

## Enhancing Grab Engagement with GeniVA's Virtual Assistance and Financial Efficiency

Generative AI for Enhanced Interactions and Experiences Virtual Assistant

GeniVA Team

# GeniVA Team

## Digital Empowerment



**Michael Sihotang**

### Product

- The Most Outstanding Student of Information System and Technology ITB 2024
- Product Manager Intern at Financial Service Company
- 2nd Winner of UNY Accounting Fair Business Case Competition



**Austin Pardosi**

### Technology

- Winner of Garuda Hacks 5.0 | 1st Place: Helping Hands Track | Best AI Hack
- Top 10 Google Solution Challenge 2024
- 2nd Winner AsiaQuest Hackathon Indonesia



**Timothy Subekti**

### Technology

- 3rd winner Pertamina Product Innovation Challenge
- 2nd Winner at Telkomsel Product Innovation Challenge
- Software Engineer Intern at PT. Sprint Asia



**M. Alif Ramadhan**

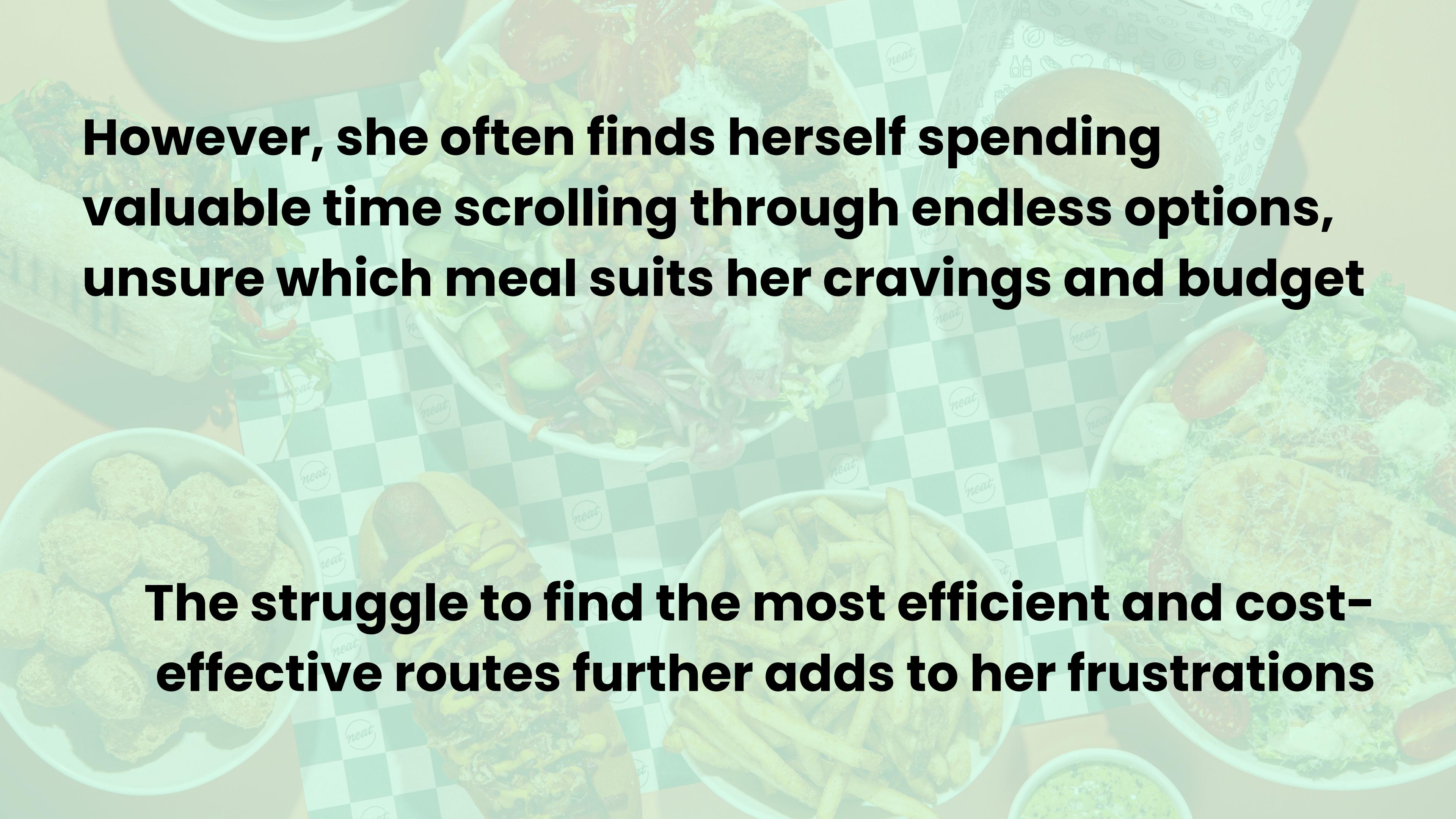
### Artificial Intelligence

- Winner of AGI Hackathon by Livit
- 4 Years of Industry Experience in Full Stack AI Engineer

A photograph of a young woman with long, dark, wavy hair. She is smiling warmly at the camera. She is wearing a light-colored, possibly white or cream, t-shirt. A dark backpack is visible over her shoulder and across her chest. The background is slightly blurred, suggesting an outdoor setting like a park or campus.

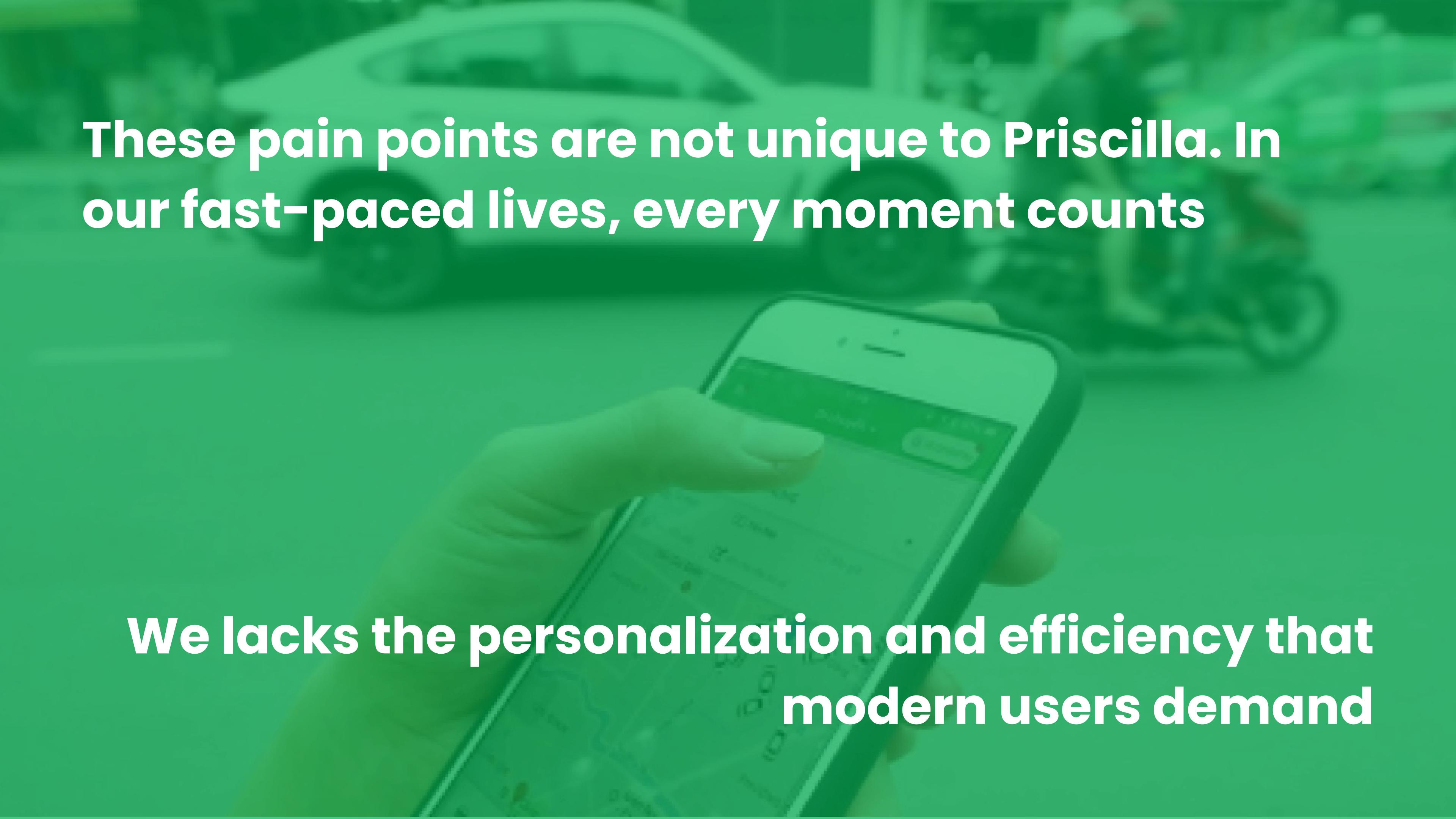
**Meet Priscilla,**

**A typical university student constantly juggling a demanding schedule. Like many of us, she depends on Grab for her daily meals and transportation needs**



**However, she often finds herself spending  
valuable time scrolling through endless options,  
unsure which meal suits her cravings and budget**

**The struggle to find the most efficient and cost-  
effective routes further adds to her frustrations**

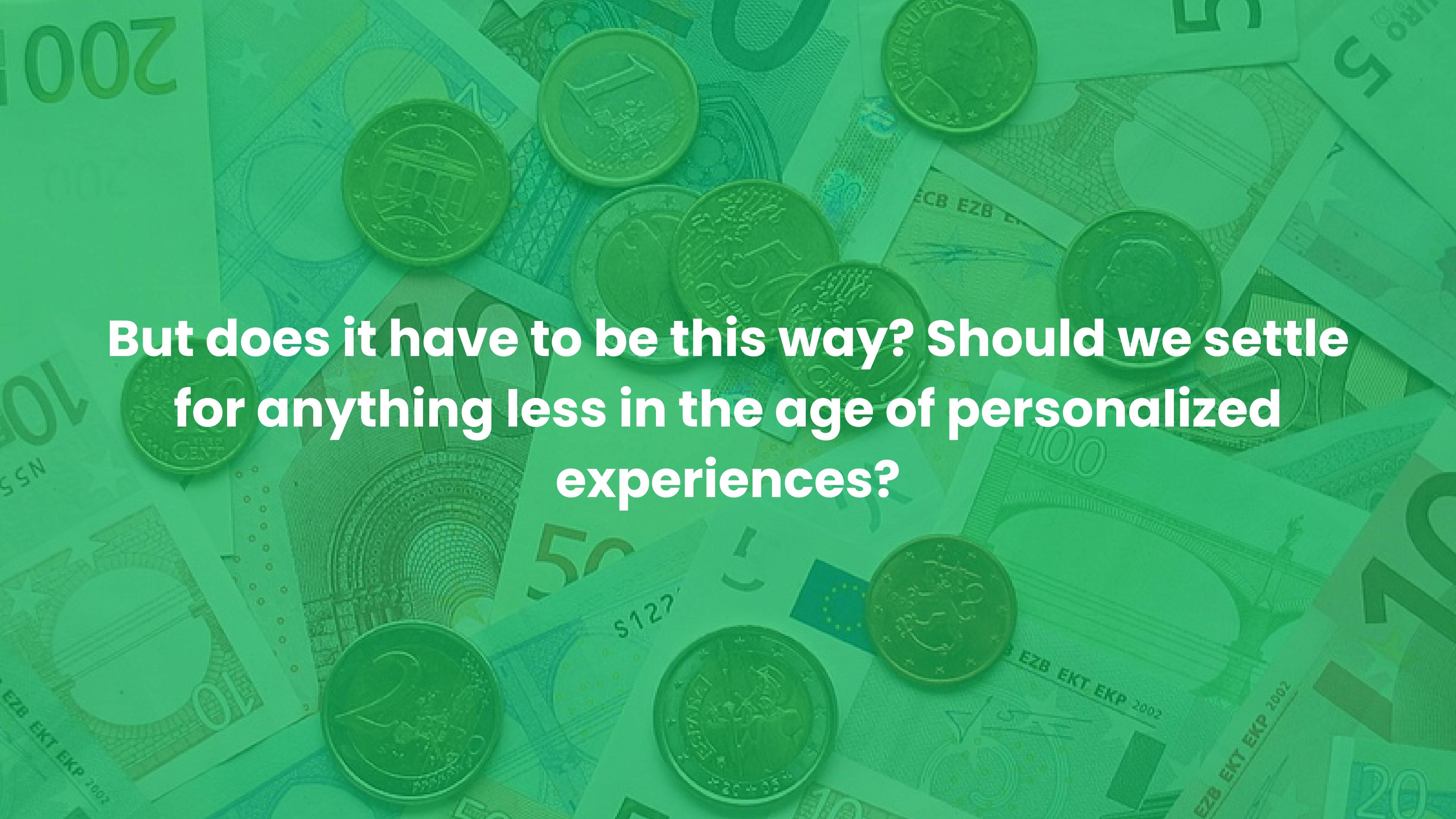
A close-up photograph of a person's hands holding a smartphone. The phone screen displays a map with several green location markers. The background is blurred, showing what appears to be a car interior.

**These pain points are not unique to Priscilla. In our fast-paced lives, every moment counts**

**We lack the personalization and efficiency that modern users demand**

A soft-focus photograph of a woman with long dark hair, wearing round-rimmed glasses and a light green button-down shirt. She is looking down with a thoughtful expression, her hands clasped together near her chest.

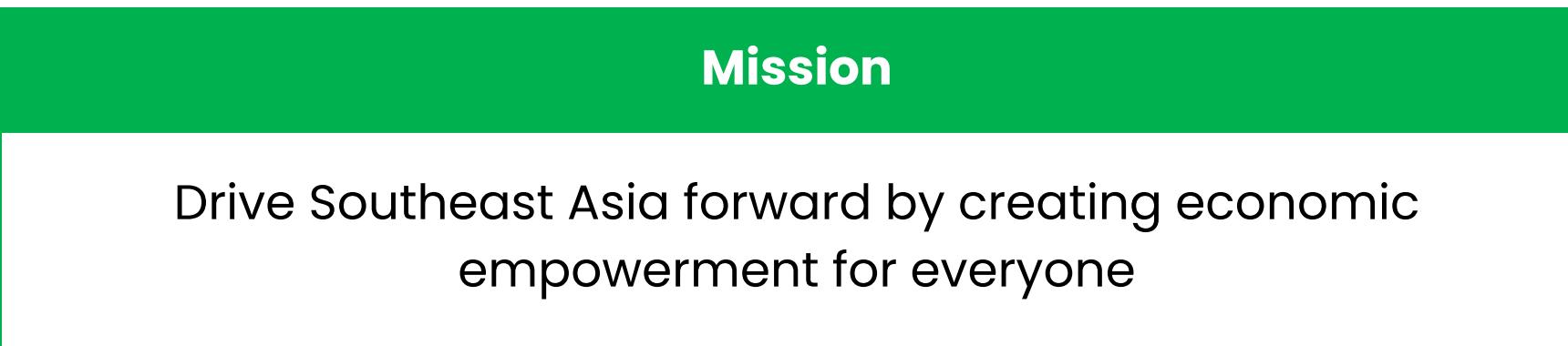
**The time spent on decision-making and the high costs associated with long-distance travel can be significant barriers to productivity and financial well-being**



**But does it have to be this way? Should we settle  
for anything less in the age of personalized  
experiences?**

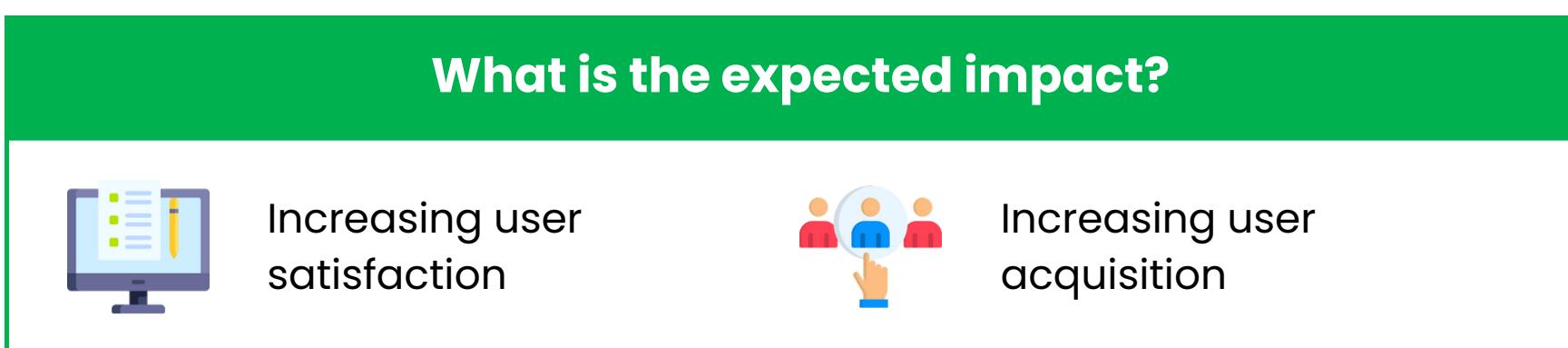
## **Background and Business Problem**

**Grab's mission is to capture the market by providing products that simplify the user experience.**



### **What are the opportunities for Grab to achieve its mission?**

- 1 Making it easier for users to quickly place orders according to their preferences.
- 2 Ensuring user comfort by offering more affordable product options and supporting their financial well-being.



**7 out of 10**

people feel confused when choosing food from a food delivery app

**Food delivery gross merchandise value (GMV) 2021**



Grab achieves the highest market share in Indonesia.

### **Main product of Grab**



**Our Focus**

### **Another Opportunity**

**Manjur bikin makmur**



How can we increase users' desire to use Superbank through the Grab app?

**Background**

**Analysis**

**Solution**

**Implementation**

# Market Analysis and Customer Analysis

Grab users need ease of transaction within the app through personalized recommendations

Target Market Persona		
<b>Indecisive Grab Food Users</b>	<b>Cost-Conscious Ride-Hailing Users</b>	<b>Older Adults</b>
Users who struggle to choose meals that match their taste, dietary needs, and budget	Users who find ride-hailing services expensive and need solutions to save money on their daily Grab usage	Older users seek to shorten the ordering and transaction process within the Grab app to make it easier for them

## SDGs



## What other factors do users consider when using Grab Food?

Some users also want to consider the sugar level in their food before placing an order

Currently, they still choose to spend time cooking their own meals to meet their specific sugar needs.

Indonesia Ranked 5th in The Number of People with Diabetes in the World

## Key Question

How can we help users increase the effectiveness and efficiency of using the Grab app while supporting their financial well-being?

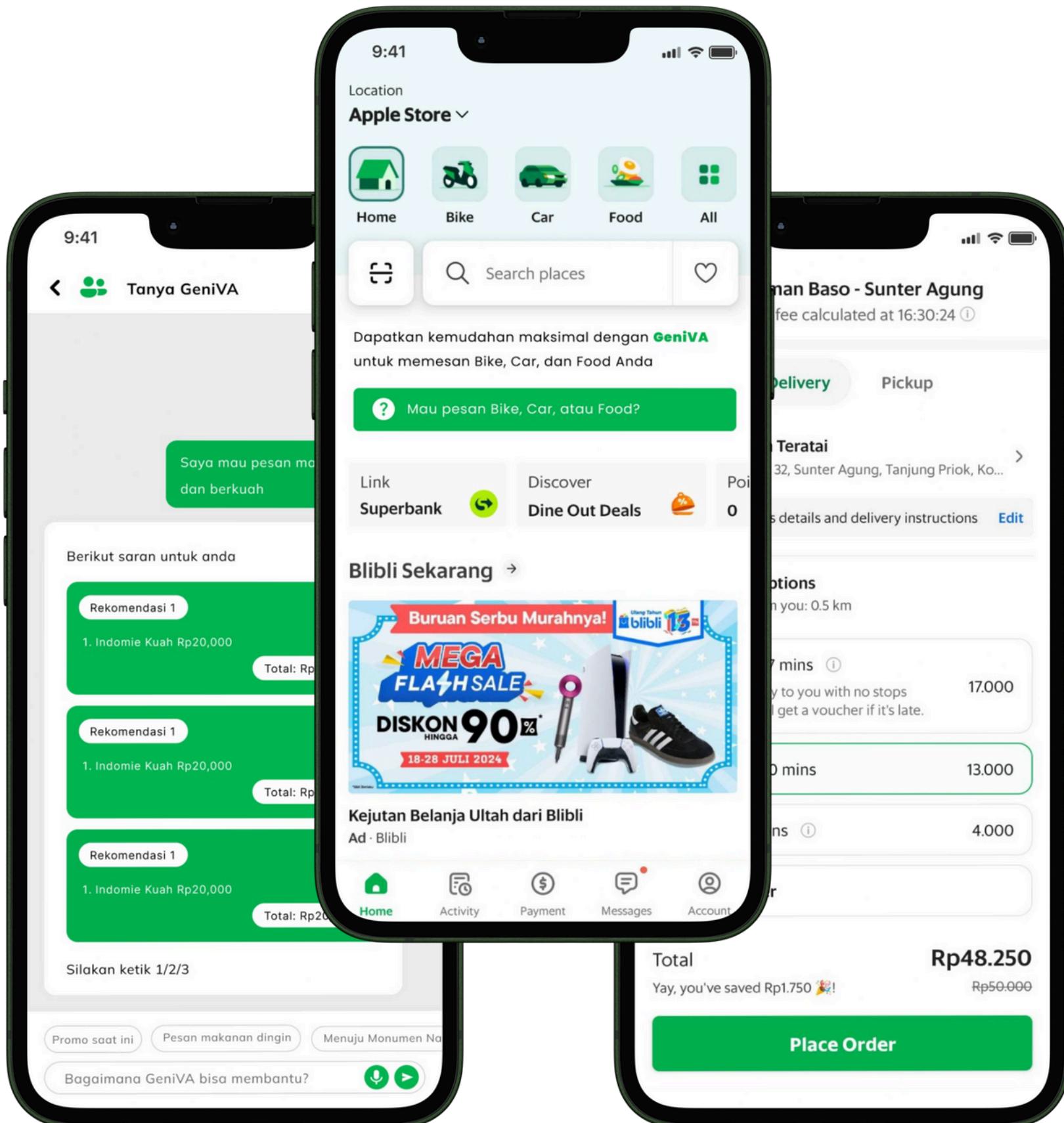
**Background**

**Analysis**

**Solution**

**Implementation**

## Solution Overview



Introducing,

# GeniVA

**Generative AI for Enhanced Interactions and Experiences Virtual Assistant**

- 1 Providing **Grab Food recommendations** based on users' history, conditions, preferences, and budget, and enabling quick transactions.
- 2 Providing **Grab Bike and Grab Car route recommendations** with **cost-saving packages** by **integrating Grab services with public transportation**, and enabling quick transactions.
- 3 Providing **recommendations based on user emotions** to enhance the accuracy of the suggestions.

Routine Investment

Integration to Superbank

Background

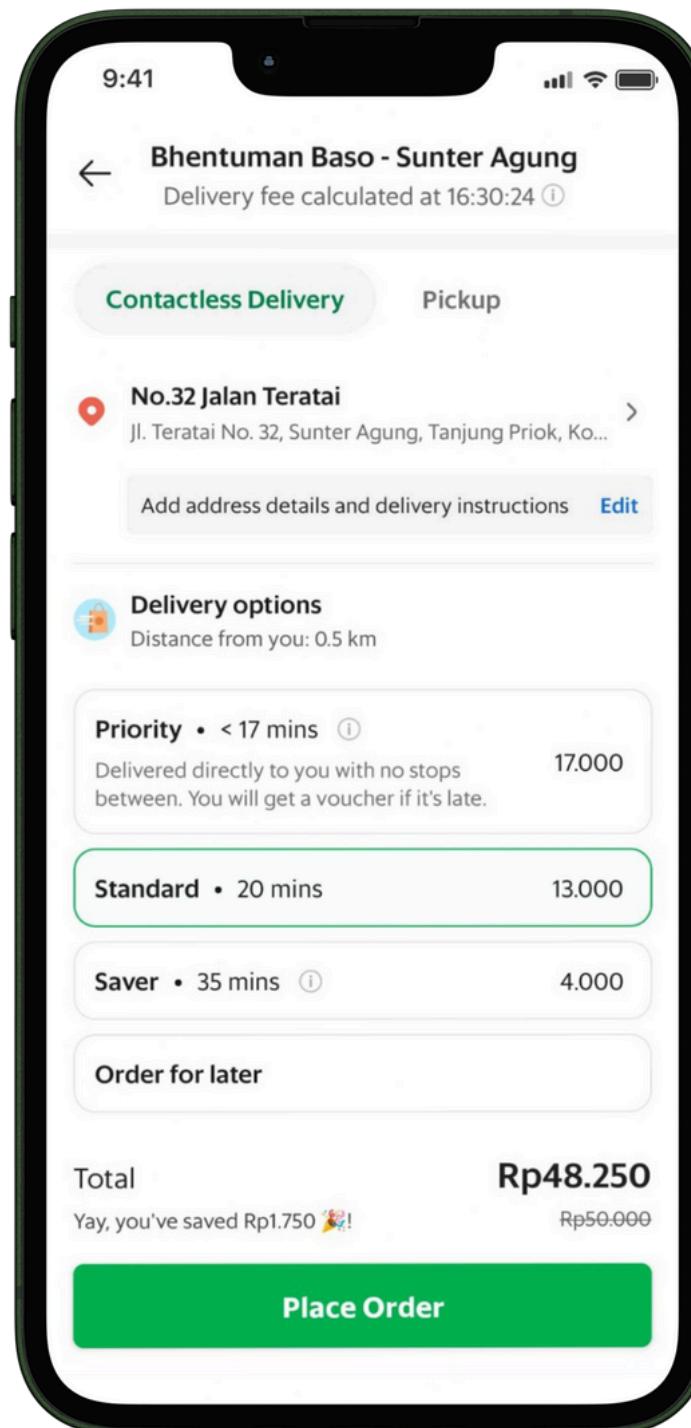
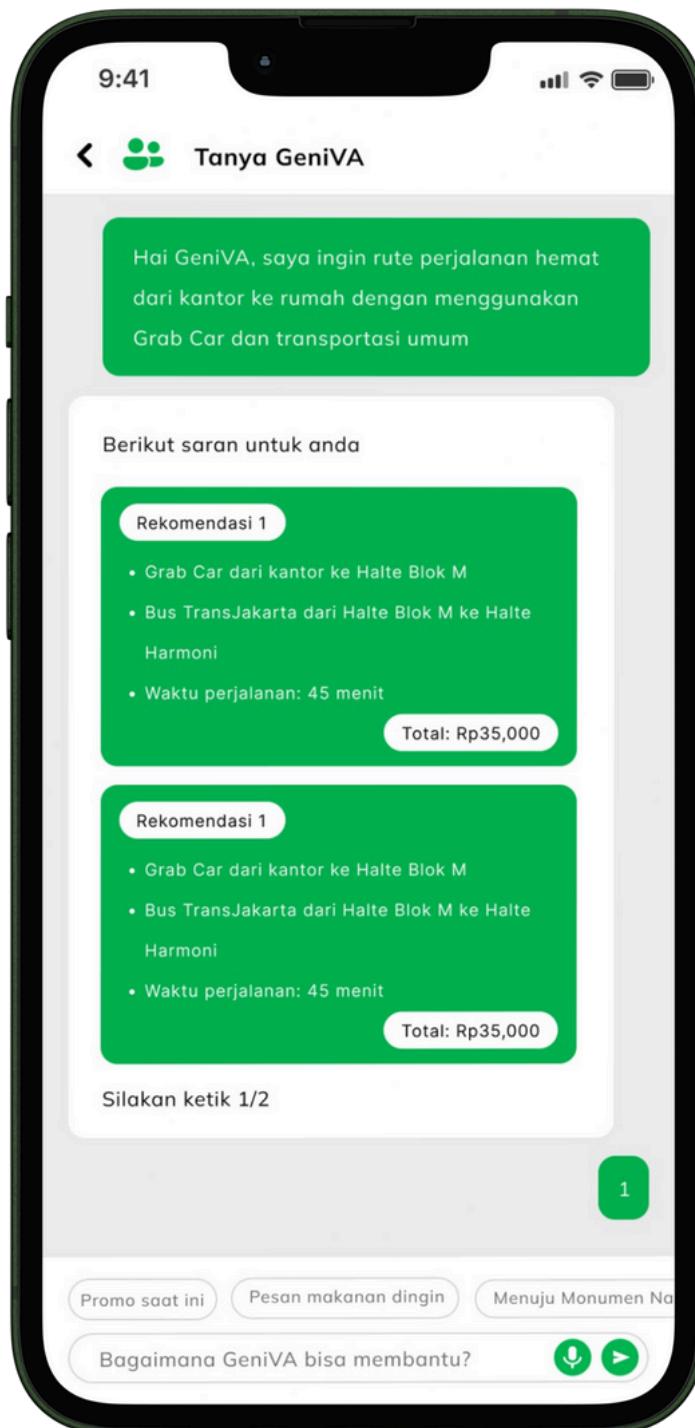
Analysis

Solution

Implementation

# Personalized Recommendation

Recommendations will focus on Grab Bike, Car, and Food to provide suggestions based on user preferences, conditions, and emotions.



## Background

Users struggle to choose food on Grab Food due to numerous considerations such as price and preferences, and they find the cost of Grab Ride and Grab Car services expensive for long distances.

## Advantage

Users receive recommendations tailored to their preferences and budget when using Grab services.

Encouraging users to increase their use of public transportation while still integrating Grab services into their journeys.

## Impact



Personalization



Increasing user satisfaction

Background

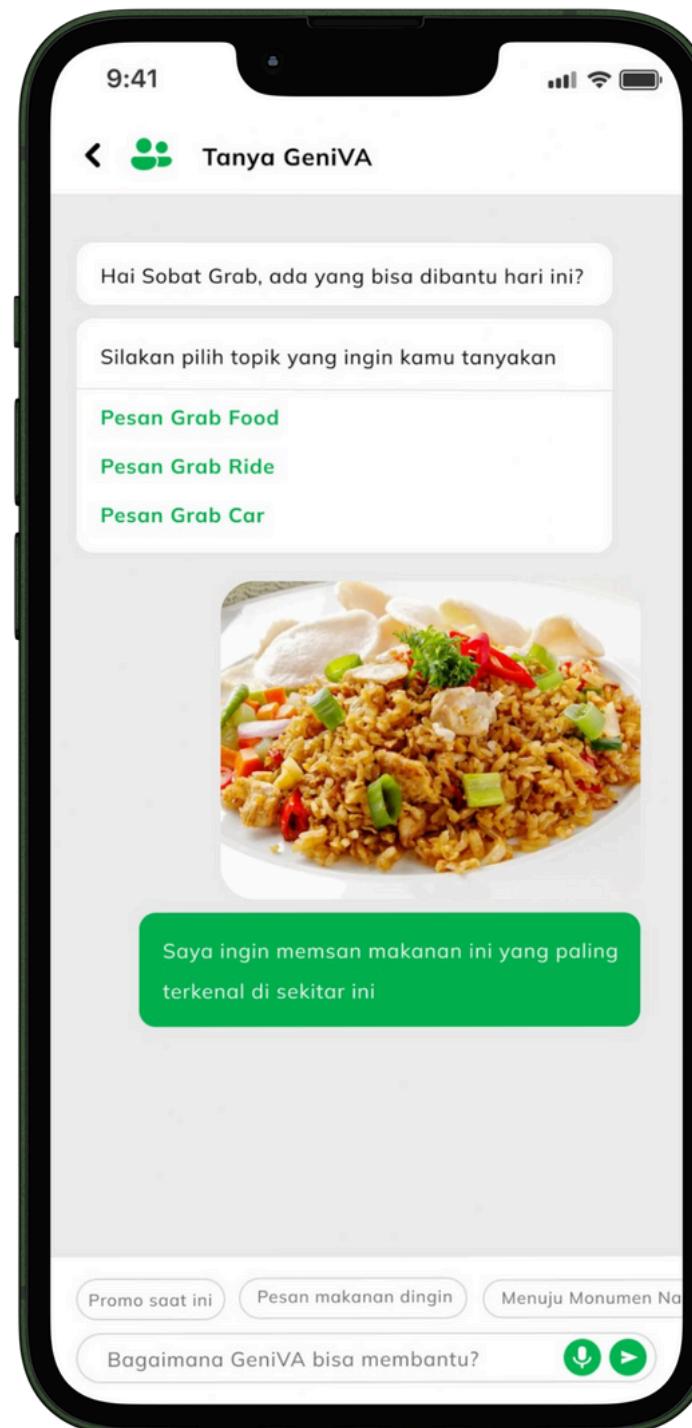
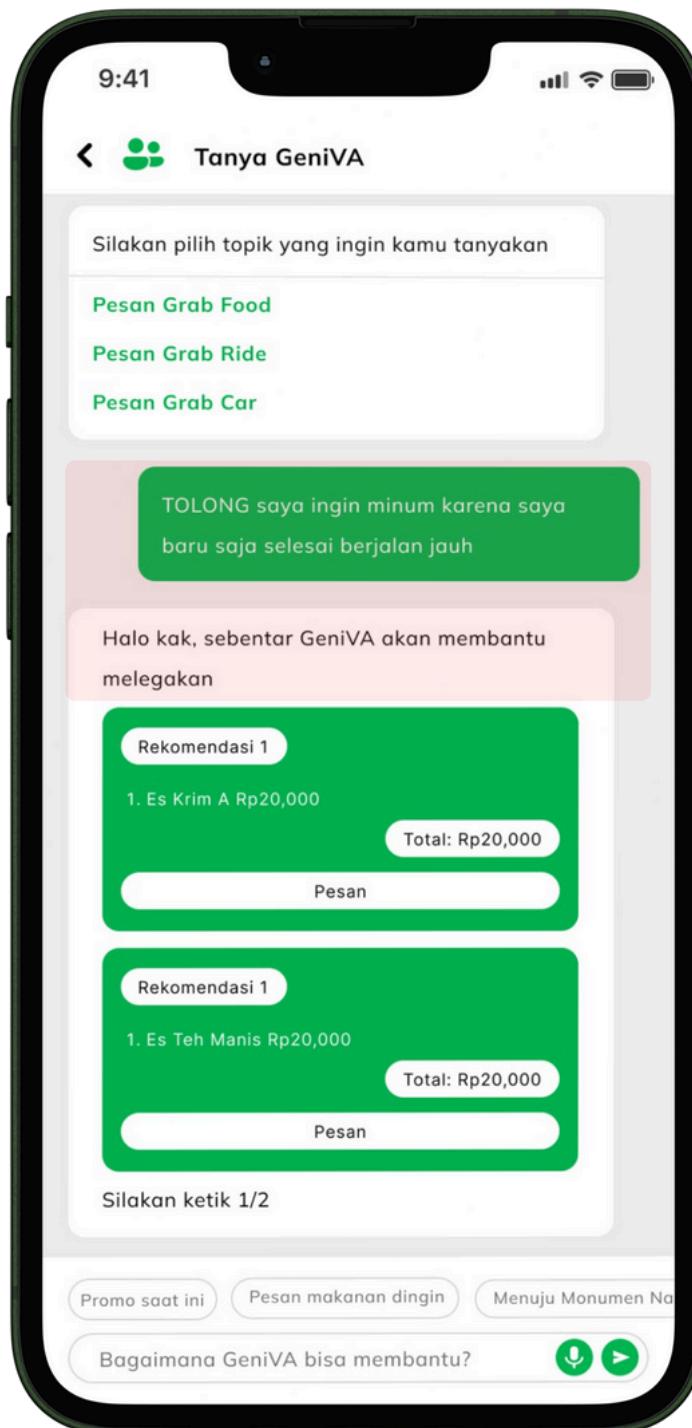
Analysis

Solution

Implementation

# **Emotion Detection and Hybrid Image Retrieval**

**Emotion detection will be used to enhance the accuracy of the recommendations provided, and Hybrid Image Retrieval will be used to assist users in placing orders**



## **Background**

Users' desire to receive personalized recommendations based on their current situation, combined with their wish to simplify the process of finding food that matches their preferences, enhances the overall user experience

## **Advantage**

Emotion detection allows for recommendations that better match users' moods and needs, enhancing satisfaction

Combining content-based search with metadata improves image accuracy and reduces search time

## **Impact**



**User Experience**



**Increasing user satisfaction**

**Background**

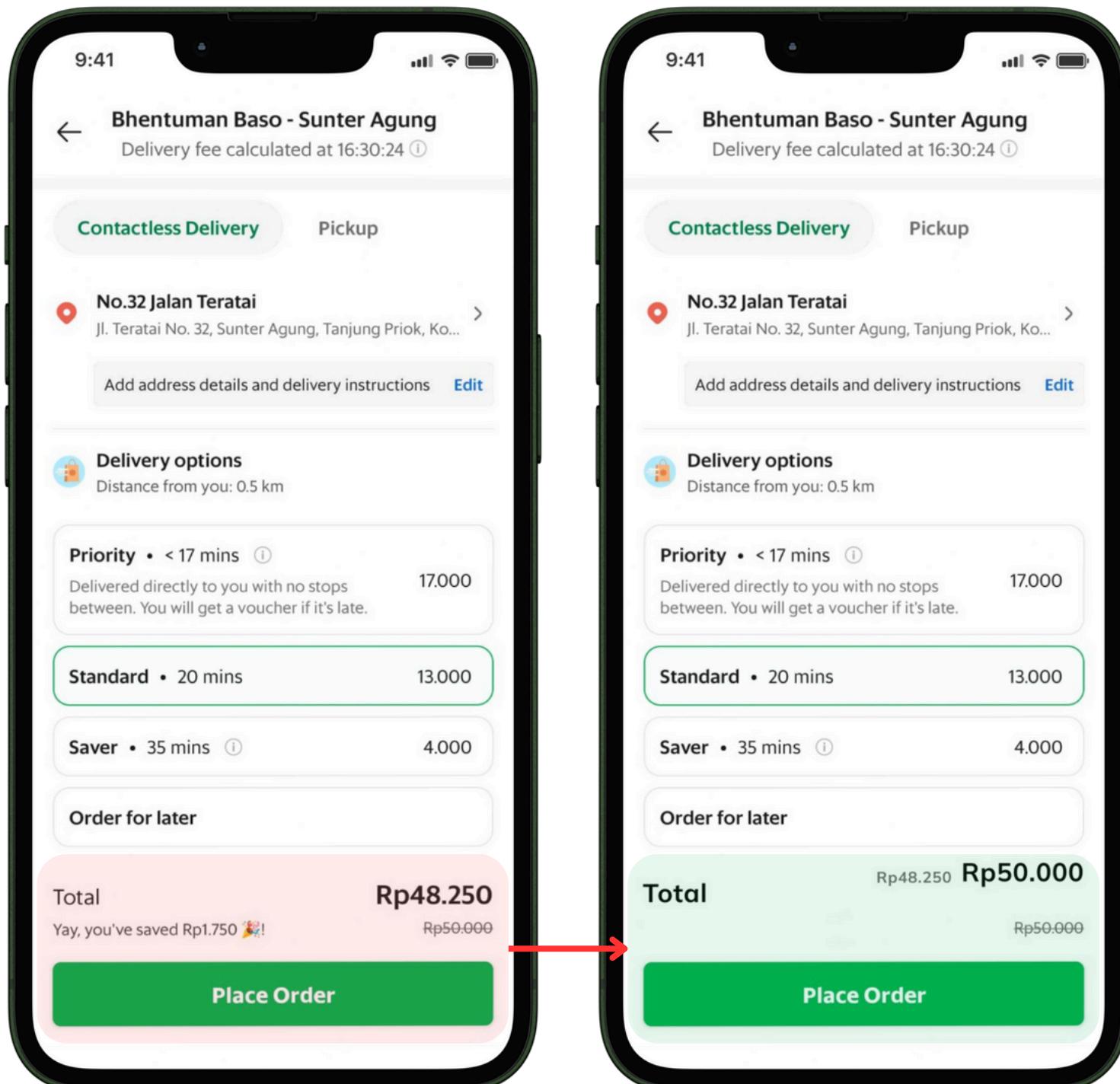
**Analysis**

**Solution**

**Implementation**

# Routine Investment Strategy

Saving small amounts of money frequently to gradually accumulate a significant sum



## Background

Grab collaborates with Superbank to support the payment process for Grab services, and Superbank also encourages its users to save regularly

## Advantage

Users will increase their savings and the number of transactions using Superbank when utilizing Grab services

Small amounts of money that are usually overlooked can accumulate into a significant sum

## Impact



Continuous increase in user engagement



Saving habits

Background

Analysis

Solution

Implementation

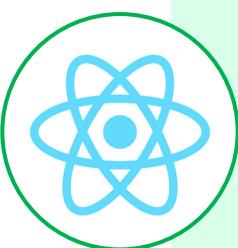
# Powering Innovation

Behind the magic: The brain behind GeniVA's development, helping users solve their problems.

## Frontend

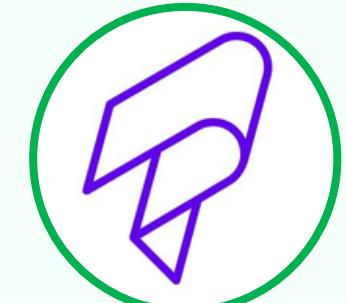
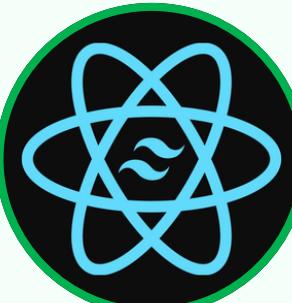
### React Native

React Native allows for faster development and deployment of cross-platform mobile apps using a single codebase.



### Expo

Expo simplifies React Native app development with an easy setup, built-in components, and streamlined deployment.



## Backend

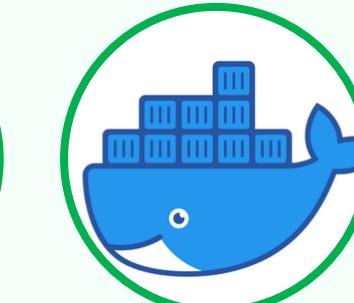
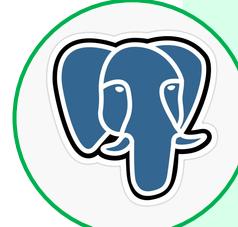
### Golang

Golang offers fast performance, efficient concurrency, and a simple syntax, making it ideal for scalable and reliable software development.



### PostgreSQL

Provides advanced data integrity, extensibility, and powerful querying capabilities, making it a robust choice for complex applications.



## Artificial Intelligence

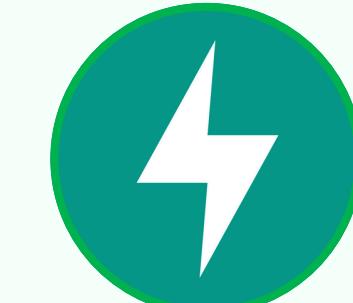
### Gemini

Using APIs for AI development enables easy integration, scalability, and access to powerful pre-trained models and services.



### LangChain

LangChain simplifies AI development by providing tools to build, manage, and optimize language models and their workflows efficiently.



Background

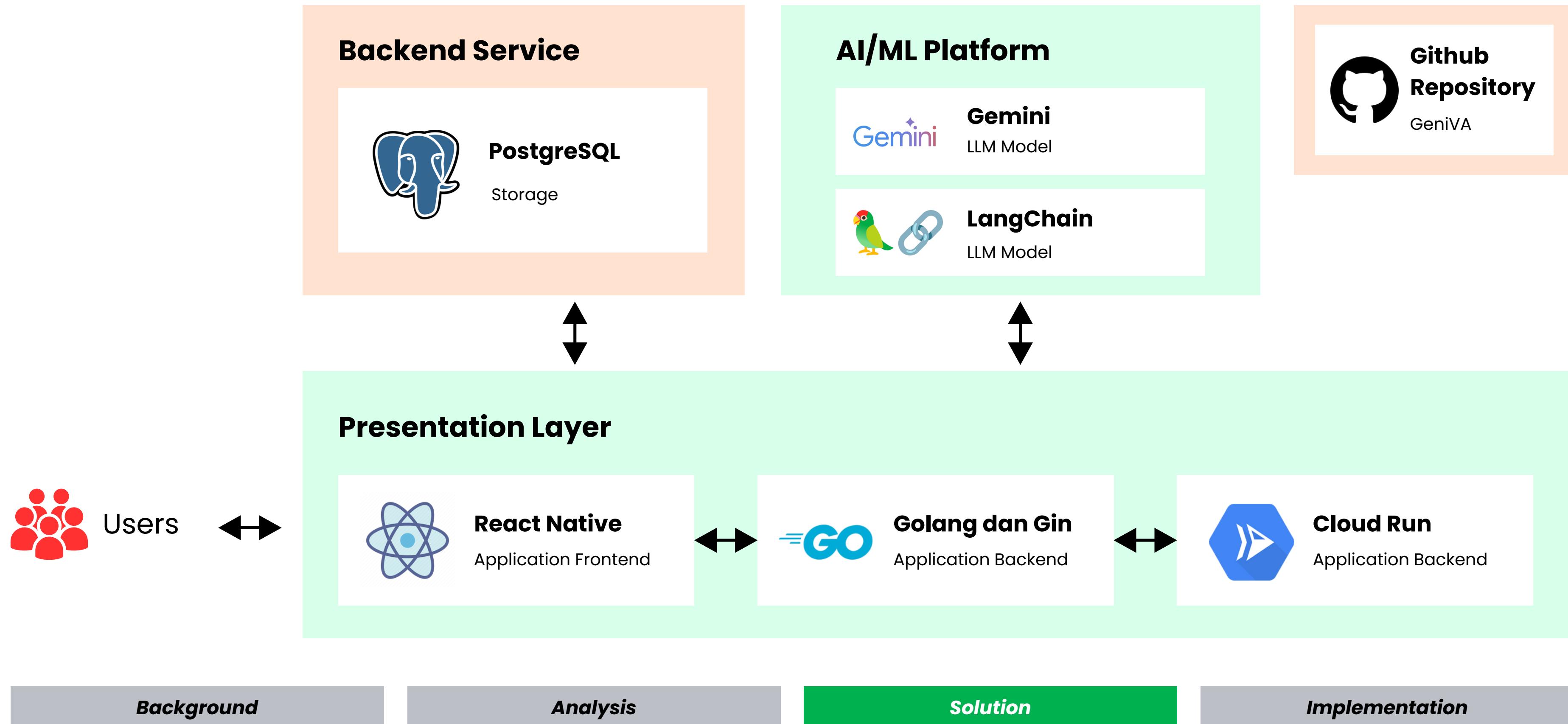
Analysis

Solution

Implementation

# System Architecture

A peek into the engine room driving GeniVA's innovation



# Future Roadmap

GeniVA will integrate all features within Grab to streamline users' transaction processes across Grab services

## Our Existing Solution

Recommendations based on user preferences, conditions, and budget for **Grab Bike, Car, and Food**.

Recommendations using **emotion detection and Hybrid Image Retrieval** to enhance the accuracy of suggestions.

**Routine saving** through transaction round-ups will enhance users' saving habits.

## How will the product evolve in the future?

Integrating GeniVA with other Grab services

Integrating GeniVA with Family Accounts to improve payment efficiency

Enhancing accuracy and personalization

Feature innovation and integration

**Stage 1:**

- Grab Express, Grab Mart, Grab Pulse & Bills, and Grab Dine Out

**Stage 2:**

- All service Grab
- New Service Grab

To simplify **Grab services for older adults**, payments can be processed through GeniVA to streamline transaction and payment processes.

Transaction Created

Payment

**Emotion Detection Accuracy:**

- Model Development
- Behavioral Insights
- Feedback Loop

- Voice and Gesture Control
- Kesehatan dan Kebugaran

**Background**

**Analysis**

**Solution**

**Implementation**

# Impact Analysis and Risk Mitigation Analysis

Increasing user engagement with the product and enhancing user satisfaction to retain Grab's user base

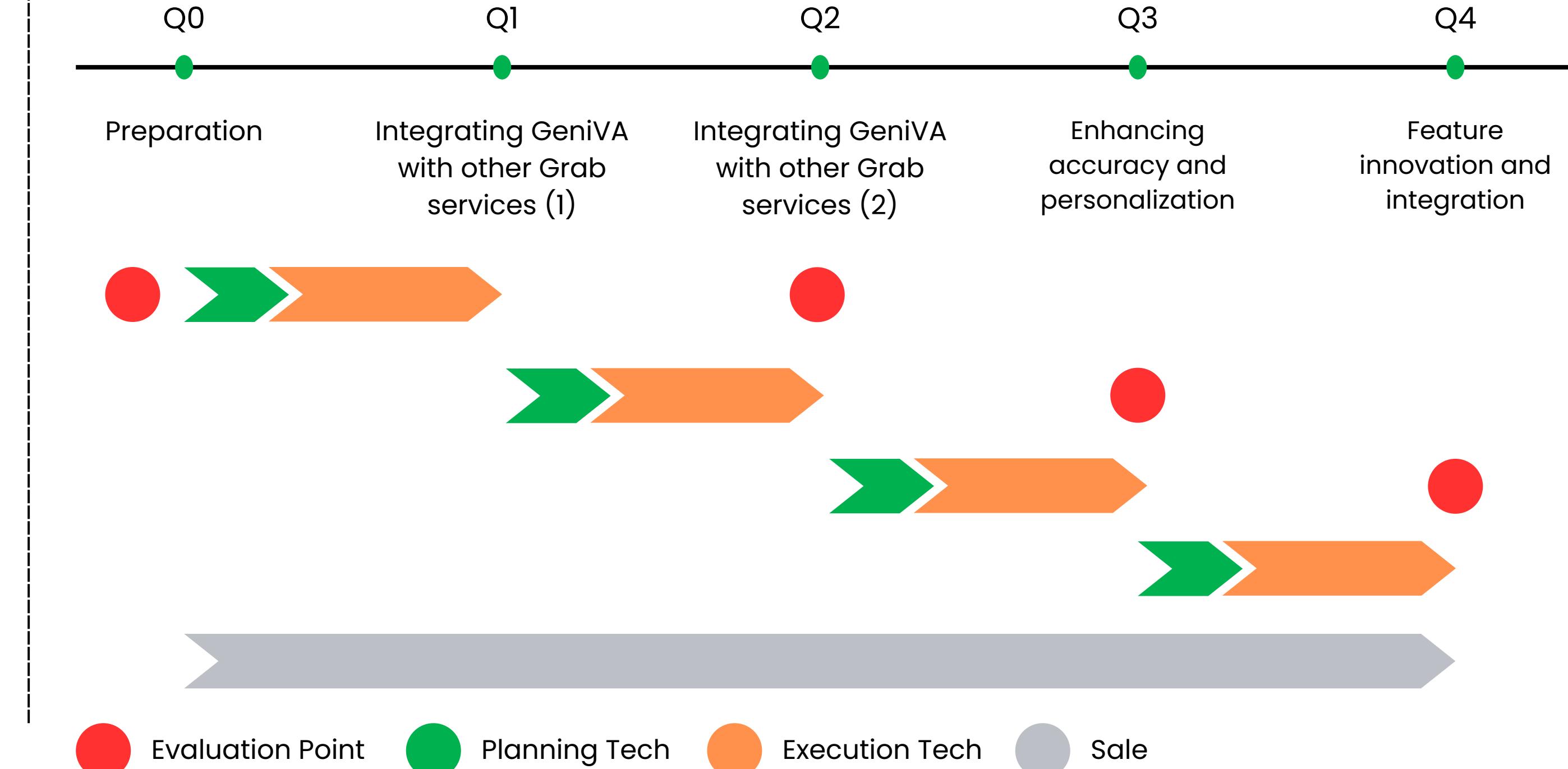
## Impact Analysis

Increase in average session duration **by 15-25%** and user interaction frequency by 20-30%.

Feature adoption **by 20-30%** of active users.

Increase in transaction frequency **by 10-15%** due to the use of round-up features.

## Timeline



Background

Analysis

Solution

Implementation

# Conclusion

## Key Question

How can we help users increase the effectiveness and efficiency of using the Grab app while supporting their financial well-being?

## Answer

GeniVA will address key questions with **four main solutions** designed for user convenience and improving saving habits.

### Grab Food

- **Number of Recommendations:** GeniVA will provide up to 3 food options per user interaction.
- **Sugar Content Information:** Each recommendation will include sugar content information, helping users choose food that meets their health needs.
- **Budget:** GeniVA will suggest options within the user's budget, ensuring choices do not exceed the set limit.

### Grab Ride and Grab Car

- **Cost-Effective Routes:**
  - **Public Transportation:** GeniVA will suggest more economical routes by incorporating public transit options.
  - **Time Parameters:** Recommendations will consider time factors, such as travel duration, to offer efficient travel options.
- **Promo Recommendations:**
  - GeniVA will suggest available promotions based on the user's travel context, helping them get the best deals.

### Emotion and Situation-Based Recommendations

- **Personalized Recommendations:** GeniVA will tailor suggestions to the user's emotions and current situation, ensuring the advice is relevant and suitable for their needs.

### Transaction Round-Up Feature

- **Round-Up Savings:** GeniVA will calculate the round-up amount for each user transaction, and the rounded-up amount will be saved into a Superbank account.

A man in a dark suit is seated at a desk, facing a laptop computer. He appears to be in a professional or office environment. The background is slightly blurred, showing what might be a window or other office elements.

**With GenivA, we transform your Grab experience  
into a seamless, efficient, and personalized  
journey, saving you time and money while  
enhancing your everyday life**



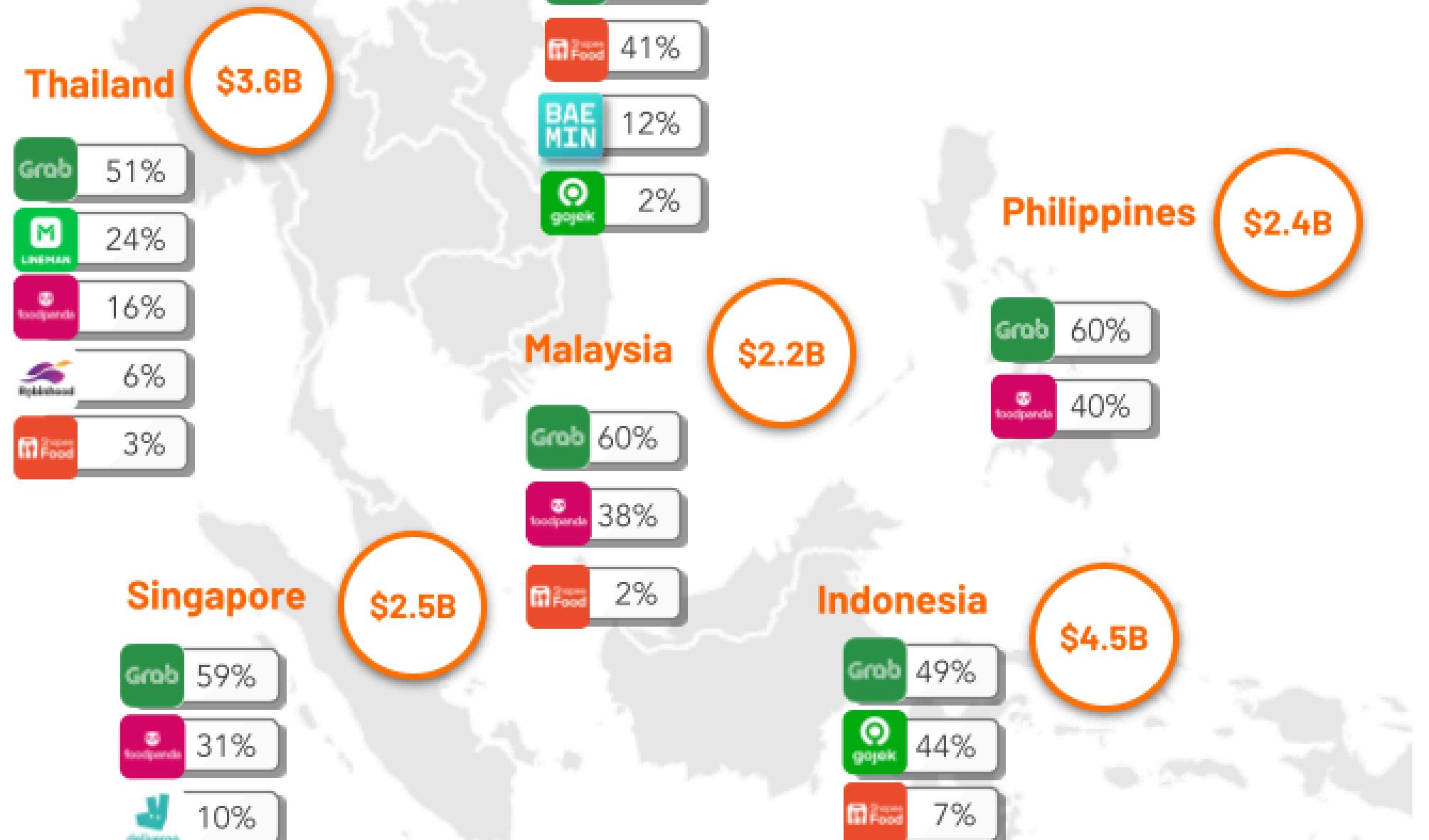
# Appendices

# Smaller markets grew while larger ones declined; Grab extended leadership position



2022, food delivery gross merchandise value (GMV)<sup>1</sup>

Total size: US\$ 16.3B



SEA GMV



\$1.1B

\$ 8.8 B

\$ 3.1 B

\$ 2.0 B

\$ 0.9 B

\$ 0.9 B

\$ 0.3 B

\$ 0.2 B

\$ 0.1 B

The three largest markets, **Indonesia, Thailand and Singapore**, all recorded total GMV decline in 2022, due to different factors of varied significance: for example, reopening in Singapore shifted food services demand offline, while in Thailand the withdrawal of government subsidies after October as well the floods in 2nd half of the year played significant roles.

**Malaysia, the Philippines and Vietnam**, three smaller markets, have recorded significant growth - as players including Grab and ShopeeFood expanded penetration.

**Grab** has taken market share leadership in Malaysia and Vietnam from Foodpanda and ShopeeFood respectively, and now contributes 54% of the region's total platform GMV. **ShopeeFood** has reduced market-share-grabbing incentives, while **Foodpanda/DeliveryHero** is rumoured to be in the process of exiting a few markets in the region.

1. The 2022 GMV estimation by Momentum Works combines on-the-ground sources including from platforms, restaurants, delivery fleets and other stakeholders. This estimate covers only 1000 delivery orders placed through Grab, Foodpanda, Gojek, Deliveroo, LINE MAN, Baemin, ShopeeFood, RobinHood. GMV includes all the orders made, including failed, cancelled, and refunded orders. This estimate does not include food delivery orders not placed with any of the platforms, such as customer placing a phone / Whatsapp order directly with the restaurant, which in turn books Grab delivery / Lalamove to deliver the food.

Source: Industry interviews; Momentum Works estimates