

SMART CANTEEN MANAGEMENT SYSTEM

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Sweet Spot of Strategy for Our Smart Canteen Management System

The Sweet Spot of Strategy is where the customer's needs, organizational capabilities, and competitor weaknesses meet. With regard to our Smart Canteen Management System, we have aligned these factors to address the demands of the market, use our strengths, and capitalize on the opportunities left by the competitors.

Customer Needs

Users of the canteen environments might want:

- ❖ Convenience: Fast, hassle-free transactions, minimized queuing time, and food availability with ease.
- ❖ Efficiency: Smoothened ordering processes and solutions to avoid overcrowding.
- ❖ Flexibility: A way of payment for a cashless canteen such as a credit system using a card system.
- ❖ Transparency: Real-time status of canteen congestion and food availability to make informed decisions.
- ❖ Reduction of needing change: No longer the canteens will have to look for change due to cashless transaction

Our system addresses these needs through card-based cashless payments, digital ordering displays, congestion control systems, and app-based canteen management with inter-canteen connectivity if there are multiple options of canteens through the premises.

Our Capabilities

We integrate hardware and software uniquely, thus enabling us to implement card payment systems displaying user details for efficient cashless transactions, deploy digital touch displays that allow users to pre-order their food and minimize waiting at the counters, and design an app to support online ordering for limited number of people, crowd monitoring, and credit exchanges between users.

- ❖ A congestion control system that updates real-time information on the crowd in the canteen to help users avoid places where there is a lot of congestion.
- ❖ Interlinking of canteens through the application that will provide options to users when one canteen is too crowded.
- ❖ Staffing can be optimized by reducing the use of cashiers and utilizing resources in enhancing the delivery and service of food.
- ❖ Easier navigation and access through the app.
- ❖ Keep track of transactions and how the monetary funds have been used.

Competitor Weaknesses

The competitor landscape has a number of flaws that our system overcomes:

- ❖ Most of the existing solutions are either confined to payment systems or digital ordering but do not address congestion control or real-time inter-canteen communication.
- ❖ Competition lacks credit exchange capabilities or an integrated system with multiple touchpoints like card readers, ordering displays, and apps.
- ❖ Very few systems offer an integrated approach that encompasses cashless payment, congestion control, and user-friendly app features in one place.

Our Sweet Spot

Our Smart Canteen Management System perfectly coincides with the Sweet Spot of Strategy in that it:

- ❖ Satisfies the customer's need for convenience, efficiency, and transparency.
- ❖ Utilizes our capabilities in hardware-software integration, app development, and canteen optimization.
- ❖ Taps into competitor weaknesses by introducing innovative features such as inter-canteen connectivity, congestion monitoring, and multi-modal payment systems.
- ❖ Secure and transparent money transactions and record history of traces

This strategic alignment will make our system competitive, cost-effective, user-friendly, and highly efficient in managing modern canteens to improve user satisfaction while optimizing operation performance, reducing the queues and allowing more efficient experience overall and a way to keep track of how the monetary funds have been used.

Problem We Are Trying to Solve

In many canteen environments, customers face several challenges that impact their overall experience:

- Long Waiting Times: Customers often have to wait in long lines to order food or pay.
- Crowded Canteens: Canteens can be overcrowded, causing discomfort and delays for users.
- Inefficient Payment Systems: Cashiers create bottlenecks, and traditional cash-based systems can slow down service.
- Lack of Information: Customers lack real-time updates on food availability or crowd levels, making it difficult to decide where to go or what to order.
- Limited Convenience in Ordering: Users often have to wait until they reach the counter to place their order.

Our goal is to address these challenges by creating an intelligent and efficient Smart Canteen Management System that improves customer convenience, reduces wait times, and optimizes operational efficiency.

Existing Solutions in the Market

Several solutions are available in the market that attempt to solve parts of the problem:

- Cashless Payment Systems: Many canteens and food courts have introduced cashless payment systems using cards or mobile apps.
- Order-Ahead Systems: Some canteens have digital ordering systems where customers can pre-order food.
- Congestion Monitoring: A few advanced canteens or food courts have implemented crowd monitoring systems, but these are limited in scope and often require additional infrastructure.

However, most of these solutions are not fully integrated into a single platform, and they do not address all aspects of the customer experience in a holistic manner. They often lack features such as real-time crowd status, interconnected canteens, or credit exchange systems.

Augmented Product Features and Differentiation

Our Smart Canteen Management System goes beyond the basic solutions by integrating multiple features into a single, streamlined platform:

1. Cashless Payments with Card System:
 - Users can pay via a card system, reducing the need for cashiers and speeding up transactions.
 - The card reader also displays user details on the screen, providing a more personalized experience.
2. Multiple Digital Ordering Displays:
 - Users can order food before reaching the counter, reducing wait times and crowding. Multiple displays are available to handle more customers at once.
3. Congestion Control System:
 - The system provides real-time updates on crowd levels in the canteen, helping customers decide where to go based on current crowd density.
 - If multiple canteens are available, the app shows which canteen is less crowded, promoting better distribution of customers.
4. Interconnected Canteens(if premises allows):
 - Our system connects multiple canteens across a premise, providing seamless information on availability and crowd status.
 - If one canteen is overcrowded, the app automatically recommends another nearby canteen with available space.
5. Limited Online Ordering:
 - Users can place orders online in advance, which helps to streamline the service process and reduces on-site wait times.
6. Credit Exchange Between Users:
 - Users can exchange credits with each other through the app, enabling greater flexibility and convenience, especially in large canteen settings.
7. Cost Efficiency:
 - By reducing the reliance on cashiers, the system frees up staff resources, allowing them to focus on food delivery, improving overall operational efficiency.