Enhancing the Walmart Customer Experience

With Personalised In-Store Voice Assistant Technology

Wallace

blue labs. x TKS

Executive Summary

Problem

Product placement leads to customers wasting time resulting in a poor customer experience.

- 87% of people consider **not finding products** as their **biggest problem** at stores.

- Customers **waste time** trying to find employers to assist them to find products.

- More than 20% of customers **only shop online**. While this number increase, in-store shopping **decreases,** along with Walmart's omni-channel **growth potential**.

Solution

Our voice assistant will revolutionise in-store shopping.

- **Wallace**, a voice assistant app will solve customer problems in real time, guide them to the product, and offer **personalised** recommendations.

- Wallace will provide **comprehensive** voice-based directions to products.

- Wallace will **keep customers happy** by providing personalised customer service.

Impact

A seamless customer experience and increased revenue for Walmart by 10%.

- Wallace will increase customer acquisition and retainment, and **enhance** their shopping experience.

- Customers and associates will **save time by** 50% in looking for products, increasing their efficiency.

- Customers will diminish their frustration, **increasing their satisfaction** as well as their buys.

Current Customer Challenges

Product Relocation

Our survey of **5+ countries revealed that 87%** of customers say not being able to find products is the biggest obstacle in-store.

Forgetting To Buy Items

92% of people forget to buy something they came for, causing inconvenience.

Lack Of Staff

There is on average, **1 employee per 33** customers in Walmart, making it difficult for customers to ask for help.

Decreased Revenue

As a knock-on effect of not finding a product, **52% of potential sales** are lost.

Additional Statistics

90%

92%

87%

20%

56%

Personalised Shopping

90% of American consumers found personalised shopping very attractive.

Forgetting Items

92% of people forget to buy something, causing major inconveniences.

Finding Products

87% of customers feel that not being able to find products is the biggest obstacle in-store, according to our survey from across 5+ countries.

Dietary Requirements

Almost 1 in 5 Americans have a dietary requirement. Specific products can be recommended according to their diet.

Food Shopping

With 56% of Walmart's net sales in the U.S coming from groceries, customers will care about how fresh, healthy and nutritious a product is.

Existing Technology

There is currently no voice assistant app like Wallace that has been implemented in retail stores. Below is an example similar to how we would imagine Wallace to be.

Who?

The company SmartAisle has a store assistant that has conversations with customers and answers their questions.

Solution

They believe that the store assistant in the form of Alexa or a Google Assistant can provide a simple, approachable information with 'expert product selection' assistance.

Incorporation

In addition, the store assistant can suggest shopping data and insights. Therefore, with Wallace, our voice assistant, we incorporated this feature so customers can easily access information within their reach on the Walmart app while they shop.

Our Solution

Our voice assistant **Wallace** will help customers who have their hands full, and cannot type into a chatbot.

Wallace can answer any questions customers have and a chatbot will be available as an **alternative option**, should customers prefer this to a voice assistant.

With many features, Wallace **saves time**, limits frustration and **personalizes the user experience,** with comprehensive **navigation** and personalised help such as accommodating dietary needs and giving **recommendations** based on their friends' shopping.
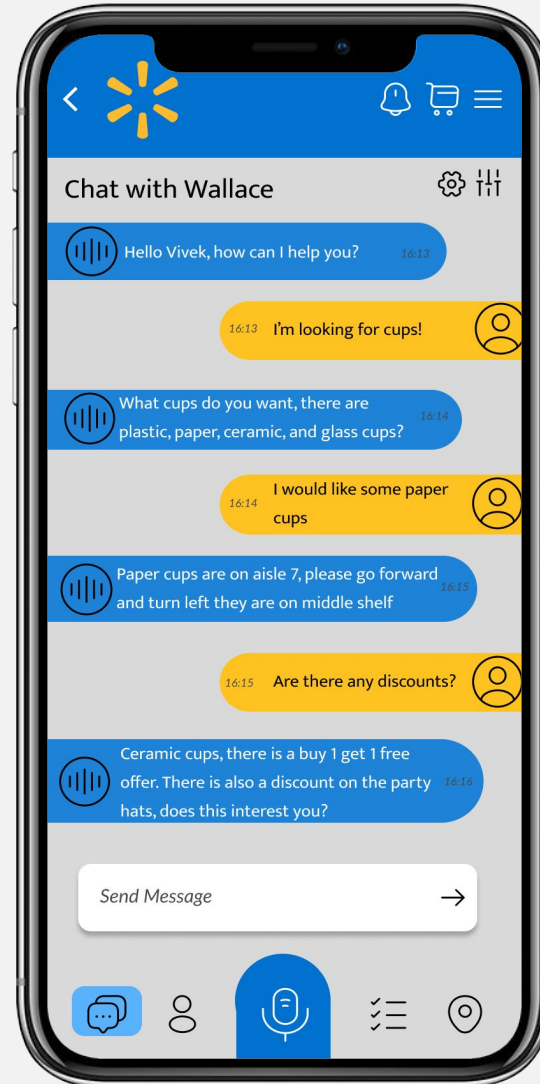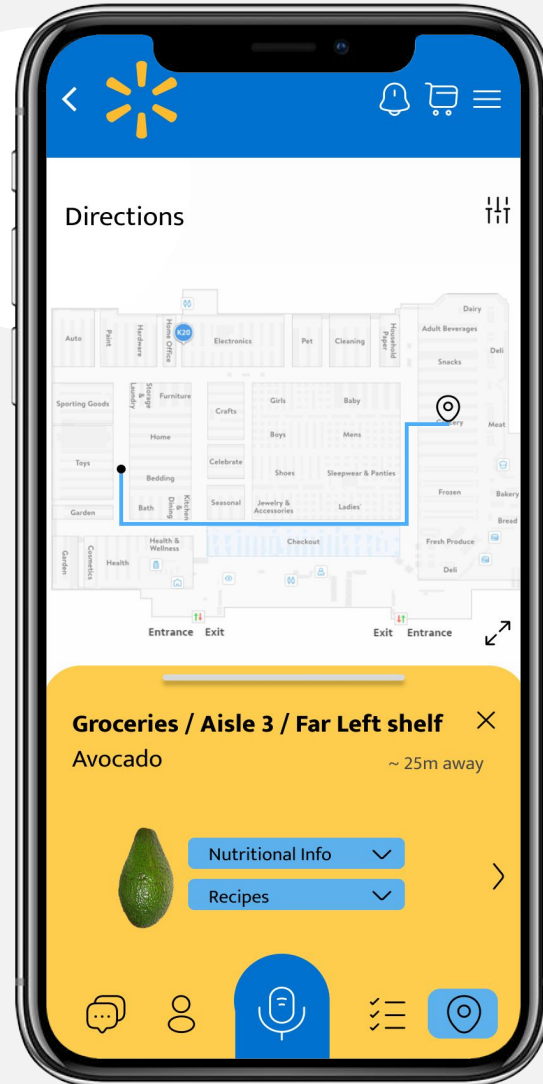
The Wallace App

Directions

Spoken and shown on the app, directing customers using machine learning and **real-time changes in direction.**

Nutritional Info

For **each product**, there will be an option to see more information about sugar levels for example.

Typing

A **chat function** is available for those who don't wish to speak.

Notifications

Notifications show waiting time for prescriptions, **personalised promotions** and friend activity. There will also be an option to show the **price comparisons**.
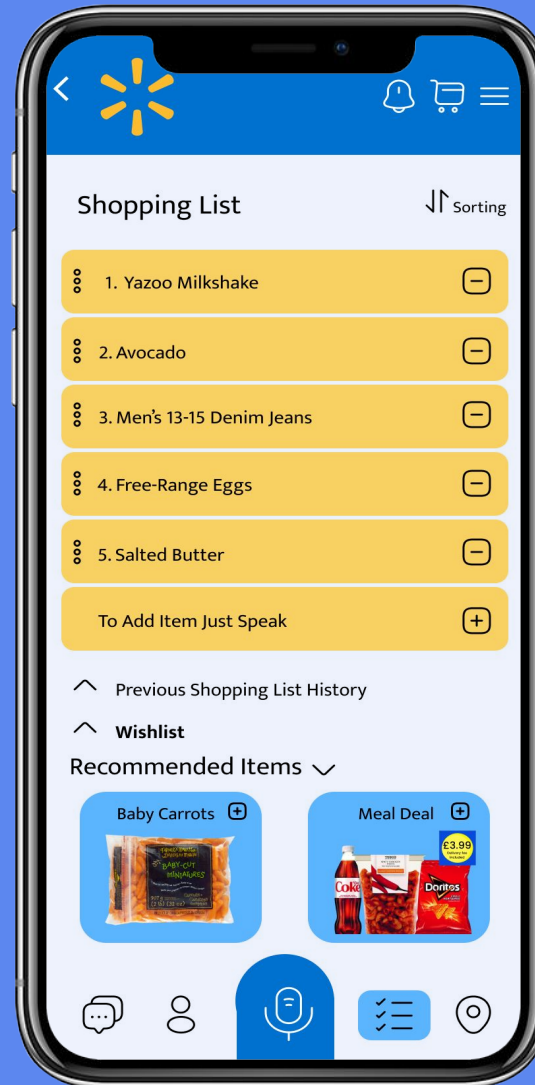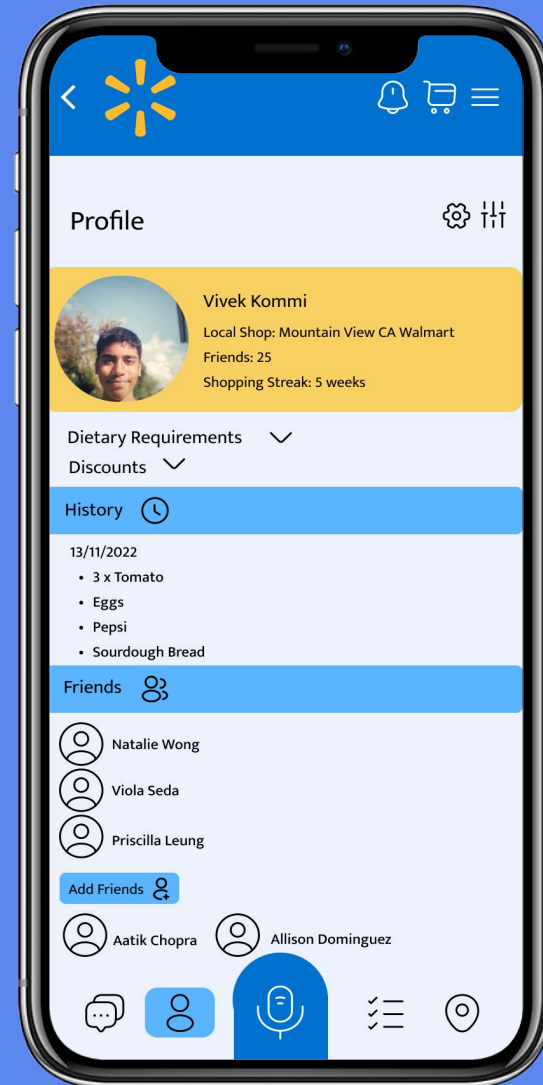
Key App Features

Dietary Requirements

People can **specify dietary requirements**, so Wallace won't recommend unsuitable items

Friends

Customers can **add friends** through contacts, showing **purchase history** and **recommendations**

Voice Assistant

Wallace guides customers through the store and recommends products. Also Wallace can be **adapted to anyone's voice**

Shopping List

Adapted from history, accounting for **dietary restrictions** and **promotions**

Wishlist

This shows Walmart what needs to be **restocked** and opportunities for pricing changes

Recommendations

Wallace recommends products that **relate to the shopping list,** increasing impulse buys

How Wallace works

1

Speech to Text

Picking up vibrations and converting them to binary with an analog-digital converter.

2

Run AI algorithms

AI algorithms are used to guide users through the store and to empower Wallace

3

Text to Audio

Artificial intelligence translates information into audio,.

This is very simple and scalable, with minimal cost. The AI can be easily created and used in an app with high accuracy, and we have created a prototype. To make sure that the AI chatbot works, there are 3 main steps as shown above.

Our Prototype

How the AI works

The Outcomes

Time Saving

Customers' **time is saved** from looking for products since the voice assistant will let them know the availability and location of them.

Navigation

In-store navigation will be improved thanks to Wallace, making it easier for customers to find what they are looking for.

Increased Revenue

Happy customers will recommend the shop, **increasing sales** and customers will become loyal and shop there more often. Also because of the increase in impulse buys.

Implementation of Our Solution

Current Idea

Wallace will help customers **navigate in-store** and can provide **nutritional information.** Personalised notifications of **promotions** will be sent to the customer.

~ 2 weeks

1 Recommendations

Our app will include the voice assistant **Wallace**, as well as other **personalisation features** such as images of products, **in-store navigation** and **product recommendations.**

~ 1 month

2 Digital Panels

For those without phones, there will be **large in-store panels** with the voice assistant. These **digital touchpoints** are a **fixed navigation device** and partial replacement for shop assistants.

~ 2023

3 Earpods

To limit noise pollution in-store, the **AI voice assistant** will be integrated into earpods. This will create a **quieter and more personal experience** for customers.

~ 2024

What Experts Have to Say

Ravichander Vipperla

*Senior Applied Scientist,
Amazon Alexa*

Darien Schettler

*Staff Machine Learning Architect
at VMware*

Ramesh Gupta

*Head of IT at Argos, Screwfix,
Gatefix, and Gate-retail*

The Expert Feedback

Customer Feedback

Gerardo
Customer at Mountain View CA Walmart

"This product would absolutely **make shopping easier**, and I would definitely use it. It would help me save time in the store **where I would have been confused** and make me have a better experience when shopping."

Kendra
Customer at Mountain View CA Walmart

"Having a product like this that is **easily accessible on my phone would be great!** I know it would make shopping more streamlined and convenient, and that would personally **help me have a better experience** in the store.

James
Customer at Mountain View CA Walmart

"I would **totally use this** if it was available to me. I think it would **definitely make shopping easier**. Overall I like the idea and would probably use this product."

Read More Customer Feedback

Appendix

In Person Interviews

Our Prototype

What Experts Say

Phase 2

Existing Technology

The Code

How The AI Works

The Problems Form

Phase 3

Estimated Cost