Vision and Scope Document

for

Bakery Management System

Version 1.0 approved

Prepared by Group 4

Process Impact

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
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# Business Requirements

## Background

Bakery businesses often face significant challenges in managing their day-to-day operations. These include inefficient inventory management, time-consuming order processing, and inadequate customer relationship management. Currently, many bakeries rely on manual processes or disparate systems to handle tasks such as tracking inventory levels, processing customer orders, and managing financial transactions. These inefficiencies not only reduce operational effectiveness but also affect the bakery’s ability to compete in a market where customer satisfaction and efficient service are crucial. A comprehensive Bakery Management System (BMS) is needed to address these issues by integrating and automating key aspects of bakery operations. The BMS will streamline inventory management, order processing, customer relationship management, and financial tracking. This system aims to enhance operational efficiency, reduce waste, improve customer satisfaction, and ultimately increase profitability. By addressing these operational challenges, the bakery can focus on delivering high-quality products and exceptional customer experiences.

## Business Opportunity

Many bakeries have expressed the need for a comprehensive Bakery Management System (BMS) that enables customers to place orders online for pickup or delivery. Such a system would allow customers to select their desired bakery items from a menu and schedule pickup times or delivery to their desired location. This online ordering system would save customers time and increase the likelihood of receiving their preferred bakery items. Additionally, by having advance knowledge of customer orders, bakeries can better manage inventory levels, reduce waste, and improve the efficiency of bakery staff.

Furthermore, integrating the BMS with local delivery services could provide customers with a wider range of choices by allowing them to order bakery items along with meals from nearby restaurants. This integration could also lead to potential cost savings through volume discount agreements with these restaurants. Overall, implementing an online ordering system as part of the Bakery Management System would not only enhance customer convenience and satisfaction but also improve operational efficiency and potentially generate new revenue streams for bakeries.

## Business Objectives

**BO-1**: Reduce the cost of bakery food wastage by 40% within 6 months following initial release.

Scale: Cost of bakery items thrown away each week by bakery staff.

Meter: Examination of Bakery Inventory System logs.

Past: 33% (Based on initial study in 2023).

Goal: Less than 20%.

Stretch: Less than 15%.

**BO-2**: Reduce bakery operating costs by 15% within 12 months following initial release.

**BO-3**: Increase average effective work time by 15 minutes per bakery-using employee per day within 6 months following initial release.

## Success Metrics

**SM-1**: Adoption Rate of Bakery Management System (BMS)

Metric: Percentage of employees using the BMS.

Measurement: Tracking the number of employees who use the BMS at least once a week.

Target: Achieve a 75% adoption rate among employees who used the bakery at least 3 times per week during the baseline period (Q3 2023) within 6 months following initial release.

**SM-2**: Customer Satisfaction Rating

Metric: Average rating on the quarterly bakery satisfaction survey.

Measurement: Quarterly surveys assessing customer satisfaction on a scale of 1 to 6.

Target: Increase the average rating by 0.5 within 3 months following initial release compared to the Q3 2023 rating, and by 1.0 within 12 months.

## Vision Statement

The Bakery Management System (BMS) is a groundbreaking solution designed to revolutionize the bakery industry's operational landscape. In a world empowered by the BMS, bakeries seamlessly integrate digital technologies into their daily operations, offering customers a modern and convenient ordering experience. Through an intuitive online platform accessible via web and mobile devices, customers can effortlessly place orders for their favorite bakery items from anywhere, anytime. Whether it's a customized cake for a special occasion or a daily selection of freshly baked goods, the BMS ensures that customers have access to a diverse range of bakery offerings at their fingertips. By leveraging advanced order processing and delivery management capabilities, the BMS optimizes bakery operations, reducing wait times and ensuring timely delivery of orders. Bakery staff are equipped with powerful tools to efficiently manage inventory, process orders, and engage with customers, enhancing overall productivity and service quality.

## Business Risks

R-1: Integration Challenges with Existing Systems

* **Risk:** Difficulty integrating the Bakery Management System (BMS) with existing bakery systems, such as inventory management or accounting software, could lead to data inconsistencies and operational inefficiencies.
* **Probability:** Moderate
* **Impact:** High
* **Mitigation:** Conduct thorough compatibility assessments and collaborate closely with system vendors to ensure seamless integration. Develop contingency plans and alternative solutions to address any compatibility issues that may arise.

R-2: Data Security and Privacy Concerns

* **Risk:** Breaches of sensitive customer or business data stored within the BMS could damage the bakery's reputation, result in legal liabilities, and erode customer trust.
* **Probability:** Moderate
* **Impact:** High
* **Mitigation:** Implement robust security measures, including encryption, access controls, and regular security audits, to protect data integrity and confidentiality. Comply with relevant data protection regulations and standards to mitigate legal risks and ensure customer privacy.

R-3: Employee Training and Adoption

* **Risk:** Inadequate training and low employee adoption of the BMS may result in underutilization of system capabilities, hindering operational efficiency improvements and return on investment.
* **Probability:** Moderate
* **Impact:** High
* **Mitigation:** Develop comprehensive training programs and change management initiatives to facilitate employee adoption of the BMS. Provide ongoing support and incentives to encourage staff engagement and participation in system utilization.

R-4: Market Competition

* **Risk:** Increased competition from existing bakery management solutions or new entrants in the market may pose challenges to the adoption and success of the BMS.
* **Probability:** High
* **Impact:** Moderate
* **Mitigation:** Conduct market research to understand competitor offerings and differentiate the BMS through unique features, customer experience, and value proposition. Continuously monitor market trends and adapt the BMS accordingly to maintain a competitive edge.

## Business Assumptions and Dependencies

Assumptions:

**AS-1**: Availability of User-Friendly Systems

It is assumed that systems with appropriate user interfaces will be available for cafeteria employees to efficiently process the expected volume of meal orders placed through the Bakery Management System (BMS).

**AS-2**: Timely Delivery Resources

It is assumed that cafeteria staff and vehicles will be readily available to facilitate the delivery of all meals for specified delivery time slots within 15 minutes of the requested delivery time, ensuring timely and efficient service.

Dependencies:

**DE-1**: Integration with Restaurant Systems

The success of the Bakery Management System (BMS) relies on the ability to communicate bi-directionally with restaurant systems, especially if a restaurant has its own online ordering system. Seamless integration is necessary to facilitate order processing and delivery coordination between the BMS and restaurant platforms.

# Scope and Limitations

## Major Features

FE-1: Users can order and pay for meals from the bakery's menu for pickup or delivery.

FE-2: Users can order and pay for meals from local restaurants for delivery.

FE-3: Users can manage subscriptions for standing or recurring meal orders, including special daily meals.

FE-4: Admins can create, view, modify, delete, and archive bakery menus.

FE-5: Users can access ingredient lists and nutritional information for bakery menu items.

FE-6: System access is available through corporate intranet, smartphones, tablets, and the internet for authorized employees.

A diagram of a customer support

Description automatically generated

Figure 1. Partial feature tree for the Bakery Management System.

## Scope of Initial and Subsequent Releases

|  |  |  |  |
| --- | --- | --- | --- |
| Feature | Release 1 | Release 2 | Release 3 |
| FE-1, Order and Payment Processing | Users can order and pay for bakery items from the cafeteria menu for pickup or delivery. Payment by cash or credit card. | Integration with payment gateways for online payments. | Loyalty program integration for customer rewards. |
| FE-2, Menu Management | Admins can create, view, modify, and delete cafeteria menus. | Addition of daily specials and customizable meal options. | Integration with third-party recipe databases. |
| FE-3, Customer Accounts | Users can create and manage accounts to store preferences and order history. | Loyalty program integration for customer rewards. | Enhanced account features and personalized recommendations. |
| FE-4, Basic Reporting | Basic reporting capabilities provide insights into sales trends and popular menu items. | Advanced reporting and analytics for detailed insights. | Predictive analytics for inventory management. |
| FE-5, Multi-Platform Access | Access through corporate intranet, smartphones, tablets, and external internet access for authorized employees. | Development and launch of mobile applications for iOS and Android devices. | Enhancements and updates to mobile apps, including support for additional features. |

## Limitations and Exclusions

LI-1: Certain specialty or custom bakery items may not be efficiently managed by the BMS due to complex production processes or unique ingredient requirements. Consequently, the BMS will primarily handle standard bakery products, and its menu offerings may not encompass the full range of bakery items available.

LI-2: The BMS is designated exclusively for use within the bakery located at [insert bakery's location/address]. Integration with external bakery branches or franchises is not supported.

# Business Context

## Stakeholder Profiles

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Stakeholder | Major Value | Attitudes | Major Interests | Constraints |
| Bakery Owner/Manager | Streamlined bakery operations; increased efficiency and profitability | Open to innovation, but cautious about disruptions to existing workflows | Cost-effectiveness; improved inventory management; enhanced customer service | Limited budget for implementation; concerns about staff training and adoption |
| Bakery Staff | Simplified work processes; reduced manual tasks | Open to change, but concerned about job security and workload implications | Job satisfaction; efficient use of time and resources | Training and support needed for transitioning to the new system; potential resistance to technology adoption |
| Customers | Expanded product offerings; convenience | Excited about new offerings, but may have concerns about pricing and quality | Variety of bakery items; ease of ordering and payment | Accessibility issues for customers without internet or mobile devices; concerns about privacy and security of personal information |
| Suppliers | Increased business opportunities; streamlined transactions | Supportive of initiatives that improve efficiency and communication with the bakery | Timely payments; clear order specifications | Integration challenges with existing supplier systems; potential resistance to changes in ordering and invoicing processes |
| IT Department | Enhanced system performance and security | Supportive of technology upgrades, but cautious about system compatibility and maintenance | Scalability; data integration with existing systems | Limited resources for system implementation and maintenance; concerns about data security and compliance with regulations |

## Project Priorities

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension | Constraint | Driver | Degree of Freedom |
| Features | All features scheduled for release 1.0 must be fully operational | Fulfillment of bakery operational needs and customer requirements | Flexibility in prioritizing features based on criticality and resource availability |
| Quality | 95% of user acceptance tests must pass; all security tests must pass | Ensuring reliability, usability, and security of the BMS | Margin for addressing any issues identified during testing; continuous improvement |
| Schedule | Release 1 planned to be available by end of Q1 of next year, release 2 by end of Q2; overrun of up to 2 weeks acceptable without sponsor review | Timely delivery to meet bakery's operational needs and market demands | Buffer for unexpected delays or challenges; proactive monitoring and mitigation strategies |
| Cost | Budget overrun up to 15% acceptable without sponsor review | Cost-effectiveness and financial viability | Contingency measures to manage unforeseen expenses; optimization of resource allocation |
| Staff | Team size is half-time project manager, half-time BA, 3 developers, and 1 tester; additional developer and half-time tester available if necessary | Adequate resource allocation and skill set diversity for project execution | Flexibility to scale team based on project requirements and workload fluctuations |

## Deployment Considerations

The web server software will need to be upgraded to the latest version. Apps will have to be developed for iOS and Android smartphones and tablets as part of the second release, with corresponding apps for Windows Phone and tablets to follow for the third release. Any corresponding infrastructure changes must be in place at the time of the second release. Videos no more than five minutes in length shall be developed to train users in both the Internet-based and app-based versions of the Bakery Management System (BMS).