Central Inventory Network

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Stakeholders: Researchers, Designers, Developers, DevOps Engineers, IT
Document Status: Draft

Overview

Vision: To make shopping easier and more informed.

Mission: To provide a central network for shoppers to find inventory information for store items.

Value Proposition: The Central Inventory Network makes shopping more efficient by searching the inventory of local stores for items on a user's shopping list to find prices within their budget at stores within their reach.

The target audience includes young adults ages 18-27 in the local Seattle area, a narrow range to better align the product with the audience's particular preferences.

Objectives

At least one of the following metrics should be shown:
- Time: Users spend 5% less time on shopping trips each month.
- Money: Users spend 5% less money on an average shopping trip.
- Travel: Users travel to multiple stores in the same shopping trip 5% less often.

Scope

Categories of items within the scope include grocery and household items.
Categories of items out of the scope include sports, electronics, office, etc items.

Features within the scope include searching for items from stores with different prices and distances.
Features out of the scope include searching for a list of items, adjusting the specificity of a search, viewing and searching with item ratings, viewing and searching with store hours, viewing and reusing purchase history, and saving items for later. Many features not within the scope of this version of the product may be considered for future releases.

User Stories or Use Cases

- A user needs to buy dark soy sauce to use in a dish that evening, but they don't know whether the store they need to go to for other items in the dish carries dark soy sauce.
- A user is doing their weekly grocery run, but the store they have been visiting is shutting down. They need to find a new store that sells the same items they are used to using that is a similar distance from them as their previous store was.

Functional Requirements

- Search items within the database for relevant results.
- Show the quantity of the item available.
- Show the price of the item.
- Show the distance of the store carrying the item from the user.
- Allow users to sort results by least price or distance.

Non-functional Requirements

- Adoption process for stores should take less than half an hour for one store representative to complete. The process should have technical support from IT available.
- Support for up to 100 stores and 500,000 items.
- Search should be efficient. Return within 0.5 s.
- Quantity data should be up to date. Changes should be registered in the product within 5 min for low traffic items and 1 min for high traffic items within the current scope.

Technical Requirements

- Product is a website.
- Product works with the external inventory systems.

Acceptance Criteria

All functional and nonfunctional requirements are met.
No bugs occur during tested behavior.

Dependencies and Assumptions

This product connects with the external existing inventory systems that stores already use to keep track of their items.

Timeline

Stage	Duration	Deadline
Ideation	2 wk	2024 Oct-mid
Research	3 wk	2024 Oct
Design	3 wk	2024 Nov
Prototyping and validation	4 wk	2024 Dec
Marketing	12 wk	- soft begin after prototype full after front end continue through launch
Front end	4 wk	2025 Jan
API and integration	4 wk	2025 Feb
Database management	4 wk	2025 Mar
Launch	-	2025 May
Feedback	4 wk cycles	2025 Jun

Definitions

References