generate reports to gain insights on property performance.	1. Log into the system. 2. Navigate to the 'Reports' module. 3. Select 'Property Performance' report template. 4. Customize report parameters (date range, property type, etc.). 5. Generate and view the report.	Detailed property performance report is generated.	Text, Number, Date/Time
UC-009	Automated Lease Renewal Reminder	System	The system automatically sends lease renewal reminders to tenants.	1. Detect leases nearing expiration. 2. Automatically generate and send reminder emails to tenants. 3. Update tenant record with reminder status.	Tenants receive timely reminders for lease renewals.	Date/Time, Text

UC-010	Customer Feedback Collection	System	The system collects feedback from tenants after maintenance requests are resolved.	1. After maintenance request closure, send a feedback survey to the tenant. 2. Collect and store responses in Dynamics 365. 3. Analyze feedback for service improvement.	Tenant feedback is collected and analyzed.	Text, Option Set
UC-011	Chatbot for Tenant Queries	Tenant	Tenants interact with a chatbot to get answers to common questions and assistance.	1. Access the tenant portal. 2. Initiate a chat session with the virtual agent. 3. Ask questions or request assistance. 4. Receive automated responses or escalation to a human agent if needed.	Tenants receive timely answers to their queries.	Text, Option Set
UC-012	Tenant Self-Service Portal	Tenant	Tenants use a web portal to manage their rental experience, including viewing leases, making payments, and submitting requests.	1. Log into the portal. 2. Access various self-service features (view lease, make payment, submit maintenance request, etc.).	Tenants have self-service access to manage their rental experience.	Text, Number, Date/Time, Option Set
UC-013	Tenant Onboarding Process Automation	System	Automate tenant onboarding tasks such as sending welcome emails, verifying documents, and completing checklists.	1. New tenant application approved. 2. System sends welcome email with portal access details. 3. Verify uploaded documents. 4. Complete onboarding checklist.	Efficient and automated tenant onboarding.	Text, Date/Time
UC-014	Real-time Analytics Dashboard	Property Manager	Property managers access a dashboard with	1. Log into the system. 2. Navigate to the analytics dashboard. 3. View	Real-time visibility into key performan	Text, Number,

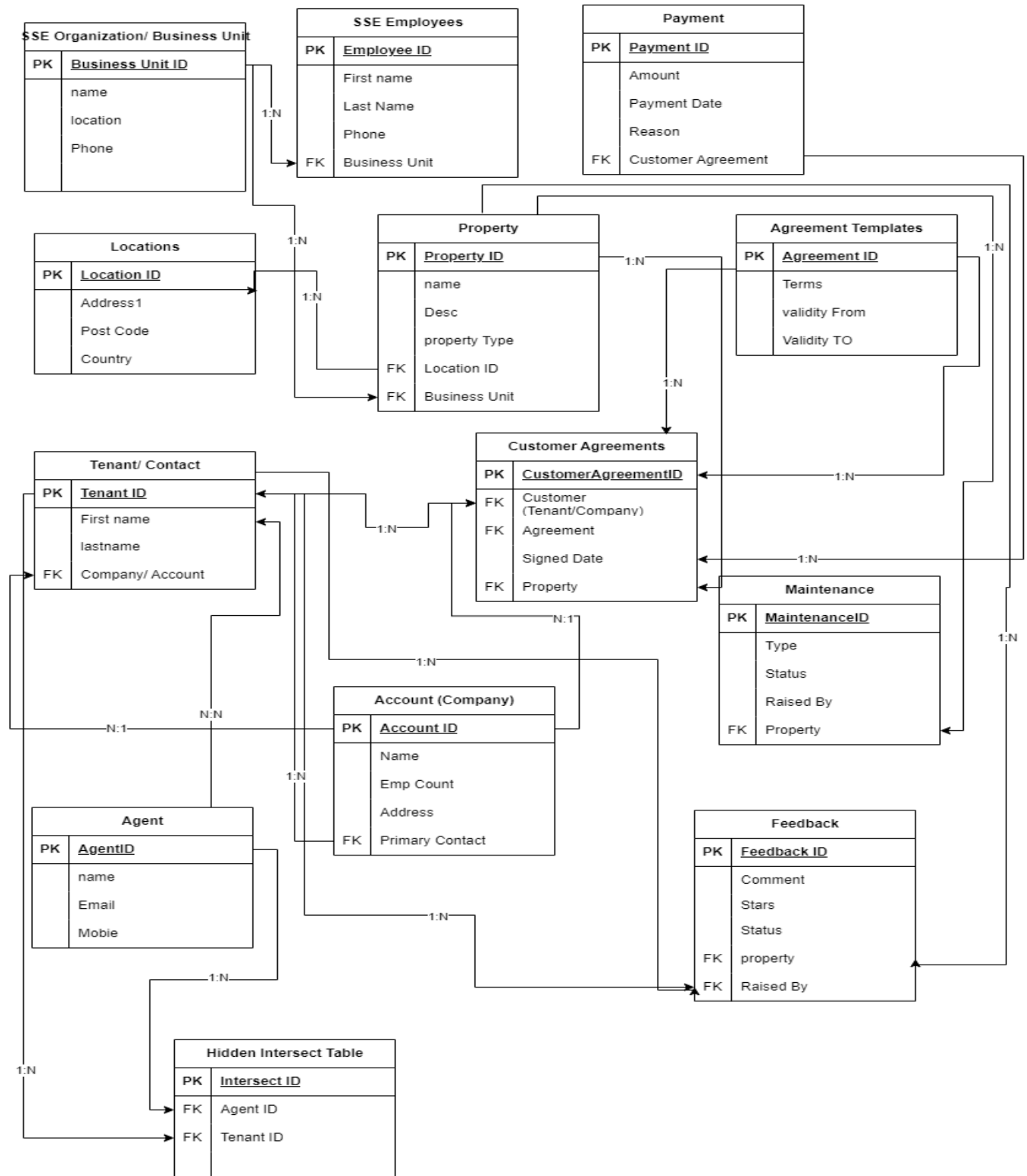|			real-time analytics on property performance, tenant satisfaction, and financial metrics.	real-time data and insights.	ce indicators.	Date/Time
UC-015	Validate Rent Payment Amount	System	System validates that the rent payment amount matches the expected amount based on the lease agreement.	1. Tenant initiates rent payment. 2. System checks payment amount against lease agreement. 3. If valid, process payment. 4. If invalid, notify tenant of discrepancy.	Ensures accurate rent payments.	Number, Text
UC-016	Ensure Lease Duration Compliance	System	System ensures lease agreements comply with minimum and maximum duration policies.	1. Property manager creates lease agreement. 2. System validates lease duration. 3. If valid, save lease agreement. 4. If invalid, notify property manager of policy violation.	Ensures lease agreements comply with policies.	Date/Time
UC-017	Automatic Maintenance Request Escalation	System	System automatically escalates unresolved maintenance requests after a specified period.	1. Maintenance request submitted. 2. System monitors request status. 3. If unresolved after specified period, escalate to higher authority.	Ensures timely resolution of maintenance requests.	Date/Time, Text
UC-018	Verify Tenant Eligibility for Lease Renewal	System	System verifies tenant eligibility for lease renewal based on predefined criteria (e.g., payment history, complaints).	1. Lease renewal process initiated. 2. System checks tenant eligibility. 3. If eligible, proceed with renewal. 4. If not eligible, notify tenant and property manager.	Ensures lease renewals follow eligibility criteria.	Text, Option Set

UC-019	Property Availability Status Update	System	System automatically updates property availability status based on lease agreements and maintenance activities.	1. Lease agreement signed or maintenance request resolved. 2. System updates property status to available or unavailable. 3. Notify property manager of status change.	Keeps property availability status accurate.	Text, Date/Time
UC-020	Capture Tenant Preferences	Tenant	Tenants provide preferences for property features (e.g., number of bedrooms, amenities) during application.	1. Tenant submits application. 2. System captures preferences and stores in tenant record.	Preferences are stored and used for matching tenants with properties.	Text, Option Set
UC-021	Monitor Property Utility Usage	Property Manager	Property managers monitor utility usage (e.g., water, electricity) for each property.	1. Log into the system. 2. Navigate to the 'Utility Usage' module. 3. View and analyze utility usage data.	Insights into property utility usage for cost management.	Number, Date/Time
UC-022	Lease Agreement Digital Signatures	Tenant, Property Manager	Tenants and property managers sign lease agreements digitally.	1. Generate lease agreement. 2. Send agreement for digital signature. 3. Tenant and property manager sign electronically.	Lease agreements are signed and stored digitally.	Text, Date/Time
UC-023	Schedule Property Inspections	Property Manager	Property managers schedule regular property inspections and notify tenants.	1. Create inspection schedule. 2. Notify tenants of inspection dates. 3. Record inspection results.	Regular inspections ensure property maintenance.	Date/Time, Text
UC-024	Store Lease Documents	System	System stores all lease-related documents for easy access and retrieval.	1. Upload lease documents. 2. Tag and categorize documents. 3. Retrieve documents as needed.	Lease documents are securely stored and easily accessible.	Text, Image

UC-025	Automate Late Payment Notices	System	System automatically sends notices to tenants for late rent payments.	1. Detect overdue rent payments. 2. Generate and send late payment notices. 3. Update tenant record with notice status.	Tenants receive timely notifications for late payments.	Date/Time, Text
UC-026	Calculate Total Rent Received	System	System calculates the total rent received from a property over a specified period using a rollup field.	1. Log into the system. 2. Navigate to the 'Financials' module. 3. Select a property and view total rent received.	Accurate calculation of total rent received.	Number
UC-027	Calculate Lease Duration	System	System calculates the duration of a lease agreement using a calculated field based on start and end dates.	1. Create or view a lease agreement. 2. System automatically calculates lease duration.	Accurate calculation of lease duration.	Date/Time, Number
UC-028	Property Occupancy Rate Chart	Property Manager	Property managers view a chart showing the occupancy rate of properties over time.	1. Log into the system. 2. Navigate to the 'Occupancy Rate' chart. 3. View occupancy rate data by property, month, and year.	Visual representation of property occupancy trends.	Number, Date/Time
UC-029	Maintenance Request Trends Dashboard	Property Manager	Property managers access a dashboard showing trends in maintenance requests, including frequency and resolution times.	1. Log into the system. 2. Navigate to the 'Maintenance Trends' dashboard. 3. Analyze trends and identify areas for improvement.	Insights into maintenance request patterns and efficiency.	Number, Date/Time, Text
UC-030	Tenant Satisfaction Survey Results	Property Manager	Property managers view survey results from tenants regarding their satisfaction with	1. Log into the system. 2. Navigate to the 'Tenant Satisfaction' dashboard. 3.	Insights into tenant satisfaction and areas for	Text, Option Set

			services and properties.	Review survey results and feedback.	improveme nt.	

6. Solution Components

Component	Description	Use Cases Supported
Dynamics 365 CE	Core customer relationship management functionality, including tenant management, lease management, and reporting.	UC-001, UC-002, UC-003, UC-004, UC-005, UC-006, UC-007, UC-008, UC-009, UC-010, UC-015, UC-016, UC-017, UC-018, UC-019, UC-020, UC-021, UC-023, UC-024, UC-025, UC-026, UC-027, UC-028, UC-029, UC-030
Power Apps	Custom applications for property management, tenant portals, and maintenance request handling.	UC-001, UC-002, UC-004, UC-005, UC-007, UC-012, UC-020, UC-024, UC-022
Power Automate	Automation of workflows, including lease renewal reminders, tenant onboarding, feedback collection, and maintenance request escalation.	UC-003, UC-006, UC-009, UC-010, UC-013, UC-017, UC-022, UC-023, UC-025
Power BI	Data analytics and reporting tools to generate insights and performance reports.	UC-008, UC-014, UC-021, UC-028, UC-029, UC-030
Power Virtual Agent/ Co-Pilot Studio	Chatbots for tenant support and query resolution.	UC-011
Power Pages	Web portals for tenant self-service and information management.	UC-012
Business Rules	Enforce business policies and rules within Dynamics 365 CE.	UC-015, UC-016, UC-017, UC-018, UC-019

ER Diagram

SSE Organization/ Business Unit

PK	Business Unit ID
	name
	location
	Phone

SSE Employees

PK	Employee ID
	First name
	Last Name
	Phone
FK	Business Unit

Payment

PK	Payment ID
	Amount
	Payment Date
	Reason
FK	Customer Agreement

Locations

PK	Location ID
	Address1
	Post Code
	Country

Property

PK	Property ID
	name
	Desc
	property Type
FK	Location ID
FK	Business Unit

Agreement Templates

PK	Agreement ID
	Terms
	validity From
	Validity TO

Tenant/ Contact

PK	Tenant ID
	First name
	lastname
FK	Company/ Account

Customer Agreements

PK	CustomerAgreementID
FK	Customer (Tenant/Company)
FK	Agreement
	Signed Date
FK	Property

Maintenance

PK	MaintenanceID
	Type
	Status
	Raised By
FK	Property

Account (Company)

PK	Account ID
	Name
	Emp Count
	Address
FK	Primary Contact

Agent

PK	AgentID
	name
	Email
	Mobie

Feedback

PK	Feedback ID
	Comment
	Stars
	Status
FK	property
FK	Raised By

Hidden Intersect Table

PK	Intersect ID
FK	Agent ID
FK	Tenant ID

Relationship labels: 1:N, N:1, N:N

7. Conclusion

Implementing the Real Estate Management System using the Power Platform and Dynamics 365 will streamline property management processes, improve tenant satisfaction, and provide data-driven insights for better decision-making. The use cases outlined in this document demonstrate the practical application of the system in real-world scenarios.