



ENHANCED GOOGLE MAP

Why Picked GMaps

Google Maps is a widely adopted navigation app with over 1.5 billion monthly active users. I chose it because, while it's robust in functionality, it still has room to improve in areas such as personalized routing, eco-conscious commuting, and real-time urban adaptability. As cities become denser and more complex, optimizing for individual behavior, environmental impact, and community contribution is critical.

VISION

To create an intelligent, adaptive navigation ecosystem that not only guides users from point A to B efficiently, but also aligns with their personal preferences and supports urban sustainability through real-time, community-driven insights.

MISSION

To help users navigate their daily journeys with personalized, environmentally conscious, and community-informed routing solutions that minimize stress and maximize efficiency.

I hire Google Maps because (JTBD)

Core Functional JTBD:

"When I'm commuting, I hire Google Maps to help me reach my destination in the fastest, least stressful, and most efficient way possible, considering my preferences and current city conditions."

Emotional JTBD:

"I want to feel in control and less anxious about commuting by trusting that the route I'm on is optimal for my time, safety, and values (e.g., sustainability)."

PROBLEM STATEMENT

When I drive in the city, **I need to** reach my destination quickly and find parking easily, **but I struggle because** Google Maps doesn't always account for real-time parking availability or my preference for eco-friendly routes, **leading to** wasted time, increased stress, and unnecessary emissions

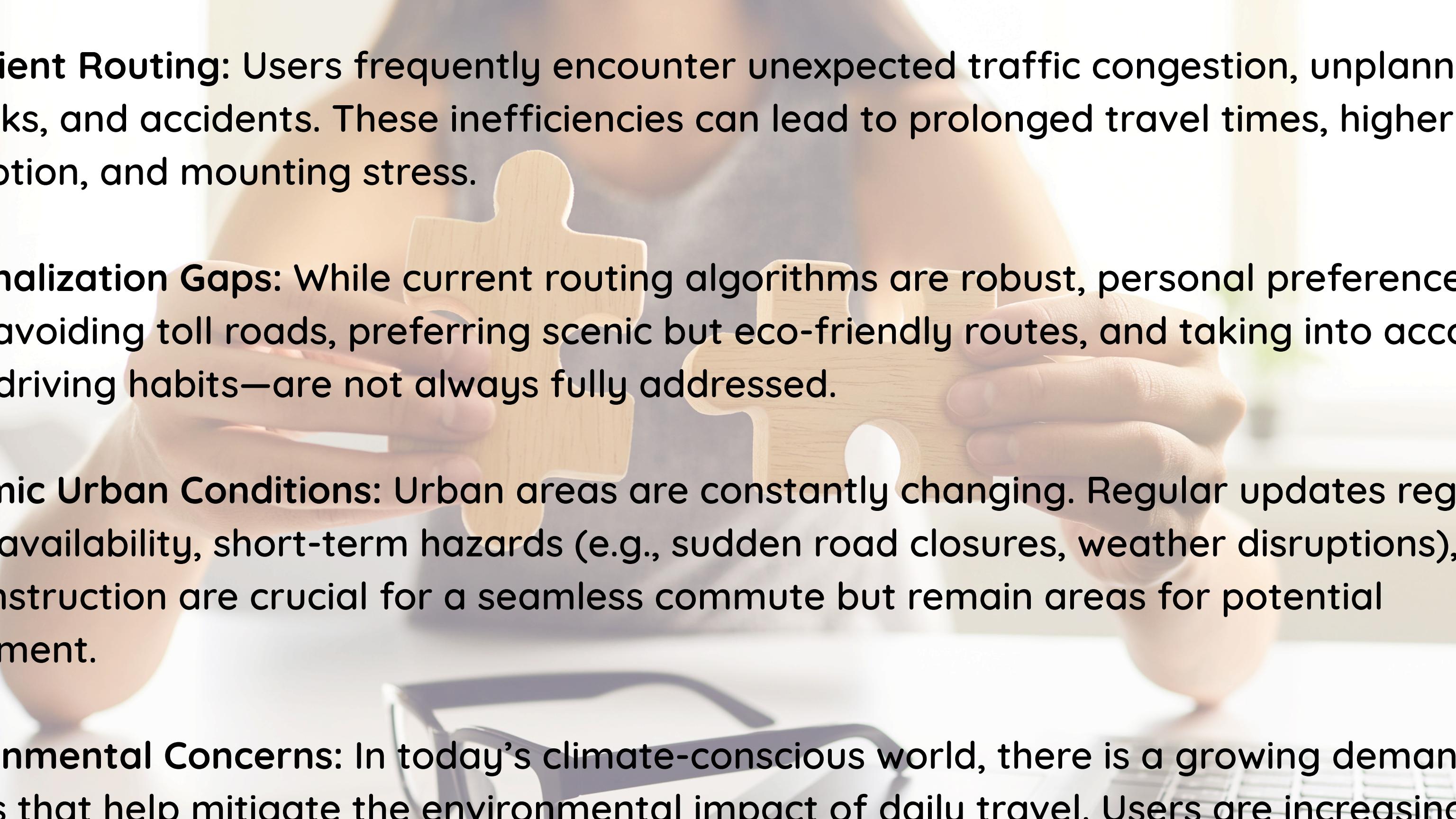
The massive scale of Google Maps' user base face several challenges:

1. Inefficient Routing
2. Personalization Gap
3. Dynamic Urban Conditions
4. Environmental Concerns

Why This Problem Matters:

1. User Convenience and Time Savings
2. Economic Efficiency
3. Environmental Sustainability
4. Enhanced Urban Living

CHALLENGES:

- 
- 1. Inefficient Routing:** Users frequently encounter unexpected traffic congestion, unplanned roadworks, and accidents. These inefficiencies can lead to prolonged travel times, higher fuel consumption, and mounting stress.
 - 2. Personalization Gaps:** While current routing algorithms are robust, personal preferences – such as avoiding toll roads, preferring scenic but eco-friendly routes, and taking into account specific driving habits—are not always fully addressed.
 - 3. Dynamic Urban Conditions:** Urban areas are constantly changing. Regular updates regarding parking availability, short-term hazards (e.g., sudden road closures, weather disruptions), and local construction are crucial for a seamless commute but remain areas for potential improvement.
 - 4. Environmental Concerns:** In today's climate-conscious world, there is a growing demand for solutions that help mitigate the environmental impact of daily travel. Users are increasingly interested in features that reduce carbon footprints through smarter, ecofriendly route planning.

WHY THESE PROBLEM MATTERS:

- 
- 1. User Convenience and Time Savings:** Inefficient routes lead to wasted time, missed appointments, and frustration. A navigation tool that smartly adapts to real-time conditions can significantly reduce daily stress and save valuable time.
 - 2. Economic Efficiency:** For businesses, poor route optimization can impact operational costs drastically— delayed deliveries, longer commutes, and increased fuel expenses are all detriments that efficient navigation can address.
 - 3. Environmental Sustainability:** With environmental sustainability becoming a key agenda worldwide, enabling users to select routes that minimize fuel consumption is both a responsibility and an opportunity to foster a greener future.
 - 4. Enhanced Urban Living:** Beyond individual benefits, dynamically improved navigation can inform urban planning efforts, helping local governments reduce congestion, plan infrastructure more effectively, and enhance the overall quality of urban life.

USER RESEARCH PLAN

1. User Interviews (Qualitative):

Interview frequent city commuters, delivery drivers, and eco-conscious users. Focus on unmet needs like personalization, fuel optimization, and last-mile parking frustration.

2. In-App Survey (Quantitative):

After a commute, ask users whether their route met expectations. Include questions like: “Did the route reflect your travel style?” and “Would you prefer greener alternatives even if it took 3-5 mins longer?”

3. Secondary Research:

Analyze forums (e.g., Reddit, Quora, Play Store reviews) for user feedback on routing frustrations and feature requests.

PERSONAS



Ananya – Eco-Conscious Commuter

Age: 29

Occupation: Marketing Executive

Needs: Prefers routes with lower emissions and avoids highways when possible.

Pain Point: Routes often optimized only for time, not sustainability.



Rakesh – Urban Delivery Driver

Age: 35

Occupation: Food delivery driver

Needs: Needs accurate traffic updates and parking info.

Pain Point: Wastes time in traffic and circling for parking.



Priya – Parent and Planner

Age: 42

Occupation: School Teacher

Needs: Coordinates kids' school and work trips.

Pain Point: Needs smarter commute planning that syncs with her calendar.

Customer Journey Map (CJM)

Stage	Awareness	Consideration	Decision	Onboarding / Usage	Loyalty
User Action	Hears from a friend or ad about eco-route feature in Google Maps	Opens Google Maps to plan commute	Evaluates suggested routes	Starts journey; tries eco-friendly option and searches for parking	Reflects on experience; considers leaving feedback
User Goal	Discover sustainable travel options	Find a convenient and green route	Choose a route that balances time and sustainability	Reach destination efficiently and stress-free	Influence future routes and contribute to app improvement
Pain Point	No clear promotion or visibility for eco-routing	Default sorting shows only shortest time	Cannot easily compare CO ₂ or fuel usage	No real-time parking info; unexpected traffic	No easy way to provide feedback or see past eco impact
User Emotion	Curious but skeptical	Hopeful but unsure	Confused about trade-offs	Frustrated by unpredictability despite "eco" option	Disappointed at lack of engagement post-journey

Opportunity Sizing

Quantitative Opportunity

Using the Top-Down approach:

- TAM: ~3 billion potential navigation app users.
- SAM: ~2.7 billion users accessible via smartphones.
- SOM: ~1.5 billion active users currently depend on Google Maps.

Even a modest additional revenue stream – conservatively estimated at \$1 per active user annually from new premium features or ad enhancements – could imply an annual opportunity of approximately \$1.5 billion.

PRIORITIZATION

Proposed Features:

-  AI-Driven Route Optimization
-  Eco-Friendly Route Suggestions
-  A Community-Enhanced Navigation and Hazard Alert
-  Augmented Reality (AR) Indoor Navigation
-  Smart Commute Planning
-  Crowdsourced Parking Availability



IN-DEPTH ANALYSIS ON EACH FEATURE:

1. AI-Driven Route Optimization:

By leveraging machine learning algorithms, this feature can analyze historical and real-time data to tailor route suggestions based on individual patterns. For example, if a user consistently prefers avoiding highways at peak times, the system will learn and adjust accordingly. This brings a personal touch to navigation—saving time and reducing stress, which can be transformative for daily commuters.

2. Eco-Friendly Route Suggestions:

A critical feature for today's environmentally conscious users, eco-friendly routing considers traffic conditions, altitude, and fuel consumption estimates to suggest routes that lower carbon emissions. For instance, during congested periods, the algorithm might choose a slightly longer yet less fuel-consuming route, supporting a dual mission of efficiency and environmental stewardship.

3. A Community-Enhanced Navigation and Hazard Alerts:

This feature transforms navigation into a collaborative, real-time experience by allowing users to report hazards such as accidents, flooding, road closures, and detours with a single tap. Reports are enhanced with optional photos or voice notes for greater accuracy and overlaid visually on the map. A trust score system highlights credible contributions, while verified inputs can trigger automatic rerouting. By integrating social proof, crowdsourced updates, and adaptive rerouting, Google Maps becomes more resilient, reliable, and responsive to dynamic urban challenges.

IN-DEPTH ANALYSIS ON EACH FEATURE:

4. Augmented Reality (AR) Indoor Navigation:

In large indoor spaces like malls, airports, or museums where GPS signals often falter, AR can provide intuitive, visual navigation. By overlaying directional cues on a live view from the user's device, this feature transforms indoor navigation, making it nearly as seamless as outdoor routing.

5. Smart Commute Planning:

Integrating with a user's calendar and historical behavior, this feature can forecast the optimal departure time to minimize delays. For example, if a user's meeting is at 9 AM, the app can suggest leaving at 8:45 AM based on past traffic trends and current conditions, ensuring punctuality in an increasingly unpredictable environment.

6. Crowdsourced Parking Availability:

One of the crucial challenges in urban centers is finding parking. By enabling users to share real-time information on available parking spots, Google Maps can streamline the last mile of a journey, reducing circling time and urban congestion

RICE Scoring

Feature	Reach	Impact	Confidence	Effort	Relative Score	
AI-driven optimization	LUNCH WITH TOM 9	9	MEETING 10:00	8	6	Very High
Eco-friendly routes	8	CHECK BILL 10	7	5	Higher	
A Community-Enhanced Navigation and Hazard Alert	9 URGENT CALL	10	8 PAY BILLS	4	Highest	
AR indoor navigation	6 !	7 LISTEN NEW ALBUMS	6	7	Moderate	
Smart commute planning	8 BUY MILK	9	7	6	High	
Parking availability crowdsourcing	7	9 CALL MOM	8	5	High	

MoSCoW Framework

AI-Driven Route Optimization:

Provides the backbone for enhanced personalization. Without it, even the best routing suggestions would not efficiently cater to user habits and real-time data.

Eco-Friendly Route Suggestions:

In an era where environmental issues are increasingly paramount, offering a feature that aids sustainable travel is indispensable.

A Community-Enhanced Navigation and Hazard Alert

It adds tremendous value during unforeseen events, it can be initially implemented with a simpler backend and further refined based on user input.

M	S
C	W

Augmented Reality (AR) Indoor Navigation:

While innovative, its applicability is limited to indoor venues. It remains a “nice-to-have” for scenarios where traditional GPS signals are weak.

ORDER
THE
BOOK

Crowdsourced Parking Availability:

An essential urban feature that significantly eases one of the major hassles faced by commuters: finding a parking space.

Smart Commute Planning:

Enhances experience by integrating personal schedules. However, it can be rolled out in later iterations as it requires deeper integration with user calendars and historical data analytics.

BUY
MILK

PAY
BILLS

CALL
MOM

Offline AI-Powered Navigation:

Given the complexity of implementing real-time dynamic updates in an offline mode and the relatively small user base for such a feature, it is not a priority for this phase.

Kano Framework

To further differentiate feature impact on customer satisfaction, we apply the Kano Framework, which classifies features into categories based on how they satisfy user expectations

Feature	Kano Classification	Explanation
AI-driven route optimization	Performance	<p>Users anticipate that navigation should be rapid and accurate. Enhancements here directly correlate with increased satisfaction</p>
Eco-friendly route suggestions	Delighter	<p>In today's environment-conscious market, eco-routing is seen as a fundamental expectation; its absence would generate dissatisfaction, while its presence delights.</p>
A Community-Enhanced Navigation and Hazard Alert	Basic and Delighter	<p>Although not expected, the ability to receive real-time community insights can pleasantly surprise and delight users during unexpected situations.</p>
Parking availability crowdsourcing	Performance	<p>Given the high urban demand, routine access to real-time parking information significantly improves the overall commuting experience.</p>

TOP PRIORITIZED FEATURE ACROSS ALL FRAMEWORKS:

A Community-Enhanced Navigation Layer

After analyzing user complaints and real-world cases of Google Maps inaccuracies, I focused on a solution that not only fixes the problem but empowers users. The idea is a real-time, user-driven reporting layer that works alongside or within navigation apps.

It answers the key question:

“Does this remove the pain quickly and realistically?”

Yes—it does so by enabling quick user reporting and smart trust-based routing corrections

TOP PRIORITIZED FEATURE ACROSS ALL FRAMEWORKS:

A Community-Enhanced Navigation Layer

Key Features:

- One-tap issue reporting (road closed, detour, hazard)
- Visual road overlays showing recent reports
- A trust score system that prioritizes credible data
- Community-driven rerouting triggers when issues are verification
- Optional photo or voice input to increase report reliability

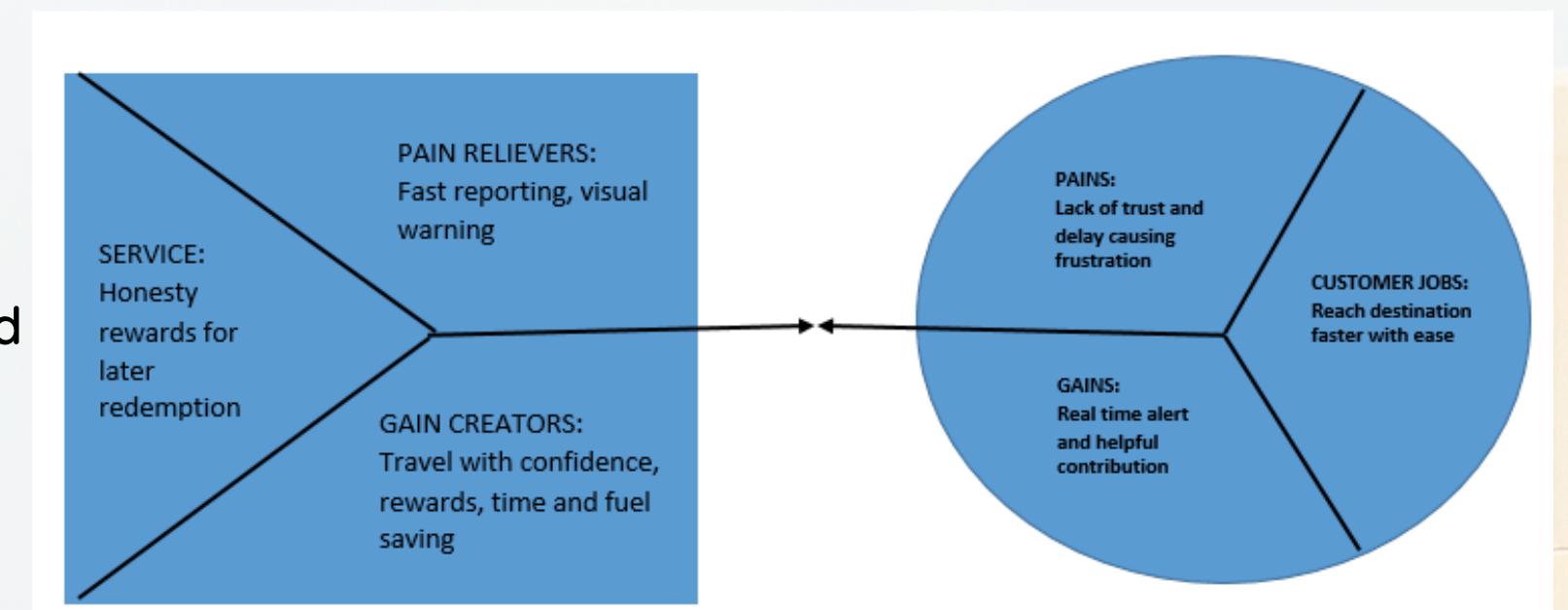
This solution leverages existing user behavior (using Maps) and adds minimal friction to turn frustration into contribution

TOP PRIORITIZED FEATURE ACROSS ALL FRAMEWORKS:

A Community-Enhanced Navigation Layer

Pain-Relievers:

- Fast, frictionless issue reporting
- Community verification for accuracy
- Immediate visual feedback (color-coded road warnings)
- Optional notifications if a user's current route gets flagged mid-journey



Gain-Creators:

- Points and recognition for verified reports (gamified trust system)
- Confidence in navigation with real-world user support
- Time and fuel savings through smarter reroutes
- Greater trust in a collaborative map experience

Jobs:

- Navigate efficiently and safely
- Reach destinations on time
- Avoid obstacles or confusing detours

Pains:

- Being routed through closed/dangerous roads
- Delayed arrival due to outdated traffic data
- Lack of trust in map accuracy
- No quick way to flag and fix bad data

Gains:

- Accurate, up-to-date routes
 - Real-time alerts from nearby users
 - Avoid frustration, delays, and unsafe paths
- Feel empowered and helpful by contributing

MVP Definition

Core Value Proposition

The MVP centers on delivering a community-enhanced, intelligent navigation platform that improves urban mobility with real-time hazard alerts, optimized routes, and sustainability-focused options.

By combining AI with crowdsourced data and environmental awareness, the MVP aims to:

- Increase commute safety and predictability through community-driven alerts
- Optimize travel time with personalized, AI-enhanced routing
- Promote eco-conscious decisions with greener route options
- Support smarter commuting with integrated parking insights

PROTOTYPE

The MVP prototype will be an interactive mobile experience, showcasing the top 3 prioritized features, tested through both usability studies and real-world engagement.

Prototype Scope:

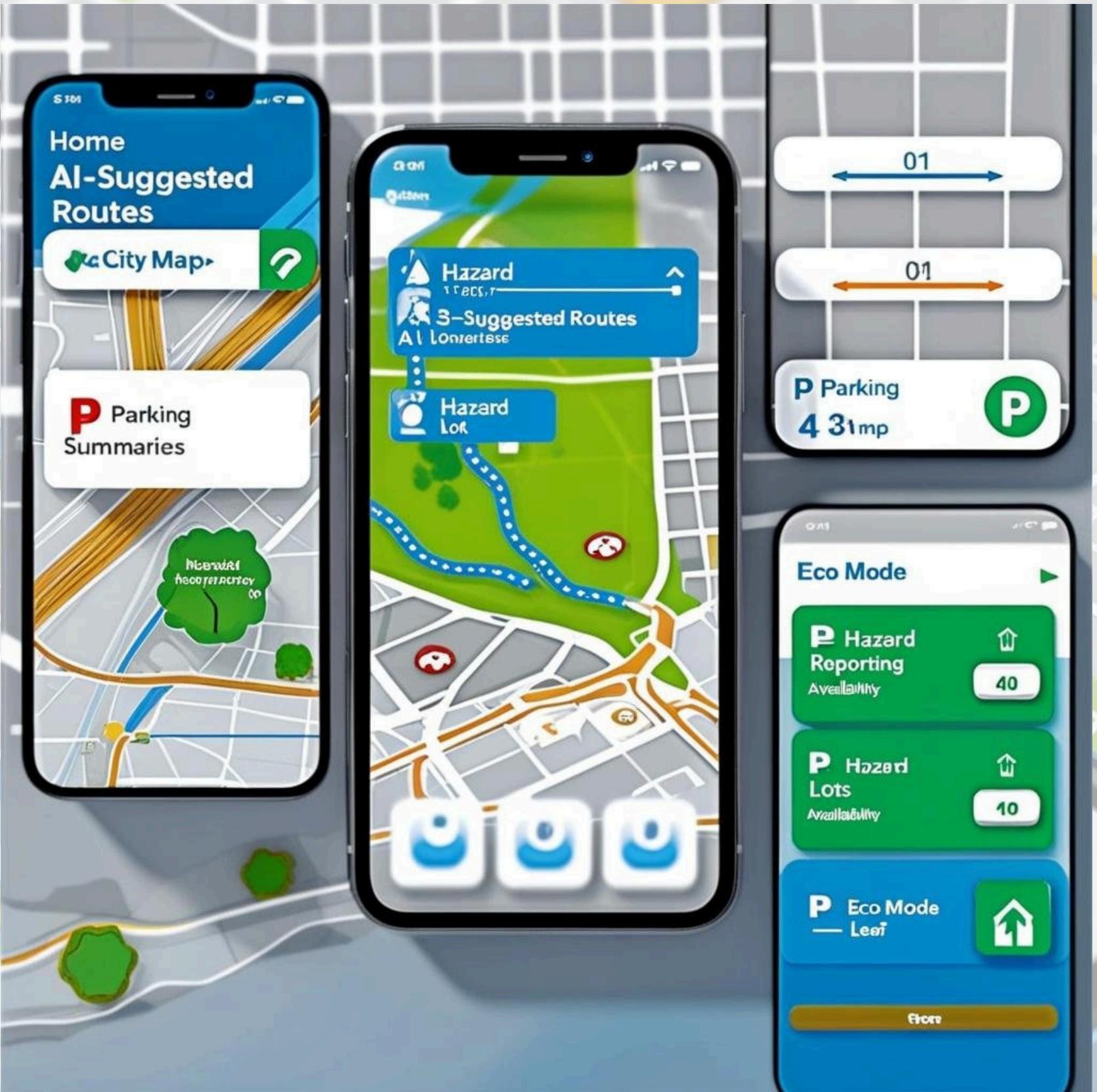
- Home Screen with AI-suggested routes, hazard overlays, and parking summaries
- Hazard Reporting Tool for live crowd updates
- Eco Mode Toggle with emissions-saving estimates

Testing Channels:

- Limited release in 2-3 urban regions with high traffic and tech adoption
- In-app feedback collection, session tracking, and optional user interviews

Key Metrics:

- Frequency of hazard alert submissions and engagement
- User preference between AI-optimized and eco-routes
- Effectiveness of route suggestions in reducing time and stress



EXPECTED INSIGHTS

We anticipate learning

- Adoption and trust in community-submitted hazard alerts
- Efficiency gains from AI-based route personalization
- Willingness to choose eco-friendly routes, even when slightly longer
- User contribution trends in parking and hazard reporting
- Feature retention – what users consistently use or disable



Now-Next-Later RoadMap

Phase	Features
Now	A Community-Enhanced Navigation and Alerts, Eco-routing(beta), basic AI preferences,
Next	parking availability , smart commute planner with calendar sync
Later	AR indoor navigation, eco incentives/points system

AI THINKING

AI can elevate Google Maps by:

- Sentiment Analysis: Mine reviews/comments for feature suggestions
- Adaptive Feedback Loop: Real-time suggestions using emoji based on in-transit behavior.
- Green Scoring: Use AI to assign a “green score” to routes based on fuel and emission data.

