<StarBug Cafeteria Management System>

Vision Document

Version <1.0>

Revision History

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| 26/10/2023 | 1.0 | Initial draft of the documentation | Intech.Co |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Table of Contents

1. Introduction 4

1.1 References 4

2. Positioning 4

2.1 Problem Statement 4

2.2 Product Position Statement 4

3. Stakeholder and User Descriptions 5

3.1 Stakeholder Summary 5

3.2 User Summary 5

3.3 User Environment 6

3.4 Summary of Key Stakeholder or User Needs 7

3.5 Alternatives and Competition 7

4. Product Overview 8

4.1 Product Perspective 8

4.2 Assumptions and Dependencies 8

5. Product Features 8

6. Other Product Requirements 10

Vision (Small Project)

# Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of the **StarBug Cafeteria Management System**. It focuses on the capabilities needed by the stakeholders and the target users, and explains why these needs exist. The details of how the **StarBug Cafeteria Management System** fulfills these needs are elaborated in the use-case and supplementary specifications.

This Vision document provides an overview of the entire project, outlining its objectives, scope, and key stakeholders. It sets the stage for the subsequent sections where we delve into the specific requirements and features of the **StarBug Cafeteria Management System**.

## References

There is no reference used in this Vision document.

# Positioning

## Problem Statement

| The problem of | Management, selling, and buying traditional foods and drinks such as cakes, milk tea, and coffee of a chain of cafeterias called StarBug. |
| --- | --- |
| Affects | Stakeholders can meet closely, discuss, review, and make decisions (based on proportions) with the project team. Of course, stakeholders can invest and receive the profits or reinvestment. They also play an important role in the development of this chain. |
| The impact of which is | The basic approach is difficult to advertise foods and drinks to millions of customers that lead to low profit and be far from the customers’ views. |
| A successful solution would be | Give an efficient method for marketing and a convenient way to sell lots of items in several stores. |

## Product Position Statement

| For | StarBug cafeterias’ owner and customers. |
| --- | --- |
| Who | Manage, sell and buy foods and drinks in a chain of cafeterias. |
| The (product name) | StarBug Cafeteria Management System (SCMS) |
| That | Allow the owner to do marketing, manage products and employees, sellers can view and deliver products easily, customers can accost the chain easier. |
| Unlike | The other coffee shops such as The Coffee House, Highland, and Phuc Long. |
| Our product | Build a fast system which can improve the delivery’s speed and has an attractive, friendly interface. |

# Stakeholder and User Descriptions

## Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| Product manager  IT director  Customer support  Marketing manager | Overseeing the entire product development process and ensuring that the web application aligns with the company's goals and customer needs  Responsible for the overall technology infrastructure and IT strategy of the coffee and tea chain  Responsible for ensuring that customers have a positive experience when using the web application. They are focused on addressing customer inquiries, issues, and feedback, as well as maintaining high-quality customer service.  Responsible for promoting the web application, increasing its visibility, and driving customer engagement. They have expertise in marketing strategies and branding. | PM: Defining product roadmap, Prioritizing features, Market researching, Project monitoring, Defining product vision, Ensuring product viability, primary interest is in the overall success and sustainability of the product  IT Director: Oversees technical infrastructure, system integration, security and compliance, scalability. Budget and technical risk assessment.  Customer Support: Listen to customer feedback, handle customer inquiries, problems. Assure user satisfaction and retention.  Marketing manager: Take care of promotion and branding of the product, engage with customers. Asses. create advertisement campaigns. Communicate to users about promotions and such. |

## User Summary

| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| --- | --- | --- | --- |
| Customer  Barista/ Cashier  Delivery driver  Store manage | Represents end-user who order coffee and tea products using the web application  Represents employees responsible for preparing and fulfilling orders in the coffee and tea chain  Represents individuals responsible for delivering orders to customers  Represents the manager of a coffee and tea chain store | 1. Browse product catalog 2. Customize and place orders 3. Track order status and delivery 4. Provide feedback and report issue 5. Receive and process incoming orders. 6. Prepare and package orders. 7. Confirm order readiness. 8. Receive delivery orders. 9. Navigate to delivery locations. 10. Deliver orders and update order status. 11. Coordinate with baristas to ensure order readiness. 12. Monitor store inventory. 13. Manage and optimize store performance. | N/A (Direct user)  Store manager  Head of Delivery and Logistics  Coffee and Tea Chain |

## User Environment

***Customer Environment:***

**Number of People:** Variable, depending on the number of customers placing orders. The number of customers using the application can change throughout the day.

**Task Cycle:** The time spent by a customer in the application can vary widely. Browsing products may take a few minutes, while the entire order cycle, including customization, payment, and tracking, may take up to 30 minutes.

**Unique Constraints:** Customers can access the application from a variety of devices and locations, including mobile devices, desktop computers, and possibly in outdoor or on-the-go situations. The application needs to be responsive and accessible on different screen sizes.

***Barista/Cashier Environment:***

**Number of People:** Typically, there are multiple baristas/cashiers working in a store, with varying shift schedules. The number of baristas/cashiers on duty can change throughout the day.

**Task Cycle:** Baristas/cashiers work in shifts, and their task cycles typically last several hours. During their shifts, they continuously process incoming orders and prepare products.

**System Platforms:** Baristas/cashiers use in-store computers or mobile devices to receive and process orders. Future platforms might involve more automation for order processing.

***Delivery Driver Environment:***

**Number of People:** The number of delivery drivers depends on the volume of orders. The number of drivers on duty can change throughout the day.

**Task Cycle:** Delivery drivers are dispatched on specific routes for deliveries, with each delivery taking a variable amount of time. Task cycles may vary from minutes to hours.

**System Platforms:** Delivery drivers use mobile devices or navigation systems to receive delivery orders and track routes. Future platforms might involve more advanced navigation and communication tools.

***Store Manager Environment:***

**Number of People:** Typically, one store manager per store. Store managers may have assistants or other staff to help manage the store.

**Task Cycle:** Store managers are responsible for the overall operation of the store, and their task cycles cover the entire duration of the store's opening hours.

**System Platforms:** Store managers use computers and management software to oversee store operations, inventory, and performance.

## Summary of Key Stakeholder or User Needs

| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| --- | --- | --- | --- | --- | --- |
| Broadcast messages | Problem | Reasons | Current solution | | Desired solution |
| Inefficient ordering process | Time-consuming and inefficient ordering process leading to customer frustration | Manual order-taking, long wait times, and complex customization options | Order taken in-person or over the phone resulting in manual entry and delay | | Online ordering system that is user-friendly, allows quick customization, and streamlines the order process |
| Lack of real-time order tracking | Customers are often left wondering about the status of their orders, leading to uncertainty and anxiety | Lack of real-time order tracking system results in a disconnect between customers and the order fulfillment process | Informed of the estimated delivery time or pickup time but they do not have real-time visibility into their respective orders | | A real-time order tracking feature that provides accurate information about the status as well as the current location of their orders. This is expected to greatly enhanced the user experience |
| Limited customization options | Customers nowadays desire a more extensive customization options for their coffee and tea orders | Limitations on the degree of customization | Can choose from a list of predefined options but don’t have much flexibility | | Offers a wider range of customization options for beverages, such as flavors, amount of ingredients, providing customers a more personalized experience |
| Seamless communication with support | Difficulties in getting in touch with customer support when they have issues or inquiries | Limited communication channels or delays in response lead to frustration | Contacting via phone or email is possible, but response time can be slow in rush hour | | Integrated, responsive customer support channels, such as chat or in-app messaging, to quickly and accurately address queries and resolve issues |

## Alternatives and Competition

Alternatives:

Maintaining the status quo:

Yes: Familiarity with the current progress

No: Inefficiency, lack of customer engagement

Building a solution from the ground up:

Yes: High customization and control over features

No: High cost, time-consuming and maintenance

Buying a competitor’s solution:

Yes: Rapid deployment, quicker acquisition of customers

No: Problems in integration, high cost

Known competitors:

The Coffee House: Established user base, loyalty program integration

Phuc Long: Highly customizable drinks, brand recognition

Local venues: Highly accessible, community engagement

# Product Overview

## Product Perspective

The Starbug Cafeteira Website is independent and totally self-contained, it’s not related to any other applications, or a component of a larger system.

## Assumptions and Dependencies

**Assumptions:** Sufficient product inventory is available to meet customer needs.

* Impact: If inventory shortages occur, a delay or even worse, unavailability of products will be experienced

by customers

**Assumptions**: Customer are comfortable with using the web-based application

* Impact: If users are not comfortable with the app, additional support may be needed

**Assumptions:** Users will access the app from a variety of web browsers, such as: Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Edge (chromium-based).

* Impact: If a significant portion of the users access the application from less well-known or outdated web browsers, compatibility issues will arise. Certain features may not work, user experience will be compromised. Leading to frustration, increased support tickets, and a potential loss of customers.

**Dependency**: Availability of third-party payment processing services.

* Impact: The availability and reliability of these services affect the application’s ability to process payments fast and securely.

**Dependency:** Coordination with third-party delivery providers.

* Impact: The performance and reliability of delivery partners can impact the application’s delivery service

**Dependency:** Availability of reliable internet service for both the customers and StarBug’s physical locations.

* Impact: Unreliable or unavailable internet service can hinder the application’s functionality and user experience.

# Product Features

| **No.** | **Features** | **Description** | **Priority** |
| --- | --- | --- | --- |
| **1** | Set-up Administrator Account | Administrators can manage  other types of accounts and  information of orders, products. | High |
| **2** | Set-up Staff Account | Staff account can manage the menu of the cafeteria. | High |
| **3** | Set-up User Account | Users can view product  categories, buy, order products,  pay products and login signup  features. | High |
| **4** | Create products and show  products from database to user  interface | Administrators can read, create  new products from the database | High |
| **5** | Update Products | Administrators update products from the database | High |
| **6** | Delete Products | Administrators can delete  products from database | High |
| **7** | View and statistics of the shop's  sales | Calculate, update price of orders  and inform to users | High |
| **8** | Generate a discount fee for  each type of product | Administrators can create a  suitable discount fee for this  type of product. | Medium |
| **9** | View product categories | Users can view product  categories on the user interface | High |
| **10** | Search Products | User can search products that  they want | High |
| **11** | Filter products by type, price | User can filter products to find  products easily | High |
| **12** | Order products | User can order products after  buy | High |
| **13** | Pay products through QR code | User can pay products through  QR code. Make sure to buy and sell  products conveniently | High |
| **14** | Login | User can login after register | High |
| **15** | Review and Comment products | User can read review and  comment products | High |
| **16** | Slider 3 Hot Selection | User can see 3 most choice that based on the amount of user buy that product via a top slider | High |
| **17** | Images and stories of product brands. | Users can see the images and stories of each product to ensure their choice | Medium |
| **18** | Introducing the history of formation, brand story, policies,.. | An About Page for listing something related to the company and story of the brand | Medium |
| **19** | Order tracking | Allow Administrator and staff to track the customer’s orders | High |
| **20** | Guest viewing | Guest actor can not order and asked for sign up | High |

# Non-Functional Requirements

* Performance:
* Response time for each user action must not exceed 5 seconds under optimal conditions (connection, device,...), actions such as: Select item, add to cart, confirm order , …
* 1 million orders can be processed without users experiencing order delays or increased response times (lag).
* Portability:
* The system can be used on many devices such as desktop, laptop, tablet, mobile (responsive).
* The functions & tools are guaranteed to work well on all platforms.
* Scalability:
* The application can scale to accommodate a growing number of users and orders without sacrificing performance. Through adding resources to the application or adding servers.
* Same goes for the application's database. Must be designed to be suitable for growing transaction volume.
* Others:
* The system operates continuously 24/7
* User interface is friendly, easy to use for users.