

Produce Management System

Background

The client is the owner of a national produce retail chain. He is seeking a comprehensive management system that will help improve operational efficiency as well as increasing revenue through sales growth and cost reduction. The client is interested in automating routine tasks to improve productivity, but want to maintain a level of oversight over the automation process to ensure quality and accuracy.

Project Scope

[Company_Name] will focus on four key areas of the client's business: inventory management, vendor management, resource management and revenue management.

All inventory, vendor and resource data will be the responsibility of the client to supply.

Seasonal items will be assigned to one of four distinct categories: Spring, Summer, Fall and Winter. The exact dates for each season will be the responsibility of the client to provide.

Exotic items are defined as any produce that are grown outside of the U.S. The initial phase will only focus on items grown within the U.S.

The client's assigned trade area will consist of four regions: Western, Northern, Southern and Eastern.

Inventory Management

Main User Stories

- A user wants to manage the procurement of inventory to improve operational efficiency.
- A user wants to manage the removal of inventory to improve operational efficiency.

Constraints & Business Rules

- Only administrators can procure and dispose of inventory for all stores within the chain.
- Only administrators can view the inventory level for all stores within the chain.
- Delegate can procure and remove inventory for only their assigned regional store.
- Delegate can only view the inventory level for all stores within their region.
- Inventory items at 20% of capacity or lower requires an order for up to 80% of item capacity.
- Procurement orders cannot exceed the inventory item's capacity at that particular store.
- Any procurement order made by delegates worth \$10,000+ will require administrator approval prior to being executed.
- Seasonal items should only be ordered if there are more than two weeks left in the season.
- Inventory items that are past the expiration date will be removed immediately.

- Inventory items that are issued a recall notice from the FDA will be removed immediately.
- All procured items must have 1 week left on expiration date at the time of delivery.
- If delivery of an order exceed the agreed upon delivery date by 3 business days, then the client can cancel the order for a full refund.
- Delegates can only use an assigned payment method for all procurement orders
- Only administrators can change payment method for procurement orders
- All procurement and removal orders are logged for yearly audit reviews

Ideal User Story

- The system will automatically procure and remove inventory based on client specified criteria to improve operational efficiency.
- The system will be able to track in-transit orders to gauge/verify time of delivery.
- The system will highlight pending orders that requires administrator approval to improve administrator productivity.

Constraints & Business Rules

- Any automatic procurement order worth \$20,000+ requires administrator approval.
- All automatic procurement orders have a 24 hour approval window from time of order placement.
- Automatic procurement orders can only use an assigned payment method set by administrators.
- Automatic procurement orders that exceed approval window are automatically cancelled and a new order must be placed.
- National automatic orders must notify the administrator for approval at time of order.
- Regional automatic orders must notify the delegate users for approval at time of order.
- An additional notification is sent to the responsible party if an order is not approved after 20 hours.
- All automatic removal orders for any region require the assigned delegate to confirm action rendered within one work week (5 business days) from date of order issued.
- FDA recall notice orders for any region require the assigned delegate to confirm action rendered within 24 hours.
- All automatic orders are logged for yearly audit reviews

Vendor Management

Main User Stories

- A user wants to manage the selection of vendors to improve inventory quality and reduce cost.
- A user wants to manage the vendor contacts to improve vendor relationship.
- A user wants to manage any vendor loyalty programs to leverage discounts when procuring inventory.

Constraints & Business Rules

- Selection of vendors is based on the following priority system: preferred, quality then quantity; With all things equal, price will be the determining factor.
- Preferred vendors are determined by past satisfaction.
- Preferred vendors are set by the administrator and can change at any time.
- Each vendor is paid 50% of the cost upfront and 50% once delivery is approved. If delivery is not approved then the vendor will return 25% of the advance payment to the client.
- Each vendor is rated by delegates from 1 to 5 based on the quality of the delivered product. For national inventory, all ratings from delegates are aggregated into a final score
- Only administrators can add or remove vendors
- Either delegates or administrators can view and update loyalty program criteria

Ideal User Story

- The system will provide searching, viewing and selecting vendors by set criteria to improve operational efficiency.
- The system will be able to bulk load and bulk remove vendor contacts to improve administrator productivity.

Constraints & Business Rules

- All manual searches will return vendors in order of rating from highest to lowest.
- All bulk operations will require input to follow a set format determined by [Company_Name]

Resource Management

Main User Stories

- A user wants to manage the assignment/reassignment of delegates to a region to improve operational efficiency.
- A user wants to manage the removal of delegates from a region improve operational efficiency.
- A user wants to manage delegate profiles to improve operational efficiency.

Constraints & Business Rules

- Only administrators can assign and remove delegates.
- A delegate is only assigned to one region; one region can have many delegates.
- Delegate profile information is only updatable and viewable by administrators.
- If a region does not have a delegate then by default an administrator will be assigned to that region. A region must be managed by someone.

Ideal User Story

- The system will provide user management capabilities to improve operational efficiency.
- The system will provide role management capabilities to improve operational efficiency.

Constraints & Business Rules

- Only administrators can add and remove users to the system.
- Only administrators can assign roles to users.
- Anyone with internet access can register for the system, but only administrators can approve the creation request prior to the user account from being created
- Each user requires an authentication mechanism prior to accessing the system
- A unique method of contact for each user is required to restore access to the system if unable to access the system
- A maximum of 3 failed system access will temporarily disable the account and will require an administrator to re-enable the account

Revenue Management

Main User Stories

- A user increases sales by increasing the supply of high demand inventory.
- A user reduces costs by no longer procuring low demand inventory.

Constraints & Business Rules

- High demand is defined as items dropping below 20% of inventory twice within a month
- Low demand is defined as items maintaining 70%+ inventory level for a least two months
- Expired items will count against sales of an inventory item

Ideal User Story

- The system will automatically provide periodic sales analytics to assist in shaping procurement strategies.
- The system will automatically notify administrators of low inventory levels among vendors to prepare for high demand scenarios.

Constraints & Business Rules

- Sales analytics will be computed on a monthly basis at both the national and regional levels per inventory item
- If more than 3 vendors has an inventory item below 30% of the client's total capacity, then that item will be considered a low inventory level among vendors