



Connecting Buyers and Sellers Globally

# Agenda

- Introduction
  - Objectives
  - Strategic Drivers
  - Digital Capabilities
- Capability Assessment & Current State
  - SWOT Analysis
  - Gap Analysis
  - Capability Assessment
- Digital Architecture
- Future State
- Roadmap
- Risks and Mitigation
- Recommendations

# Introduction

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# Introduction

## Vision

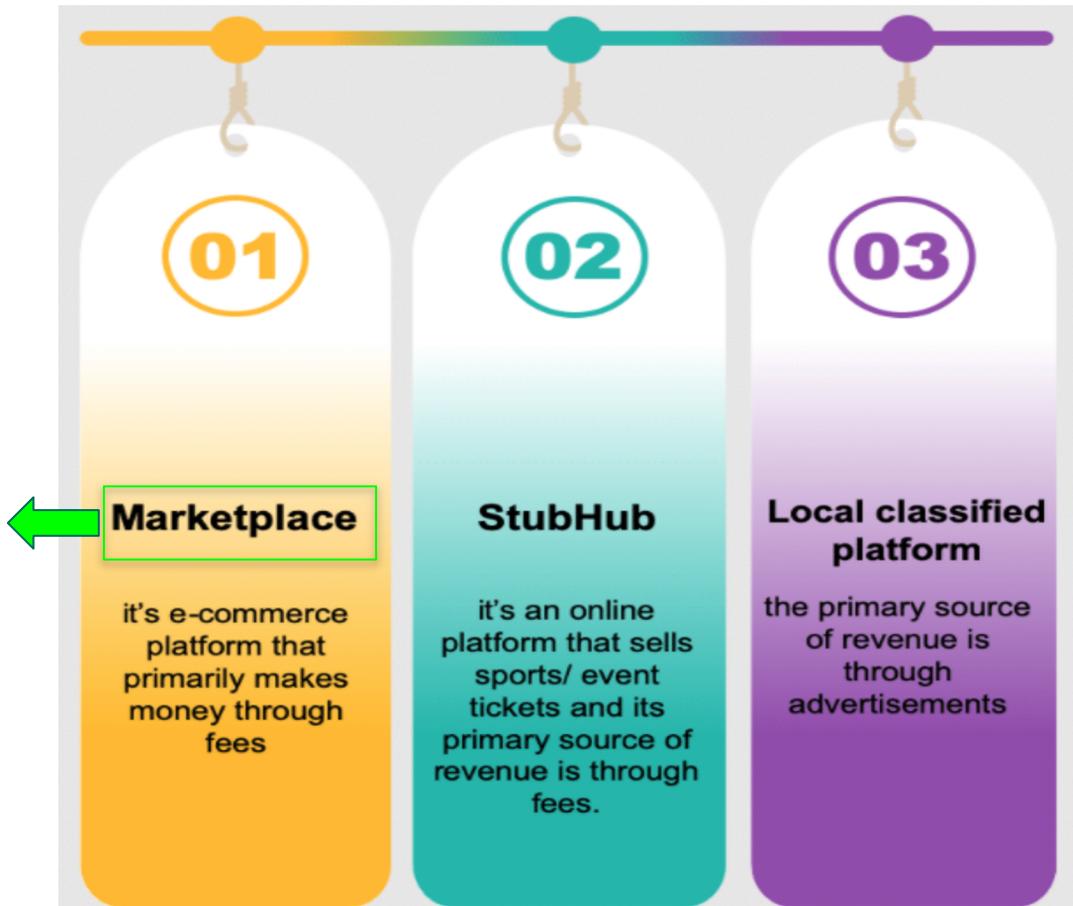
*Provide a global online marketplace where practically anyone can trade practically anything, enabling economic opportunity around the world*

## Objectives

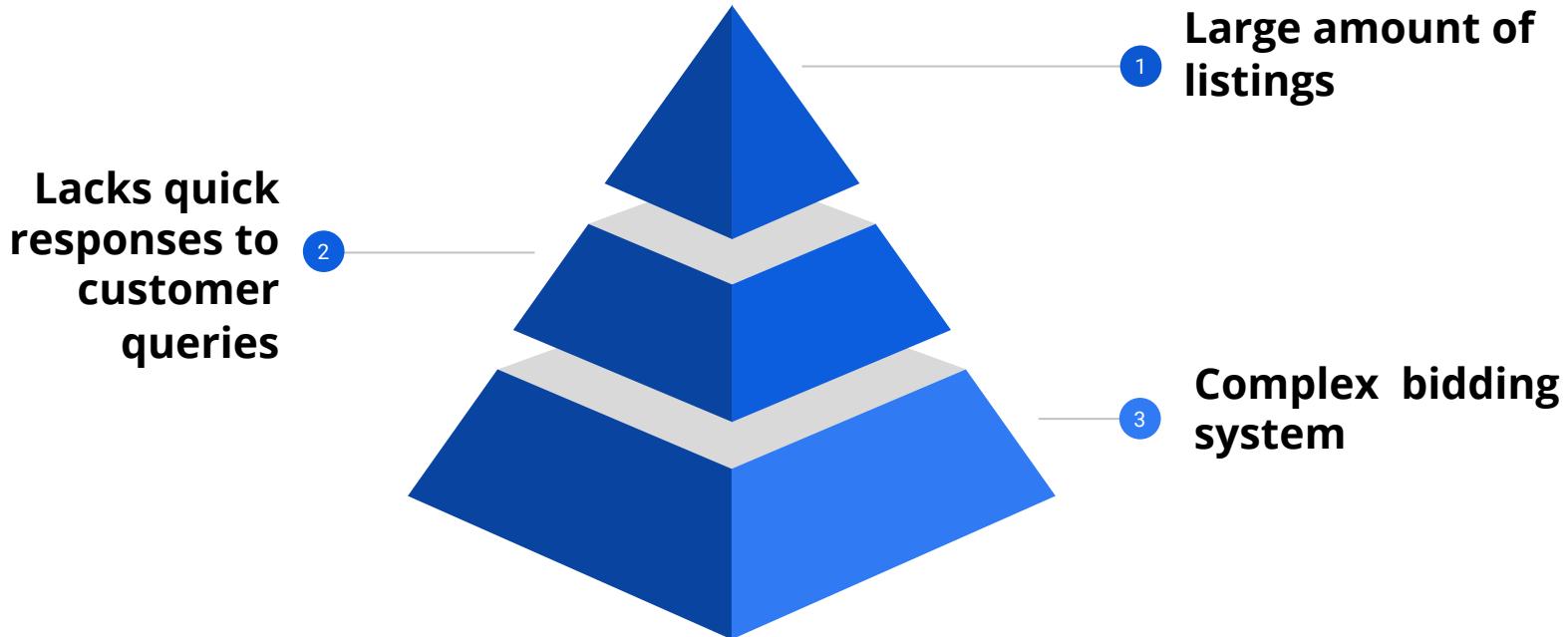
- **Acquisition** – increasing the number of newly registered users on the eBay marketplace.
- **Activation** – increasing the number of registered users that become active bidders, buyers or sellers on the eBay marketplace.
- **Activity** – increasing the volume and value of transactions that are conducted by each active user on the eBay marketplace.

# Strategic Drivers

- 2nd largest third-party marketplace in the U.S.A.
- holds 170 million active buyers worldwide and more than one billion live listings.
- In the past year, eBay generated over \$10 billion in revenue.
- About 2 billion daily transactions.
- 35–64 year olds make up 61% of eBay's audience.



# Problem Statement

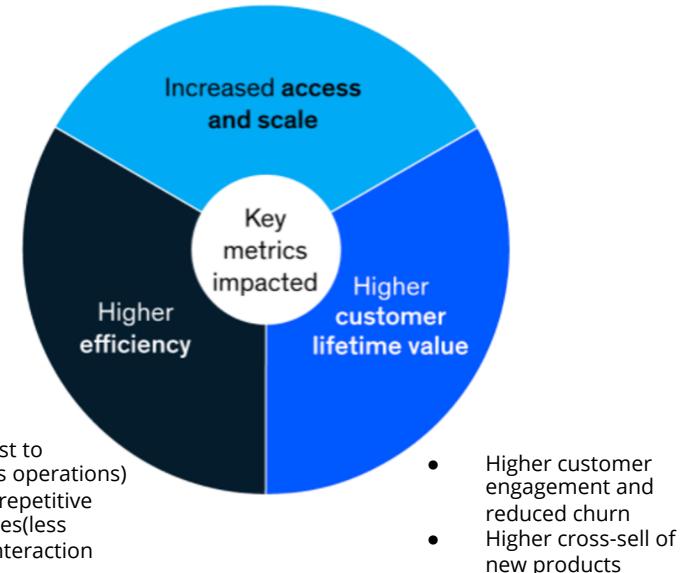


# Proposed Solution

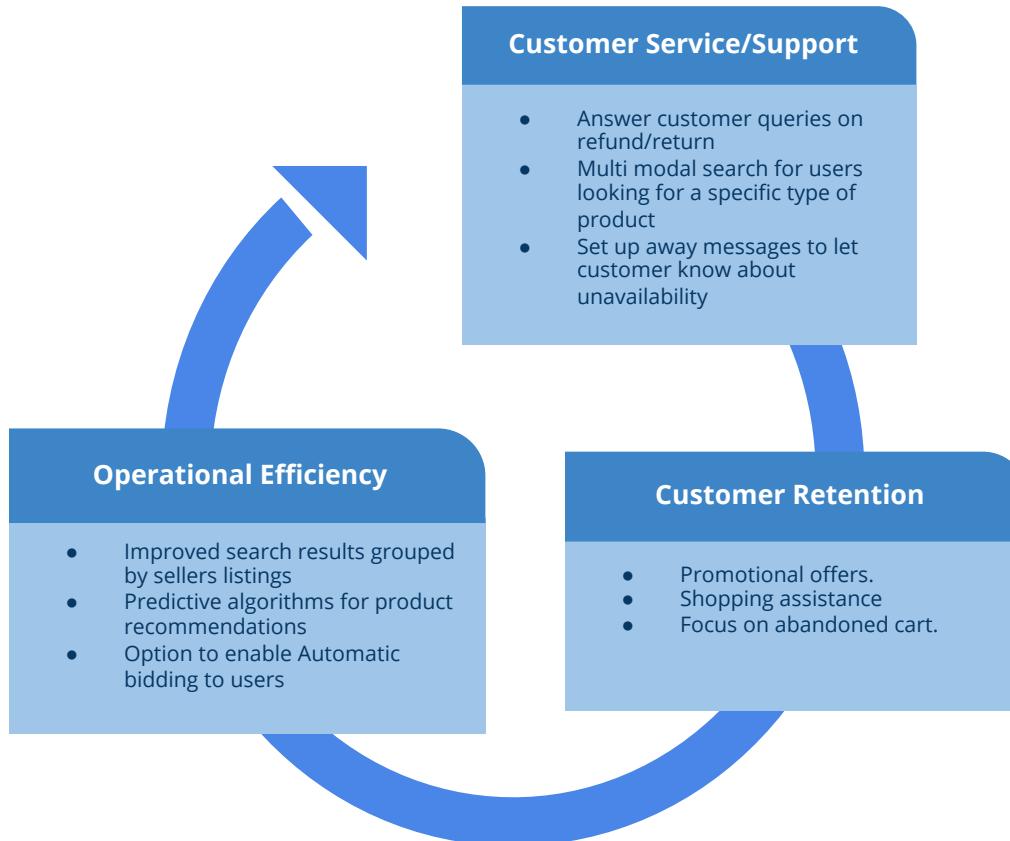
## “HelpBot”

- Get a quick answers in emergency: Complaints or problems.
- Personal **shopping assistants** where humans are not available.
- Quick response on **customer queries**
- **Auto-bidding** for auction listings.
- Recommend items that may interest buyers
- Help to increase abandoned carts recovery
- Chatbot integration allows reducing response time.

- Higher speed
- Personalized experience
- Access to newer customer segments



# Digital Capabilities



# **Capability Assessment & Current State**

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# Current state - SWOT Analysis



# Gap Analysis

| Business requirement          | Existing situation   | Gap between existing and new  | Capabilities needed to reduce/eliminate gap   | Issues and risks gap  |
|-------------------------------|--|---|---|---|
| Improve customer journey      | Cumbersome to search products, among large amount of listings                                | Personalized search and recommendations embedded in chatbot                                   | Optimising search engine and Incorporating machine learning algorithms and utilized data points of customers    | Recommendations for new customers also those who chose not to use cookies                           |
| Improve customer satisfaction | Contact/mail/call customer support team for return, refund, or order/payments related issues | Chatbot will share the updates on order status and product, refund and return related queries | Chatbot with capability of parsing inputs/questions and help customers for their return/refund and order status | Initiating refund and return for predefined problems with products, orders and reasons combination. |
| Improve customer engagement   | Convoluted process to get answers to simple queries and FAQs                                 | Chatbot will answer the queries and redirect customers to FAQs                                | Chatbot trained to take queries and provide help to customers   | Smooth handoff to customer support team during peak times   |
| Acquisition and Activations   | Increase the number of registered users that become active bidders, buyers or sellers        | Help customers in reminders about abandoned carts, auto bidding and predefined workflows      | Chatbot trained to notify customers for products left in carts and provide auto bidding for ebay auction        | Auto bidding system improvements and recovering target customers for products in abandoned carts    |

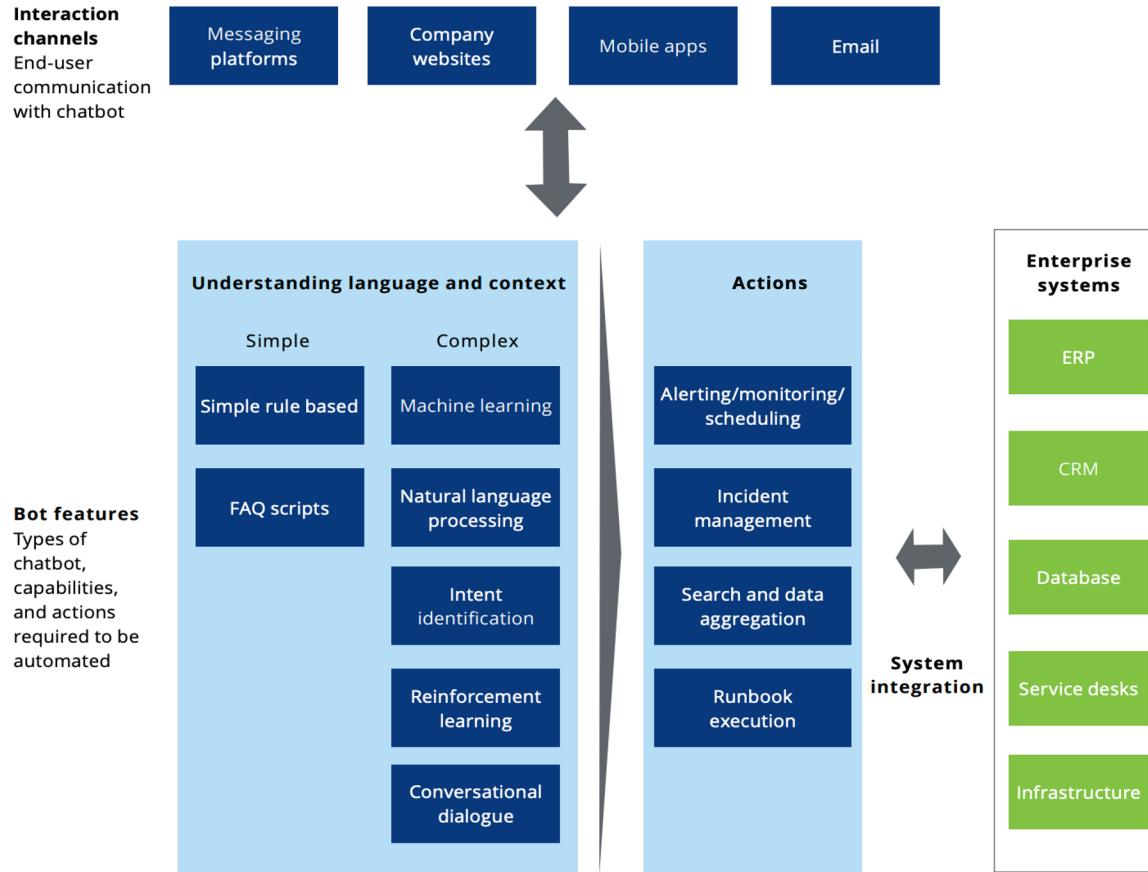
# Capability Assessment

| AI/Automation                           | Current Capability  | Priority |
|---|---|----------|
| <b>Customer queries</b>                 | <b>Limited:</b> Human agents take longer to respond to customer's queries     | HIGH     |
| <b>Search Engine</b>                    | <b>Limited:</b> Basic search engine with limited input options                | MODERATE |
| <b>Auto-bidding</b>                     | None  | MODERATE |
| <b>Personalized Shopping Assistance</b> | <b>Limited:</b> Lesser focus on personalization                               | HIGH     |
| <b>Abandoned carts</b>                  | <b>Limited:</b> User is never notified of the items that was left in the cart | MODERATE |

# Digital Architecture

QUESTION

# Digital Architecture



## Components:

- **NLU** - Understanding language and context using NLP techniques
- **Deployment Channel** - User Interaction through Facebook Messenger, ebay.com, email
- **Training** - Integration with ERP, CRM, eBay's customer database, Service Desks etc, for precise answers

# Future State

QUESTION

# Multi-modal system input

Text

I am looking for a pair of white jeans of size 8 for my daughter. What do you have?

Click and tap



Image

Speech

Type or click and hold the mic



# Multi-turn Conversation

Hi there! What are you looking for?

Men's shoes

Sure, what size?

12

Here are some recommendations! Check it out.



MensXP Espadrilles  
Men's Khaki Canvas...



SALE  
PUMA Smash V2  
Sneakers in...



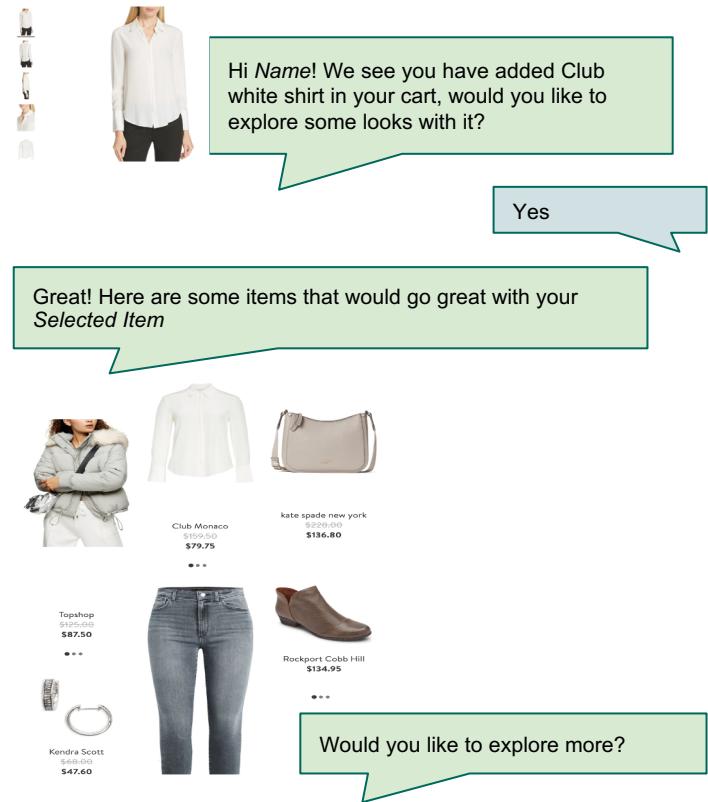
Men Casual Shoes



GO21 Colourblock  
Lace-Up Casual Sho...

# Shopping Assistance

- Suggest items that are being bought together  
**Target :** Increase Sales, User engagement
- Provide recommendations based on items being bought  
**Target :** User Experience
- Has a bot memory that keeps record of browsing history  
**Target :** Improvise recommendations



# Abandoned carts

- Prompt user to buy items in the cart  
**Target :** User Retention
- Suggest items that are being bought together  
**Target :** Increase Sales
- Give limited period discount codes for the products in existing cart  
**Target :** Shopping cart value, Conversion rate

Welcome back *Name*!  
You have some items in your cart that have not been checked out. Get them before it gets out of stock!

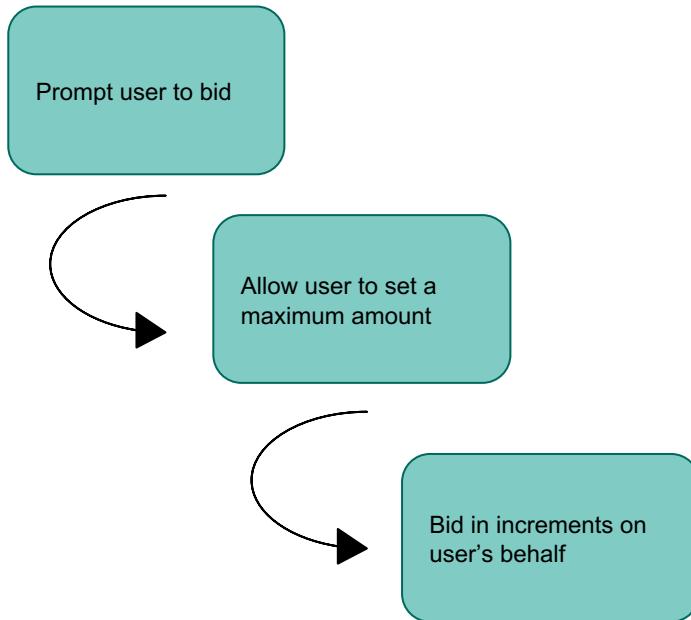
You Have 3 Items  
In Your Bag

[View my shopping bag](#)

[Checkout now](#)

You are in luck! We have an offer on the items in your cart.  
Use EBAY10 to **get 10% off!**

# Automatic Bidding



Hi Name!  
Interested in placing a bid? Hurry! The bid ends in 5 days!

Interested

Let's get you going!  
What's the maximum amount you are willing to bid for this item?

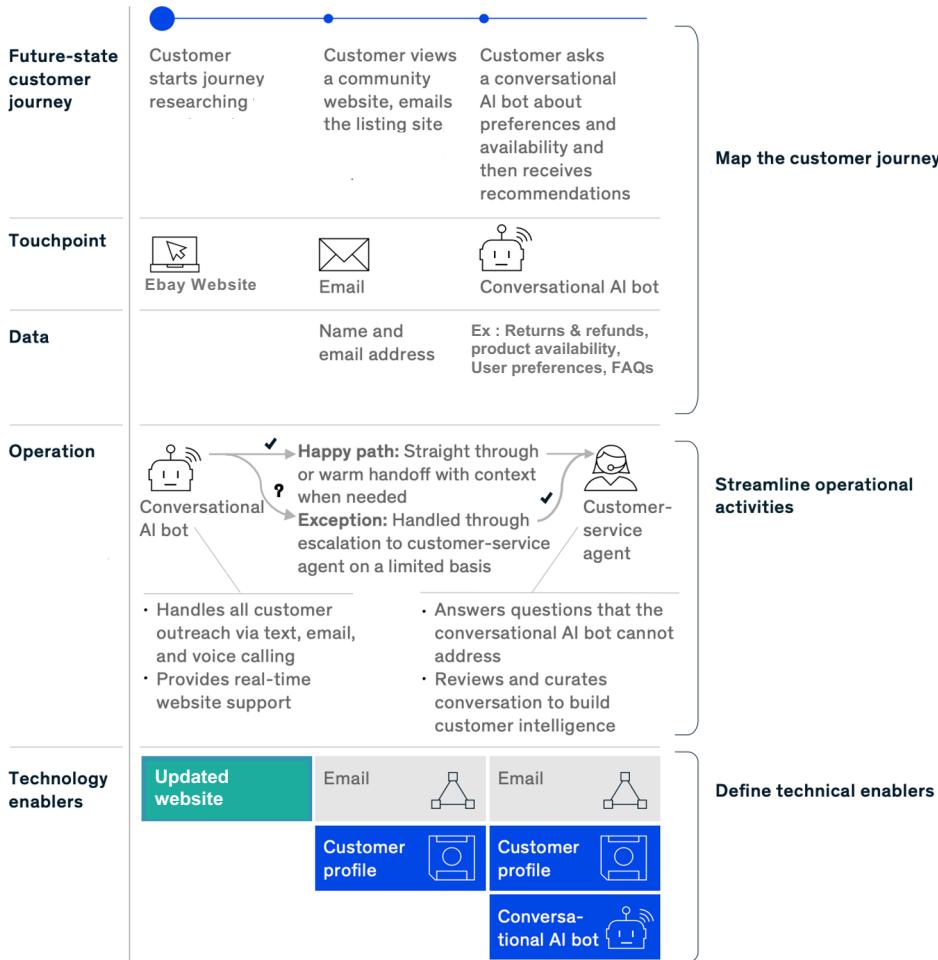
20\$

All set! We'll bid in increments on your behalf to keep you in the lead but only up to your limit.

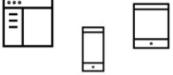
Would like to be notified if someone outbids you?

# Draft the Operational blueprint

- Capture all the customer journeys
- Determine the reskilling required to resolve pain points
- Streamline key transitions
- Define the technology stack : Current and aspirational needs



# Customer Journey map

|                     | Awareness  | Consideration   | Decision   | Delivery & Returns/ Refund   |  |  |   | Loyalty & Advocacy   |
|---------------------|--|---|--|--|--|--|---|--|
| Customer Activities | Visits Ebay Website  | Compare & Evaluate Product  | Add products to cart & make order  | Receive or Pickup order  | Dislikes product, Contacts Customer service  | Check returns/refund status  | Get returns/ refund if the order qualifies  | Share experience   |
| Customer Goals      | Buy desirable product  | Find the best Buy   | Find & select products easily, order effortlessly  | Receive / Pick-up effortlessly   | Get help, request refund   | Get returns/refund   | Get returns/refund  | Share feelings, give feedback  |
| Touchpoints         | Word of mouth, Traditional Media, Social media                          | Word of mouth, website, social media  |   | Delivery services, packing, messages(emails, SMS, phone)   | Phone, email, chat   | Chat, email, phone   | Chat, email, phone  | Word of mouth, social media   |
| Experience          |  ChatBot pops 20 secs after user visits; asking if assistance is needed |  ChatBot provides recommendations based on user requirements |  ChatBot assists updating order details after the order is made |  ChatBot assists in checking order status |  ChatBot assists/ initiates the return or refund process; notifies the seller |  ChatBot helps checking the case status/stage |  Notify the decision of return/ refund to the user |  ChatBot pops up and asks user to write a review about past purchases |
| Business Goal       | Increase customer engagement & Interest  | Increase No. of website visitors  | Increase shopping cart value, , Increase sales, conversion rate  | Deliver on time minimize delivery window   | Increase customer service satisfaction, minimize waiting   | Make Products to match expectations  | Improve customer retention  | Turn customers to advocates, negative to positive experience   |
| KPI                 | No. of People reached  | New website visitors  | Shopping cart value, conversion rate, Online sales   | Avg. delivery window, Delivery time  | Success rate, waiting time   | Product reviews  | Reliability, Customer satisfactions   | Customer satisfactions   |

# Roadmap

QUESTION

# ROADMAP

|                                  | Q1 : Finalize wireframes |     |     | Q2 : Finalize Plans & Designs |     |      | Q3 : Bot testing |     |     | Q4 : Launch & Marketing the new bot |     |     |
|----------------------------------|--------------------------|-----|-----|-------------------------------|-----|------|------------------|-----|-----|-------------------------------------|-----|-----|
|                                  | JAN                      | FEB | MAR | APR                           | MAY | JUNE | JULY             | AUG | SEP | OCT                                 | NOV | DEC |
| Defining scope & goals           |                          |     |     |                               |     |      |                  |     |     |                                     |     |     |
| Conversation flow modelling      |                          |     |     |                               |     |      |                  |     |     |                                     |     |     |
| Persona Creation and Bot Styling |                          |     |     |                               |     |      |                  |     |     |                                     |     |     |
| Testing                          |                          |     |     |                               |     |      |                  |     |     |                                     |     |     |
| Launch                           |                          |     |     |                               |     |      |                  |     |     |                                     |     |     |

**Defining scope & goals**

- Use case Ideation & requirement engineering
- Identify Optimal use case for Proof-of-concept
- Define required bot functionality and use cases

**Conversation flow modelling**

- Design chatbot conversations and path
- Structure flows that meets customer requirements - menu based/speech input/image recognition
- Define the Triage Process - Answer from database, transfer to live agents, requests to be contacted later with answers

**Persona Creation and Bot Styling**

- Create personality for chatbot
- Defining Chatbot look's feel to fit with company styling

**Testing**

- Pre-Test the Bot - Evaluate the accuracy of the AI responses
- Test the Bot - Pilot test phase with a smaller audience, beginning with simple Q/A and then with menu based, modify response based on the user responses

**Launch**

- Production Stage - Set benchmarks: Abandon rate, Interaction time, Customer satisfaction
- Evaluate and Optimize Bot - Add or modify, Speak to analysts, act on end-user feedback, Market the new chatbot

# Evolution of HelpBot

- In-house development of chatbot

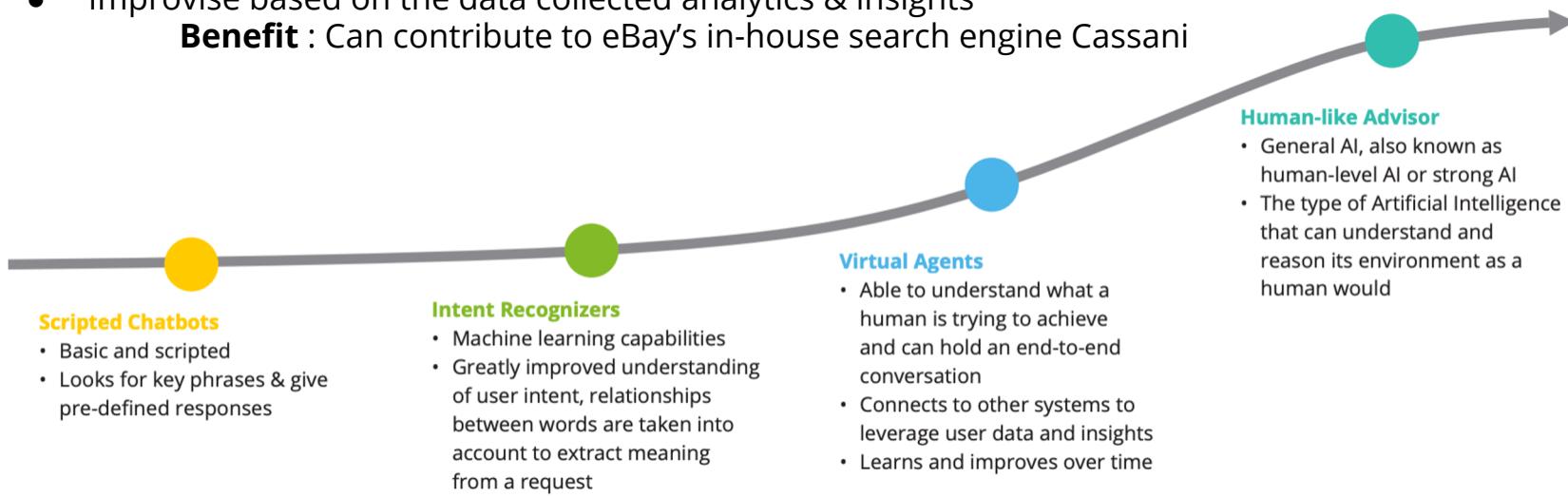
**Benefit :** Chatbot is trained according to eBay's needs & organizational values, anticipate own security enhancements

- Building a MVP & Implementing it in phases

**Benefit :** Helps in prioritizing the features based on success rate of the bot, avoids implementation failures

- Improvise based on the data collected analytics & insights

**Benefit :** Can contribute to eBay's in-house search engine Cassani



# Risks and Mitigation

QUESTION

# Risk and mitigation

| Risk category                      | Severity | Risk intentions   | Mitigation Techniques  |
|------------------------------------|----------|---|--|
| 1<br>Cybersecurity                 | High     | Spoofing, Tampering & data theft  | <ul style="list-style-type: none"><li>• Appropriate Authentication</li><li>• Protect sensitive data by end to end encryption</li></ul> |
| 2<br>Bad design and implementation | High     | A poorly designed chatbot causes users to use it in a way that was not intended                   | <ul style="list-style-type: none"><li>• Define clear scope</li><li>• Developers need to be competent with the best practices</li></ul> |
| 3<br>Wrong technological approach  | Medium   | Wrong AI driven technological approach can result in open ended chatbot; Bias in bot              | <ul style="list-style-type: none"><li>• Use simple NLP and decision tree technologies</li><li>• Data intensive approach</li></ul>      |
| 4<br>High expense                  | Low      | Implementing AI related technologies like chatbot can lead to huge expenses and maintenance costs | <ul style="list-style-type: none"><li>• Planning is the key</li><li>• Prioritize features and important phases</li></ul>               |

# Conclusion

QUESTION

## **Conclusion**

- Engage with customers, provide better more efficient service
- Drive revenue and increase the customer retention rate
- Focus on AI/automation to enhance the user experience and upgrade the brand image

## **Future scope:**

- Ebay should invest in AI technological advancements to solve problems not only from a customer perspective but also from a seller perspective

# Thank you!

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