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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. These problems exist for the competitors as well, but we would be in the upfront if we start focusing on this segment now. We could convert this problem into an opportunity by automating the delivery process using service robots instead of human dashers. We assume that there could be lots of potential interests from customers to make small orders if they don’t get the feel of being judged and to exchange this feeling and prove that we care about you even you need a small order. A service robot meant mainly for small deliveries would give them the comfort that they need and this would reduce the delivery and service charges from their total amount. Small deliveries here mean, an order with just one or two inexpensive items, like for example, an order with just a dessert or a snack. From the company’s perspective, the operating costs of service robots would be insignificant compared to human dashers. This allows Human dashers also to focus on bigger and long-distance delivery orders which has a potential for a better tip for their service.

### Goals

* To build a mobile application:
  + to track and control the robots
  + to view the status of their deliveries
  + to receive the passcode that open the robot
  + to solve any bug happened fast
* To increase number of small orders that are apparently delivered by robots.
* To deliver in accurate time
* To receive more positive reviews and ratings from the customers / restaurants for the support offered by the operations team.

### Success Metrics

* Receive Positive feedback from users and get 4.5 of 5 stars in stores.
* Because of a better support offered by the operators, there must be an increase in the small food orders from the customers by 15%
* Increasing in reorder by the same customer up to 20%

### Key Features & Scope

|  |  |  |
| --- | --- | --- |
| Priority | Feature | Description |
| P0 | Sign-in with employee ID | The users are in the operations team of Doordash. The expectation is that they hold a valid company email ID or employee ID, which they can use to login to this app |
| P0 | List of all tasks in the main menu | There must be a main menu that shows the list of all tasks that the operations team can do using this app.  Organized list would help them go directly to the required pages. |
| P0 | Check status of delivery | Operator must be able to enter just the customer’s registered email ID or phone number to retrieve the status (in transit/ destination reached/ order delivered/ job initiated) of the active order of a customer. |
| P0 | Track status of the automated dasher | The operator must be able to track the exact position of the robot dasher who is delivering a particular order. He should also read the estimated time of arrival at the destination. |
| P1 | Track live status of the robot (that is delivering an order) on a map | The operator must be able to view the current position of the robot dasher in a map and could see the live update as and when the robot is moving. |
| P1 | Control Route guidance of the robot delivering an order | From the tracking status of a robot dasher, the operator would be able to control the robot   * To change its route guidance |
| P2 | Add a new job in the queue of the robot delivering an order | From the tracking status of a robot dasher, the operator would be able to control the robot   * To add a new job into its queue |
| P3 | Enter user feedback for a particular order | From the tracking status of a robot dasher, the operator would be able to enter user’s / customer’s feedback for that particular order |
| P1 | Track status of any dasher | From main menu, operator should be able to track the status (job status/location) of any robot dasher by inputting the unique ID of the dasher |
| P2 | Assign job to robots | From main menu, operator should be able to assign a job to any robot dasher. He can input Restaurant ID and can search for all robots nearby. On clicking any robot, he can assign a job to that robot. He can sort the list of robots using its ‘distance to Restaurant / job status / battery status’ |
| P1 | Control robots (Route guidance) | From main menu, operator should be able to control any robot dasher. He can Choose the robot ID and can   * change its current route, if it’s active on a job |
| P1 | Control robots (control Alarm) | From main menu, operator should be able to control any robot dasher. He can input the robot ID and can   * Control Alarm of the robot |
| P1 | Control robots (Manual guidance) | From main menu, operator should be able to control any robot dasher. He can input the robot ID and can   * Guide manually by pulling it over on the side street |
| P1 | Control robots (control power) | From main menu, operator should be able to control any robot dasher. He can input the robot ID and can   * Control power of the robot |
| P0 | Antitheft Mode | From Control robot, Operator can open camera and horn if it is something there |

### Target Market

**Target Users of the App**: Operators within Door Dash company who want to manage by view the status of any food deliveries made using Door Dash and to remotely take control of robots that need intervention.

**Customers**: Customers are the real Door Dash customers who want to order a small order and the people around the restaurants.

### Total Addressable Market (TAM)

Assuming that we will launch in San Francisco first as a test and check validity for the product so:

**Top-Down TAM**:

SF Population: 883,255 as on 2021

And there is 757.415 Adults in SF,

Seamless buyers ordered an average of 21.5 times and spending an average money, $36.95, per order, so the average amount spent on food delivery per buyer per year: 21.5\*36.95=794.425

**TAM calculation (Top down):** (757.415x794.42) = **$601M**

**Bottom-up TAM:**

we consider the number of households instead of the total population. This could also be estimated with ‘Age’ statistics, but for simplicity, I have just considered only households here.

SF Households: 362,354

Per-order value: $36.95 on average

Approx. number of orders per year: 10 [assumption: approx. 1 order per month]

**TAM calculation (Bottoms Up):** 362.354 x $36.95 x 10 = **$133M**

**DoorDash increased its revenue by 241 percent in 2020, from $850 million to $2.9 billion**

**In that same timeframe, it also decreased its losses by 30 percent, from $667 to $461 million.**

**DoorDash has 18 million users, the vast majority of which are from the US**

**According to Edison Trends, DoorDash controls 45 percent of the US food delivery market.**

**References**:

<https://worldpopulationreview.com/us-cities/san-francisco-population/>

[**https://www.businessofapps.com/data/doordash-statistics/**](https://www.businessofapps.com/data/doordash-statistics/)

[Uber Eats is devouring its food delivery competition - Rakuten Intelligence](https://www.rakutenintelligence.com/blog/2018/uber-eats-is-devouring-its-food-delivery-competition)

[Food fight: DoorDash diminishes Uber Eats’ dominance in food delivery - Rakuten Intelligence](https://www.rakutenintelligence.com/blog/2019/food-fight-doordash-starting-to-edge-past-uber-eats-in-battle-for-food-delivery-market-dominance-1)

### Core UX Flow

[Prototype](https://www.figma.com/proto/ja2nPtvBQ4tEr3H91GALKv/Automated-DoorDash?node-id=82%3A682&scaling=scale-down&page-id=82%3A13)

### Competitors

**Postmates**:

Revenue: $1.2B as on 2018

Number of deliveries made: 35 Million

Number of cities operated: 2940 US cities

Number of US households that Postmates is available to: 30 Million

**UberEATS**:

Estimated Annual revenue: $2.5B

Actual revenue (worldwide): $1.46B as on 2018

Number of users: 91 million monthly active users of the platform

**References**:

<https://www.owler.com/company/ubereats>

<https://craft.co/ubereats/revenue>

[Postmates Company Profile - Office Locations, Competitors, Financials, Employees, Key People, News | Craft.co](https://craft.co/postmates)

[Postmates and DoorDash are testing delivery by robot with Starship Technologies | TechCrunch](https://techcrunch.com/2017/01/18/postmates-and-doordash-are-testing-delivery-by-robot-with-starship-technologies/)

### Acquisition Channel Strategy

Channel 1: Advertisements through Facebook, Twitter, YouTube

why this channel would work for the product:

Social networking reaches to 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.

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

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)

why this channel would work for the product:

More details can be explained in the DoorDash blogs. How to use features, user guide, etc. can be easily shared in the blogs.

All these channels above would bring to the attention of all existing and new potential customers.

### Marketing guide

[](file:///E:\Product%20Management\My%20Projects\Project4\Marketing%20Guide.docx)

### 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 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 job. However, this tool should influence the revenue indirectly, by increasing the number of deliveries especially in the small food delivery segment.

### Pre-Launch Checklist

**Development:** the development team is whole and sole responsible for making the app and all technical parts.

**Engineering:** To get support on the launch day for any technical issue

**Marketing:** To interact with Marketing team to know the impact of the tool on the overall food ordering behavior of the customers.

**Operations and Customer Support:** 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.

**Legal:** provides legal consultation and advice as well as reviewing the rules, contracts and agreements generated by other departments.

**Sales:** ​need a team that can get us leads and make company revenue.

**QA:** ​ quality assurance check will be taken care by this team.

### Risk involved

**Product testing:** We will need to maintain a consistently high percentage when it comes to the degree of relevance between the job shortlisted for the user and his skills though our product testing and algorithms and discuss with the Engineering team to confirm that our system can handle the extra pressure of the market expansion, is the solution / system stable enough and scalable

**Network issue:** between the app used by the operator and the robot in the field.

**Technical issues**: when we roll this App out to the global operations team.

### Training Guide

[](file:///E:\Product%20Management\My%20Projects\Project4\Training%20Guide%20for%20Sales%20and%20Customer%20Support.docx)

### User Guide

[](file:///E:\Product%20Management\My%20Projects\Project4\User%20Guide.docx)

### Post-Launch iteration

**Testing:**

**Problem identified:**

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

**Assumption made:**

They are caused by the technical issues in robot. Robot malfunctions.

**A/B Testing:**

**Solution / proposal:**

Currently the tool is designed in a way to track the status of a robot only on 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 3%

**Backend Team (70% of them):**

They still work with the App without notification mechanism

**Backend Team (30% of them):**

We add the notification feature that notifies the operation team immediately on any issue with the robots on job.

**Hypothesis:**

There should be at least 70% reduction in the customer complaint calls because of technical issues with robots.

### Launch Email

[](Launch%20Email.docx)