

RB CHALLENGE

A close-up, high-angle shot of a motorcycle's instrument cluster. The central feature is a large, dark, rectangular digital display screen. Surrounding the screen are several control buttons and indicator lights. On the left side, there are buttons for a horn, a hazard light (triangle with exclamation mark), and a double-headed arrow. On the right side, there are buttons for a headlight, a battery symbol, a wrench, a screwdriver, and a fan. Below the screen, the 'F1' logo is visible. To the right of the screen, there is a circular dial with a scale and a small orange, white, and green flag. The background is dark and out of focus, showing parts of the motorcycle's bodywork.

Team members we worked together



Ohwani Kikani
Mentor



Sahana Gangadhar
Leader



Shiyamsundar. V



Tejaswee Pande



Shreya Rathi
Leader



Jayesh Bhagat



Nimisha Biswas

Time Line

Day

01

Understand
Design Brief

Day

02

Study
leading EV
brands

Day

03

Competitors
Analysis

Day

04

Competitors
Analysis & User
interview

Day

05

Review 1

Day

06

User
interview

Day

07

Synthesis

Day

08

Feature
listing and IA

Day

09

Review 2

Day

10

Amending feed
back and
preparing final
PPT

Road map

Brands' Overview

01

Research Workshop
Research Plan
Competitors Analysis

02

Discussion Guide
Usability Testing

03

Synthesis
Analysis
Persona

04

Problem Statement
Features Listing

05

IA

06

BRAND OVERVIEW

EV-Brand

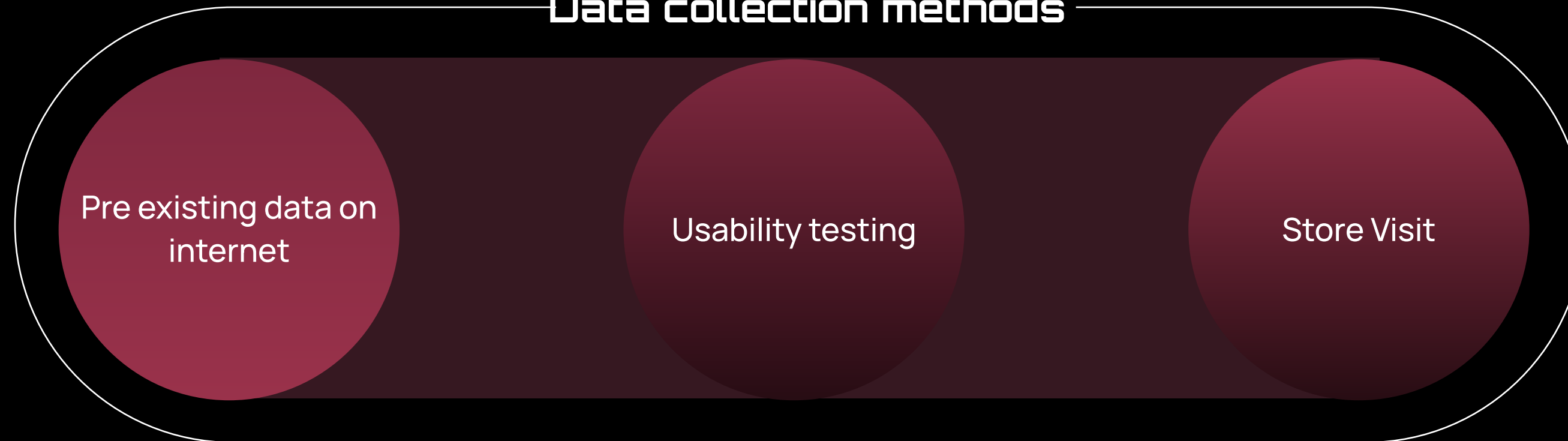


Research plan

Research Type



Data collection methods



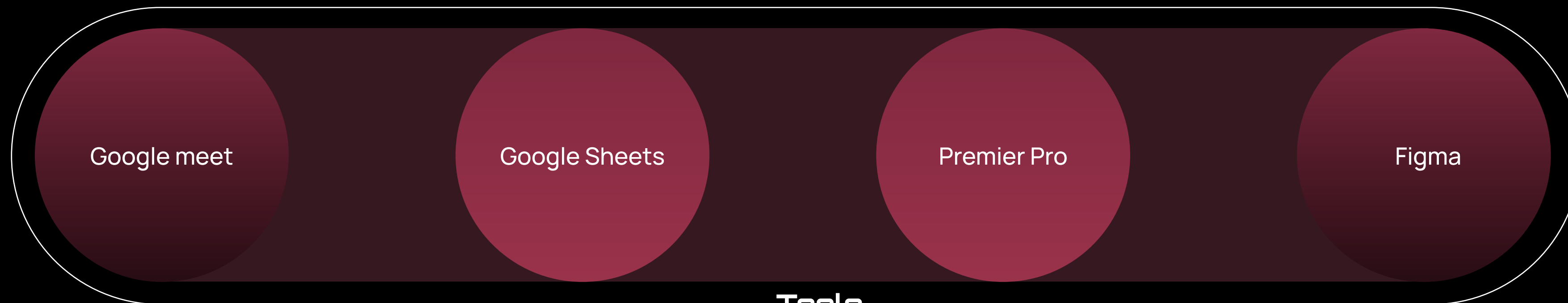
Timeline



Deliverables



Tools



COMPETITOR

Analysis

Vehicle parameters

Parameters	Revolt	Yulu	Vida	Lime	Spin	Ather
Dashboard to mobile integration	Yes	No	Yes	No	Yes	Yes
Lock / Unlock	Remote, key	QR Code	Remote	QR Code	Remote lock	Remote lock
Rent or Buy	Buy	Rent	Buy	Rent	Rent	Buy
Pice range	1.25 IK	Rs. 15 - 30 / hour	1.45L	Per ride fare, Differs from City to City	15 cents to 40 cents / min, Differs from City to City	₹ 1.35 - 1.58 Lac
Vehicle speed	High, up to 150Km/h	Slow, 25km/pr max speed	High, 80km/pr max speed	Slow, 13kmph max	Slow, 15 mph max	High, 105 km/pr max speed
Multiple speed mode	Yes (Eco, normal, sports)	No	No	No	No	Yes
Battery Efficiency	120-150 Km on 5 hr charge	60km on full charge	65 min full charge for 95kms	30km on full charge for 3 hours	40 miles on full charge, battery indication on dashboard	146 km on 5 hours 40 mins to charge fully
Target group	Age 18 - 35 Students and early career professionals	16+, adults, old people	Kids, adults, old people	Kids, adults, old people	18-26, college students	Tech savy, 25+ age
Unique features	AI enabled, can locate bike from remote, regenerative breaking system, sound selection	Drive and drop	Drive and drop	Micromobility	Computer vision AI & sensors to detect footpath, wrong parking, pedestrian. Beeps if it detects.	Smart electric scooter Larger long lasting battery pack (3 years) 7" smart dashboard with rich TFT display Reverse feature
USP	India first EV bike. India's first AI enabled motorcycle	Battery operated. No ownership	2 Removable battery	Color Dashboard, Indicator- If wrongly parked or parked in No parking zone, Detects pedestrians	Electric bicycle-sharing and electric scooter-sharing company. Unit of Ford Motor Company.	Futuristic design with high battery performance, and internet connectivity
Battery charging method	Removable battery to charge	Removable battery to charge	Removable battery to charge	Charging stations	Removable battery & charging stations	At charging station or with Ather portable charger
Design specifications	Average sized, heavy, regular bike	Small, light weight, regular scooter	Small, light, regular scooter	v Small, v light, bird Bike	compact, lightweight, and easy to maneuver in tight spaces	Futuristic dashboard and modern scooter design

Mobile parameters

Parameters	Revolt	Yulu	Vida	Lime	Spin	Ather
Navigation	Easy, because of less features	Easy	NA	NA	NA	Easy
Iconography	Remote, key	QR Code	Remote	QR Code	Remote lock	Remote lock
Design Aesthetics	Outdated	Modern, but no dark theme	Minimal	Minimal	Modern & approachable	Minimal
Error Prevention	Yes, while uploading documents	Yes during parking	Yea	Yes, while uploading the ID proof	Yes, Notifies user when riding improperly	NA
How to connect to Dashboard	Turn on Bluetooth, and bike	NA	Turn on bluetooth, and bike	Scan QR code on bike and start	Scan QR code on bike and start	Turn on bluetooth, and bike
Help and Assist	Yes, supporting document and contact details are available	Help and Assist	On site repair and assistance	Help	FAQ & help section	Provides customer care support, roadside assistance (24*7), call support
Onboarding	Registered number and OTP	OTP verification, Security fee + recharge for every ride	OTP Verification	Gmail & mobile number	Facebook/mail, password, terms and conditions	Lengthy sign up process. User has to create account on the website first
Use Efficiency	Easy to use as the features are limited	Vehicle access only during rides	A user-friendly application with remote vehicle controls	A user-friendly application that is intuitive to use	Clear instructions on how to use them and safety instructions	Easy to use as the features are limited
OS compatibility	Android and iOS	Android and iOS	Android and iOS	Android and iOS	Android and iOS	Android and iOS
Consistency	Looks inconsistent with Dashboard	Yes	Yes	Looks consistent	Looks inconsistent with dashboard	Looks consistent
Other Features	Locate charging centers, locate bike, sound and volume control, swap batteries	Locate Yulu Zones, Recorded instructions and feedbacks from the bike	24x7 Roadside assistance	Post entered the card details user error can be recovered.	Safety checkboxes for the user before they start ride	Find a charger, Locate my scooter, Ather forum (community)
Limitations	Once the bike is on then only you can set up the features, need to keep bluetooth active all the time	Zone to Zone issue. No live map feature	No GPS navigation on console. Only bluetooth connectivity	Zone to Zone issue. No live map feature, must park in the lime park zone until that the charges will be considered.	No transparency in charges	Sign up process is very lengthy

Dashboard parameters

Parameters	Revolt	Yulu	Vida	Lime	Spin	Ather
Day/Night mode	Yes	No	Yes	Yes	No	Yes
Bluetooth connectivity	Yes	No	Yes	No	Yes	Yes
User Friendly	Yes, as most features are operated through switches	Yes, Easily accessible and easy start	Yes, customisable as well as switch operations sync with digital console	Yes	Yes, it is easy to understand	Yes
Google map integration	No	No	No, as no internet connectivity for real time Google Maps	No, as no internet connectivity for real time google maps	No, as no internet connectivity for real time Google Maps	Yes
Digital/analog/smart	Digital	NA	Smart	Digital	Digital	Smart
Upfront info displayed on dashboard	Speedometer, range, battery %, ampere meter, modes, side indicator, battery temperature, battery status, headlight indicator, parking mode, servicing status,	NA	Speedometer, Battery indicator, Riding mode, Navigation & bluetooth,	Speed and Charge only	Speed, battery, light indicator	Speedometer, battery, odo meter, average speed, possible travel distance in current battery charging, mode, menu, time, bluetooth connectivity
Other special features	Automatically shifts to night mode through photo sensor	On starting or parking , the vehicle gives voice instructions	Dark theme, features	NA	NA	Error diagnosis, park assistance (forward and reverse mode), save and send locations, upload documents
Navigation	NA	NA	NA	NA	NA	Yes, but Confusing
Error prevention	Yes, Through switches	Notifies that the user cannot stop near Yulu charging stations	Yes, SOS push button	Yes	Parking zone sensors and Pedestrian or sidewalk zone sensors	Yes
Real estate	7 “ 5”	NA	7” touch display	4.5” display	3*1 inches approx	7 inches
Iconography	Not consistent	NA	Consistent	Not included	Consistent	Not consistent

Competitor Analysis Insights

Revolt

- **Right amount of information** on dashboard
- Dashboard displays **vehicle range** as per the driving modes
- **Design inconsistency** between dashboard and mobile app
- Less features in mobile app
- Geo find has a **restriction of 50km** distance

Yulu

- **Right amount of information** on mobile app
- Consistent design
- **Quick and easy** bike start
- Yulu coin **feature is not upfront**
- Sound is used to inform system status

Ather

- **Back navigation** on dashboard looks **confusing**
- **Low priority information** on dashboard
- Lengthy mobile app onboarding process
- **Easy to find charging stations and locate scooter**

Lime

- **Swappable battery** feature reduces user effort
- **No map support**
- Sensors to assure **user safety**

Spin

- Sensors to assure **user safety**
- Sensor for incorrect parking
- Dashboard UI can be better
- **No map support**

User research

Usability testing and interview | Duration : 40 mins | Location : Bengaluru

User 1

Name: Sayali Age: 21 Gender: Female

Occupation: Graphic Design intern

Brand: Yulu

Interview Date: 24-03-23

Number of year experience: New user

User 2

Name: Altaf Baig Age: 55 Gender: Male

Occupation: Unemployed

Brand: Ather

Interview Date: - 28-03-23

Number of year experience: 1yr 6 months

User 3

Name: Eshwanth Age: 29 Gender: Male

Occupation: Construction Field

Brand: Revolt

Interview Date: 24-03-23

Number of year experience: 1yr

User 4

Name: Atul Age: 29 Gender: Male

Occupation: Mechanical Engineer

Brand: Ather

Interview Date: 31-03-23

Number of year experience: 2 days

Store visit: 1

Name: Saif Age: 25 Gender: Male

Occupation: Senior executive

Brand: Revolt

Interview Date: 27-03-23

Store visit: 2

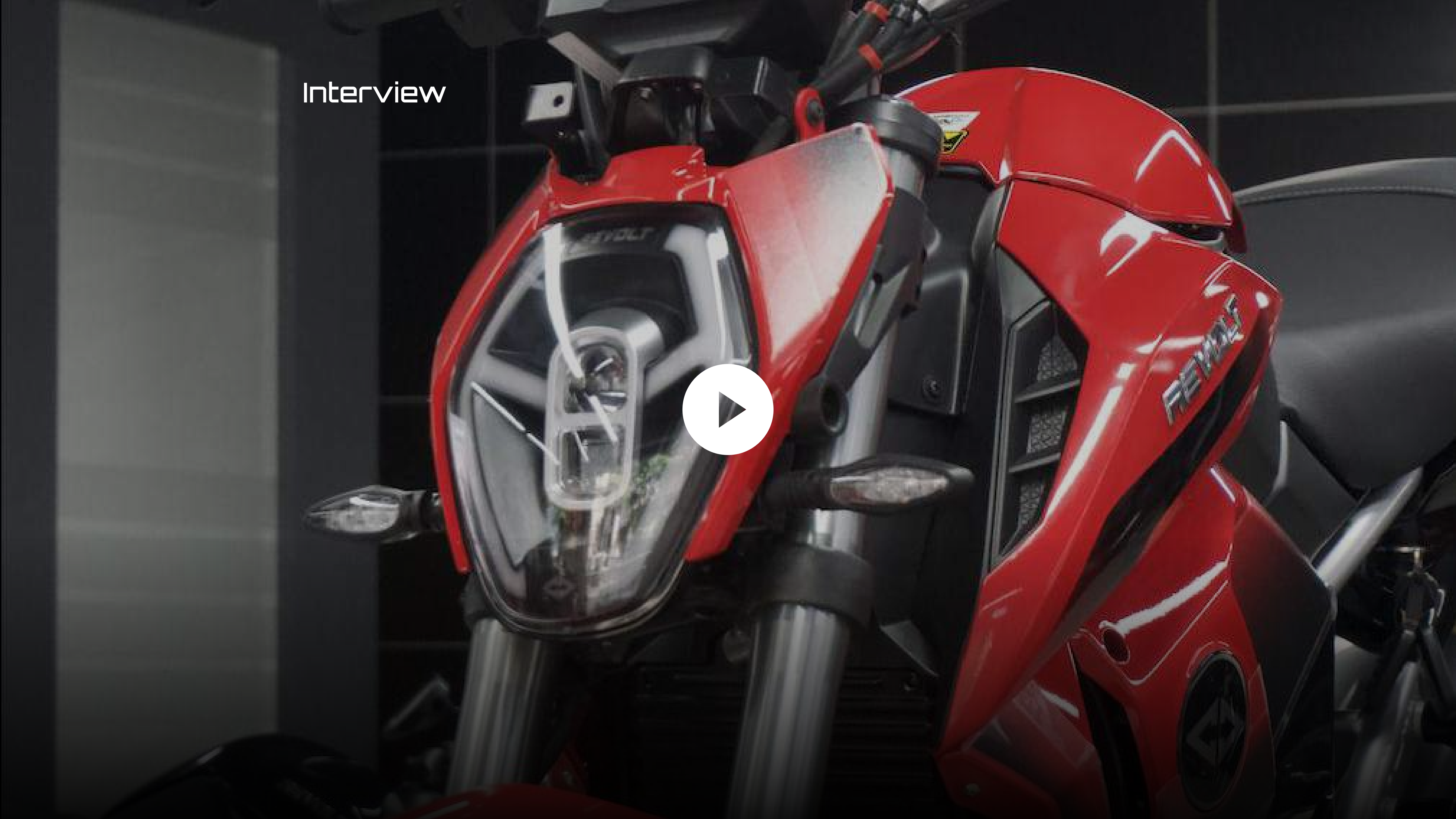
Name: Jay Kumar Age: 32 Gender: Male

Occupation: Service Manger

Brand: Revolt

Interview Date: 28-03-23

Interview



PROBLEM STATEMENT

Problem statement

Identifying these problems helped us understand the EV industry better than just using them and watching them travel around us. Through this research workshop, we found some gaps at a human experience level in the EV brands in India.

- Features - Lack of sync of features between the mobile app and the vehicle dashboard
- Vehicle Servicing - No help to educate users about when and how the vehicle may require servicing
- Dashboard design - Crowded dashboard with too much information
- User assistance - If the user is confused at any point, no place for him/her to easily reach out for help.

[Link to the interview videos](#)



Persona -1



Altaf Baig

55 Yrs - Unemployed

Male

EV - Ather



Choosing an electric vehicle was a no-brainer for me - it's not only eco-friendly, but also more cost-effective than petrol scooters in the long run. It's a win-win situation

Tech savvy ● ● ● ● ●

Background

Altaf is a 55-year-old man living in Bangalore. He has been driving a two-wheeler electric vehicle for the past 1 year and 6 months. Although Altaf owns the vehicle, his three sons mostly use it to commute. He takes great care of the vehicle, ensuring that it is always charged and well-maintained.

Tasks

- Make sure that his electric scooter is always charged and ready to use when needed.
- Visit the charging station daily to charge his electric scooter.
- Plan his errands and activities around the availability of charging stations in his area.

Goals and Needs

- To continue using his electric two-wheeler to run errands and complete his daily tasks.
- To find ways to make his electric vehicle more practical for his needs, such as adding a **port to charge his phone**.
- Wants installation of more **charging stations in the city**.
- To ensure that his electric vehicle is always in good condition and well-maintained.

Frustrations

- The charging stations have a **limit of charging only till 80%**, which sometimes may not be enough for his needs.
- It takes a lot of time to charge his electric vehicle at home, which is **time-consuming**.
- Altaf is not tech-savvy and have **difficulty using the features of the app**.
- Limited availability of charging stations in his area makes it difficult to plan longer trips.

Persona -2



Sayali

21 Yrs - Student/Intern

Female

EV - Yulu (new user)



Efficient, eco-friendly, and convenient - Yulu has been my go-to mode of transportation for short distances within the city.

Tech savvy ● ● ● ● ●

Background

Sayali is a 22-year-old student. Currently she lives in Bangalore and is doing an internship in the city. She often travels short distances within the city with her friends using Yulu, a popular bike-sharing service in Bangalore. She finds Yulu to be a convenient and eco-friendly mode of transportation that also saves her time and money.

Tasks

- Familiarizing herself with the Yulu app interface and exploring all the features.
- Finding and locating Yulu stations near her PG.
- Checking the availability of Yulu bikes in her desired locations before making travel plans.

Goals and Needs

- Access to Yulu stations near her PG for easy pick-up and drop-off of bikes.
- A user-friendly interface that clearly **displays all the features** of the **Yulu app** upfront.
- Availability of Yulu bikes at peak hours of the day.
- Safe and secure bike-sharing service.

Frustrations

- **Long loading times for the Yulu app**, which causes inconvenience.
- Difficulty in **finding and exploring all the features** of the app.
- Difficulty in reporting issues with the bike or the service to the customer support team.
- Unpredictable weather conditions affecting the safety and comfort of riding a Yulu bike.

Persona - 3



Atul

29 Yrs-Mechanical Engineer

Male

EV - Ather



At the end of the day my main goal is simple - get from point A to point B. That being said, I believe that having the right features and technology can make that journey all the more enjoyable and efficient.

Tech savvy ●●●●●

Background

Anuj is a 29-year-old mechanical engineer who has always been fascinated by automobiles and bikes. He was particularly intrigued by the Ather EV, which he learned about from a friend. Two weeks ago, Anuj finally bought an Ather EV, and he's been thrilled with his decision ever since. He loves the premium feel of the vehicle.

Tasks

Planning and executing long-distance trips using his Ather

- EV, including researching charging station locations and estimating travel times.

Maintaining and repairing his electric vehicle, including

- performing routine maintenance and addressing any issues that arise.

Goals and Needs

- More features like **calling and messaging capabilities**.

Wants a smooth ride that is free

- from any vibrations or discomfort.

- History of his **previous destinations**

See **more public charging**

- **infrastructure** for electric vehicles in his area.

Frustrations

- **Lack of public charging infrastructure** for electric vehicles

Not aware of a lot of features, this could make it difficult for him to take full advantage of

- all the vehicle's capabilities, and he may feel like he is missing out on important functionality.

Features listing for dashboard

Should have

Direction indicator

Speedometer

Battery life remaining

Headlight- low and high beam

Led or brighter screen for visibility

Odometer

Riding modes (Eco/normal/sports)

Recharge indicator when battery hits less than 20%

Good to have

Service indicators

Touch screen

Drive mode toggle

Error Codes

Bluetooth connection indication

Date and time

Trip meter

Security key (Star/view documents)

Incognito mode

Auto shift to dark mode

AI integration

Profile

Could have

Music connectivity

Google map navigation

USB charging indicator

Climate/weather indicator

Digital documents

Save destinations

Sending a call and message notification during the ride

Switch to open integral storage space

Share location

Auto sleep dashboard

Features listing for Mobile app

Should have

Locate vehicle

Locate battery charging/swapping stations

Locate service centres

Check availability of service centres

Dashboard display settings

Vehicle details

User details

Help

Good to have

Low vehicle battery alert

Vehicle manual

Instructions for Dos and Don'ts

Alert if security key entered incorrectly multiple times

Dashboard Customisation

Vehicle servicing history

Upload digital documents

Profile

Could have

Vehicle history

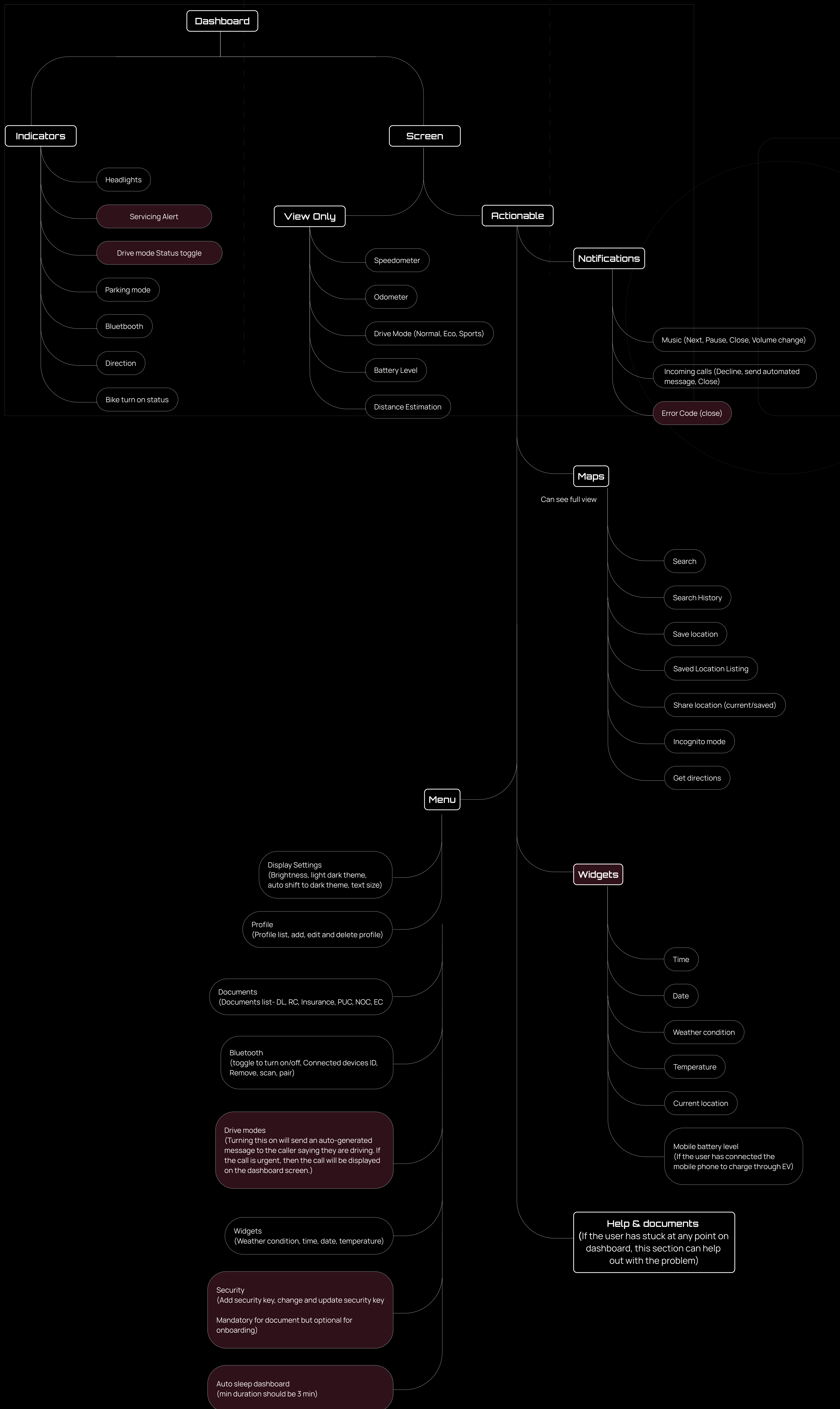
How much fuel is saved

Carbon footprint related stats

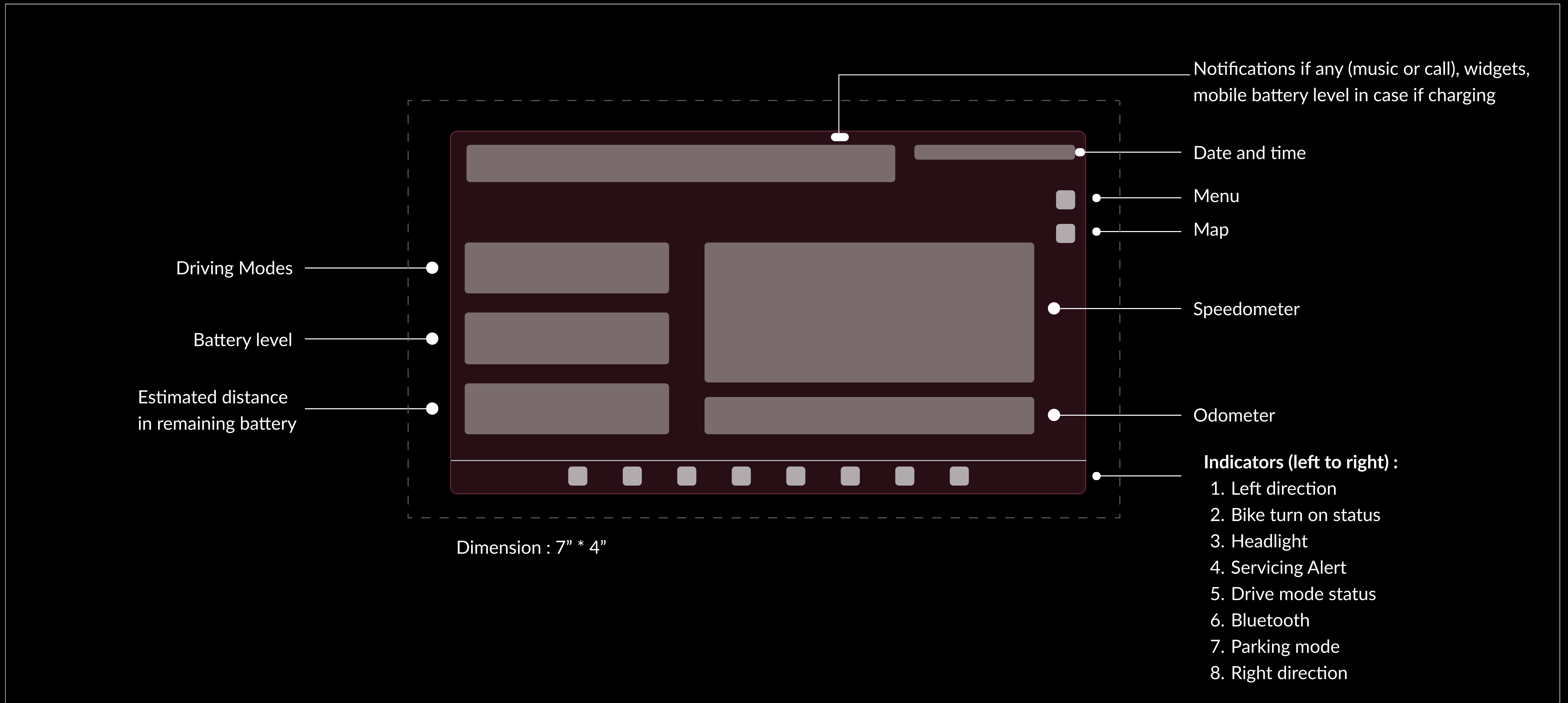
Pre booking of service centres

Drive mode status

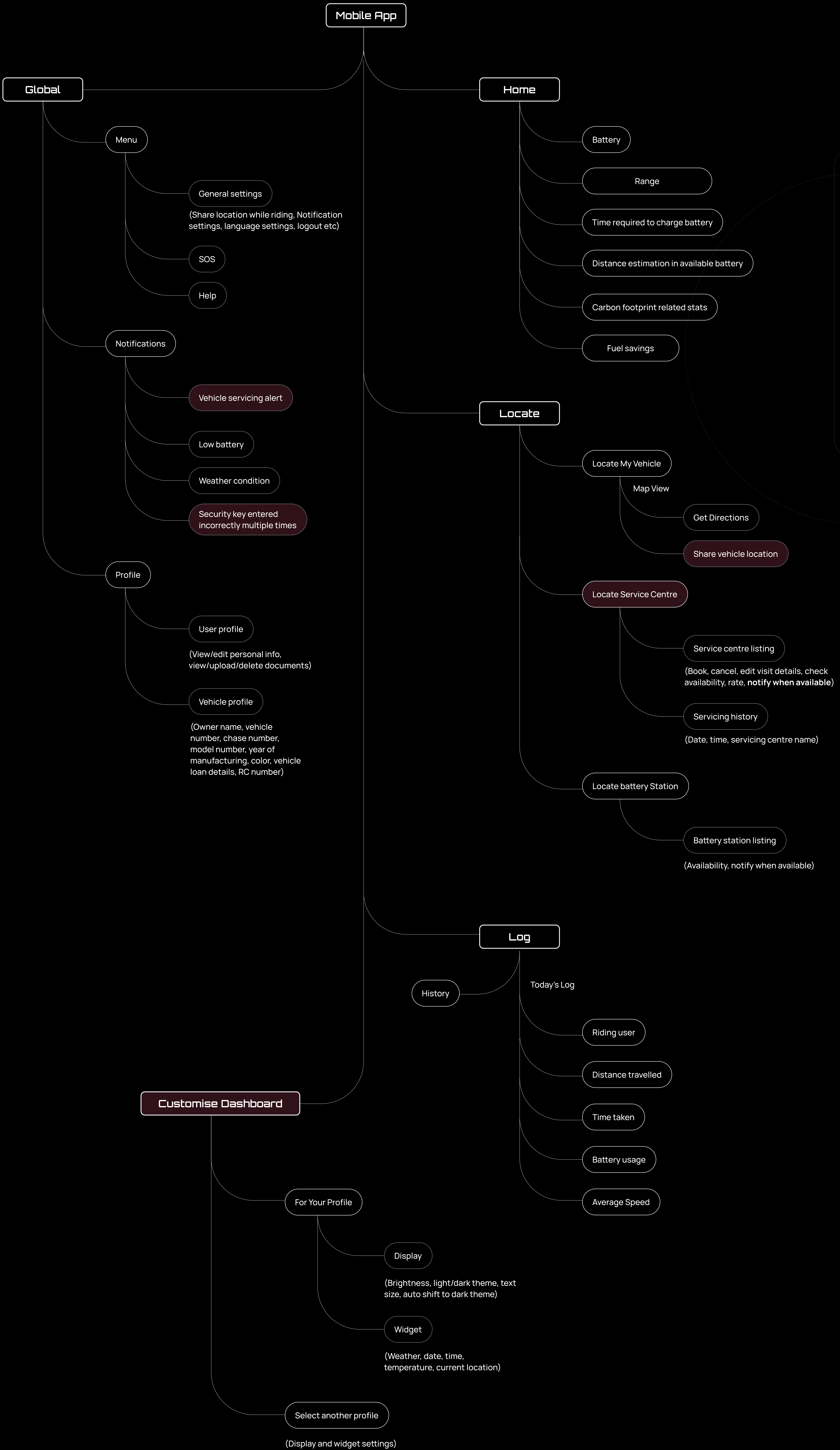
Information architecture (IA) for dash board



Low fidelity wireframe



Information architecture (IA) for Mobile App



A person wearing a black motorcycle helmet with colorful blue and orange patterns and a black leather jacket is sitting on a motorcycle. They are holding their hands up to their face, possibly adjusting their glasses or helmet. The motorcycle is white with a large round mirror on the left handlebar. The background shows a parking lot with several cars and a building with a wooden fence. The text "THANK YOU" is overlaid in white, bold, sans-serif font across the center of the image.

THANK YOU