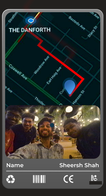
Google Maps

Smooth, Safe, Smart Travel.



Overview

Through **contextual inquiry**, we **observe and interview** users to **understand their real-world navigation challenges** and identify opportunities for improvement.

Content

INQUIRY	ANALYSIS	SCREEN
Observations and interviews with participants navigating through real-world scenarios, including challenges and workarounds	Affinity diagramming and thematic analysis to identify recurring pain points and unmet needs	Wireframes and prototypes of key screens, including alternative route suggestions and real-time updates

Sections Explaining different parts of the contextual inquiry process

Field Study & Observations

Chosen Scenario:

Location: 27 Delhi to Alwar (highways and urban-to-rural roads)

Identify pain points in navigation, toll management, road condition awareness, and essential stop recommendations.

Primary Objective

Identify **pain points in navigation**, toll management, road condition awareness, and essential stop recommendations.

User Group

The user group for the purpose of the research are members of my family.

Using

Methods

Users Background

	Arnav	Soumik	Dhruv	Rajat
	Passenger	Passenger	Driver	Passenger
Age	19 yrs	21 yrs	21 yrs	21 yrs
Occupation	Student			
Likes	Train Travel		Road Trips	

INQUIRY

All dialogue translated roughly from hindi.

Scene 1

While driving, the group encounters **unexpected potholes and rough roads**, realizing that **Google Maps didn't provide any warnings**, making the journey uncomfortable and risky.

Dhruv: The **road is so rough**, we can barely drive!

Arnav: There are no **signages or warnings** about this anywhere.

Scene 2

While driving through **Alwar at night**, the group realizes that the area is **not lion-free**, posing a serious risk of **sudden wildlife crossings**, which could lead to **accidents**.

Rajat: I just spoke to the petrol pump guy, and he said this is not a **lion-free zone**, so we might see lions around.

Dhruv: Should we really go near the lions this **late at night**?

Arnav: If we had known earlier, we would have come during the day or **chosen a different route**.

Scene 3

The group unknowingly crosses two toll points within a short time and gets **charged an unexpected penalty**, realizing that **Google Maps didn't provide any warning about toll timing rules.**

Soumik: What?! We just got **charged an extra fee.**

How are we supposed to know the time limit for passing between tolls?

Arnav:

INSIGHTS

Lack of Toll Awareness
Users face **unexpected penalties** due to unclear toll timing rules.

Poor Road Condition Warnings
Travelers encounter potholes & **construction zones** without warning.

Wildlife & Safety Risks
No alerts for **animal crossing zones**, increasing accident risks.

Difficulty Finding Essential Stops
Users **struggle to find open petrol pumps** in remote areas.

Lack of Recent Accident Data
Drivers are unaware of **high-risk accident zones.**

USER NEEDS

Toll Transparency & Alerts
Users need **clear toll fee breakdowns, timing restrictions, and penalty warnings** to avoid unexpected charges.

Real-Time Road Condition Updates
Drivers require **warnings for potholes, bad roads, and construction zones** to ensure a smoother and safer ride.

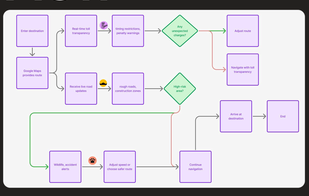
Wildlife & Accident Risk Awareness
Travelers need **animal crossing alerts and accident-prone zone warnings** to prevent sudden collisions.

Proposal

These features will help travelers avoid unexpected toll penalties, navigate safer routes, find essential stops in advance, receive alerts about road hazards, ensuring a **smoother and more reliable journey.**

Enhancing Google Maps with real-time toll alerts, road condition warnings, wildlife crossing notifications, and smart stop recommendations to improve **safety**, **efficiency**, and **user experience** during long-distance travel.

Flow



Toll Guard

Toll Guard provides **real-time toll fee breakdowns** and **timing restrictions**, and **penalty warnings** ensuring users avoid unexpected charges. It also offers **alternative toll-free routes** when available for cost-efficient travel.