Vision and Scope Document

for

Bakery Management System

Version 1.0 approved

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Karl Wiegers | 8/5/13 | initial draft | 1.0 draft 1 |
| Karl Wiegers | 8/22/13 | baseline following changes after inspection | 1.0 approved |

# Business Requirements

## Background

Bakery businesses frequently encounter major challenges in their daily operations, such as inefficient inventory management, labor-intensive order processing, and poor customer relationship management. Many bakeries currently use manual methods or unconnected systems to handle tasks like tracking inventory, processing customer orders, and managing finances. These inefficiencies diminish operational effectiveness and hinder the bakery’s ability to compete in a market where efficient service and customer satisfaction are vital. A comprehensive Bakery Management System is essential to resolve these issues by integrating and automating critical aspects of bakery operations. The BMS will streamline inventory management, order processing, customer relationship management, and financial tracking. This system is designed to enhance operational efficiency, reduce waste, improve customer satisfaction, and ultimately boost profitability. By tackling these operational challenges, the bakery can concentrate on delivering high-quality products and exceptional customer experiences.

## Business Opportunity

Many bakeries have identified the need for a comprehensive Bakery Management System (BMS) that allows customers to place orders online for pickup or delivery. This system would let customers select their desired items from a menu and schedule a pickup time or delivery to their chosen location. Such an online ordering system would save customers time and increase the likelihood of getting their preferred items. Additionally, knowing customer orders in advance would help bakeries manage inventory better, reduce waste, and improve staff efficiency.

Integrating the BMS with local delivery services could also offer customers a wider selection by allowing them to order bakery items along with meals from nearby restaurants. This could lead to cost savings through volume discount agreements with these restaurants. Overall, implementing an online ordering system within the BMS would enhance customer convenience and satisfaction, improve operational efficiency, and potentially create new revenue streams for bakeries.

## Business Objectives

**BO-1**: Increase Customer Satisfaction Score by 20% within 9 months following initial release

**BO-2**: Enhance Employee Training Effectiveness by 35% within 9.

**BO-3**: Reduce Customer Complaints by 50% within 6 months .

BO-4: Improve Bakery Product Quality Score by 25% within 6 months following initial release.

## Success Metrics

SM-1: Reduction in Bakery Food Wastage

Metric: Percentage reduction in the cost of bakery items thrown away.

Measurement: Weekly analysis of Bakery Inventory System logs.

Target: Achieve a 40% reduction in wastage costs within 6 months following initial release.

SM-2: Decrease in Operating Costs

Metric: Percentage reduction in overall bakery operating costs.

Measurement: Monthly financial reports comparing operating costs pre- and post-release.

Target: Achieve a 15% reduction in operating costs within 12 months following initial release.

SM-3: Increase in Effective Work Time

Metric: Average increase in effective work time per employee per day.

Measurement: Employee time tracking data.

Target: Increase effective work time by 15 minutes per employee per day within 6 months following initial release.

SM-4: Employee Training Completion Rate

Metric: Percentage of employees who complete new training programs.

Measurement: Training attendance and completion records.

Target: Achieve a 90% completion rate for new training programs within 9 months following initial release.

SM-5: Online Order Growth

Metric: Percentage increase in the number of online orders.

Measurement: Monthly online order logs.

Target: Achieve a 30% increase in online orders within 12 months following initial release.

## Vision Statement

The Bakery Management System (BMS) is a revolutionary solution poised to transform the operational landscape of the bakery industry. By seamlessly integrating digital technologies into daily operations, BMS provides bakeries with a modern, efficient, 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, at any time. Whether it's a customized cake for a special occasion or a daily selection of freshly baked goods, BMS ensures that customers have easy access to a wide array of bakery offerings.

Leveraging advanced order processing and delivery management capabilities, BMS optimizes bakery operations by reducing wait times and ensuring timely delivery of orders. It equips bakery staff with powerful tools to efficiently manage inventory, process orders, and engage with customers, thereby enhancing overall productivity and service quality. This comprehensive system not only streamlines operations but also elevates the customer experience, making BMS an indispensable asset for modern bakeries.

## Business Risks

R-1: Technical Glitches and Downtime

* Risk: Technical issues or system downtime could disrupt bakery operations, leading to delays, lost orders, and decreased customer satisfaction.
* Probability: Moderate
* Impact: High
* Mitigation: Establish a reliable IT support system with quick response times. Implement regular system maintenance and updates to prevent technical glitches. Develop a robust disaster recovery plan to ensure business continuity in case of system failures.

R-2: High Implementation Costs

* Risk: The costs associated with implementing the BMS, including software purchase, hardware upgrades, and training, could strain the bakery's budget.
* Probability: Moderate
* Impact: Moderate
* Mitigation: Prepare a detailed cost-benefit analysis to justify the investment. Seek potential grants, subsidies, or financing options to offset costs. Plan a phased implementation to spread expenses over time.

R-3: Customer Resistance to Change

* Risk: Customers may be resistant to adopting the new online ordering system, preferring traditional methods, which could limit the BMS's effectiveness.
* Probability: Moderate
* Impact: Moderate
* Mitigation: Launch targeted marketing campaigns to educate customers about the benefits of the new system. Offer promotions and incentives to encourage initial use. Provide user-friendly guides and customer support to assist with the transition.

R-4: Vendor Reliability

* Risk: Dependence on external vendors for software, hardware, or services could pose risks if these vendors fail to deliver as expected.
* Probability: Moderate
* Impact: High
* Mitigation: Perform thorough vetting of vendors before engagement. Establish clear contracts with performance guarantees and service level agreements (SLAs). Maintain a list of alternative vendors as a contingency.

R-5: Regulatory Compliance

* Risk: Non-compliance with industry regulations and standards could lead to legal penalties and damage the bakery's reputation.
* Probability: Low
* Impact: High
* Mitigation: Stay updated on relevant industry regulations and ensure the BMS complies with all necessary standards. Regularly review and audit compliance practices. Engage legal experts to navigate complex regulatory environments.

R-6: Technological Obsolescence

* Risk: Rapid technological advancements could render the BMS obsolete, necessitating further investments to stay current.
* Probability: Moderate
* Impact: Moderate
* Mitigation: Invest in scalable and upgradable technology. Monitor technological trends and advancements in the bakery industry. Plan for regular updates and improvements to the BMS to keep it aligned with current technologies.

R-7: Customer Service Disruptions

* Risk: Implementation of the BMS might initially disrupt customer service, leading to negative customer experiences and loss of business.
* Probability: Low
* Impact: High
* Mitigation: Develop a detailed implementation plan that includes customer service continuity strategies. Provide thorough training for customer service staff to handle potential issues. Communicate transparently with customers about any expected changes and improvements.

R-8: Scalability Issues

* Risk: The BMS may face challenges scaling up to meet increasing demand as the bakery grows, leading to performance bottlenecks.
* Probability: Low
* Impact: Moderate
* Mitigation: Design the BMS with scalability in mind from the outset. Conduct regular performance testing and capacity planning. Implement scalable infrastructure solutions, such as cloud services, to accommodate growth.

## Business Assumptions and Dependencies

Assumptions:

AS-1: Reliable Internet Access

* It is assumed that both the bakery and its customers will have reliable internet access to use the BMS effectively, ensuring seamless online order placement and processing.

AS-2: Adequate Inventory Levels

* It is assumed that the bakery will maintain adequate inventory levels to fulfill all orders placed through the BMS without significant delays or stockouts.

AS-3: Employee Competence

* It is assumed that bakery employees will possess or can quickly acquire the necessary skills to operate the BMS efficiently, following initial training and ongoing support.

Dependencies

DE-1: Vendor Support and Collaboration

* The success of the BMS depends on continuous support and collaboration with software and hardware vendors to address any technical issues, provide updates, and ensure system reliability.

DE-2: Compliance with Local Regulations

* The successful operation of the BMS is dependent on adhering to local health, safety, and data protection regulations, which govern online food ordering and delivery services.

DE-3: Availability of Payment Processing Services

* The BMS relies on secure and efficient payment processing services to handle transactions. Any disruptions in these services could impact the ability to process orders and payments.

DE-4: Coordination with Delivery Services

* For bakeries that use third-party delivery services, the success of the BMS depends on the reliable coordination and performance of these delivery partners to ensure timely and accurate deliveries.

# Scope and Limitations

## Major Features

FE-1: Feedback and Rating System

* Users can provide feedback and rate their experience with the bakery's products and services, helping to improve quality and customer satisfaction.

FE-2: Inventory Management

* Admins can monitor and manage inventory levels in real-time, receiving alerts when stock is low and generating reports to optimize inventory control.

FE-3: Sales and Revenue Reporting

* The system can generate detailed sales and revenue reports, providing insights into performance metrics and helping with financial planning and decision-making.

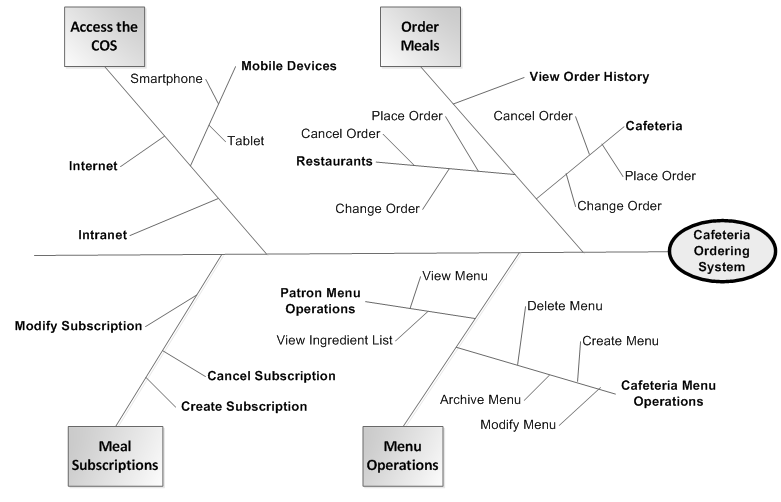
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Figure 1. Partial feature tree for the Cafeteria Ordering System.

## Scope of Initial and Subsequent Releases

|  |  |  |  |
| --- | --- | --- | --- |
| Feature | Release 1 | Release 2 | Release 3 |
| FE-1 Feedback and Rating System | Users can provide feedback and rate their experience with the bakery's products and services through a basic feedback form.. | Implementation of a star-rating system and detailed review options. Admins can view and respond to customer feedback. | Advanced analytics on feedback and ratings to identify trends and areas for improvement. Integration with customer loyalty programs to reward users for providing feedback. |
| FE-2, Inventory Management | Admins can monitor and manage inventory levels in real-time. Basic alerts for low stock levels. | Enhanced reporting features for inventory management, including usage trends and order forecasts. Integration with supplier systems for automated reordering of supplies. | Advanced inventory optimization tools, such as predictive analytics to prevent overstocking or stockouts. Multi-location inventory management for larger operations with multiple bakery locations. |
| FE-3, Sales and Revenue Reporting | The system can generate basic sales and revenue reports, including daily, weekly, and monthly summaries. | Advanced reporting features with customizable report generation options. Integration with financial software for seamless data transfer and analysis. | Enhanced account features and personalized recommendations. |

## Limitations and Exclusions

LI-1: Limited Delivery Radius

* The BMS supports delivery services only within a specific geographic radius from the bakery. Orders placed outside this radius will be restricted to pickup only, ensuring timely and efficient delivery within the manageable area.

LI-2: Offline Functionality Restrictions

* The BMS requires an active internet connection for full functionality. In offline mode, only limited features such as viewing cached menus or past orders will be available. Placing new orders, processing payments, and accessing real-time inventory will not be possible without internet connectivity.

LI-3: Customization Limits on Orders

* While the BMS allows for some customization of orders, extensive customizations or modifications that significantly alter the standard recipes or preparation methods may not be supported due to operational constraints.

# Business Context

## Stakeholder Profiles

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Stakeholder | Major Value | Attitudes | Major Interests | Constraints |
| Bakery Owner/Manager | Increase operational efficiency and reduce costs | Positive about digital transformation but concerned about initial investment | Streamline operations, improve profit margins | Budget limitations, resistance to change among staff |
| Customers | High-quality products and convenient service | Favorable towards technology that enhances their experience but sensitive to price changes | Easy ordering process, timely delivery, access to special deals and offers | Comfort with using digital platforms, budget for premium services |
| Marketing Team | Attract new customers and retain existing ones through effective marketing strategies | Excited about new promotional opportunities but concerned about tracking ROI | Utilize data analytics to target promotions, increase brand visibility | Budget for marketing campaigns, tools for measuring campaign effectiveness |

## Project Priorities

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension | Constraint | Driver | Degree of Freedom |
| Customer Experience | Customer-facing features, such as order tracking and feedback mechanisms, must be intuitive and error-free upon release. | Enhancing customer satisfaction and engagement with the new system. | Ability to refine user interface and experience based on user feedback collected during the first month post-launch |
| User Traing | Comprehensive training for all bakery staff must be completed within 4 weeks of system deployment. | Ensuring staff proficiency to minimize disruptions and maximize the benefits of the new system. | Option to extend training sessions and provide additional support resources as needed based on initial feedback. |
| Schedule | Initial launch of the web-based BMS must occur by the start of Q2; mobile app development to be completed by the end of Q3. | Aligning with the bakery's operational timeline to maximize seasonal sales opportunities. | Contingency planning for up to 4 weeks of delay, with additional resources allocated to critical path tasks to minimize risk. |
| Cost | Total project expenditure must not exceed the allocated budget by more than 10%. | Ensuring financial viability and cost-effectiveness of the project | Potential reallocation of funds from less critical areas to essential components if unforeseen expenses arise. |

## Deployment Considerations

The database management system will need to be upgraded to support the increased data load and ensure optimal performance. Initially, the BMS will be developed as a responsive web application accessible from any device. Native apps for iOS and Android will be introduced in the second release, followed by a desktop application for Windows and macOS in the third release. The infrastructure must be scalable to handle potential spikes in user activity, especially during peak hours and promotional periods. Comprehensive user manuals and interactive tutorials, each no longer than seven minutes, will be created to guide users through the features and functionalities of both the web-based and app-based versions of the BMS. Additionally, a dedicated support portal will be established to assist users with troubleshooting and provide ongoing technical support.