Reimagining the In-Store Shopping Experience

Utilizing simple & scalable digital touchpoints to integrate e-commerce into the in-store shopping experience, removing communication and navigation barriers to further engage customers in our digital journey

Walmart ✳ × TKS

EXECUTIVE SUMMARY

Problem

23% of Canadians are immigrants (1) and face difficulty communicating with staff causing customers to lose trust in Walmart.

Communication Barriers
72% are more likely to buy products in their own language (2), but in-store shopping never caught onto online shopping's language translation trend.

Confusing Navigation
67.3% of customers left a store at least once empty-handed (3) from the complicated, and constantly changing product organization.

Lack of Personalization
Customers aren't getting enough individual attention (ex. dietary restrictions) when shopping at big box stores.

Recommendation

A kiosk that removes language barriers, assists navigation, and enhances personalization to upgrade the in-person shopping experience.

#1: Communication:
Our kiosk promotes inclusivity and diversity by providing a multilingual, user-friendly system with thorough product descriptions to assist informed purchasing decisions.

#2: Navigation:
Our kiosk enable users to quickly find items by the simple click of a button. It guides customers to item locations and shows them when their favourite items are in stock.

#3: Personalization:
A unique feature that allows customers to prepare a shopping list, view similar products, see unique recommendations, and find an ideal item.

Outcomes

Walmart will regain trust of lost customers and attract new ones with the new and convenient shopping experience.

Improve customer satisfaction:
Fosters and nurtures long-term customer loyalty without language barriers, with 76% (4) more inclined to buy with personalized experiences.

Increase profit:
Customers no longer leave the store empty-handed as they have found the item they were looking for (increasing profit by 27%).

Mine rich customer data:
Allows Walmart to gain more customer data such as customer buying patterns.

THE PROBLEM

Walmart is missing out on potential opportunities to **grow its customer base** and **create engaging experiences** for shoppers.

- **The problem with Walmart's in-store shopping experience is its lack of digital touchpoints**

- This creates an inconvenient and inefficient shopping experience for customers, as they are unable to take advantage of the speed and convenience offered by online shopping

- We can increase customer satisfaction by incorporating digital touch points to help with *communication*, *navigation* and *personalization*

Learn more about the problem.

1 Communication Barriers

Due to the language barrier, many Walmart customers—mostly immigrants—do not receive the assistance they require which decreases the customer experience. Immigrants make up 23% of the population in Canada (1), one of the most multicultural nations in the world.

That amounts to approximately 56 million individuals in North America alone.

2 Confusing Navigation

Shopping at Walmart can be difficult for those with limited time, typically takes 70 minutes. This is due to the large store size and abundance of products - a problem faced by 60% of customers

Furthermore, communication with employees, making it difficult for customers and resulting in a 20% loss of profits in Walmart's total sales.

3 Lack of Personalization

Walmart's shopping experience is not personalized enough because it relies heavily on a one-size-fits-all approach

This means that customers may not be able to find items that cater to their specific needs and preferences, leading to a lack of loyalty to Walmart.

The Current Customer Journey

The current in-store shopping experience is lengthy and inefficient.

1

2

3

4

5

CARTS

Carts are large and tedious.
Hard to navigate especially during peak shopping hours

NAVIGATION

Customers often struggle to find items due to Walmart's huge layout

SEARCH

Once customers has found the department of their product they sort through various brands and products

STAFF

While shopping, it is difficult to locate staff to answer questions. They often do not have adequate product knowledge

CHECKOUT

Wait times at checkout lines can be long. Self-checkout is cumbersome for customers with full carts.

Recommendation Outline

There are 3 parts to the Interactive Kiosk targeting different gaps in the Walmart, in-store shopping experience.

Communication

01

- ✓ Multilingual user interface
- ✓ Comprehensive product descriptions
- ✓ Text to Speech Function
- ✓ Comprehensive FAQs + Reviews

Our technology promotes inclusivity and diversity by providing a **multilingual, user-friendly system**.

Navigation

02

- ✓ In-store mapping
- ✓ Navigational search
- ✓ Clear pathway visualization
- ✓ Stock availability

Our monitors enable users to quickly find objects by the simple click of a button. It **guides** customers to **aisles** or **departments** and let them know when your favourite items are **in stock**.

Personalization

03

- ✓ View Shopping list
- ✓ Sensitive Materials
- ✓ Personalized Product Suggestions
- ✓ View Similar Products

Our solution allows customers to prepare a shopping list, view similar products, see store recommendations, and find suitable items.

Our Product

Our Vision

Our vision is to create a personalized, seamless customer experience for Walmart shoppers by integrating digital touch points into their stores.

The interactive kiosk we have produced will break down communication barriers, fix confusing navigation and increase personalization through a streamlined process. This solution will make it easier for customers to shop and purchase their desired items, ultimately creating a more enjoyable shopping experience.

Our Proposal

With this kiosk, customers will have access to product information, reviews, and other helpful features that will enrich their shopping experience, creating a more enjoyable and convenient shopping experience.

By using this kiosk, Walmart will be able to better understand their customers' shopping habits and preferences, allowing them to tailor their in-store experience to their customers' needs.

See the prototype & the 3D model

Interactive Kiosk Prototype
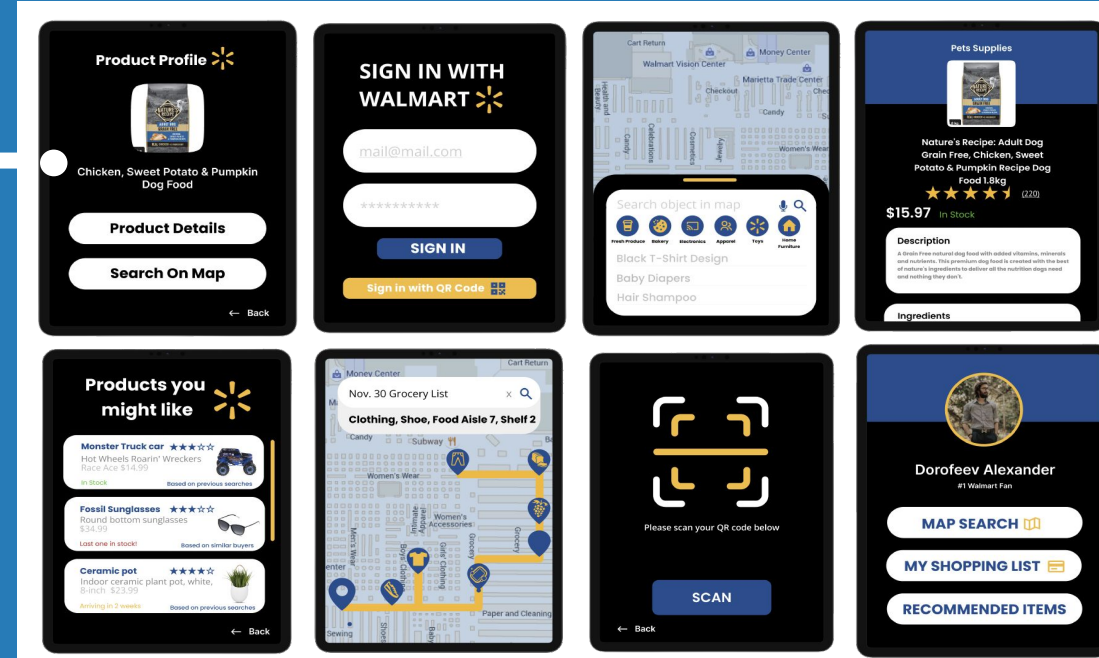
Improve The In-Store Shopping Experience with our Tap, Browse & Shop Process

TAP
Tap the screen to get started - select your preferred language and choose to sign-in

BROWSE
Search for a variety of products - skim through product details and locate them on the map

SHOP
Follow the interactive map to locate products - continue shopping or proceed to the checkout

Outcome Summary

The best parts of online shopping have been brought in-store.

Communication

Customers can easily access information and assistance in their own language, reducing the need for them to rely on store associates for assistance. The kiosks provide information and assistance to customers with disabilities or special support, enhancing the accessibility of the store for all customers.

Navigation

The kiosks are equipped with interactive maps, allowing customers to easily find their way around the store and locate specific products. Reduce the frustration and stress that customers may experience when trying to navigate a large, often crowded store. This helps create a more intuitive and user-friendly shopping environment at Walmart.

Personalization

Walmart stores now have an innovative way of offering a more personalized shopping experience for customers. With the use of kiosks that are designed to collect data on customer preferences and behaviors, Walmart can tailor the information and assistance provided to each customer. This includes personalized product recommendations and deals based on a customer's previous purchases and browsing history. By doing this, Walmart is able to show that they are listening to their customers' individual needs and preferences, resulting in improved customer satisfaction and loyalty.

Removing Communication Barriers

- ✓ Provide **multilingual support** so that customers can access information and interact with the kiosk in their **preferred language**.
- ✓ Use clear and concise language in all written and visual content displayed on the kiosk.
- ✓ Implement **text-to-speech** & **speech-to-text** functionality for customers who prefer to hear information rather than read it & prefer to say rather than type.

Fixing Confusing Navigation

- ✓ Provide **search functionality** and clear categories to help customers quickly access the information they need.
- ✓ Offer tutorials and onboarding materials to help customers understand how to use the kiosk effectively.

Increasing Personalization

- ✓ Implement a login system that allows customers to access their **account information** and previous interactions with the kiosk.
- ✓ Use customer data and preferences to make **personalized recommendations** and suggestions.
- ✓ Offer a personalized shopping experience by allowing customers to create and save lists, track their orders, and more.

Learn more about how it works

Removing Communication Barriers

Finding an employee to help can be difficult and frustrating, as they are not always available, and language or social barriers may impede communication

Description

The kiosk promotes inclusivity and diversity by providing a multilingual, user-friendly system, so customers can make their own informed purchasing decisions. There is a constantly increasing number of immigrants in North America: 26% of the US are Immigrants [8] and 23% of Canada are immigrants [1]. That rounds up to 93.6 million potential customers [8][1] Walmart doesn't cater towards due to language barriers. Plus with the rise of social anxiety in GenZ, communication is key for a great shopping experience.

Multilingual User Interface

The monitor is available in the 200 most spoken languages in the world and sets your preferred language immediately at use.

Text-to-Speech & Speech-to-Text

For customers who prefer to hear information rather than read it. This features allows the customer to listen to product descriptions and reviews rather than reading them. It also allows customers to say what they want to search for rather than type, saving time and convenience.

Comprehensive Product Description

The kiosk provides detailed product descriptions in the language selected so that customers understand what they are buying.

Comprehensive FAQs + Reviews

The kiosk displays past reviews for items, helping customers make informed purchases. It also includes a "purchasing guide" feature that brings you to similar products you can view on the screen.
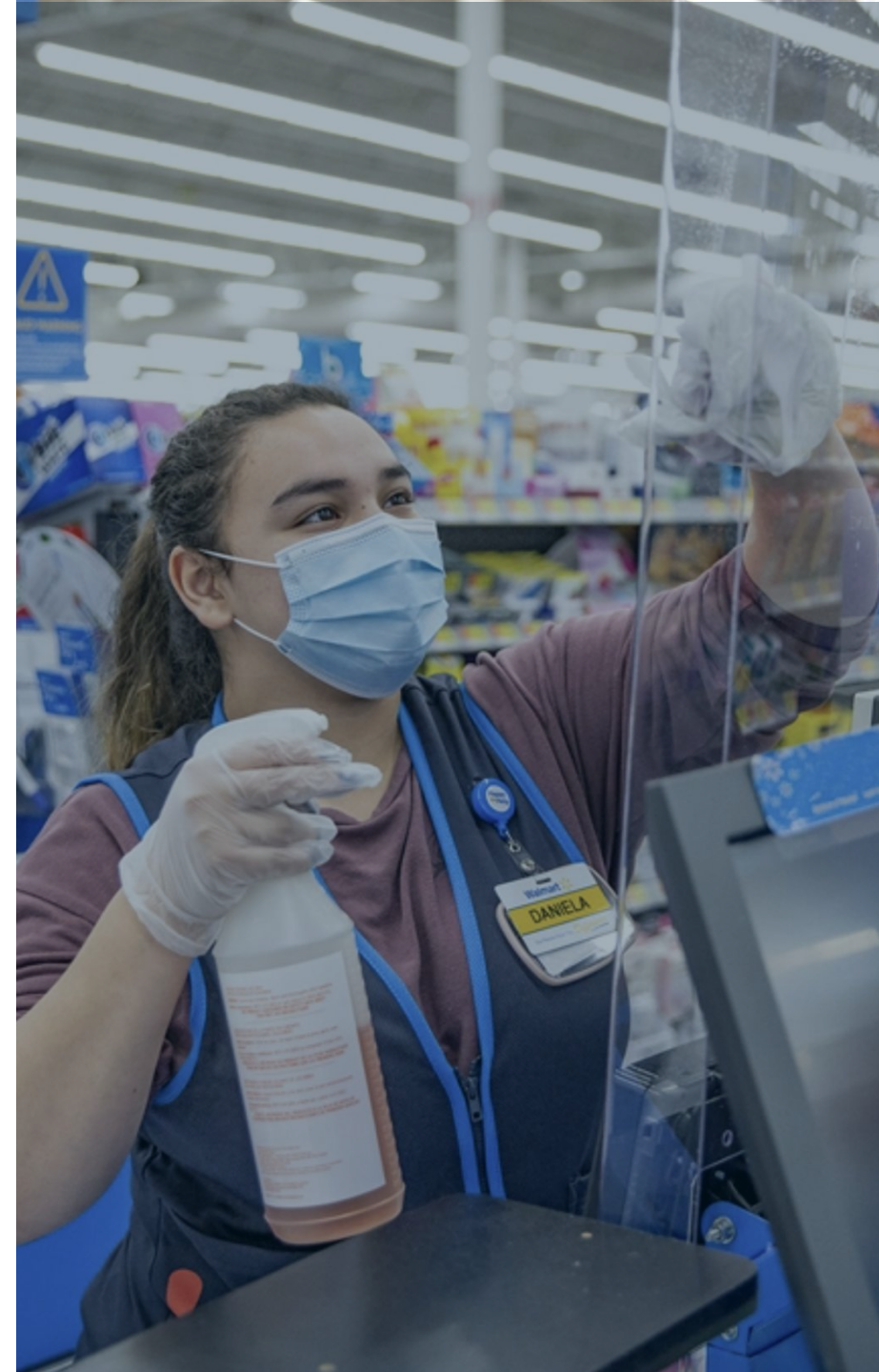
Fixing Confusing Navigation

Description

Finding products in-store has never been simpler. With Bluetooth Beacons implemented into the kiosk, customers can easily locate items in Walmart stores faster than ever before. Up to 40% (3) of customers failed to find <u>at least one item</u> on their shopping list in-store <u>each visit</u>, despite the fact that these items were almost always in stock and concealed on shelves throughout the superstore.

In-Store Mapping

This function allows customers to easily view a map of the store and see the location of different departments and products. This can help customers quickly find what they are looking for and avoid getting lost in the store.

Navigational Search

The navigational search function allows customers to search for specific products or departments using natural language. This can make it even easier for customers to find what they are looking for, and can save them time and frustration.

Clear Pathway Visualization

This function shows customers the fastest and most efficient route to their destination within the store. This can help reduce congestion and make it easier for customers to move around the store.

Stock Availability

The stock availability feature is a valuable tool for both customers and store employees. This function allows customers to see whether a particular product is in stock, and can even help store employees quickly locate products that are out of stock.

Increasing Personalization

Description

Creating the ultimate personalized experience to improve customer satisfaction. A unique special touch that allows customers to prepare a shopping list, view similar products, see store recommendations, and find a suitable item caters towards them.

View Shopping list

Utilize the kiosks "View Shopping List" feature to help customers plan their shopping trips and stay organized while they shop. This saves hem time and make their shopping experience more efficient.

Sensitive Materials

The "Sensitive Materials" feature is useful for customers with dietary restrictions or allergies. This feature can help them quickly and easily identify products that meet their needs.

Personalized Product Suggestions

The "Personalized Product Suggestions" feature can help Walmart tailor product recommendations to individual customers based on their past purchases and preferences. This can help drive sales and improve customer satisfaction.
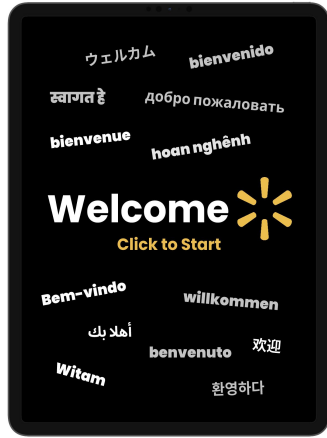
View Similar Products

The "View Similar Products" feature helps customers explore and compare different products within a category. This is useful for customers who are trying to make informed purchasing decisions.
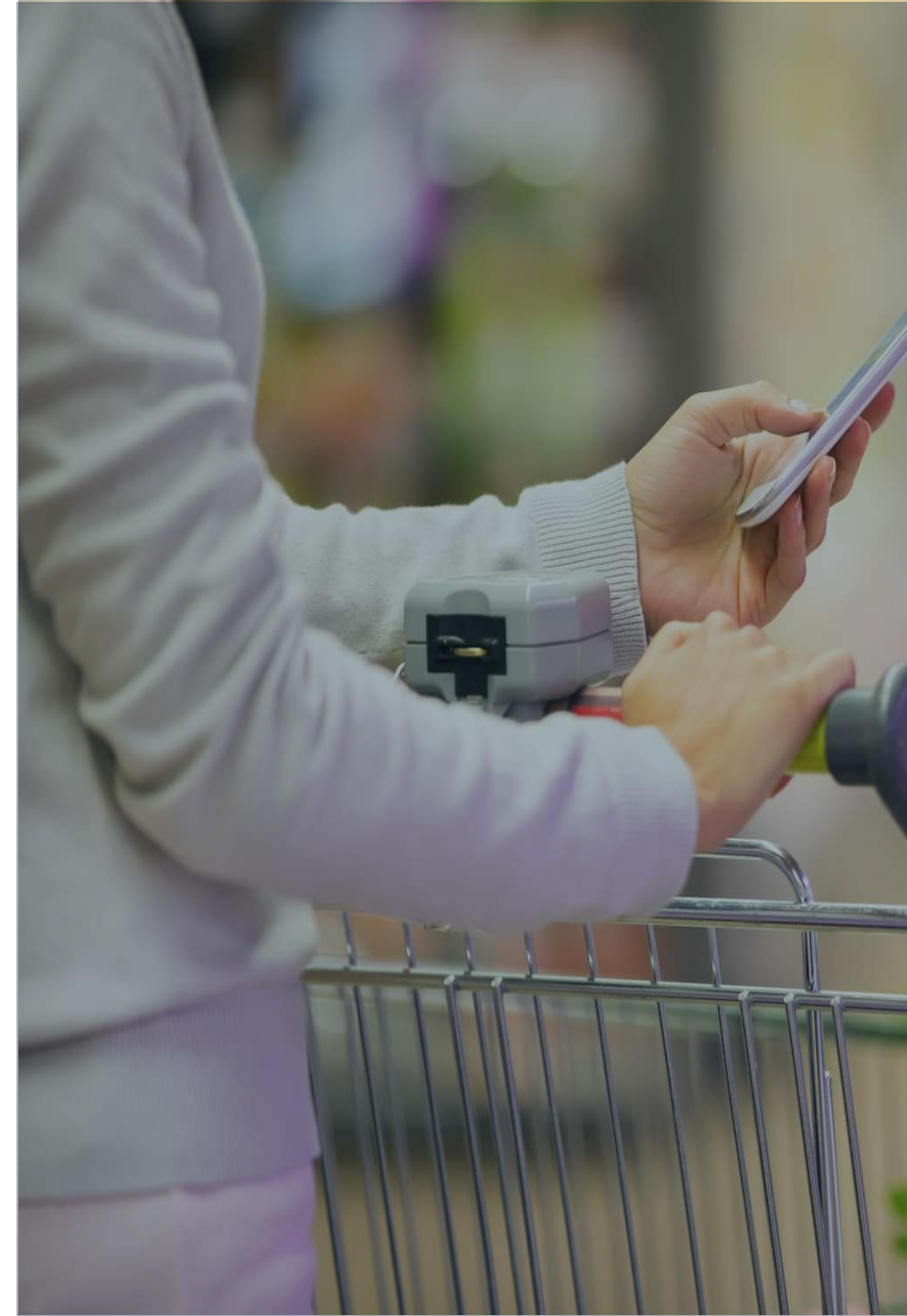
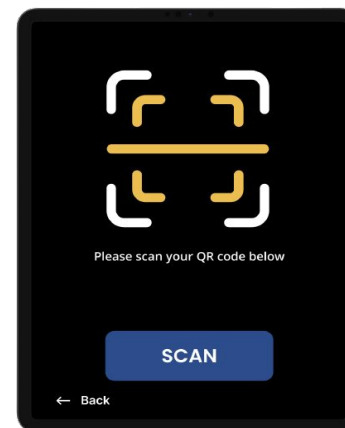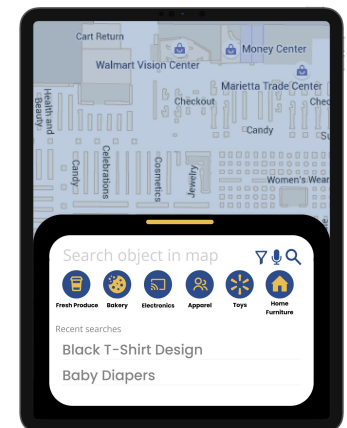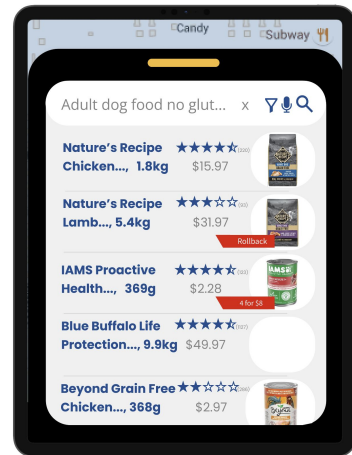# Check Out Our Prototype

Welcome Screen

Language Screen

Sign-In Screen

Account Sign-In

QR Code Sign-In

Search Map

Product Search
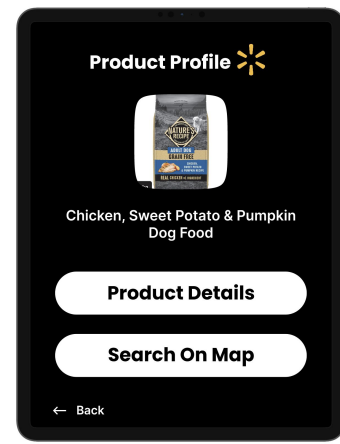
Product Profile
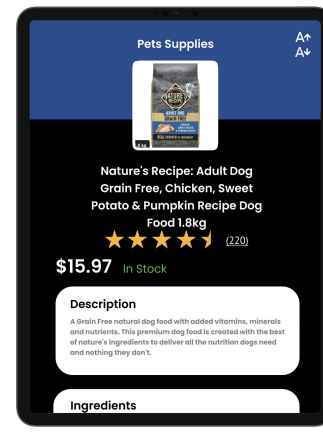
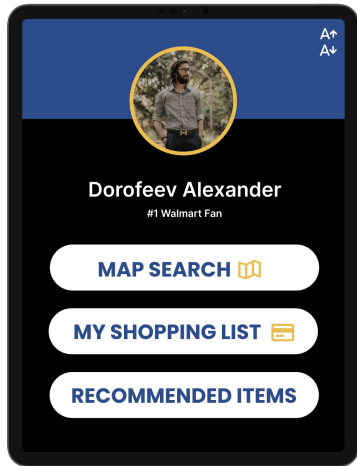**Product Details Pt.1**
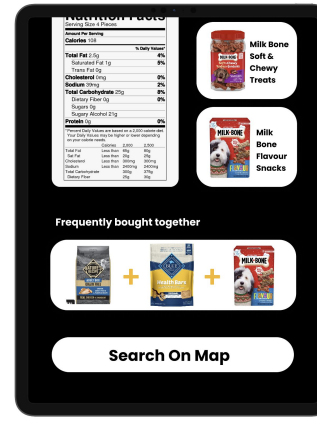
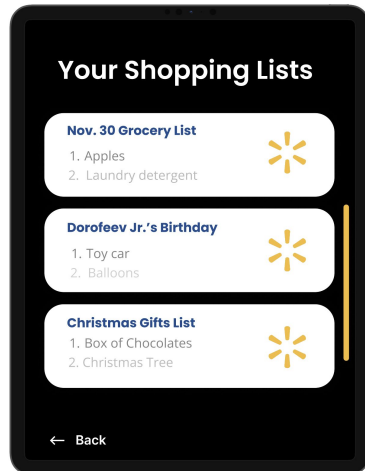**Product Details Pt.2**
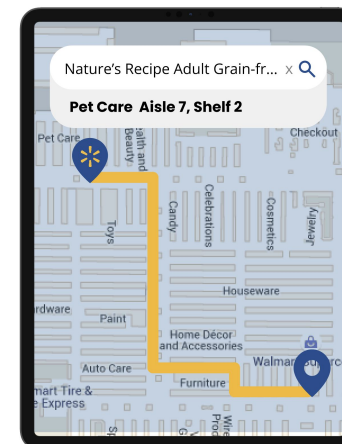
Map Navigation
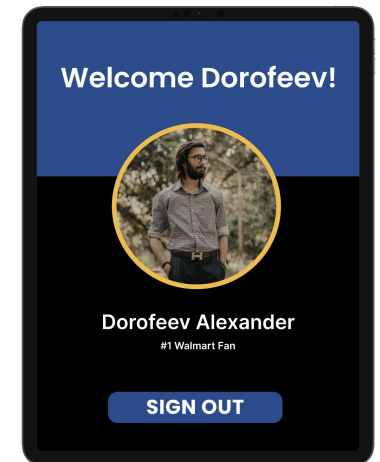
Welcome Account

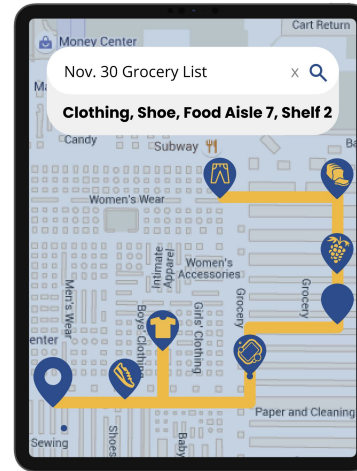# Check Out Our Prototype

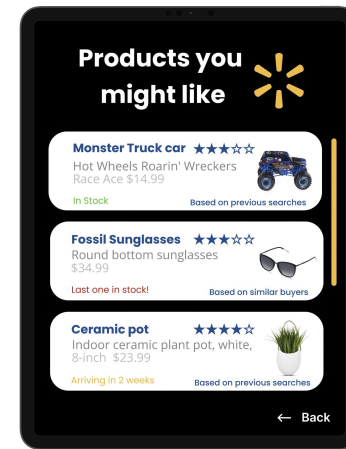**Account Details**

Shopping List

Shopping List Items

Shopping List Map

Recommended Products

Timeout Screen

How The Interactive Kiosk Works

The tech behind the touchpoints. Information for successful implementation right at your fingertips.

3 Technological Parts of The Kiosk

Mapping System

Mapping system

By leveraging the **IPS (Indoor Positioning System)**, our kiosks can accurately locate aisles and the products within them, just like a GPS system but designed specifically for finding objects instead of locations.

Bluetooth Setup

Bluetooth Setup

Bluetooth beacons provide a **cost-effective method** of **communication** between kiosks, ensuring secure transmissions. Item tracking is only accessible to those who are granted permission, preventing the risk of unauthorised hijacking.

Kiosk Integration

Kiosk Integration

By leveraging the beacon technology Walmart already uses in for the app, our monitors can detect the same radio signals.

Why This Technology?

1 **Indoor Positioning Systems** are the most convenient way to track products in real-time, utilizing a network of transceivers and receivers. With this technology, users can monitor the movements of their items with precision and accuracy, allowing for improved visibility and control.

2 **Bluetooth Beacons** operate on the same frequency as WiFi (2.4GHz), making them an energy-efficient alternative that can pass through walls more effectively, ultimately lowering electricity bills.

3 **Leveraging Walmart's Existing Technology** allows those that do not use smartphones regularly, prefer a larger screen or simply prefer to interact with the physical space can still receive quick and convenient directions to their selected items.

Key Performance Indicators For Walmart

Our interactive kiosk helps to fulfill Walmart's key performance indicators by improving customer satisfaction, increasing sales, improving efficiency, and reducing costs.

Improving Customer Satisfaction

Increasing Sales

1

2

3

4

Improving Efficiency

Reducing Costs

Interactive Kiosk Potential

Interactive Kiosk Potential
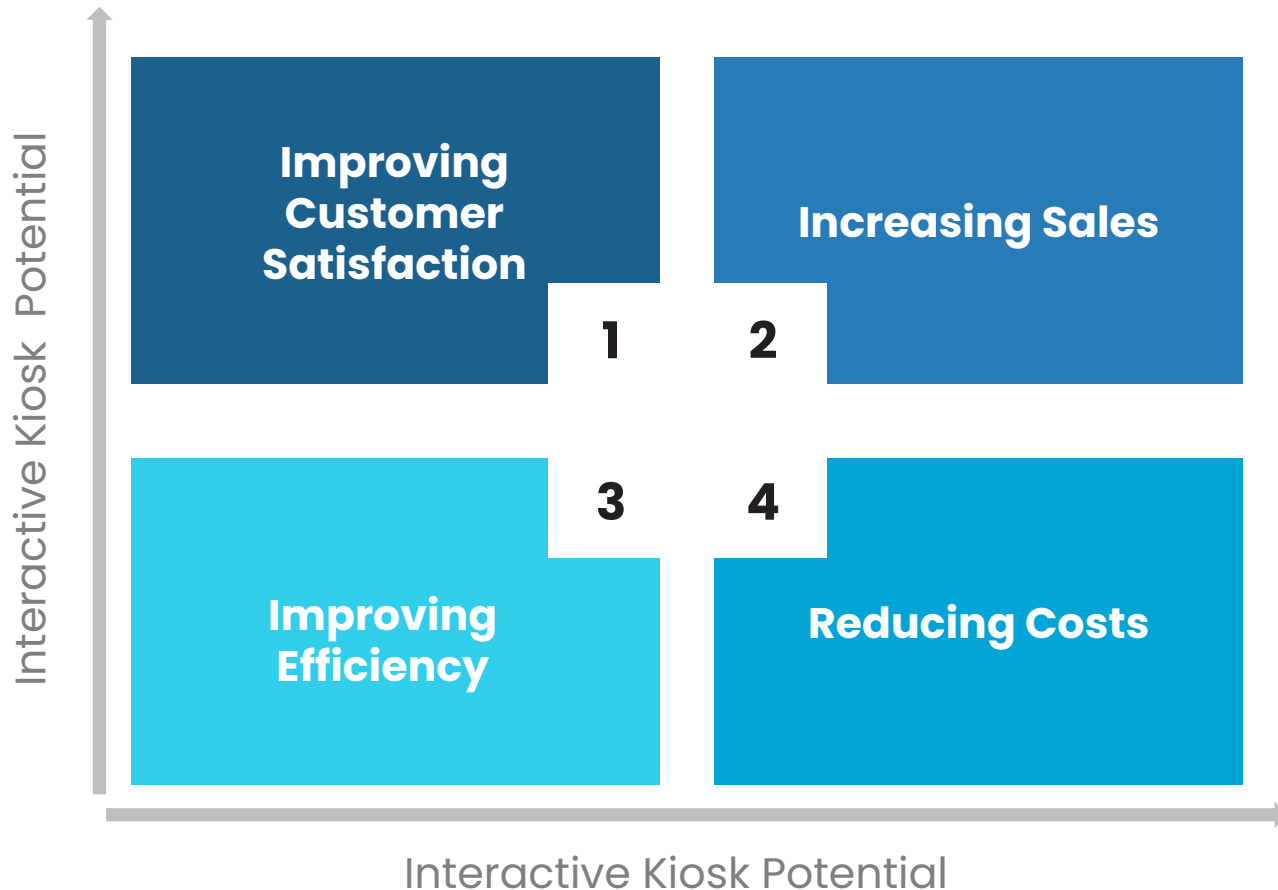
- By providing a **more intuitive and personalized experience**, our kiosk helps to break down **communication barriers** and improve navigation. This can lead to a more positive customer experience, which can in turn drive customer satisfaction.

- By providing customers with a more personalized and engaging experience, our kiosk can help to **drive sales**. For example, by providing tailored product recommendations and information, customers may be more likely to make a purchase.

- Our kiosk can help to streamline the shopping experience for customers, which can help to **reduce wait times and improve efficiency.** This can help to reduce congestion in the store, which can improve the overall customer experience.

- By providing customers with a more efficient and personalized experience, our kiosk can help to reduce the need for additional staff to assist with customer inquiries. This can help to **reduce labor costs and improve the overall cost-efficiency of the store.**

The New Customer Journey

From endless searching to limitless satisfaction.
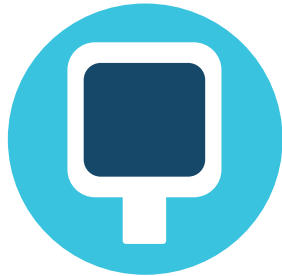
1 — KIOSK

A Customer Approaches a Kiosk when they need help locating a product, or need information about specific product details.

2 — TAP

Tap the screen of the kiosk to get started - select your preferred language and choose to sign-in

3 — LOCATE

The customer is taken directly to the item's spot, so there is no need to spend time looking for it.

4 — LEAVE

The customer was pleased to find exactly what they were looking for quickly with the assistance of a kiosk, and departed contentedly.

Implementation Plan

Learn more about
how it works

PHASE 1
Plan + Data Collection

✓ **Key Locations**

Identify **key locations** in the store where the kiosks would be most beneficial, such as near the entrance, in **high-traffic areas**, or near popular products.

✓ **Number of Kiosks**

Determine the **number of kiosks** needed and secure the necessary **budget** and resources to purchase and install them.

PHASE 2
Interface Development

✓ **Walmart IT Team**

Work with Walmart's **IT** team to integrate the kiosks with the company's **existing systems**, including inventory management, customer data, and loyalty programs.

✓ **Train Employees**

Train Walmart's employees on how to use the kiosks and provide them with clear instructions on how to **assist customers** with using them.

PHASE 3
Launch

✓ **Launch a Marketing Campaign**

Promote the kiosks to customers and educate them on their benefits, such as reducing wait times and increasing personalization.

✓ **Monitor the Usage**

Monitor the effectiveness of the kiosks, and make adjustments as needed based on customer feedback and usage data. (End Phase)

✓ **Continue to Update and Maintain**

The kiosks to ensure they are functioning properly and providing value to both customers and Walmart. (End Phase)

THE PLAN

Implementation Timeline

Phase 1

Plan + Data Collection

1-2 Months for data collection, on high in-store traffic and near poplar products.

Phase 3

Launch

3-5 Months to promote the kiosks to customers and educate them on their benefits + Monitor Kiosk and use data as feedback

Early 2023   **Mid 2023**   **Late 2023**   **Early 2024**   **Mid 2024**   **Late 2024**

Phase 2

Interface Development

6 Months for Walmart's IT team integrate the kiosks with the company's existing systems & develop front + backend of interface.

End Phase

Monitor + Maintenance

Ongoing, monitor the effectiveness of the kiosks, and make adjustments ensure they are functioning properly and providing value.

Financial Budgeting

Investment Planning for a 16Gb tablet/monitor Kiosk System

	Phase 1	Phase 2	Phase 3
	Year 1	**Year 2**	**Year 3**
Investments			
BOM (billing of materials)	$878.98	$1,319.97	$2,199.95
Manufacturing costs	$18.42	$27.63	$46.05
Total production costs of monitor	$897.40	$1,347.6	$2,246
Base indoor kiosk (BOM+manufacture)	$2,112.00	$5,280.00	$10,560
Installation costs	$1,000.00	– –	– –
Estimated software costs	$2,500.00	– –	– –
Total production costs of kiosk	$5,612.00	$5,280.00	$10,560
Estimated maintenance costs	$1000.00	$1000.00	$1000.00
Total Investments	**$7,509.40**	**$7,627.60**	**$13,806.00**

**View the cost of one kiosk and calculations.

Hear What Experts Have to Say

We reached out to experts in the field. Hear what they have to say about our solution.

Yash Vyas
Retail Sales Merchandiser at No Frills

"As someone who has personally dealt with customers who face language barriers, I believe this is an excellent product. For them, this product is a marvel; I've literally seen people try to show me a picture of the product or Google translate something in their language. Also regarding the elderly, they must roam the entire store in order to find what they seek. I believe these kiosks have tremendous potential."

Peter Wing Hung
Multicultural Food Procurement Retail Professional

"Great job! It is possible that this could be an extra service provided by chain stores (Walmart) and advance their IT development team."

Michael LeBlanc
Strategic Advisor & Global Retail Influencer

"It's great, convenient and a proven success in other big box stores. The more people, and the faster you can get those people to where they're going the better."

Liza Amlani
RETHINK Retail 2022 Influencer

"Kiosks are an effective solution for providing customers with a convenient, efficient and personalized shopping experience. By offering an interactive user interface, customers can quickly access product information and navigate through your store. Additionally, customers can receive personalized recommendations and promotions tailored to their individual interests and preferences."

Hear What Customers Have To Say

We asked regular Walmart Shoppers what they thought about Walmart and our Interactive Kiosk.

Dalia Simson

Type 1 Diabetic

"Love the product, don't prefer to buy from Walmart, being diabetic and all, I have certain dietary restrictions and prefer to shop online, but this monitor would definitely incline me to shop there more often."

Anna Konstantinides

8 Months Pregnant

"This solution would totally help me, as a pregnant women, knowing exactly where to go is a definite advantage when you are at a high risk. And knowing all the details of a product is incredibly important that comes with pregnancy."

Winnie Chen

14 Year-Old Student

"Would definitely go to Walmart more. I kinda feel uncomfortable talking to staff, its just awkward. With my parents who have broken english, this kiosk/monitor would be really cool and helpful."

On a more personal note

THANK YOU

Beatrice Milasan　**Shirley Yang**　**Vidhi Jaju**　**Shimoi Kalra**　**Julia Duarte**　**Jula He**

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Our Team wanted to thank you Walmart for this amazing opportunity. This was a really cool and informative experience!

We look forward to working with you in the future and contributing to the success of the company!

Appendix

The Implementation Plan

Budgeting

Timeline

Our Prototype

Mockup Walkthrough

3D Mockup

How it Works

The Problem

Communication

Navigation

Personalization