Uber

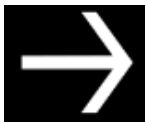"provide transportation as reliable as running water, everywhere, for everyone"

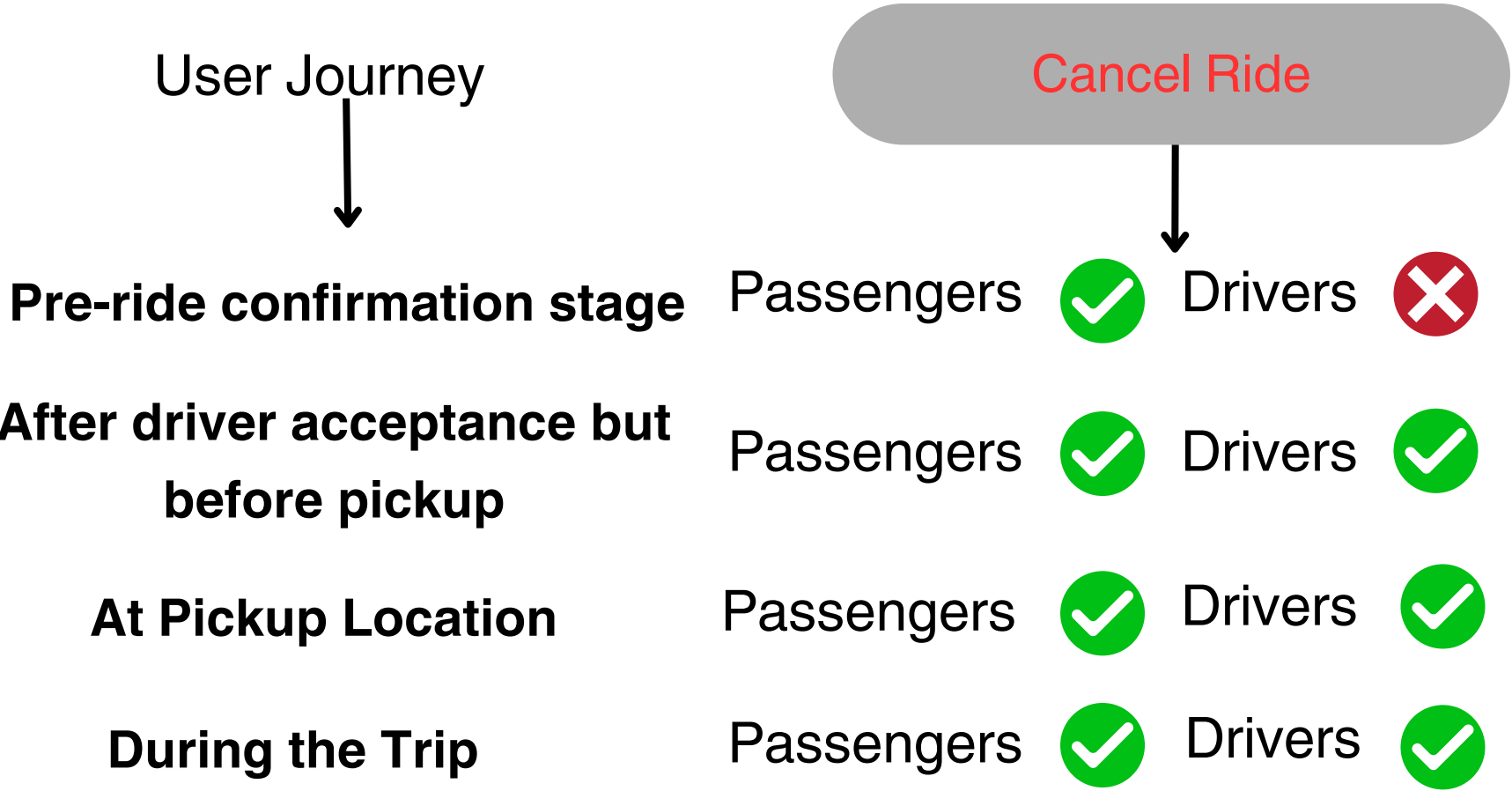**Our Mission** → Reduce ride cancellations

Uber business model

Per trip fare

| 80% | 20% |

Driver earning / Uber commission

Partnerships and Commissions
Uber charges drivers a commission fee on their earnings per ride for using the platform [1]

Advertising and Promotions
Advertising partnerships contribute to revenue through promotions [2]

- The Journey Ad
- Tablet Ads
- Cartops and Taxitops

Actors in our system

- **Demand side** : Passenger requesting rides thorough uber
- **Supply side** : Drivers using various vehicles (cab, auto, bike etc.) to ferry passengers from pickup to drop location
- **Uber platform** : Connecting passengers and driver (app/website)
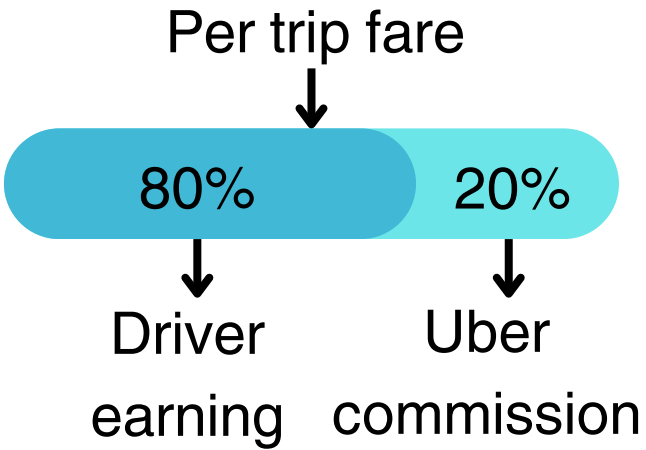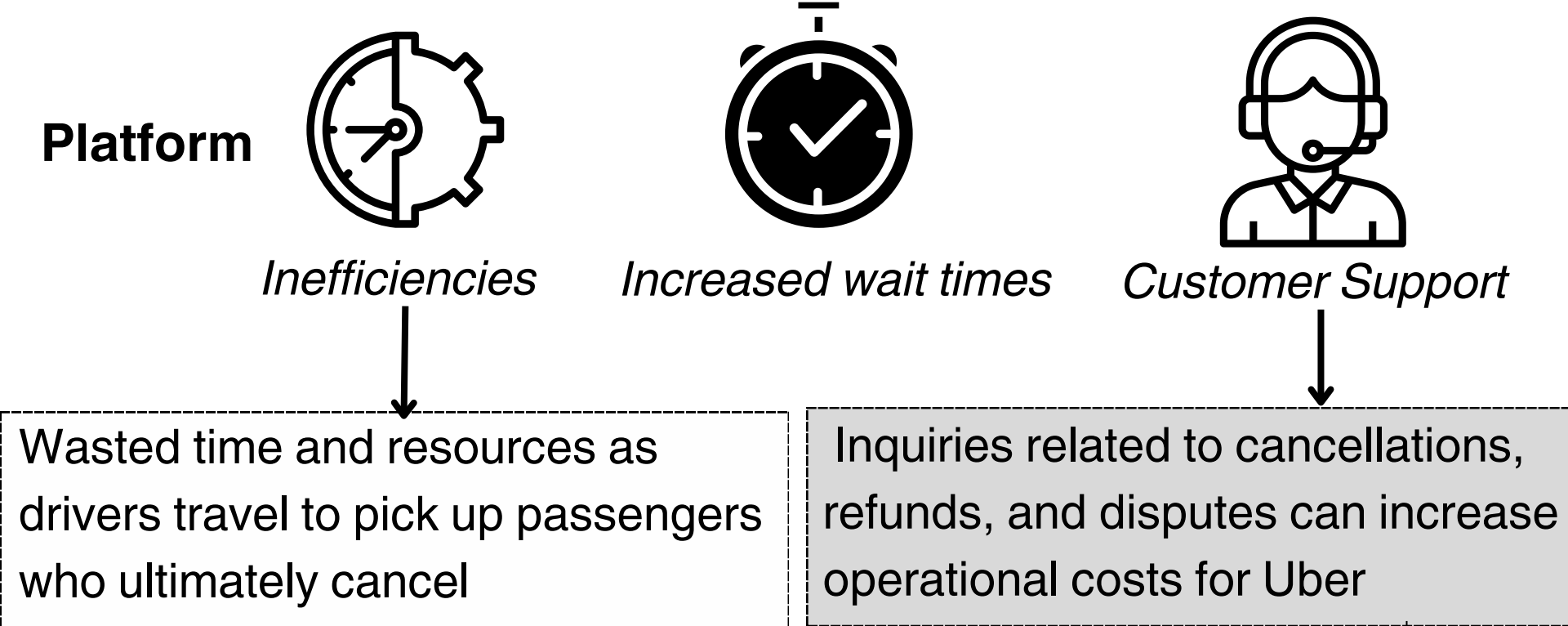
When can a ride be cancelled?

User Journey → Cancel Ride

Pre-ride confirmation stage — Passengers ✅ Drivers ❌

After driver acceptance but before pickup — Passengers ✅ Drivers ✅

At Pickup Location — Passengers ✅ Drivers ✅

During the Trip — Passengers ✅ Drivers ✅

Effect of ride-cancellations

Business Model

- **Direct Fare Loss** When a ride is canceled, Uber loses the fare that would have been earned from that trip
- **Commissions** Cancellations result in fewer completed rides, leading to a decrease in commission revenue
- **Advertisements** Loss of touch points (uber app and in car tablet) for ad impressions

Stakeholders

Driver Satisfaction and Retention *Passenger Experience and Loyalty* *Reputation and Brand Image*

Platform

Inefficiencies   *Increased wait times*   *Customer Support*

Wasted time and resources as drivers travel to pick up passengers who ultimately cancel

Inquiries related to cancellations, refunds, and disputes can increase operational costs for Uber

Mapping business outcomes to product outcomes
Check KPI tree

We can reduce ride cancellation by → Product Outcomes

Passengers
- % avg ride **cancellation rate**
- % cancellation before **confirmation**
- % cancellation before **pickup**
- % cancellation for each reason [4]
- # number of **cancel request steps**

Drivers
- % avg ride **acceptance rate**
- % avg ride **cancellation rate**
- % cancellation **before pickup**
- % cancellation at **pickup location**

Know our Users

Passengers
- People age 23-30, Tier 1
- Cannot drive or don't have a vehicle
- Use uber for transport within the city

Driver
- People driving cab services in tier 1
- Use their own vehcile, or rent vehicles from third-parties

Why?
1. Frequent passengers
2. Loyalty potential
3. Feedback Availability

Why?
1. 79% riders face cancellation issue [3]
2. 94% target passengers use cab

User Personas

Sunita, 28 | Working professional | Mumbai

Does not own a vehicle | Relies heavily on Uber for her daily commute to office and various other places around the city

Needs/ Goals
- Reliable daily commute
- Cost-conscious and seeks affordable transportation options
- Seamless booking process
- Safety

Pain Points
- Frequent ride cancellations after ride is accepted
- Price surges during peak hours
- Sunita has encountered drivers with poor behavior

Rajesh, 40 | Uber Cab Driver | Mumbai

Works day shifts and relies on Uber as his primary source of income | Values a steady flow of passengers

Needs/ Goals
- Steady income to support his family
- High ratings from passengers
- Efficient navigation tools to minimize travel time and maximize the number of completed rides in a day

Pain Points
- Frequent ride cancellations lead to inefficiencies and wasted time
- Low earnings impacting Rajesh's financial stability
- Passengers with challenging behavior or unreasonable demands

What are there problems?

Check Survey   N = 16   Check Survey Questions

Cancellation faced by passengers

87%	18%	37%
Cab	**Auto**	**Bike**

When cancelled by passengers
- Pre - ride confirmation **75%**
- Before pickup **87%**
- At pickup location **18%**

When cancelled by Driver
- Before pickup **100%**
- At pickup location **25%**
- During Journey **6%**

Why do passengers cancel? → Top 3 Issues →
- Wait time is too long
- Driver does not gets closer
- Booking on other ride hailing app arrives first

Target passengers were interviewed *for cancellations*

> - Have to book on multiple apps, to get a ride
> - Driver cancels after hearing pickup or drop location
> - I usually cancel when driver is far away
> - Driver only starts moving, after I have called the him

- **6/6 Wait time** is too long(pre- ride conformation)
- **4/6 Driver does not move** after accepting ride
- **3/6** Many vehicles around, but no one accepts ride
- **3/6 Cab from other ride app** arrives first
- **3/6 Cancels after conversation** on text/call
- **2/6** Driver goes in wrong direction during pickup
- **2/6 Driver asks to cancel**

Target drivers were interviewed *for cancellations*

> - Route comes up after accepting ride, if it is time consuming due to traffic I cancel the ride
> - I Cancel ride if pickup is in inside narrow streets
> - No compensation for traffic or toll fees on the way
> - Uber sometimes give less than 10-12 per km

- **6/8 Pickup location is difficult to reach**
- **5/8 Can't read** all ride **details**
- **4/8 Traffic congestion enroute** pickup location
- **4/8** Booking on different app by passengers
- **3/8 Selected** ride **by accident**
- **2/8 Excessive waiting time** at pickup location
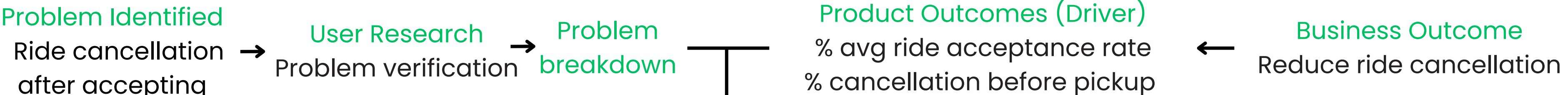- **1/8** More passengers than vehicle limit

Problem : Driver **can't read all ride details** and then **cancels**

1 *Why* : Driver can't read all ride details and cancels after accepted ride
  - **Because** driver **only reads drop location**, although **pickup & drop distance/time is also stated in ride prompt**

2 *Why* : Driver only reads drop location and not other details
  - **Because** driver is **not able to read all details** on ride prompt

3 *Why* : Driver is not able to read all details on ride prompt
  - **Because** all ride details on **prompt is difficult to read** within 10 sec (prompt screen time) **specially while driving**

Which one to solve? L =2, M= 3, H= 4	Impact on User	Frequency	Control	Score (I*F*C)
Wait time is too long (**Passenger)**	**High** (cancels primarily because of this)	**Medium** (when there is short supply of drivers)	**Medium** (matching algorithms have reduced issue) [5]	36
Driver does not move (**Passenger**)	**High** (causing delays, frustration and ride cancellations)	**Low** (only when driver contacts passenger for more details)	**Medium** (driver on-boarding and training)	24
✅ Can't read ride details (**Driver**)	**Medium** (driver cancels after seeing pickup distance/traffic)	**High** (when prompt is given for ride request to driver)	**High** (information given to driver)	48
Unreachable Pickup location (**Driver**)	**High** (driver cancels primarily because of this)	**Medium** (passengers generally select accessible pickup for driver	**Low** (passengers choose pickup location as per there preference)	24

Problem Summary

What is the real problem?

- Drivers often **struggle to read and comprehend ride details** effectively and accepting ride requests with partial information
- Drivers **does not prefer pickups which are far away or have traffic enroute**, although these data points are shown on ride prompt they often don't read this data when accepting
- They **often cancel after seeing** pickup or drop details like **distance/traffic/time/route**

Who are we solving for?

Uber Drivers

Uber's driver-partners are at the core of our service. Providing them with relevant information enhances their ability to **make informed decisions** and reach passengers promptly.

Uber Customers

When drivers are equipped with relevant information, it will help **reduce cancellation** and enhances overall **customer experiences**.

How do we know its a real problem?

- **Why do cab drivers cancel rides** after accepting them? **Uber's President** Prabhjeet Singh **decodes the reason** [6]
- **User interviews** shows high cancellation rate after accepting ride
- **Driver interviews** indicate they accept ride with partial information about ride

Why should we solve now?

- **Driver Retention** : Uber, Ola drivers will have to pay hefty fine for cancelling rides in this city [8]
- **Market Competition :** Ola Launches 'No-Cancellation' Service In Bengaluru [9]

What is the valve generated

Drivers

Higher Earnings

Improved Ratings

Reduced Stress

Passengers

Reduced Cancellations

Better user experience

Improved CSAT

Uber

Reduced Costs

Enhanced Reputation

Competitive Advantage

Problem Identified
Ride cancellation after accepting → **User Research** Problem verification → **Problem breakdown**

Product Outcomes (Driver)
% avg ride acceptance rate
% cancellation before pickup

← **Business Outcome**
Reduce ride cancellation

Solutions

Which one to build?

Enhanced Ride Detail Prompt

- **Revamping the driver interface** to provide **more comprehensive and legible ride details**
- **Including traffic** and other essential details for driver

Voice Assistants

- Integrate **voice-based** virtual **assistants**, for **sharing ride details** for incoming ride request
- Drivers can use **voice commands to accept/deny ride** or access ride details and traffic updates
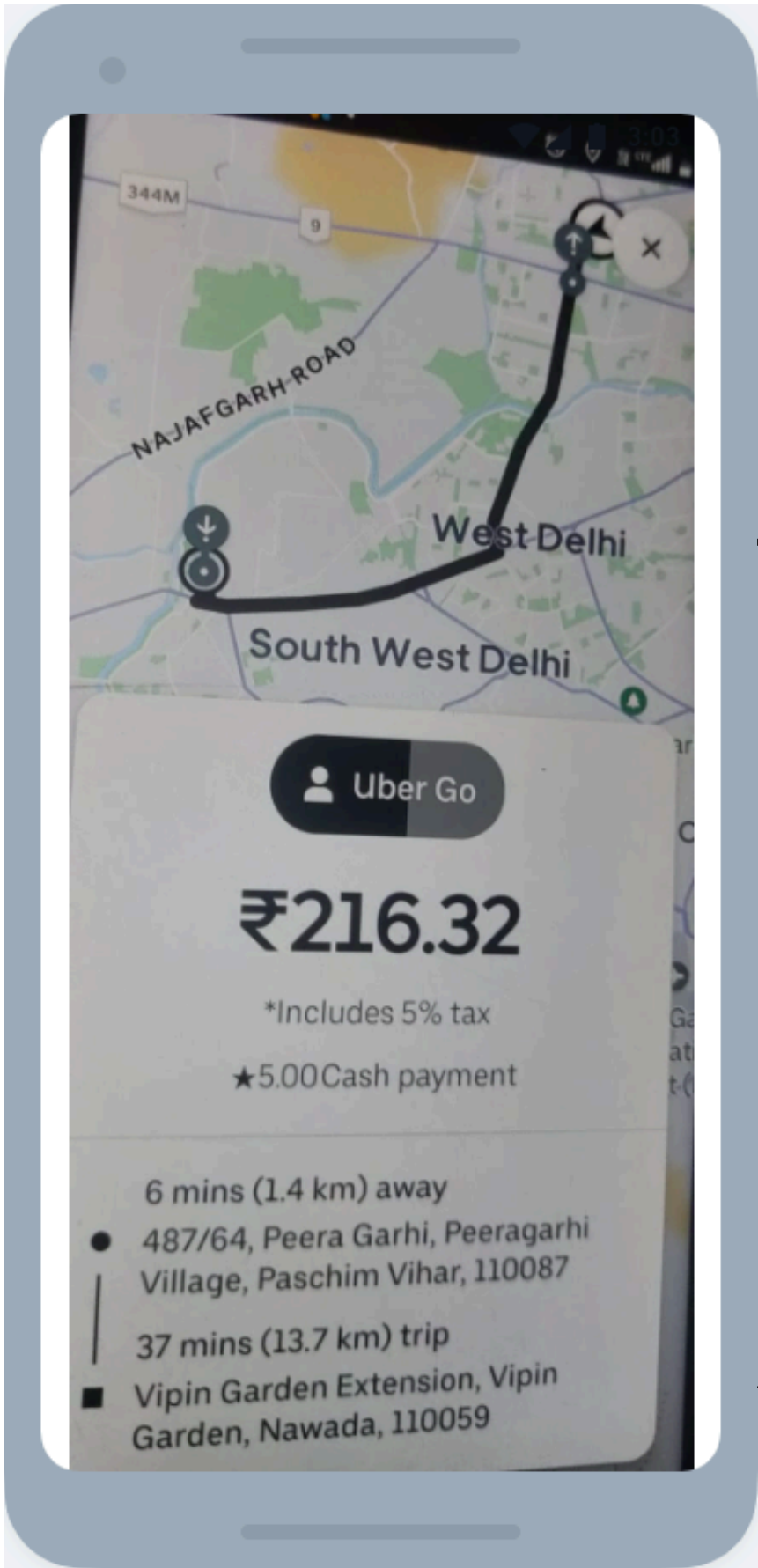
Heads up display (HUD)

- A **HUD device** integrated with the drivers mobile phone, for **projecting ride details on wind shield of the cab**
- Driver can choose which information to project as per preference

L=10,**M**=20,**H**=30	**Reach**	**Impact**	**Effort**	**Score** $(R+I)/E$
Enhanced Ride Prompt	**High** (Driver familiar with ride prompt, customizable details)	**High** (Reduce cancellation due to improved info display)	**Low** (Prompt redesign)	**6** ✅
Voice Assistants	**Medium** (-ve effect user exp, as rides overlap frequently [6])	**Medium** (Some driver might prefer familiar display prompts)	**Low** (Voice chatbot design)	**4**
HUD	**Medium** (Cannot be used for bike services)	**High** (Reduce cancellation due to improved info display)	**High** (Device costs)	**1.67**

Chosen Solution **Enhanced Ride Detail Prompt**

Ride decline : By swiping left

Ride accept : By swiping right, or by clicking on ride prompt box

Check Prototype

Status : Colored notification bar when a ride is offered to the driver, for easier acknowledgment by driver

Map View : This section could either show a route for offered ride, or when there is back to back rides this will be navigational screen for an ongoing that is about to end [9]

Traffic Bar : Showing traffic status in a concise manner, which will help driver comprehend traffic status better enroute pickup and location

Prompt timer Prompt is only visible for 10s

Information Hierarchy : First section showing pickup details and second section showing drop details clearly using bigger fonts and icons

Address : Showing only relevant data (Area, sub-area) as compared to full address, as drivers only need this information and uses GPS for further navigation

Current Ride Prompt Screen (No ongoing ride)

Ride prompt for back to back rides
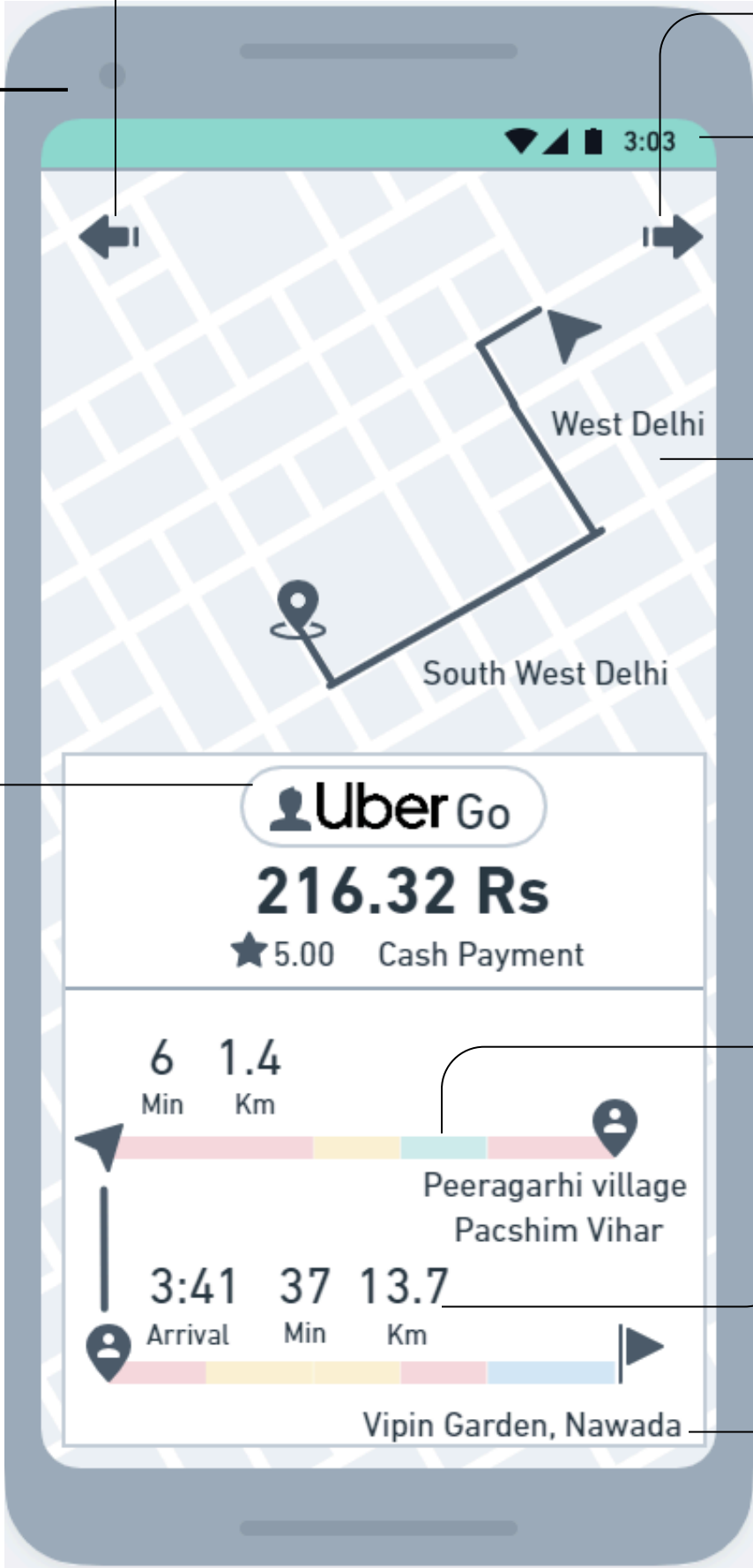
Proposed Ride Prompt Screen

How does ride prompt work?

Incoming ride request to online driver 1 → Ride prompt comes on screen

- **No** → Ride request goes to other drivers
- **Yes** → Ride is started

Ride prompt timer expires **(Missed ride request)** → Ride request goes to other online drivers

- **Yes** → Ride is started for other drivers
- **No** → (back to Incoming ride request to online driver 1)

If all nearby drivers decline the ride is again given to driver 1, request only given max 2 times

Risks & Mitigation

| Metrics that can be impacted	Why?	Solution
Cancellation rate (Driver) **Avg. ride acceptance time** (Driver)	Driver might **not understand the new prompt** and the details shown on it	**A/B testing** of new prompt design for improvement and a **setting tab** for drivers to choose which data they want to see on ride prompt
#**customer support** calls by drivers	Drivers **calling support for more information** regarding the new prompt	Small **video/document for training** the driver about redesign of prompt and how to read it

Second order effects

Improved User experience

- Improved driver experiences can lead to higher driver satisfaction, resulting in a more motivated and engaged driver base
- Better passenger experiences, reduced cancellations, and increased loyalty among both drivers and passengers
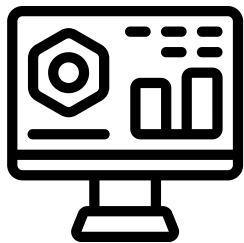
Data Processing Load

- Inclusion on traffic data in the ride prompt could lead to strain on uber backend systems

Metric	Definition	Rational	Success Trend
Cancellation rate **NSM**	# rides cancelled before pickup / #total rides accepted **(Monthly)**	Our goal	↓
% Acceptance rate **L1**	# avg trips accepted / # avg rides offered per driver **(Weekly)**	Rides accepted accidently or without reading all the details	↓
% Cancellation within 15s of accepting trip request **L1**	# cancelled within 15s / # total rides cancelled **(Weekly)**	Drivers cancelled promptly after seeing traffic/distance/time on map after accepting ride	↓
Avg ride acceptance time **L2**	Time taken to accept trip through ride prompt **(D1,D7,D15)**	Redesigned ride prompt will make it easier & faster to read details	↓
% Ride decline rate **L2**	# trips declined / # avg trips offered per driver daily **(D1, D7, D15)**	Redesigned prompt would enable drivers to decline ride rather than missing ride request	↑