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**<StarBug Cafeteria Management System>  
Vision Document**

**Version <1.1>**

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## Revision History

Date	Version	Description	Author
26/10/2023	1.0	Initial draft of the documentation	Intech.Co
14/11/2023	1.1	Change the vision document (Sprint 2, Sprint 3) + Added new actor (Guest) + Updated <b>User Environment</b> and <b>Alternatives and Competition</b> + Updated <b>Product Features</b>	Phù Thành Nhân Nguyễn Quốc Huy

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# Vision (Small Project)

## 1. 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**.

### 1.1 References

There is no reference used in this Vision document.

## 2. Positioning

### 2.1 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.

### 2.2 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.

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### 3. Stakeholder and User Descriptions

#### 3.1 Stakeholder Summary

Name	Description	Responsibilities
Product manager	Overseeing the entire product development process and ensuring that the web application aligns with the company's goals and customer needs	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	Responsible for the overall technology infrastructure and IT strategy of the coffee and tea chain	IT Director: Overseas technical infrastructure, system integration, security and compliance, scalability. Budget and technical risk assessment.
Customer support	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.	Customer Support: Listen to customer feedback, handle customer inquiries, problems. Assure user satisfaction and retention.
Marketing manager	Responsible for promoting the web application, increasing its visibility, and driving customer engagement. They have expertise in marketing strategies and branding.	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.

#### 3.2 User Summary

Name	Description	Responsibilities	Stakeholder
Customer	Represents end-user who order coffee and tea products using the web application	1. Browse product catalog	N/A (Direct user)
Barista/Cashier		2. Customize and place orders	Store manager
Delivery driver		3. Track order status and delivery	
Store manage		4. Provide feedback and report issue	Head of Delivery and Logistics
	Represents employees responsible for preparing and fulfilling orders in	1. Receive and process incoming orders.	Coffee and Tea Chain
		2. Prepare and package orders.	
		3. Confirm order readiness.	

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	the coffee and tea chain	<ol style="list-style-type: none"> <li>1. Receive delivery orders.</li> <li>2. Navigate to delivery locations.</li> <li>3. Deliver orders and update order status.</li> </ol>	
	Represents individuals responsible for delivering orders to customers	<ol style="list-style-type: none"> <li>1. Coordinate with baristas to ensure order readiness.</li> <li>2. Monitor store inventory.</li> <li>3. Manage and optimize store performance.</li> </ol>	
	Represents the manager of a coffee and tea chain store		

### 3.3 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 and throughout holiday seasons.

**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, it will be much quicker when ordering at the shop.

**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 and throughout the holiday season.

**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 (point-of-sale system) 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 and throughout the holiday season.

**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 for ease of communication between customer and delivery driver.

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### ***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.

### **3.4 Summary of Key Stakeholder or User Needs**

<b>Broadcast messages</b>	<b>Problem</b>	<b>Reasons</b>	<b>Current solution</b>	<b>Desired solution</b>
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 enhance 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

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### 3.5 Alternatives and Competition

Alternative solutions	Advantages	Disadvantages
Maintaining the current status	<ol style="list-style-type: none"> <li>1. Familiarity with the current progress.</li> <li>2. Next to no disruption to existing workflows.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inefficiency, lack of customer engagement.</li> <li>2. Limited growth potential in the long run.</li> </ol>
Building a new solution from the ground up	<ol style="list-style-type: none"> <li>1. High customization and control over features</li> <li>2. Adaptable to changing business needs</li> </ol>	<ol style="list-style-type: none"> <li>1. High cost, time-consuming and maintenance.</li> <li>2. May affect normal operation due to additional cost.</li> </ol>
Buying a competitor's solution, outsourcing	<ol style="list-style-type: none"> <li>1. Rapid deployment, quicker acquisition of customers.</li> <li>2. Chance of attracting competitor's user base due to familiarity.</li> </ol>	<ol style="list-style-type: none"> <li>1. Problems in integration, high cost, weak brand recognition.</li> <li>2. Differences in operation may affect both.</li> </ol>
Partnership with an another shop	<ol style="list-style-type: none"> <li>1. Shared customer base, increasing overall traffic.</li> <li>2. More diverse offerings</li> </ol>	<ol style="list-style-type: none"> <li>1. Highly dependent on the other shop's brand recognition and quality.</li> <li>2. Challenges in coordination.</li> </ol>



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Known competitors	Strengths	Weaknesses
Highlands	<p>1. Long-standing: With over 24 years of formation and development, Highlands brand recognition is highly desirable.</p> <p>2. Locations: Not only limited to Ho Chi Minh city, Ha Noi, but also other 24 provinces.</p>	<p>1. Eco-friendliness: Still using plastic cups and straws, while promoting environmental campaigns at the same time.</p>
The Coffee House	<p>1. Customer service: Very good customer service, building lasting relationships, and leaving customers delighted.</p> <p>2. App experience: Customer loyalty point is integrated into the app, and overall app's performance, UI/UX is well implemented.</p>	<p>1. Menu: Menu is not as varied and plenty of options compared to others.</p>
Phuc Long	<p>1. Menu: Highly-customizable menu, focusing on healthy drinks and pastry, and a distinct flavor.</p> <p>2. Location: Although not as much as others, placement of shops are at key strategic points.</p>	<p>1. Time: Noticeably longer waiting time compared to others.</p>

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Local venues / street vendors	1. Pricing: Low operational cost leading to a much affordable product.  2. Accessibility and convenience: Highly accessible, providing quick and convenient service to pedestrians and passerby.	1. Menu: Limited menu compared to larger coffee shops chains, limiting customer choices.  2. Safety: Food safety is not trustworthy enough.
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## 4. Product Overview

### 4.1 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.

### 4.2 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.

## 5. Product Features

No.	Features	Description	Priority
1	Set-up Guest Account	Guest account can view, search, and operate with the cart [2]	High
2	Set-up Cart feature	The Cart is a place where Guest and Customer save their favorite product or tend to buy it	High

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3	View product detail	Guest can click on the product the see the detail information about that product	High
4	Search Products	Guest actor (or higher actor) can search products that they want	High
5	Add product to Cart	Guest actor (or higher actor) can add their favorite product to the Cart	High
6	Delete product from Cart	Guest actor (or higher actor) can delete/remove their favorite product from the Cart	High
7	Update product from Cart	Guest actor (or higher actor) can update their favorite product from the Cart: adjust the amount of product, adjust the topping, ....	High
8	Sign up Customer	Guest can choose to upgrade their role to Customer by sign up	High
9	<b>Set-up Customer Account</b>	Customer can do everything that Guest can do and some other features	High
10	Check status of order	Customer can check whether their order is delivered or not, tracking the progress, ...	High
11	<b>Set-up Staff Account</b>	Staff account can manage the menu of the cafeteria.	High
12	Forget password	Customer and Cafeteria actor can reset their password if they forget with the combination of authentication	High
13	Sign in	Customer and Cafeteria actor both have to sign in to activate their own feature	High
14	Pay order	Customer can pay their order via QR code, Bank account, ... and they can pay only when they Sign in [13], there will also a calculated interface to summary their order	High
15	Review and rate product	Customer can send the comment and rate to feedback the product and they can do it only when they Sign in [13]	High
16	Decline order	Cafeteria can decline the Customer order (out of product, time, ...) and they can do it only when they Sign in [13]	High
17	Finish order	Cafeteria can mark the Customer order to be done (delivered/finished) and they can do it only when they Sign in [13]	High

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18	Update account information	Both Customer and Cafeteria can update their own information (name, age, email, ...)	High
18.1	Change password	In the Update account information feature [18], they can also Change their password	High
19	Sign out	Both Customer and Cafeteria can Sign out (switch account or exit their role)	High
20	<b>Set-up Manger Account</b>	Managers can manage other types of accounts and information of orders, products and do everything that Staff can	High
21	Delete slider promotion	Manager can remove the advertisement on the slider	High
22	Add slider promotion	Manager can add the advertisement on the slider	High
23	Delete staff account	Manager can delete staff (lower actor ) account	High
24	Update staff account	Manager can adjust staff (lower actor ) account	High
25	Add staff account	Manager can add staff (lower actor ) account	High
26	View statistical report	Manager can view the statistic, the number, the overall report of the cafeteria	High
27	3 Best-selling products	Manager can choose which 3 products base on the statistic and pop it on the Best selling UI part	Medium
28	Update products	Manager update products from the database	High
29	Delete products	Manager can delete products from database	High
30	Add products	Manager can add product to the database	High

## 6. 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:

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- + 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.