

# Walmart

# 「 Walmart Call Centers 」

A **Fast** and **Personalized** assistant for consumers which improves the user experience while maintaining a low cost operating model

TKS x 



# Executive Summary

## The Problem

The current Walmart help centre is expensive to operate and provides average customer service. Furthermore, the current help centre cannot:

- a) Assist customers beyond hours of operation
- b) Handle high volumes of traffic
- c) Operate without paid employees

## Our Recommendation

**An automated chatbot** can assist customers with their needs and inquiries, reducing the costs of Walmart help centers and improve the customer experience. This would ideally solve problems with:

- a) Increasing expenditures
- b) Customer experience
- c) Limited operation hours
- d) Scalability

## The Outcome

The chatbot aims to defer a portion of incoming traffic from calls and live chats to an autonomous system, lowering costs of employing call operators and increasing the functionality of the website and app, as well as providing better service and convenience to customers.

# A Customer's Journey

step 1



## Inquiry or Problem

A customer has a question or problem to report to Walmart.

Step 2



## Contact Walmart

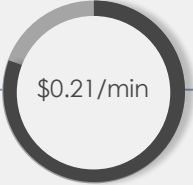
Customer uses the Internet to find the Walmart help center phone number or to use the online chat service.

step 3



## Wait time

Customer has to either wait an extended period of time to speak to a customer service representative or to message an employee via the Walmart's live chat.



\$0.21/min

The customer receives average customer service at the expense of \$0.21 per minute spent assisting them with their needs. Call operators are sometimes unable to help customers with their problem.



# The Problems With the Experience



## Availability

Assistance on the Walmart Help Centre has specific operational hours set to:

**8am-10am EST, 6 days a week.** Hence, services end at **8PM in Vancouver** and services don't begin until **9AM in Halifax**, meaning that they must wait until the help center is available.



## Language Barriers

Walmart call centres speak in only 2 languages, English and French. A lot of Walmart's customer base may not be comfortable to speak in either. Considering **20.6% of Canadians reported a mother tongue other than English or French**, a large portion of Walmart's customers might prefer service in their native language.



## Slow Response

One of the biggest downsides of calling is the wait time. Customers want answers and want them fast as. It typically it takes about **2 minutes** of calling before a customer is allowed to communicate with an employee and can often take up to hours if there is high traffic.



## Reliability

The Walmart help centre can experience occasional down times when overloaded with high traffic. In these cases, the live chat is unavailable even if the time is within the range of operational hours, affecting the usability of the service.



# The Problems With the **Costs**



## Opportunity Cost

When an employee is working with a customer, they can't help another customer at the same time. Walmart spends **approximately 21 cents** for each call centre representative per minute. On average, a single call will last roughly 5-10 minutes averaging a cost of **1-2 dollars a call**.



## Employee Cost

From contacting various call representatives at Walmart, there are over 100 employees at a single call centre. The average pay of a representative is \$13 dollars per hour (on the low end) and cost of employees is estimated to be around **3.7 million dollars** a year per centre. This amounts to hundreds of millions of dollars over all the call centers across the globe.



## Scalability

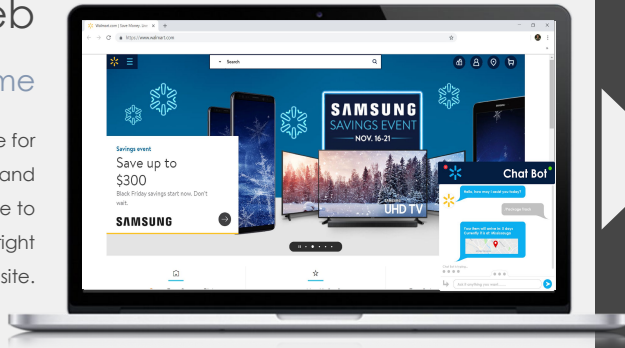
When Walmart receives higher and higher volumes of call in the predicted future, the cost of human operators cannot scale well to the growth in demand. Since each operator performs one task at a time, they cannot efficiently handle an increase in tasks for an equivalent share in performance.

# Our Solution:

## For the Web

### Assistance at home

The chatbot will be available online for computers at Walmart.com and customers seeking help will be able to access it from a pop-up at the right bottom corner of the site.

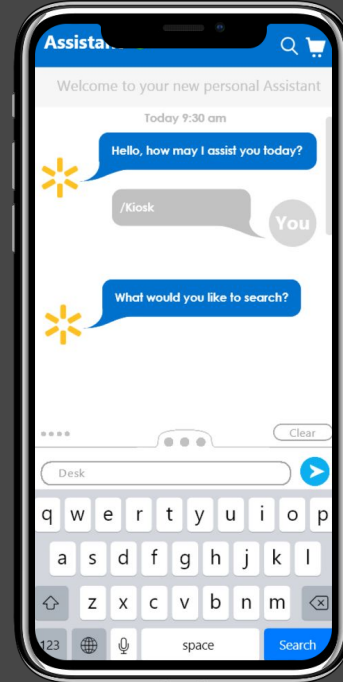


# A Personalized Chatbot.

## For Mobile

### For those on the go.

Pertaining to mobile devices, customers will be able to talk to the chatbot from the walmart app and website, as well as with the built-in bot on facebook messenger.



# Goal: Be **Versatile** and **Quick**



## Solution

Our recommendation is to create a chat bot that can **defer traffic from Walmart call representatives and live chat operators**. The aim with the chatbot is to quickly answer a customer's question that cannot be answered easily via the FAQ page, as well as building a personalized connection with the customers.



## Commands

The chatbot would be pre-programmed with command buttons for useful tasks such as: package tracking, store information, return policies, item searching, and customer feedback.



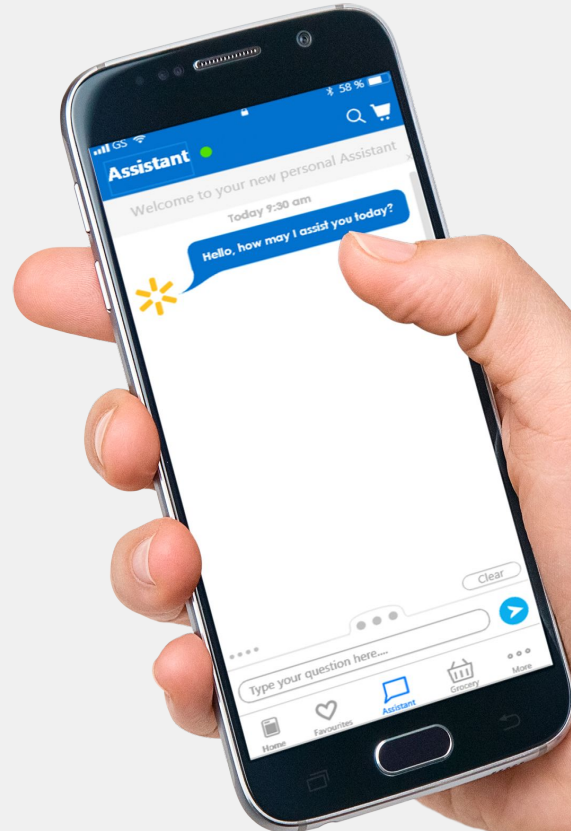
## Programmed Responses

The chatbot is expected to carry out pre-programmed conversations to answer questions such as: "What rewards can I get from my Walmart credit card?"




## Versatility

Features from the Walmart app such as mobile prescription refill would also be integrated into the interface of the chatbot, allowing the customer to access everything they can wish to access in a single window.







**“80% of inquiries are on  
Walmart's return policies,  
item availability, and  
online and package  
tracking”**

- Walmart Call Representatives



**Our Chatbot will be able to  
address these questions.**



# Low Level Commands

## The Basic Commands

These low level commands help customers navigate the app and access their own accounts faster. Their purpose is to answer the most asked questions much more quickly than any other method, which will **attract many users**.



## Online Package information

The chatbot can inform customers about their online packages. This includes but is not limited to questions about the shipping date, the location of their package and questions about damaged or faulty products.



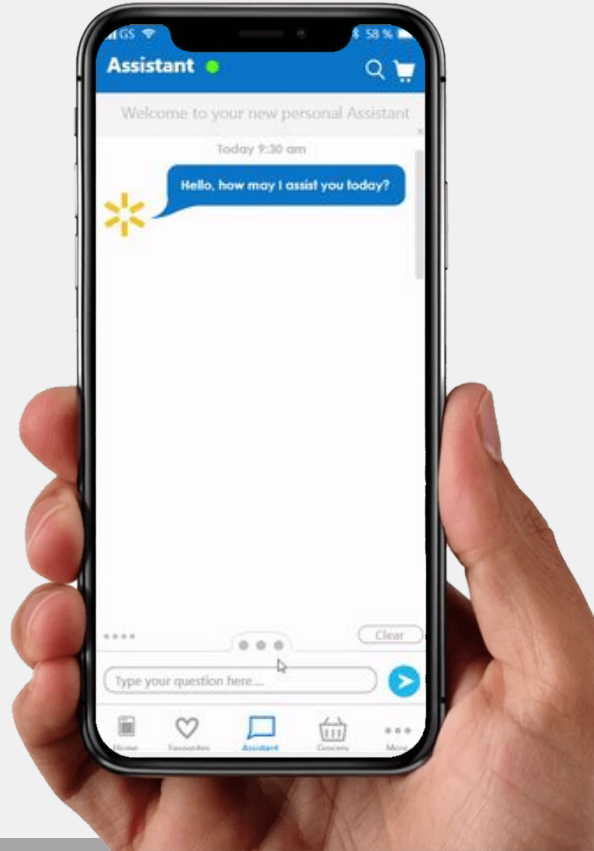
## Return Policies

Customers wanting to better understand the return policy of Walmart can ask the chatbot for more information and clarification. The return command would also allow users to cancel pre-existing online purchases. Once again, versatile.



## Product availability

The chatbot can inform customers about the inventory of a certain product at their preferred store through a built in search.



# High Level Conversations.



## Conversations.

The chatbot is to be **pre-programmed with conversations** to have with the user. To maximize most bang for the buck, we suggest the following conversations based on our observation from talking to Walmart Call representatives.



## Predicted Questions

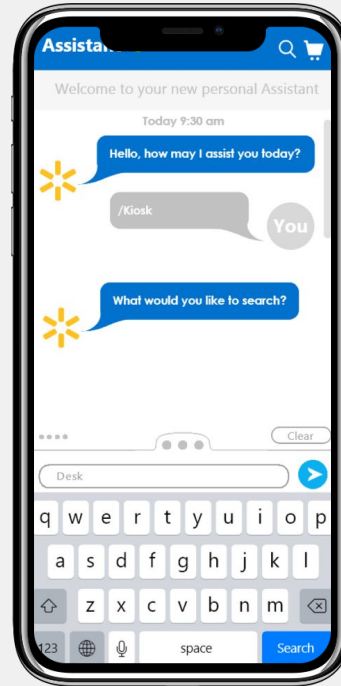
Topics/Questions people may call in for:

- **When will [item] be in store?** (availability)
  - Chatbot can access data on item shipments
- **Applying for a Walmart Credit Card**
  - Chatbot can guide the user in a detailed manner of applying for a Walmart credit card or demonstrate the benefits of their loyalty program
- **Concerns on Online Orders** (Late package, or refunds etc)
  - The chatbot can deliver a typical response to a customer dealing with a lost package or a late delivery.
  - **For example:** Most cases lost packages are paid for by the retail company. The Chatbot can process a lost item based on the delivery dates to justify the validity of the lost item and offer a full refund.

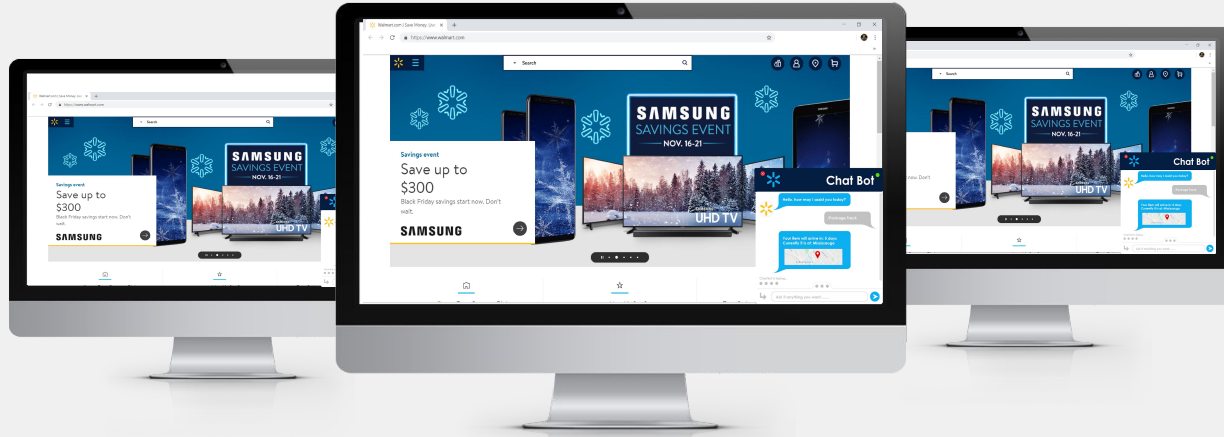


## Assist Walmart Employees

When the chatbot fails to deliver the response demanded by the customer, the customer can choose to message a employee. **The employee can see the conversation beforehand** and help the customer without needing them to reiterate their problem.



# How the Chatbot Helps Walmart.



## Help Me. Help You.

The chatbot services customers as well as employees. Call centre representatives can look into live chat requests via the chatbot and process the problem with the customer without having to ask again. The chatbot makes the life of the employee easier.



## Data Collection

**Every single customer interaction via the chatbot can be collected as valuable data** on how to improve customer service. This data can: help personalize customer's UX, show Walmart useful analytics on customer satisfaction or show weaknesses in Walmar's current customer service. The chatbot also can ask the customer for feedback after the conversation, providing even more useful data to improve the bot.



## Plan For Tomorrow

Chatbots scale easily with changes in demand. High volume traffic only requires higher computational power from servers. Human operators require a paid salary and occupy space at a call center.

# Predicted Savings

Cost of call center | Per annum

**\$3.7M**

## Cost per call center / annum

In the average call center in USA, there are 100 customer service representatives. A call representative has an average salary of \$13 per hour, so each call center will cost approximately \$3.7M for call operator salary only, not counting their benefits.

Cost of chatbot

**\$2.5M**

## Cost of Chatbot

Cost of chatbot: Assume a team of 20 of deep learning software engineers can build a minimum viable product in half a year and the final product can be released in a year. The average salary of a machine learning software engineer is around \$120K per year so it would cost around \$2.4M to employ them to build the product. External costs such as server space and time extensions could push the total cost to around \$2.5M.

Global Net Savings | Per annum

**\$25.25M**

## Global Net Savings / Annum

Assuming there are roughly 150 call centers in the world, it would cost \$555M minimum to operate them. Estimating a 5% deferral rate from help centers to the chatbot, the net savings for Walmart would be around **\$23.75M per annum**. As the adoption of chatbot rises among customers, the net savings could rise to **\$50M or more per annum**.

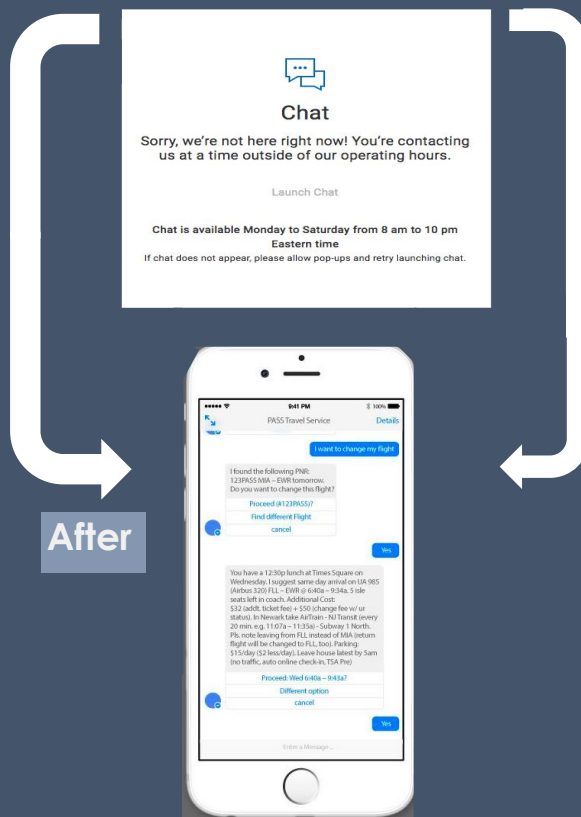
## Next Steps | Feasibility

A chatbot has a relatively high feasibility. It isn't overly ambitious as costs of implementation are relatively low compared to other endeavors (e.g inventory sensors, electronic price displays, kiosks in stores).

Many other companies like ebay and Lyft have already successfully adopted the chatbot as a method of customer support, so Walmart could easily follow suit.

Click [here](#) to learn more about other chatbots.

Before



After

## Next Steps | Look at Facebook

One company to look into is Facebook's framework on developing a automated chatbot. The bots designed at Facebook operate at a similar level with the Walmart bot, in terms of difficulty of task. Click [here](#) to learn more.

The biggest difference is in the data.

Walmart's new implemented feature must have access to large collection of Walmart's database, including stock, shipping times, and account management. The only major hurdle is accessing this data.

In conclusion, a chatbot would be very viable and could interpolate data and answer majority of customers saving valuable time and money.



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Hello Walmart Team,

We'd like thank you for giving us this wonderful opportunity to contribute our part to help Walmart maintain a low cost operational model. In the beginning we didn't know where to start. Ever since the initial struggle, we understood the difficulty of this difficult challenge that you face. That is why we worked **hard** to deliver you our recommendation.

We hope that we were able to make an impact on Walmart's future decisions and operating cost model. Feel free to reach out to us at anytime via email or LinkedIn if you have any questions or concerns in regards to our recommendation.

We hope that this recommendation is helpful for you! We definitely learned a lot from this experience. Once again, thank you very much for the opportunity.

Peter, Albert, & Zeyan

On A  
More Personal  
Note. **Thank you.**

# Contact Us

If you have anymore questions,  
comments or concerns.



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