Purple Pixel, Inc.

Condominium Management Web App

Project Vision Document

Version 1.0

10/1/2022

Revision History

Revision	Date	Author	Reviewed By	Summary of Changes
Working Copy	2022-09-28	Ferdous Azizi	Vinicius Henrique	First draft copy
First Draft	2022-10-01	Vinicius Henrique	Ferdous Azizi	Edited and Completion of first draft
Final Draft	2022-10-02	Ferdous Azizi	All members (Group 16)	Compare to first draft and finishing touches.

Document Approval List

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Document Distribution List

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1 Introduction

This document is aimed at providing an overview of Purple Pixel's Building Management Solution capability. It also covers a SWOT analysis of the solution. The document outlines the Business opportunity and product details its benefits to users and other stakeholders. Stakeholder definition and User profiling are also undertaken in the document. Finally, the document lists all the features of the solution along with assumptions under which it will be delivered. Constraints that usually require workarounds and/or additional costs are also listed in the end.

1.1 Purpose

The document highlights problems in Building Management System. It presents these as possible business opportunities with a detailed explanation of how this business opportunity can become a profitable venture for Purple Pixel and solve many problems of End users.

1.2 Scope

1.2.1 In Scope

- Package/Mail Delivery Automation
- Tenant Management
- Amenity Booking Solution
- Notification Automation using Mail, Voice Telephony and SMS
- Service and Maintenance Automation
- Cyber Security for Solution
- Surveillance and Monitoring Integration with BMS
- All Integrations required to implement above modules

1.2.2 Out of Scope

- Existing processes that are not in purview of this document
- HVAC Integration.
- Any other not explicitly listed in this document.

1.3 Definitions, Acronyms, and Abbreviations

Term	Explanation
BMS	Building Management System
BAS	Building Automation System
IT	Information Technology
HVAC	Heating, Ventilation, and Air Conditioning
SWOT	Strength, Weakness, Opportunity, and Threat (Analysis)

1.4 References

Name	Link
Kermani, Mostafa & Ghasemzadeh, Esmaeil & Vahidi, Taghi & Reza, Majid. (2013). Implementing BMS in household and commercial complexes using industrial PLCs as well as its impact on optimizing energy consumption.	www.researchgate.net
SWOT Analysis	https://www.businessballs.com/strategy-innovation/swot-analysis/
BIM SWOT Analysis	https://www.revitmodelingindia.com/latest-blog/swot-analysis-bim-rmi/
Problems with Building Automation Systems	info.midatlanticcontrols.com
Data Analytics & Smart Building Science Articles |	www.buildingsiot.com

2 Positioning

2.1 Business Opportunity

In a world where security and privacy are valued more than ever, implementing a Building Management System for condominiums will place the company in an elite market. We will be able to target the customers who value and guard their privacy and security beyond anything else. With this software, we will be able to target customers in private and public institutions, organizations and bodies, colleges, schools, builders, homeowners, both individuals, and housing facilities, and schools. This software will be built on the modularity of implementation with the scope to integrate more advanced solutions as they evolve over a period. The solution when customized and implemented for customers will help in optimizing energy utilization and reduce and optimize maintenance and personnel costs by increasing staff productivity. It will build and enhance tenant safety and privacy through 90% process automation and integration with any type of surveillance hardware.

2.2 Problem Statement

The Problem of	Managing Buildings with an optimum number of resources without much manual or human intervention
affects	Property owners, Tenants, Admin, and maintenance staff
the impact of which is	Inefficient use of resources, risking privacy and security of tenants; waste of time and energy of precious men hours
a successful solution would be	Easily accessible web interface which can be accessed by Staff both admin and housekeeping along with tenants. Seamless integration of third-party software and hardware for Surveillance, monitoring, and optimization of energy usage; Automation not just for information flow and workflow.

Table 1 Problem Statement

2.3 Product Position Statement

For	Property Owners, Builders, and communities
Who	Are looking to secure their property, and ensure the best utilization of resources through process automation
The Purple Pixel Condominium BMS	Is a BMS especially designed for Condominiums
That	One Stop web solution for all your privacy security and process automation needs.

Unlike	John Controls and Cicso products
Our product	Is built on modularity, which means it can be implemented as much as you want with solutions supporting all possible integrations for efficient building management

2.4 SWOT Analysis

<Reference: https://www.businessballs.com/strategy-innovation/swot-analysis/)

Strengths	**Weaknesses**
Simplifies Facility Management	Cost of Implementation is High
Ensures Optimized Productivity of Staff Through Process Automation	Not all integrations are Plug and Play.
Most integrations are Plug and Play	Human intervention is required as though all processes are automated, the system will require 5% inputs and updates keyed in by staff manually
Opportunities	**Threats**
The entire solution is built in a way that it caters to many properties of same of different types	Bare minimum implementations offered at a lower price for capturing larger Customer numbers will dilute the market with Dupes launched as cheaper substitutes.
Market segment based on sending capacity can be as low as $1,000 to a full-fledged implementation $100,000 which will give all state of art integration for HVAC, Surveillance, process automation, AI integration, etc.	Since the software allows many integrations with third-party systems, users must be very cautious of malware and bad systems that can get on the system.

3 Stakeholder and User Descriptions

3.1 Stakeholder Summary

Stakeholder Name	Represents	Role
Investors	Chief Sponsors for Building the Software	Provide primary funding to develop and launch the product
Supplier	The Company Making the Software	Main contributor from inception of product till implementation at customer site. Deeply involved post implementation as well

Stakeholder Name	Represents	Role
System Integrator	IT resource	Responsible for implementation and all integrations available and needed by the owner
Property Owner	Purchaser of the Software	Primary go- no go person. Super important as he will okay the requirements
End User	Users of implemented system	Staff, purchaser of software and Tenants

Table 3 Stakeholder Summary

3.2 User Summary

Username	Description	Responsibilities	Stakeholder
Admin User	Back-office users	They will setup the workflows for automation	End User
Tenants	Application Users	They will be using the application for their	End User
System Purchaser	Customer	They will look for personalization and analytics reports. They will also confirm on value add and actual ROI	End User
System Integrator	IT Resource	Responsible for implementation at client site. Responsible for hardware and Software Integrations	IT – provided by Purple Pixel, Inc.

Table 4 User Summary

4 Stakeholder Requirements

ID	Requirement	Stakeholder
1	20% return on investment on annual basis	Investors
2.	Amplified productivity of staff – Expecting 50% efficiency	Purchaser
3	Cost saving by 20% from first month implementation completion	Purchaser
4	Breakeven by 8 months of implementation	Purchaser
5	100% System uptime	Purchaser
5	Ease of use	End User - Staff
6.	Tolerance to errors in usage	End User - Staff
7.	Process automation for Urgent /follow-up workflows	End User - Tenant
8.	Data Privacy and security	End User - Tenant
9	Enhanced safety security and process automation	Purchaser/End users

Table 5 Stakeholder Requirements

5 System Features

ID	Feature	Stakeholder Requirement ID
SF01	Notification Management	7
SF02	Tenant Management	5,6,7,8
SF03	Cost Optimization	2,3,4
SF04	Efficiency Optimization	
SF05	Safety and Security of Data, property, and occupants of the property	8,9

Table 6 System Features

6 Assumptions

1. *The BMS product is acquired as complete system including IT hardware, Software, professional services of Purple Pixel*
2. *Purchaser agrees to requirements shared, which will be implemented as a solution*
3. *Any additional requirements will be taken up via a change order if required.*
4. *All the implementations will be in accordance with standard operating procedure for implementing BAS.*
5. *Any upgrades beyond limited warranty will be paid for by the purchaser.*

7 Constraints

1. *Enhancing coverage for more square feet property area involves enhancing the solution infrastructure. Therefore, it is important to scope the asks accordingly.*
2. *Upgrade costs can be huge or reduced based on technology price. This may have an impact on ROI and cost benefit analysis*
3. *System downtime for maintenance is unavoidable. This maintenance will happen through hosted network via prior notification.*