PROJECT AUTO-DASHER
PRD

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STATUS: DRAFT

Background

In 2020 the online food delivery market in the US reached a value of US$21.2 Billion. The market is expected to exhibit strong growth between 2021-2026. DoorDash became the number one online food delivery service in the US in 2020, surpassing the likes of UberEats and Grubhub.

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 households 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

The uncertainties of the COVID-19 pandemic have created a dire need for contactless delivery and also a rise in orders from customers. The need for an error-free and on-time delivery is on the high increase.

Also, the company is looking to cut operational costs, in order to turn in profits. The use of self-driving robots will help cut costs with time and also improve productivity and customer satisfaction. We assume that there could be lots of potential interest from customers to make small orders if they don't get the feel of being judged. A service robot meant mainly for small deliveries would give them the comfort they need and this would reduce the delivery and service charges from their total amount

The Problem of customers' tips not getting to drivers would completely be eliminated.

Goals

- ❖ Integrate Self-driving robots into our system
- ❖ Build an App for control, tracking, and routing.
- ❖ Reduce the cost of Operation
- ❖ Increase delivery time and reduce errors
- ❖ Increase customer satisfaction

Key Features

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	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	The user can add different payment methods of their choice

	Method	
P1	Track Robot	The user should be able to track the robot in real-time using the inbuilt app on the app
P1	On-Screen Reader	An onscreen reader can be added to help the visually impaired
P2	Suggestions	The app can suggest restaurants and foods based on past orders.
P2	Favourites	Users can add Restaurants to favorites.

Success Metrics

- ❖ The number of people who download the app.
- ❖ The number of new users registered on the platform.
- ❖ The average number of small Orders.
- ❖ Number of Transactions completed by users.
- ❖ Avg Time taken by bots to get to their destination.
- ❖ Revenue first 3 months.
- ❖ Customer feedbacks and referrals.
- ❖ Churn Rate, App Reviews, and Ratings

Target Market

The target market are in two categories:
i) **Target Users of the App**: DoorDash operators in the team who want to view the status of any food deliveries made using DoorDash and to remotely take control of robots that need intervention.

ii) **Customers**: Customers are the primary concern of DoorDash. Customers who have ordered food online and want to know the status of their deliveries using customer call-center/support or the customers who like to call the support just to make a new order for food. Also for customers who would like real-time tracking of their orders.

Core UX Flow

App Prototype

Total Addressable Market (TAM)

Top-Down TAM:

San Fransisco Ca Population: 883,255 as of 2021 [1]

Homeless Population: 8,597 estimated [2]

The average amount spent on food delivery per buyer per year: 579.76$ [3]

TAM calculation (Top-down):

(883,255 - 8597) x 579.76 = **$504,658,576.76**

Bottom-up TAM:

We consider the number of households instead of the total population. This could also be broken down to 'Age' 'sex' 'race' statistics, but for simplicity, I just considered households only.

San Fransisco Ca Households: **359,673** [4]

Per order value: $36 on average

Approx. several orders per year: 12 [assumption: approx. 1 order per month]

TAM calculation (Bottoms Up): 359673 x $36 x 12 = **$155,378,736**

Actual DoorDash Specific TAM:

Percent of food delivery orders done using DoorDash: 47% as of 2021

Market share: $155,378,736 x 47% = **$73M**

Note: This is not a **TAM value**. This is a figure to know our expectations and target based on current scenarios.

Assumptions:

- ❖ DoorDash offers delivery services to all customers across the United States and Canada. But for this project, I'm taking San Fransisco CA as a case study. Since SF is DoorDash HQ and has its largest customer base. We'd be rolling out the service first in SF. I'd like to estimate the TAM within SF first. This would give the team an idea of what to expect as returns on the initial launch.
- ❖ For the bottom-up approach, it is assumed that there will be one food order per household (to estimate the worst-case TAM figure)

[1] https://worldpopulationreview.com/us-cities/san-francisco-ca-population
[2]
http://hsh.sfgov.org/wp-content/uploads/2019HIRDReport_SanFrancisco_FinalDraft.pdf
[3]https://www.rakutenintelligence.com/blog/2019/food-fight-doordash-starting-to-edge-past-uber-eats-in-battle-for-food-delivery-market-dominance-1
[4] https://www.census.gov/quickfacts/sanfransiscocalifornia

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

Postmates:

❖ Revenue: $1.2B as on 2018
❖ Number of deliveries made: 35 Million
❖ Number of cities operated: 2940 US cities
❖ The number of US households that Postmates is available to several were 30 Million

Reference: https://www.businessofapps.com/data/food-delivery-app-market/
Acquisition Strategy

Channel 1: Advertisements through Facebook, Twitter, YouTube

The reason why this channel would work for the product: Social networking reaches a wide range of customers. DoorDash has reached many customers through Facebook and YouTube in the past. This would be the right channel to advertise our new products to the market. And also with adverts that target specific customers.

Channel 2: Promotion emails to all existing customers (vendors or restaurants, customers, and dashers)

The reason why this channel would work for the product:

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.

Channel 3: Advertising on Blogs (DoorDash, influencers, SEO optimization)

The reason why this channel would work for the product More details can be explained in the DoorDash blogs. How to use features, user guides, etc. can be easily shared in blogs.

All these channels above would bring to the attention of all existing and new potential customers that DoorDash is introducing robot delivery service in the market. Further

DoorDash has included a fail-safe mechanism by adding technical and customer support that has access to high-end tools and applications which could help the end customers.

Marketing Guide

[**Marketing Guide**](#)

Pricing:

This App is meant only for the internal operations team and is free to be used by the team members.

There would not be a direct revenue earned out of the usage of this fleet management 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 (because of the increase in the number of robots employed). An increase in the number of deliveries is influenced by the fewer issues in the field and the best operations support from the team in case of issues.

Pre Launch Check List

Teams to interface with	Discussion item
Engineering	To get support on the launch day for any technical issue
Technical Writer	To get help on writing 'Learning /Help center information and articles', 'Guidance article for the Customer Support team', 'User Guide', 'Release notes'

A representative from Operations and Customer Support / Product Specialists	To get feedback on the features planned and developed before rolling out to the entire operations team within the organization. To interact with the customer support post-launch to get feedback on their level of support and the customer satisfaction index
Marketing	To interact with the Marketing team to know the impact of the tool on the overall food ordering behavior of the customers
Legal	To get legal and policies issues sorted for the permissions related to the app usage
Sales	To keep them updated on the sales and target audiences
Leadership / Management	To keep them in the information loop (to show a big picture on the status of the Launch)

Risk Management

S.No	Risks	Mitigation
1	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

2	Irrevocable damage or technical issue with a robot on the job. I.e Beyond remote controlling from the App.	❖ 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.
3	Technical issues when we roll this App out to the global operations team	Discuss with the Engineering team to confirm that our system is ready for internationalization and can handle the extra pressure of the market expansion then answer the question: is the ssystem stable enough and scalable?.

User Guide

[User Guide](#)

Training Guide for Sales and Customer Support

[Training Guide for Sales and Customer Support](#)

Post Launch Iteration

Problem identified:

There are customer-reported issues in 25% of the food deliveries executed by the robots.

Assumption made:

They are caused by technical issues in robots. Robot malfunctions.

Root cause:

It is observed that there are customer 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:

Currently, the tool is designed in a way to track the status of a robot only on a request basis. Requests to check the status of robots are generally due to a complaint call from the customer asking for the status of their food. This delay must be avoided and any field issues because of robot malfunction should be automatically informed immediately to the operations team. A notification feature needs to be installed in the app which would inform the operations in case of any issues with the robots.

Success metrics:

Reduction in the customer complaint calls because of technical issues with robots to less than 5%

For the users in the control group (50%):

We will do nothing (group A). They still work with the App without a notification mechanism

For the users in the variant group (50%):

We add the notification feature that notifies the operation team immediately of any issue with the robots on the job (Group B)

Our hypothesis

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

Launch Email

[**Launch Email**](#)