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### 

### Background

Over the years, there has been an increase in the usage of service robots for many domestic and industrial needs. They are deployed in a wide variety of applications ranging from simple household to a complicated medical environment. Service robots powered with artificial intelligence, using computer vision and deep learning, have also entered into logistics and delivery services, where they can make nearly human-level intelligent decisions. This creates a greater opportunity for companies to automate their operations to a great extent.

### Problem

Small deliveries have always been a pain area for DoorDash due to its higher operating costs and low returns. This is also a problem for human dashers who would not get a fair tip for their service and also for the customers who hesitates to make small orders from restaurants.

Doordash is looking to automate food delivery using self-driving robots for trips that are less than 2 miles in order to reduce its operating costs and provide more reliable delivery times. The long term goal is that these delivery robots will navigate sidewalks fully autonomously. But initially there may be times when manual intervention will be required. Your team has been tasked with building a tool for the operations team-- to view status of deliveries and remotely take control of robots that need intervention (ie: rerouting)

### Goals

* To build a mobile application:
  + to track and control the robots (rerouting)
  + to view the status of their deliveries
  + to track the data of robots with no manual interventions
* To increase number of small orders that are apparently delivered by robots
* To deliver in faster
* To receive more positive reviews and ratings from the customers / restaurants for the support offered by the operations team

### 

### Success Metrics

* The number of people who downloaded the app
* The number of new users registered on the platform
* Daily Average 50%-70% orders through Robots
* Number of Transactions completed by users.
* Avg Time taken by Robots for delivery
* Customer feedbacks and referrals
* 90% CSAT score and NPS Score greater than 30
* Churn Rate, App Reviews, and Ratings
* 90% adoption rate of application

### Key Features & Scope

| **Priority** | **Feature** | **Description** |
| --- | --- | --- |
| P0 | Create account/ Login | A new user should be able to create an account using their email and phone. Old users should be able to log in. |
| P0 | Choose Delivery Location | A new user should be able to pick and choose their locations or address |
| P0 | Search For Restaurants and Food categories | Users should be able to search for restaurants based upon various filters like food, location, restaurant. |
| P0 | Choose and Order | The user should be able to choose, order, and check out from a restaurant on the app. |
| P0 | Add Payment Method | The user can add different payment methods of their choice |
| P1 | Provide delivery type options | Provide user to select the delivery type options   1. Automatic Dasher 2. Human Dasher |
| P1 | Track Robot | The user should be able to track the robot in real-time using the inbuilt app on the app |
| P1 | Control Robots | A control panel for user to control the robots and to help robot to navigate to their delivery location |
| P2 | Help Center | A user can raise query related to order or robot and operations team can take lead from their |

### Target Market

Target user of the Doordash application has two different categories.

1. Operations Team
2. End Customers

Operations Team:

The operators who want to see the real time location of the robot as well as status of the delivery. The operator who are going to control the robots are also one of the target users for automated doordash application.

End Customers:

End customers are one of the essential targets users for this application. The reason behind this is, we are giving opportunity to customer also to control the robots delivering the orders to them.

### Core UX Flow

<https://www.figma.com/proto/9byWad1bC2auuXWc6gFZ3u/Automated-Doordash?node-id=11%3A161&scaling=scale-down&page-id=0%3A1&starting-point-node-id=3%3A32>

### Total Addressable Market

Total Food Delivery App Users in US : 111 Million

Avg Delivery Fees : $7

[Monthly Users on DoorDash: 20 Million

Monthly Users across other food delivery platforms: ~20 Million (Knowing the fact that DoorDash

contributes 51% market share compare to other platforms, this no. has been assumed)]

Monthly Consumers = ~40 Million

Total Addressable Market = 40 Million x 12 x $7 = **$3360 Million**

**Reference:** <https://backlinko.com/doordash-users>

### Competitors

* Uber Eats
  + Uber Eats generated $4.8 billion in revenue in 2020, a 152 percent increase year-on-year
  + Uber Eats gross bookings surpassed $30 billion in 2020
  + Internationally, Uber Eats is the most popular food delivery service, with 66 million users
  + It controls 29 percent of the global food delivery market (Fortune)
  + Uber Eats is available in 6,000 cities, with 600,000 supported restaurants
* Grubhub
  + Grubhub generated $1.8 billion revenue in 2020, a 39 percent increase year-on-year
  + Grubhub reported a net lost of $155 million in 2020, its largest loss since it went public in 2013
  + In 2020, Grubhub had 31.4 million active users, who use the app at least once a month

**Reference**: <https://www.businessofapps.com/data/food-delivery-app-market/>

### Acquisition Channel Strategy

1. Existing Application:
   1. Since it is kind of new feature we are launching to the existing application we will give 1st preference to the In-App advertisement channel for promoting the robot delivery feature for short distance delivery
   2. Introducing promotional offers for choosing robot delivery option to increase the adoption of the feature
2. Social Media
   1. Instagram and YouTube influencers are the key promotors of the doordash basis our historical research. So we will use them as our foundational promotors of the new doordash application
3. Promotion emails to all existing customers:
   1. The reason why this channel would work for the product is that the existing customers are the solid base for our future growth. It’s easier and quicker for us to test a new feature and get quick feedback from them. They have the confidence in our existing service and would like to get new services too.

### [Marketing Guide](https://docs.google.com/document/d/11iKPmDKY6eGmk-GsCC5351buNoHHqjBV/edit?usp=sharing&ouid=109774132959066649207&rtpof=true&sd=true)

### [Training Guide for Customer Support and Sales](https://docs.google.com/document/d/1u34dniv8_JSIATZybU09V9pk-oezwOAV/edit?usp=sharing&ouid=109774132959066649207&rtpof=true&sd=true)

### Pre-Launch Checklist

| Engineering | The team will be required to manage if any surprised issue occurs on the launch day |
| --- | --- |
| Marketing | The team will help us to know the impact of the tool on the overall food ordering behavior of the customers using robot option |
| Customer Support | To address the queries raised by the customer through our help center feature |
| Legal: | To get legal consultation to answer all legal questions from the customer or other B2B partners |
| Sales | This team will help is to sale our new features to the market and will help us to generate the revenue from robot delivery feature |

### Pricing

This App is meant only for internal operations team (Back end) and is available free to be used within Door Dash’s AppStore.

**Revenue Goal:**

There would not be direct revenue earned out of the usage of this app. This is meant to be used by the internal operations team to track or control the robots on the job. However, this tool should influence the revenue indirectly, by increasing the number of deliveries, especially in the small food delivery segment

RISK:

| Risk | Description | Mitigation Plan |
| --- | --- | --- |
| Robot Failure | Irretrievable damage or technical issue with a robot on the job | * Contingency plan to pass the order to another dasher, preferably human dasher in the vicinity * Attention of field support team to address the issue instantly |
| Unable to Track Order Status | Customer are unable to track the order status and realtime location | * Connect with the location service providers to understand the issue * Identify the root cause analysis and resolve the problem |
| Network Failure | Network attenuation between the control base and the robot in the field | * High bandwidth dedicated connectivity established for communication with robots * Redundant communication channel planned * Provision for field support team to check on the status of the robot manually |

### [User Guide](https://docs.google.com/document/d/1EMBYye_x5iLUiH1rMXUv7GphgAZ5H6dw/edit?usp=sharing&ouid=109774132959066649207&rtpof=true&sd=true)

### Post Launch Iteration

Problem identified:

~30% of the customer are not satisfied with the delivery performance of robots.

Assumption:

Orders are not delivered within the expected time and customers are not able to control the robots.

Root cause Analysis:

It is observed that there are customers who reported issues in a couple of deliveries made by robots. The operations team was not informed about this issue on time, thereby leading to the delay in the food delivery. It’ll be too late by the time the operations team is being informed about the robot malfunction.

A/B Testing

Solution/proposal:

For some instances due to latency issues and network issues, the customer was not able to take control of the robots. Also, it has been observed that there were some navigational issues with the location service provider.

because of robot malfunction should be automatically informed immediately to the operations team.

In the upcoming version of the application, we are planning to introduce the offline maps so if there is any network issue, the robot should not be lost anywhere due to navigational issues.

### Success metrics:

### Reduction in the customer complaint calls because of technical issues with robots to less than 15%

### Our hypothesis

### There should be at least a 50% reduction in the customer complaint calls because of technical

### issues with robots and navigational issues with location service provider

### [Launch Email](https://docs.google.com/document/d/1hCHbUkwFLkxdKiHDHMEMWJc1hNhYoZS35Q0A2whbiTo/edit?usp=sharing)