

Google Maps AR Feature

Product Proposal

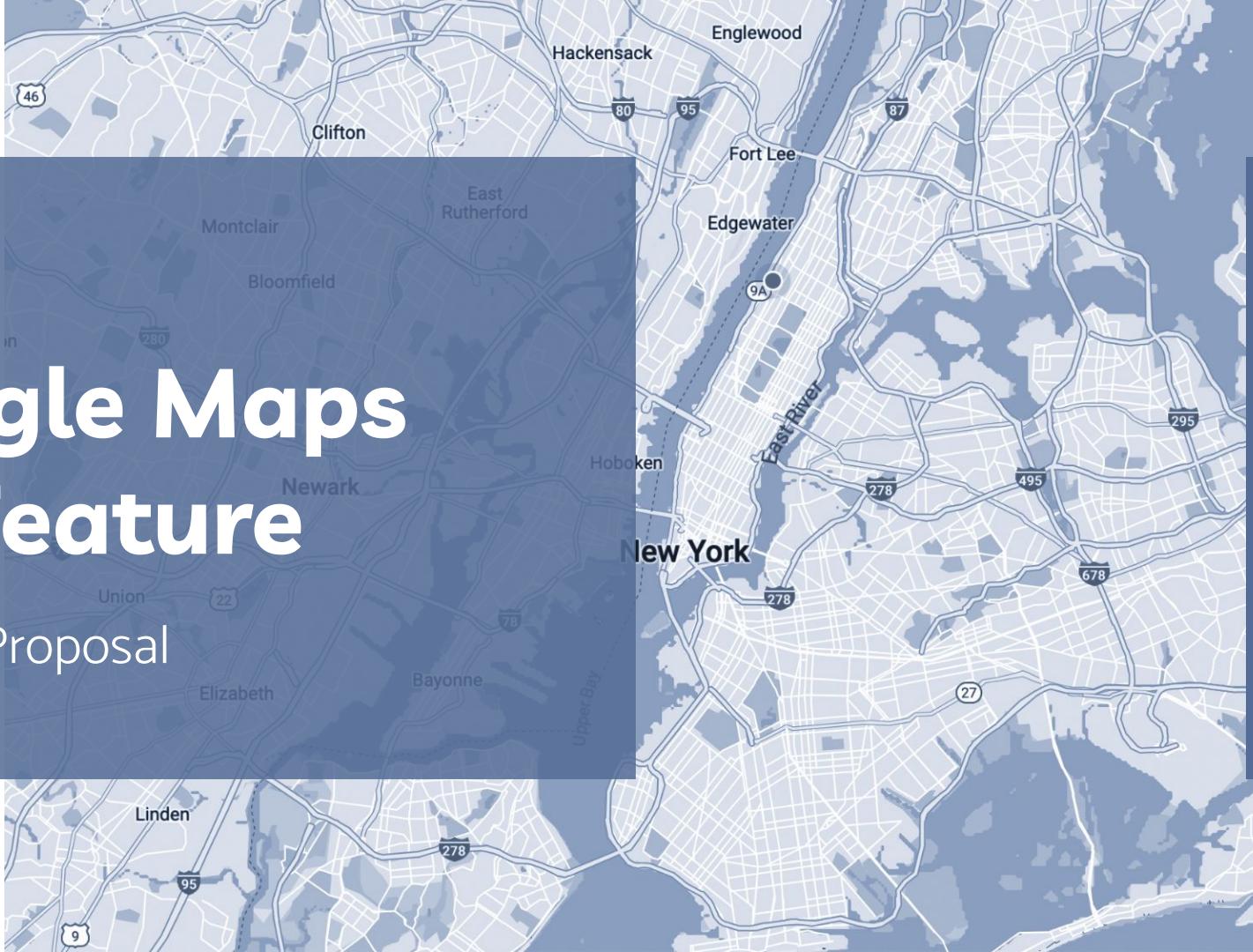


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USER NEEDS



TO 

USER PROBLEMS



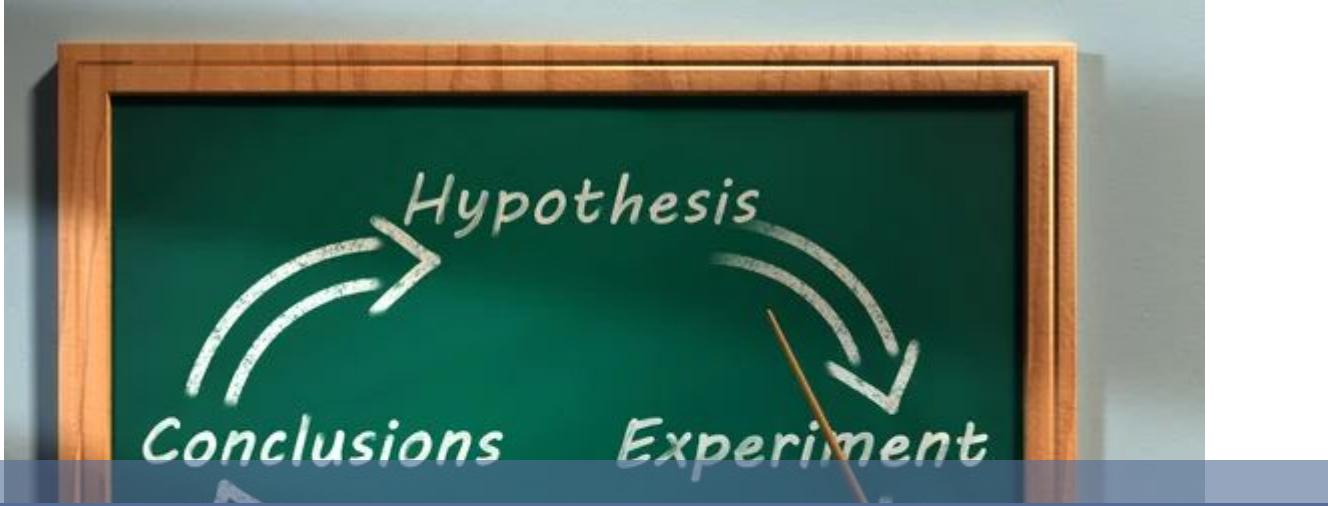
2D-to-3D Translation

You just stepped out of subway
and opened Google Maps;
The arrow on the map seems to
point you to the right direction;
You take a few steps only to
find out that your dot is moving
in the opposite direction!

Culinary Explorer

You are visiting a city you've
never been to before;
You stumbled upon a side of the
street lined with restaurants;
You open up Google Maps to do
some research, but wait, how do I
get info on the exact restaurant I
am staring at right now!

INITIAL HYPOTHESES



These problems are...

BLATANT

Anyone who used Google Maps in the previously described use settings should immediately recognize the problems

If we can solve these problems, our solutions will be...

INCREMENTAL

The status quo product does work, and the improvement from status quo to the optimal performance is moderate...

DEFENSIVE

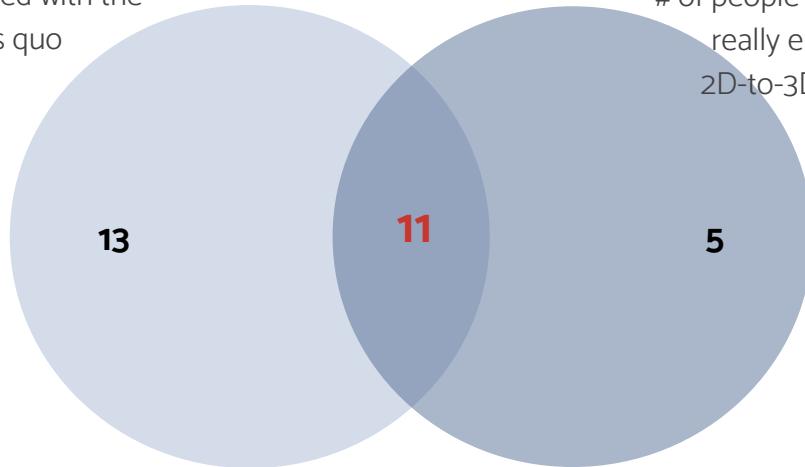
...but the navigation apps market is competitive, and we need to solve these problems to increase stickiness and preempt competition

#1. BLATANT



Happy with status quo?

of people who are satisfied with the status quo



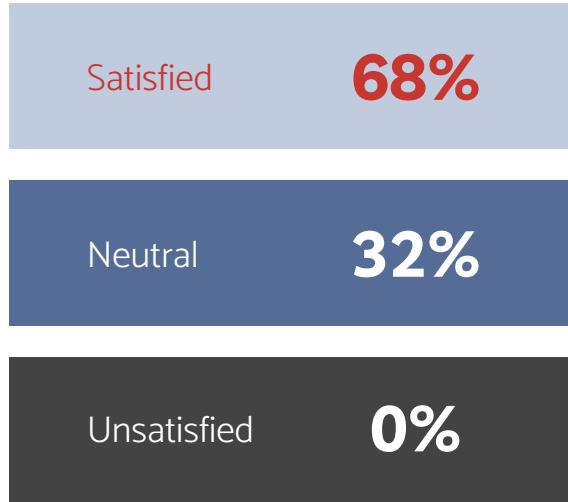
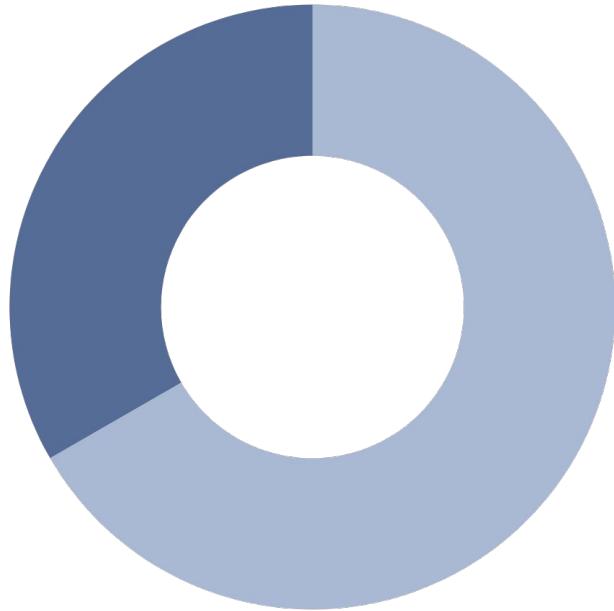
What about adding this?

of people who would really enjoy added 2D-to-3D functions

About half of the respondents who are satisfied with the status quo would also really enjoy having additional 2D-to-3D features/ functions

Latent, but not blatant? Or a reflection of incremental improvement?

#2. INCREMENTAL ✓



2/3 of the respondents are **satisfied** with the status quo, suggesting that the gap towards the optimal performance product is quite small.

#3. DEFENSIVE



11%

WILL SWITCH

110 million

LOST MAUs

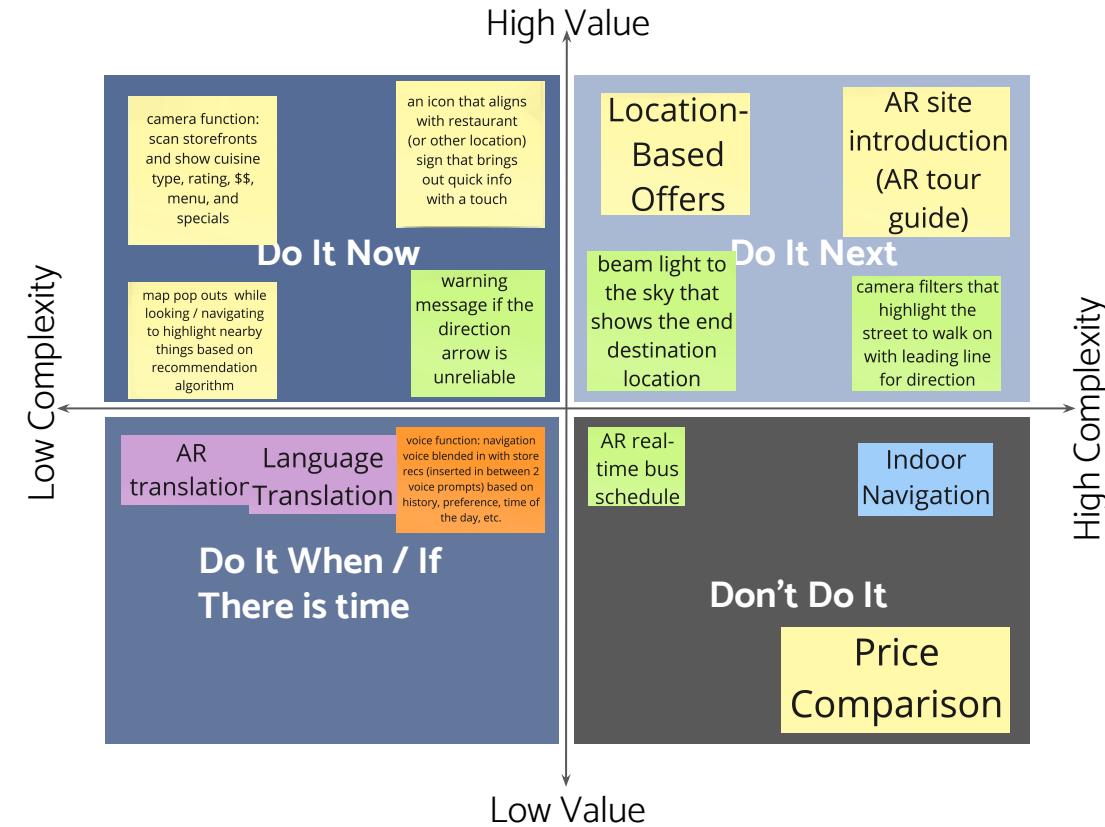
\$1.2 billion

ANNUAL LOST REVENUE

FEATURE PROPOSAL



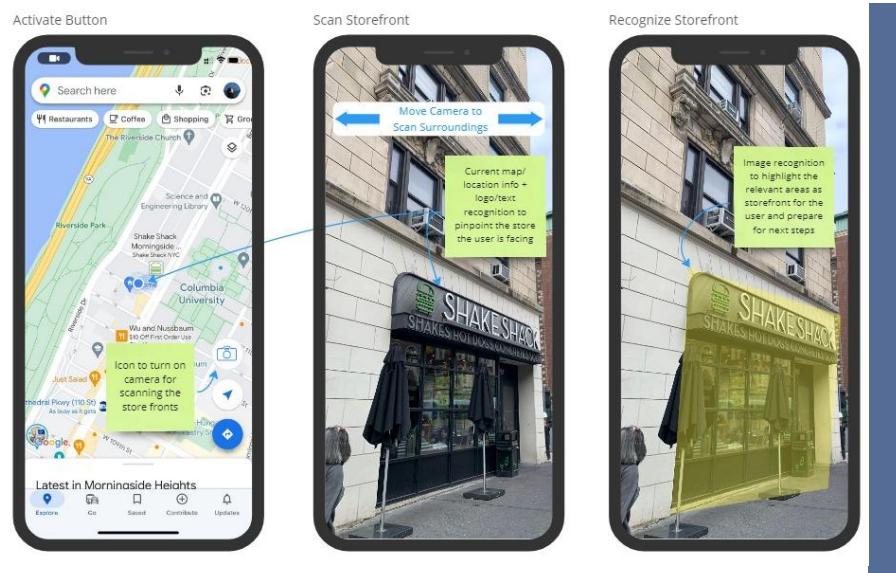
02



Prioritizing the features

We use Value x Complexity as our metrics during the prioritization process. After considering the value (what user need) and the complexity level (technology difficulties), we decided to focus on Storefront / Location scanning feature.

AR-enabled City Discovery



Scan the storefront

When user open their Google Maps app, a camera icon will appear on the landing page. By clicking on the camera icon, user can point their camera to the target store / location and move their camera to scan the surrounding area.

AR-enabled City Discovery

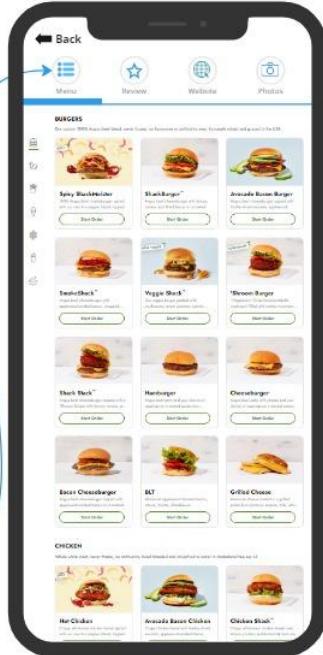
See Basic Information

After Google Map identify the store front image, basic information for the specific store/location will pop up on user's screen. Additional information is available after clicking on the relative icon such as menu, reviews, pictures...etc.

Retrieve Info



Retrieve More Info



Logic Behind the New Feature



Logic Layers



- 1) **Sending a query** to the storage layer to extract data on nearby restaurants
- 2) Every 0.5s, taking a **still image from the scan, tracking subsequent user actions,** and saving the data to the storage layer (for training and improving our algorithms)

Storage Layers



- 1) **Retrieve data** and send it back to the logic layers
- 2) **Store the data** that is sent from logic layer

Logic Layers



- 1) **Image recognition algorithm** to recognize which discontinuous blocks represent storefronts
- 2) **Optical character recognition algorithm** to recognize logos / symbols from each storefront
- 3) Use all the data gathered (location, direction, surroundings...) to **identify the accurate store** to the user

PRODUCT LAUNCH



CO

CROSS-FUNCTIONAL COLLABORATION

Data & Engineering

Data team is crucial for training machine learning model to enable storefront image identification.

Engineering team is technology backbone to develop new system logic for data transformation, maintain new data-table to store image data, and implement the new feature.

Legal

Legal team ensures compliance with regulations, data privacy, corporate policy, and safeguarding this AR feature's legality.

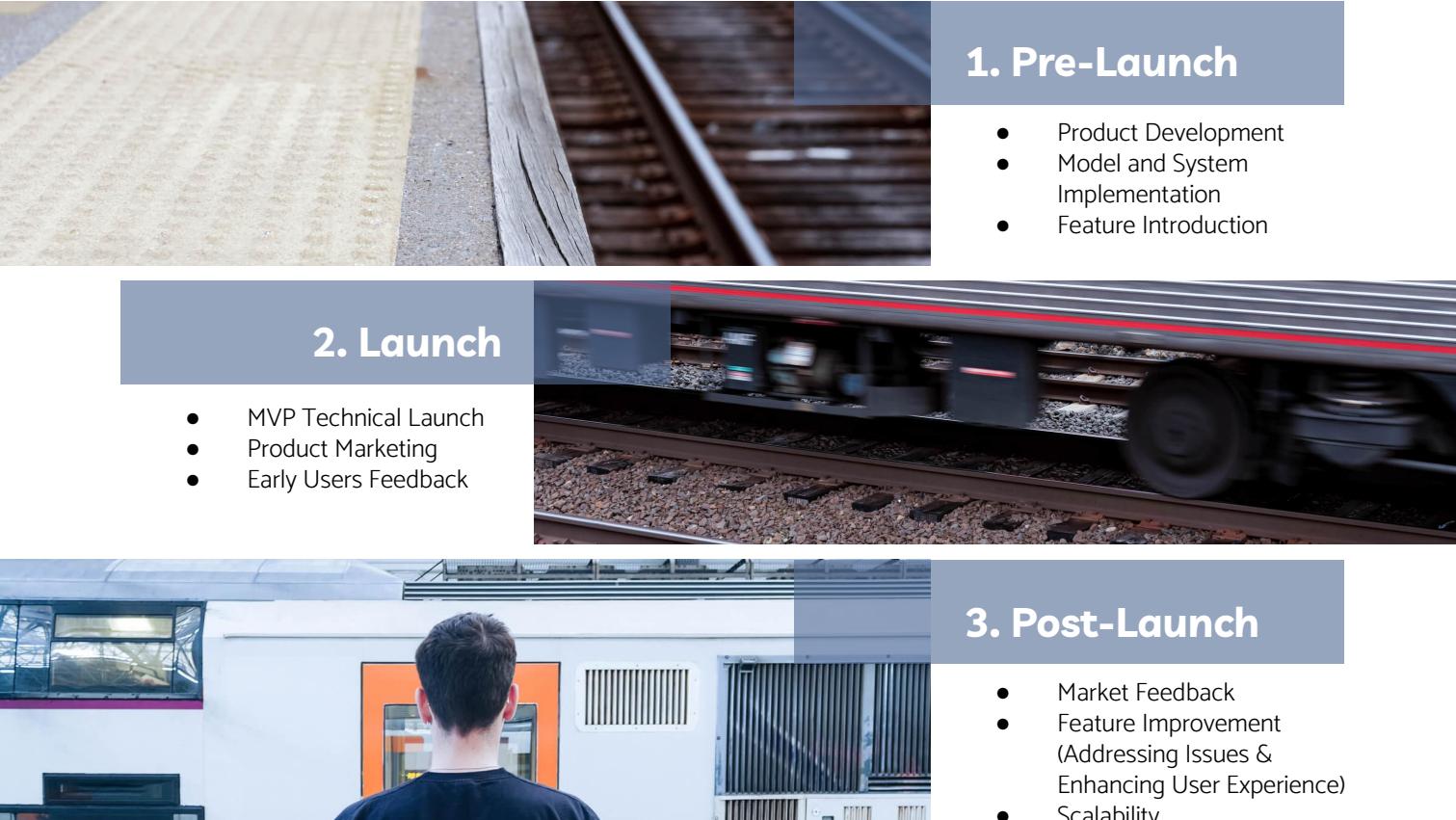
Finance

Finance team manages budget constraints, ensuring cost-effective development and launch.

Marketing

Marketing team is vital for promoting the feature and informing users, enhancing adoption and user satisfaction. Further customer feedback is needed to actively improve Google Maps and AR feature.

GO-TO-MARKET STAGES



RESOURCES ALLOCATION

Development

Eng: System implementation
Data: Computer Vision modeling for image recognition
Finance: Budget control
Marketing: Feature introduction and curiosity generation

Initial Market

Feedback

Marketing: User needs validation and receiving feedback for improvement
Eng: Bug fix if needed
Data: Model fine-tuning
Legal: User agreement adjustment if needed

Design

Eng: System design validation and computing capacity estimation
Data: Algorithm selection for image recognition and new data-table validation
Finance: Budget estimation
Legal: Legality evaluation and user agreement review

Launch

Eng & Data: Technical Launch
Marketing: Target segmentation, direct channel marketing, advertising, and PR

Scale

Eng: Feature (user experience) improvement implementation and computing capacity review
Data: Model training improvement
Marketing: Scalable marketing channels
Legal: User agreement review and regulation updates monitoring

VALUE PROPOSITION



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What's in it for Google?

Future Proofing Against Competition

This feature will enhance our users' experience so they will stick with our current ecosystem by keep using our product



Ad Supported Business Model

This creates future opportunities to implement an ad supported model to Google Maps

Business Model



Virtual Billboards

Virtual billboards could be incorporated into the AR experience while keeping the user experience intact. Billboards would appear on the camera view as if there is a physical billboard on an empty space (e.g. top of a building).

“In-Store” Promotions



Companies can pay premiums to enhance the visuals provided on their tab/storefront in the AR experience. “In-store” promotions can be offered when customers scan the storefront.

THANKS

Does anyone have any questions?

