

Vision and Scope Document

for

(iMega)

Version 1.0 approved

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Table of Contents

Table of Contents	ii
Revision History	ii
1.Business Requirements	3
1.1.Background	3
1.2.Business Opportunity	3
1.3.Business Objectives and Success Criteria.....	3
1.4 Business Assumptions and Dependencies	4
1.5.Business Risks	4
2.Vision of the Solution	5
2.1.Vision Statement.....	5
2.2.Major Features	5
3.Scope and Limitations.....	5
3.1.Scope of Initial Release	5
3.2.Scope of Subsequent Releases	7
3.3.Limitations and Exclusions.....	7
4.Business Context.....	8
4.1.Stakeholder Profiles	8
4.2.Project Priorities.....	9
4.3.Operating Environment.....	9

Revision History

Name	Date	Reason For Create	Version
Raneem Alqarni	20.12.2023	Document created based on research and provide information	1.0
Ghala Alqarni			

1. Business Requirements

1.1. Background

iMega Shopping Centre is a bustling hub with a large number of visitors daily. However, the traditional methods of advertising and engaging with customers have limitations in terms of reach and effectiveness. The decision to implement Beacon technology at iMega Shopping Centre was driven by the need to overcome limitations in traditional advertising, enhance the visitor experience, track visitor behavior. iMega recognized that traditional methods had limited reach and effectiveness, leading to a desire for a more targeted and efficient way to engage with visitors.

1.2. Business Opportunity

Many visitors at iMega Shopping Centre have expressed the desire for a system that would allow them to receive targeted pricing specials and advertisements on their mobile devices. To address this, iMega Shopping Centre plans to implement Beacon technology using BLE beacons. These beacons will transmit pricing specials based on visitor proximity, delivering personalized offers directly to their mobile devices, establish a dedicated role for managing the Beacon system. However, the implementation goes beyond advertising. iMega also aims to track app usage to analyze the system's impact on profit. By monitoring visitor engagement and behavior, iMega can gather valuable data to enhance their marketing efforts and improve the overall customer experience. This data-driven approach allows iMega Shopping Centre to make informed decisions that positively impact their bottom line.

1.3. Business Objectives and Success Criteria

Business Objectives:

BO-1: Reduce task completion time for store managers by 20% to enhance efficiency. The scale of measure to quantify the statement will be tracking and analyzing the time required to complete managerial tasks.

BO-2: iMega Shopping Centre aims to increase a 15% in customer satisfaction ratings, resulting in a higher number of repeat visits.

BO-3: iMega Shopping Centre aims to increase a 25% in app downloads and active user participation.

BO-4: iMega Shopping Centre aims to increase sales by 15% within the first year of implementation.

Success metrics:

SM-1: 25% increase in the number of repeat visits and a 10% improvement in customer retention rate within 6 months following initial release.

SM-2: 30% increase in customer satisfaction ratings, indicating a higher level of customer satisfaction.

SM-3: 20% growth in sales compared to the previous year.

SM-4: 20% reduction in task completion time, indicating enhanced productivity and time-saving benefits for store managers.

1.4. Business Assumptions and Dependencies

Business Assumptions:

AS-1: Systems with user-friendly interfaces will be available for visitors to effectively engage with and derive benefits from the offered advertising.

AS-2: System interface will be user-friendly for store managers to process the expected volume of specified functions.

Dependencies:

DE-1: If the system must effectively analyze and monitor visitors' participation and behavior, the system must incorporate data analysis tools.

DE-2: If the system wants to use data related to users, it must comply with governmental regulations related to data privacy, wireless communication.

1.5. Business Risks

Risk ID	Risk	Probability	Impact
RI-1	If the system is hard to use, will be reduce sales and customer satisfaction and possibly usage of it.	0.3	3
RI-2	Non-user-friendly interfaces for managers may impede operational efficiency, risking the intended reduction in task completion time.	0.5	6
RI-3	Inadequate data analysis tools may compromise insights into visitor behavior, affecting marketing strategies and customer experience.	0.6	3
RI-4	If rules of data privacy aren't followed, legal issues may arise, and using customer data for decisions could be impacted	0.3	9

2. Vision of the Solution

2.1. Vision Statement

For visitors at iMega Shopping Centre, who have expressed the desire of advertisements on their mobile devices, The iMega Beacon System Is a location-based technology that uses Bluetooth Low Energy (BLE) beacons to transmit information to nearby devices, That offers tailored pricing specials, relevant advertisements, and promotional content, based on individual preferences and behavior patterns, Unlike traditional marketing methods that rely on one-size-fits-all messaging, Our product delivers significant advantages, such as: Increased customer satisfaction, improved shopping experiences, enhanced profitability by gathering valuable data on visitor behavior and preferences.

1.2. Major Features

Feature ID	Feature Name	Feature Description
F-1	Store Manager Interface	Allow store managers to create, update, or delete pricing specials associated with beacons.
F-2	Beacon Management	Allow the Beacon Manager to set up, configure, and manage all beacons in the shopping center.
F-3	User Management	Provide functionality for users to register, log in, and receive notifications on new or updated pricing specials.
F-4	Analytics and Reporting	Offer a comprehensive analytics dashboard that displays insights into customer behavior, including dwell time, path taken, and frequency of visits.
F-5	System access	Provide system through web application as well as iOS, Android, and Windows apps.
F-6	Store management platform	Engaging experiences and smooth functionality for visitors and store managers alike.

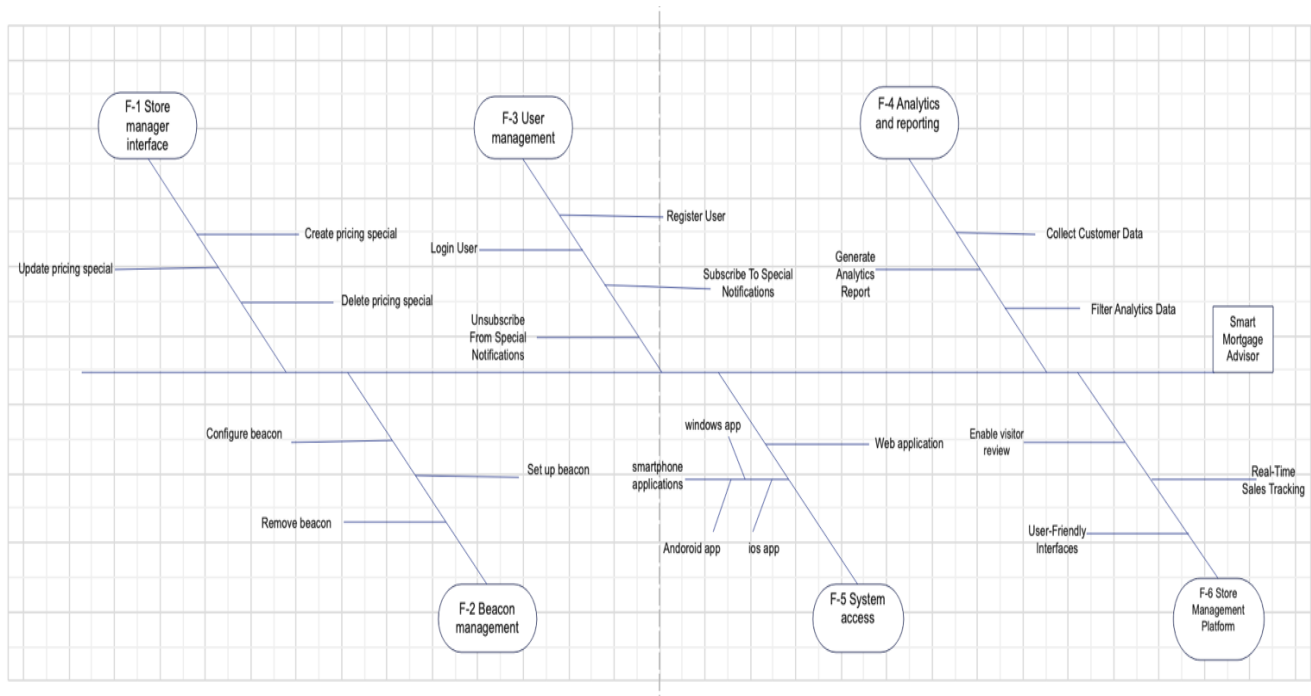


Figure 1. Feature tree for iMega

2. Scope and Limitations

Figure 2 presents the scope of the iMega at a high level of abstraction.

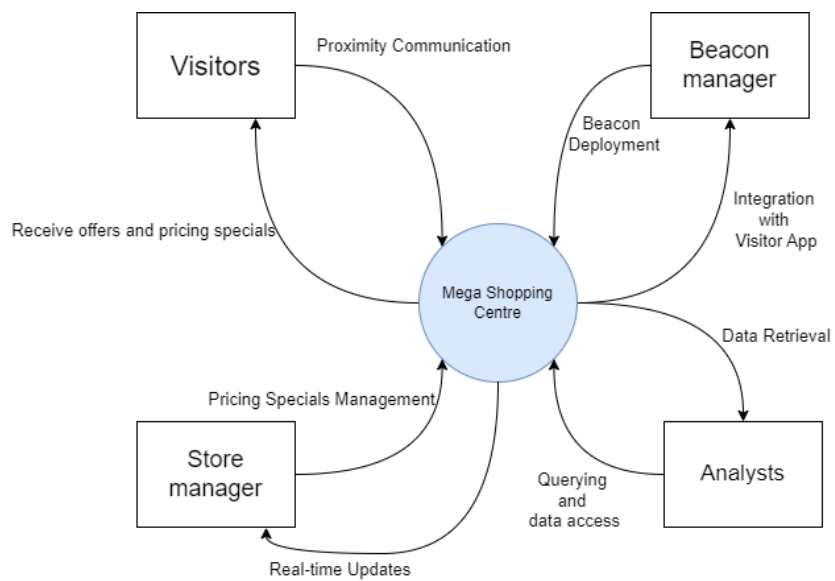


Figure 2. Context diagram for iMega

3.1. Scope of Initial and Subsequent Releases

Feature	Release 1	Release 2	Release 3
F-1: Store Manager Interface	Store managers can create, update, and delete pricing specials for beacons.	Implement scheduling feature to set specific start and end dates for pricing specials associated with beacons.	
F-2: Beacon Management	Implement beacon registration feature, enabling Beacon Managers to register new beacons into the system.	Enhance beacon management capabilities by enabling Beacon Managers to configure advanced settings for each beacon.	Fully implemented
F-3: User Management	Implement user registration feature, allowing users to register..	Enable users to manage their profiles, allowing customization of preferences to enhance their experience.	Integrate social media login options to streamline the registration process.
F-4: Analytics and Reporting	Get insights on customer behavior	Enhance insights with more details and visuals.	Integrate machine learning algorithms
F-5: System access	Web application	iOS and Android apps	Windows phone and tablet apps
F-6: Store management platform	Not implemented	Fully implemented	

3.2. Limitations and Exclusions

L1- Many stakeholders might expect the Beacon system to earn points or rewards based on their proximity to certain products or areas within the shopping center. It might not be planned for the initial implementation of the Beacon technology.

L2- Stakeholders might anticipate but is not planned to be included in the Beacon technology implementation is direct integration with the visitors' personal mobile payment platforms or systems.

4. Business Context

4.1. Stakeholder Profiles

Stakeholder	Major value	Attitudes	Major interest	Constraints
Beacon manager	Improved Efficiency and Effectiveness	They would be motivated to ensure that the Beacon system delivers value to visitors by providing targeted offers and relevant information	System Performance and Optimization, Visitor Behavior Analysis, employee time saving	Compliance with data protection laws and ensuring visitor privacy
Store manager	More efficient use of managers time, and ensuring maximum profits	willingness to leverage data provided by Beacon technology to understand customer behavior	Increase sales, achieving business objectives	Training for managers requires budget limitations
Visitors at Mega Shopping	Better Advertisement Delivery, convenience	They appreciate the opportunity to find discounts and promotions that align with their shopping preferences and needs	Simplicity of use, Access to Exclusive Offers	Internet access and mobile device is needed
Data analysis and reporting personnel	insightful analysis that provides meaningful insights and actionable recommendations, and drive business improvements.	They value staying up to date with the latest data analysis techniques, tools, and methodologies.	Assess its effectiveness in terms of generating profits, improving customer experience, and achieving marketing objectives.	Data privacy and compliance regulations.

4.2. Project Priorities

Dimension	Constraint	Driver	Degree of freedom
Features	Deliver all planned innovative features successfully		Some flexibility to adjust features
Quality	All security tests must pass		Adjustments possible based on user acceptance test results
Schedule			Release 1 planned to be available by the end of Q1 of next year; Release 2 by the end of Q3
Cost			Budget overrun up to 10% acceptable without sponsor review
Staff		Team size fixed (full-time project manager, half-time BA, 5 developers, 2 tester)	

4.3. Operating Environment (Deployment Considerations)

Apps have to be compatibilited with prevalent operating systems (iOS, Android) to maximize accessibility for a diverse user base as part of Release 2, with Developing an intuitive, user-friendly interface and providing comprehensive training resources for store managers and Beacon Managers for Release 3. Videos (no more than 7 minutes long) shall be developed to ensures that both Beacon Managers and store managers are well-informed and can maximize the benefits of the technology.