

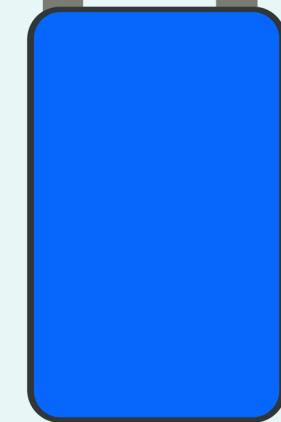


# Mongkol

ITCS335 Introduction to E-business Systems

2

026 | 120 | 179 | 181 | 210

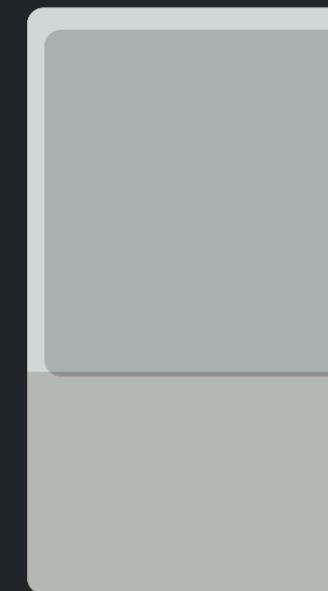
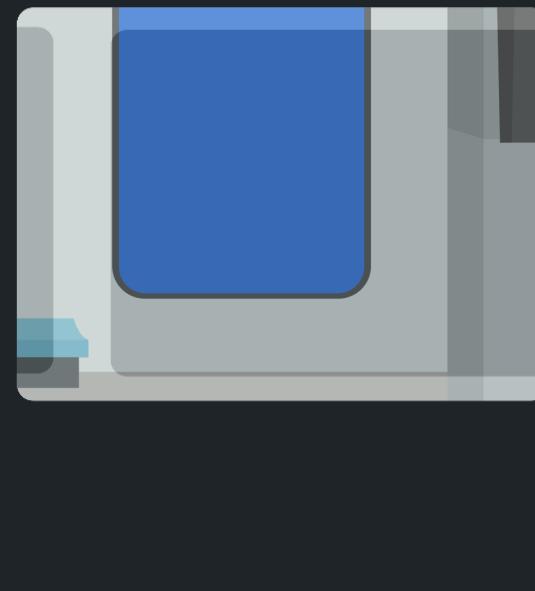
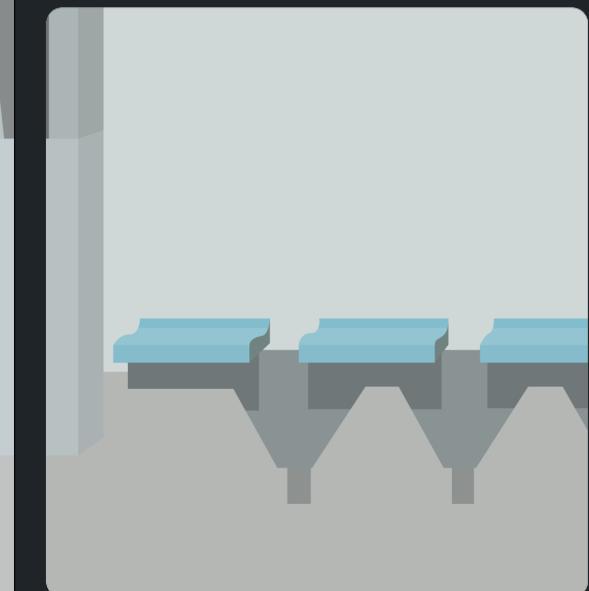


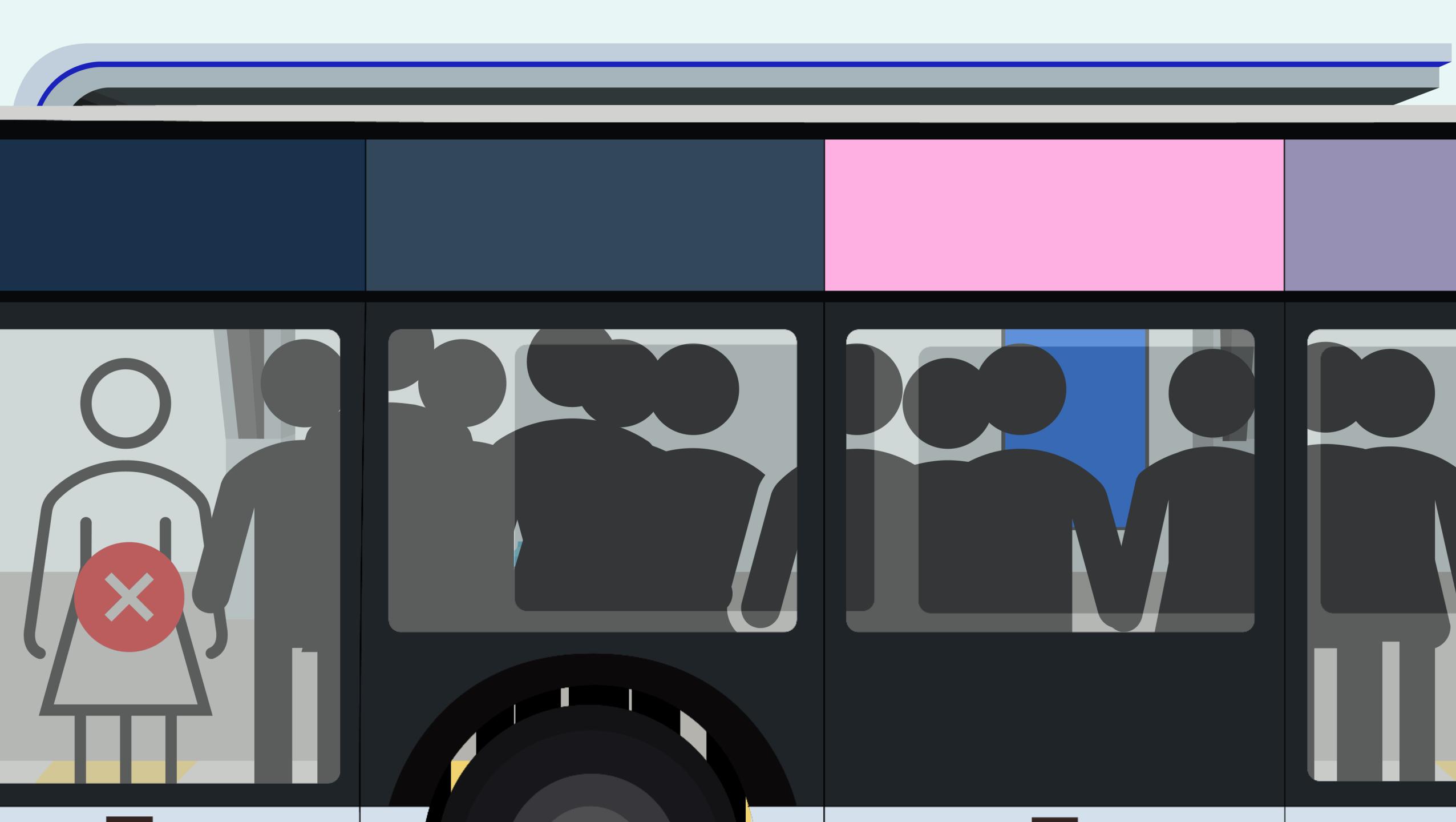


# Mongkol

ITCS335 Introduction to E-business Systems

2



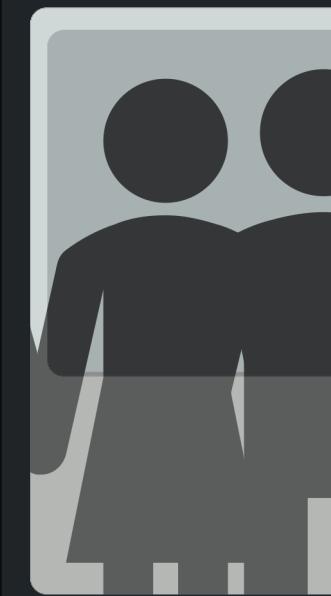
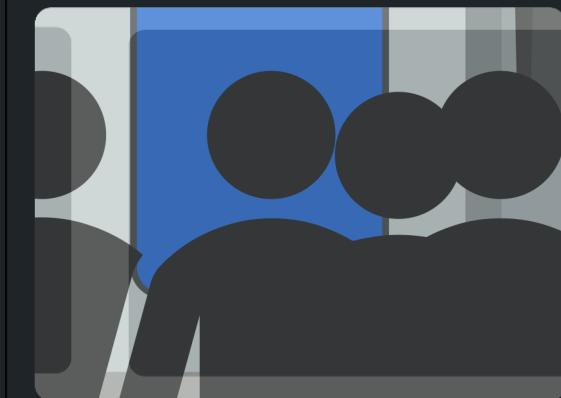
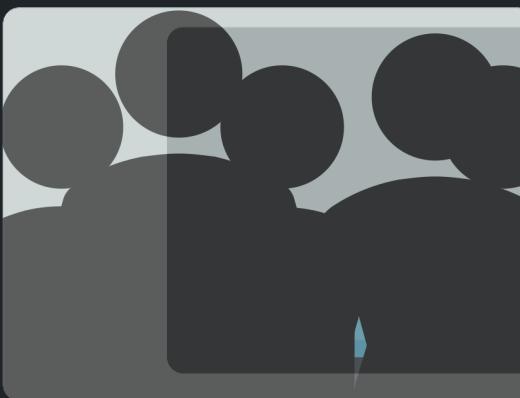
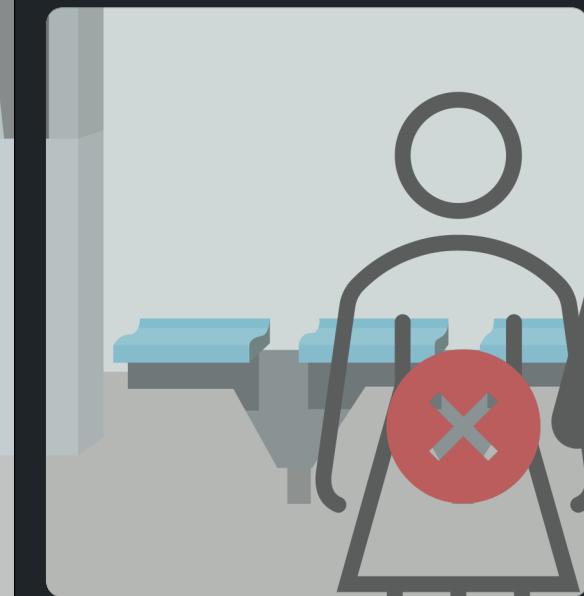




# Mongkol

ITCS335 Introduction to E-business Systems

2



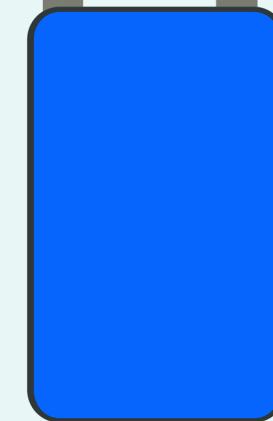


# Mongkol

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2

026 | 120 | 179 | 181 | 210





E - BUS



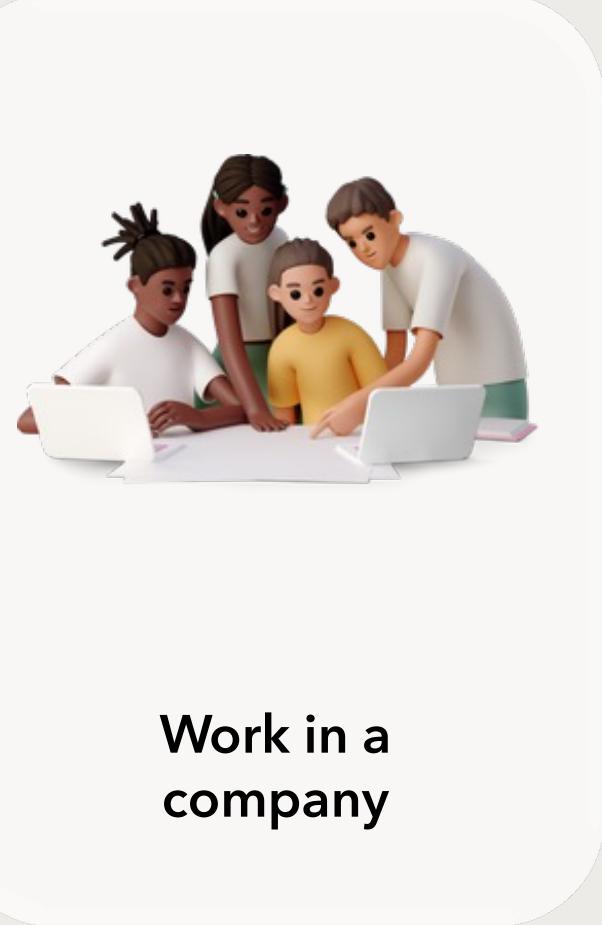
TARGET

# TARGET

General



20 - 40  
years old



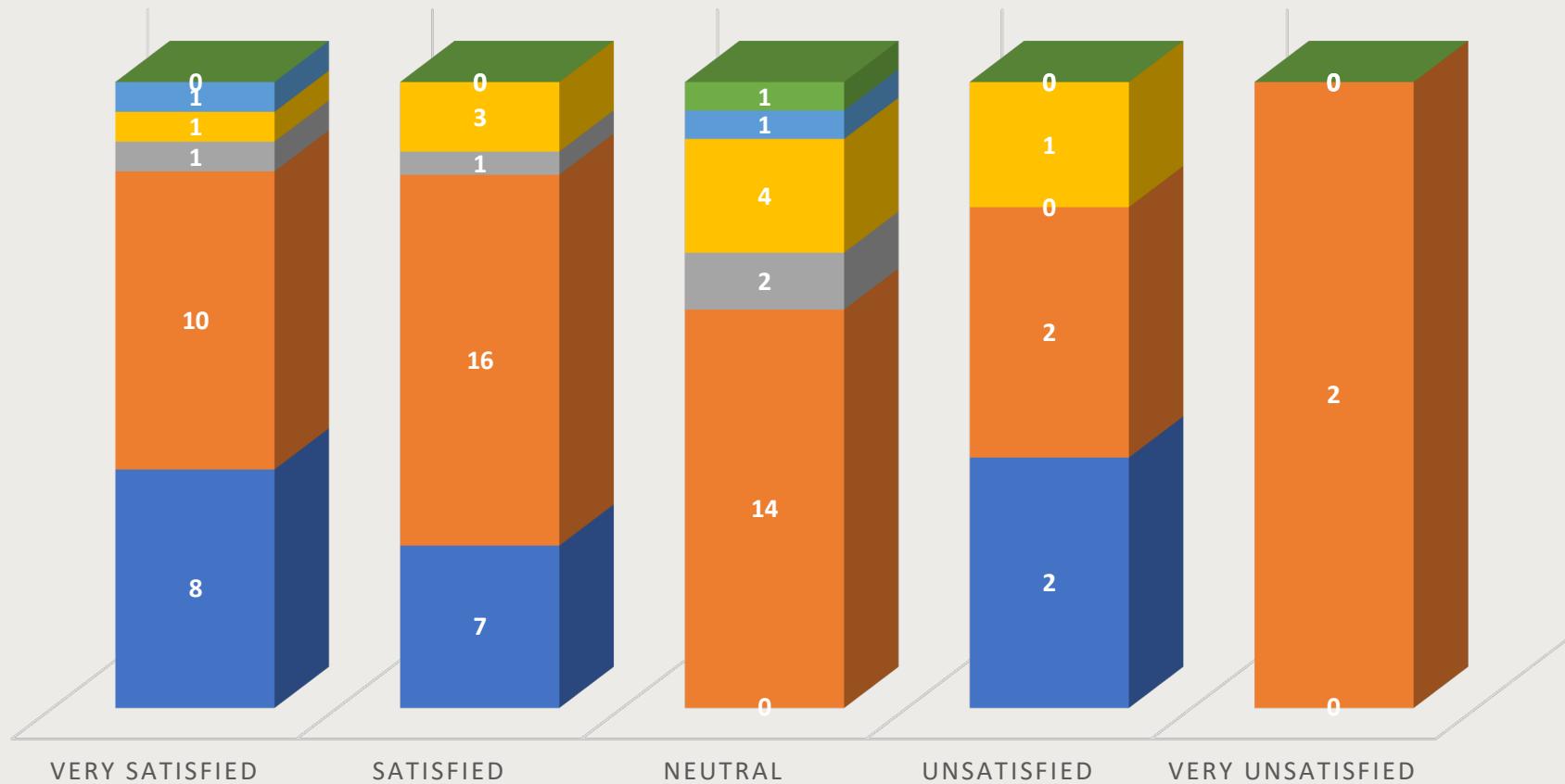
Work in a  
company



Average income of  
15,000 - 25,000 baht

## IF TECHNOLOGY IS INTRODUCED TO FACILITATE THE USE OF BUSES. ARE YOU WILLING TO PAY A HIGHER PRICE?

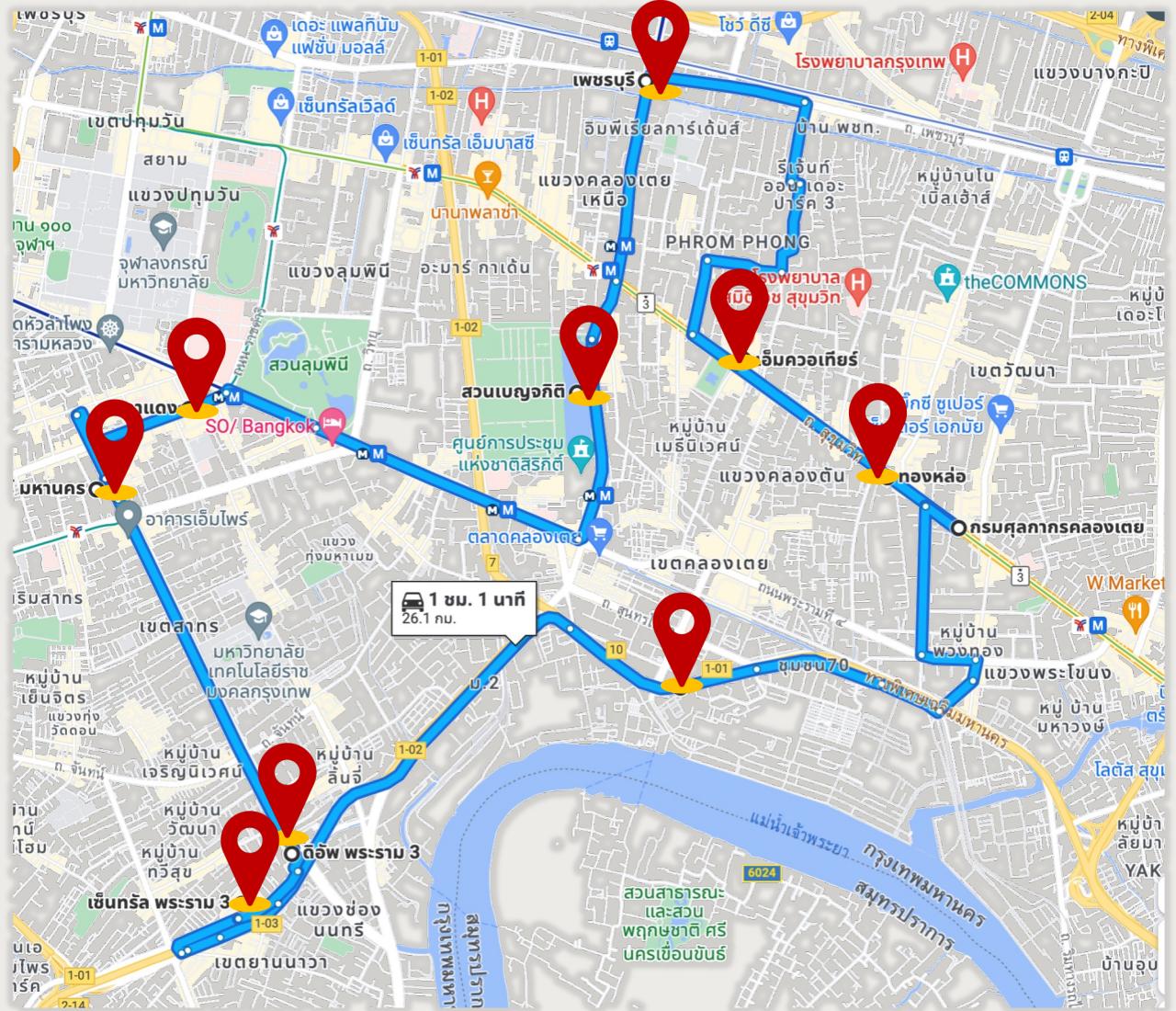
■ Under 20 ■ 20 - 29 ■ 30 - 39 ■ 40 - 49 ■ 50 - 59 ■ 60 and Above



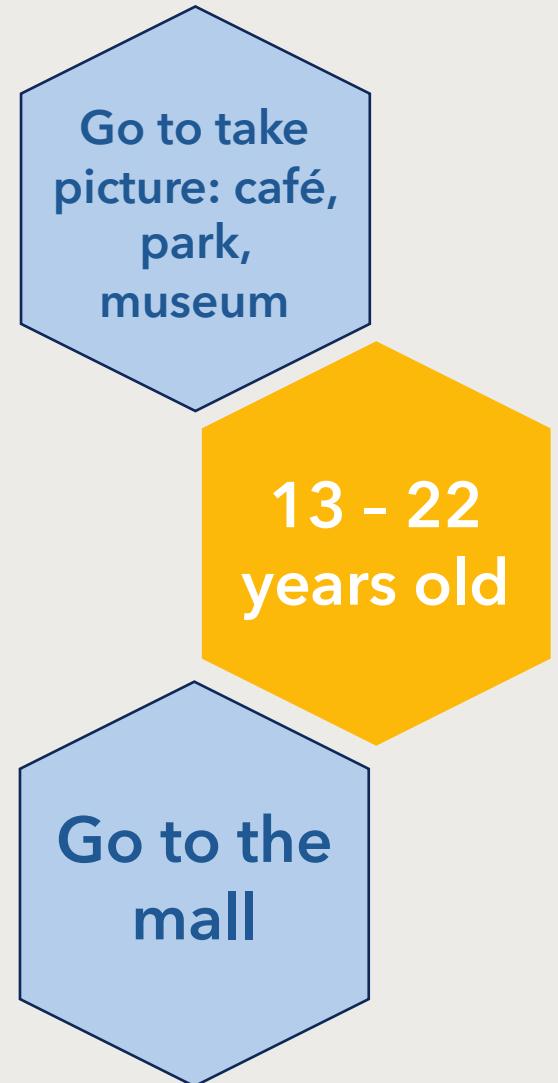
# TARGET

- Thonglor
- The Customs Department
- Central Rama 3
- L&H Villa
- Chong Nonsi
- Thaniya Plaza
- Benchakitti Park
- Phetchaburi
- Emquartier

# Route of bus stop



# TARGET



# TARGET



2  
**Office worker**

work in  
BKK

23 - 55  
years old

want to  
save  
money

Don't have  
driving  
license or  
car

# TARGET

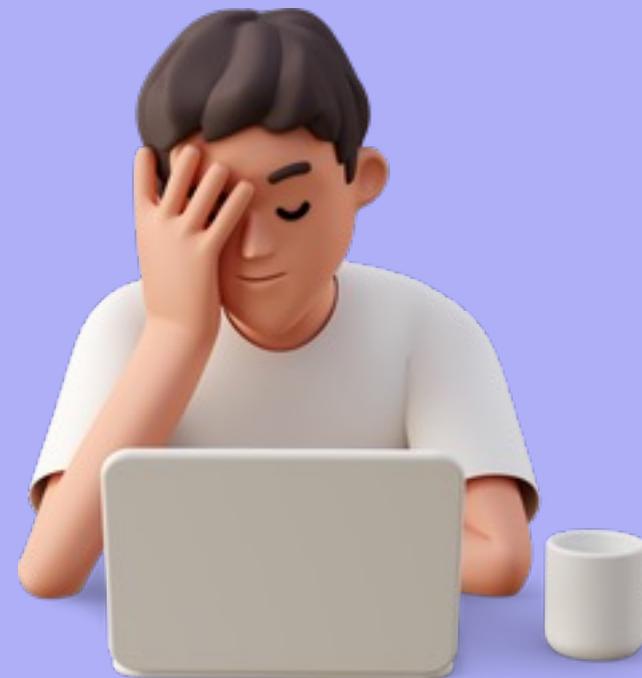


3  
Tourists /  
Foreigner



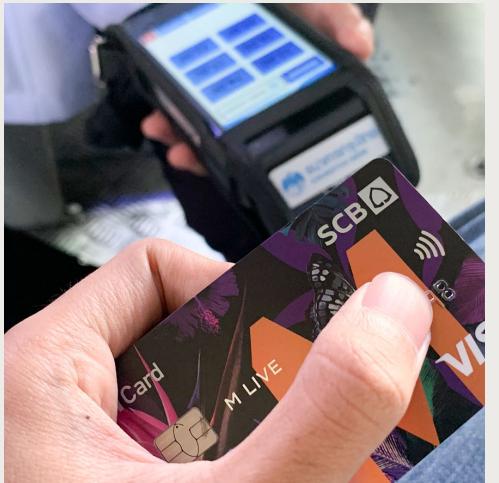


E - BUS



PAIN

# PAIN



**VISA  
Card**



**E - Ticket**

# Payment



**Cash**

# PAIN



**Using technology is difficult**

# PAIN

# Security



# PAIN

Pollution



Black Smoke

# PAIN



**Confused  
Route**



**Few Bus**

Concession



E - BUS



SOLUTION

# SOLUTION

## OVERVIEW

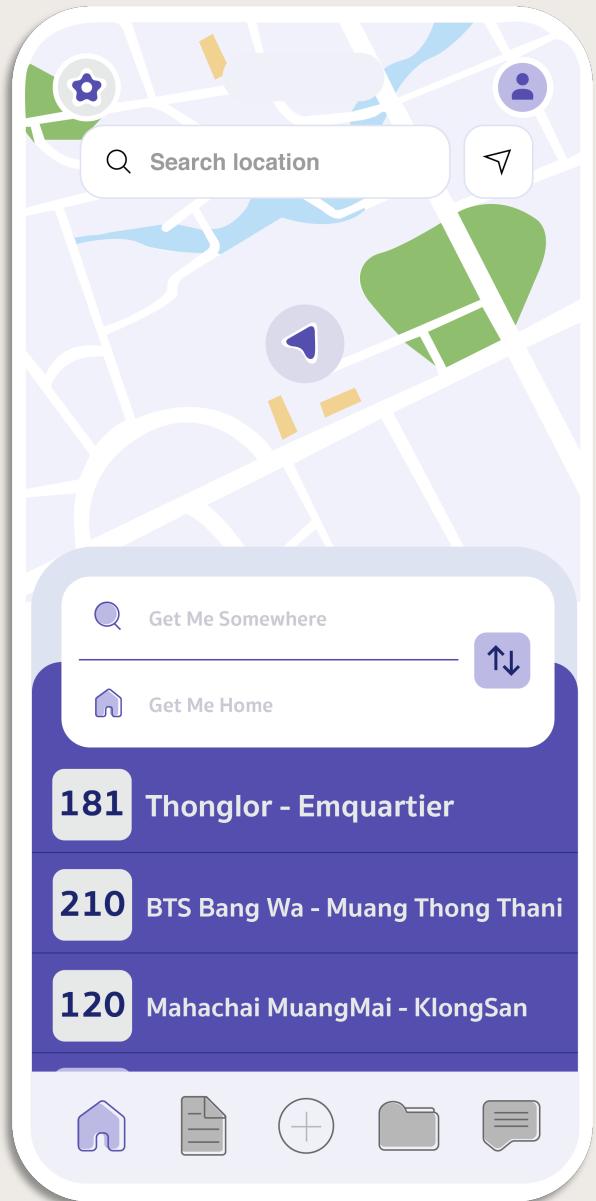
"Changing the concept of the traditional public bus by incorporating technology inside the bus and developing a program."

# SOLUTION

## WHAT ARE FEATURES IN AN APPLICATION?

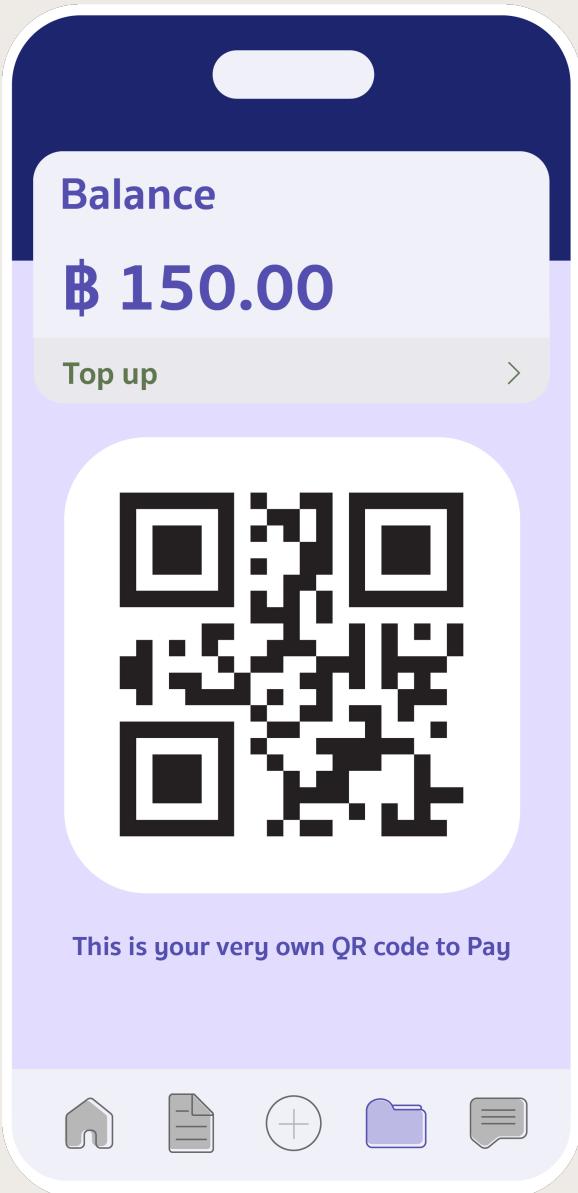
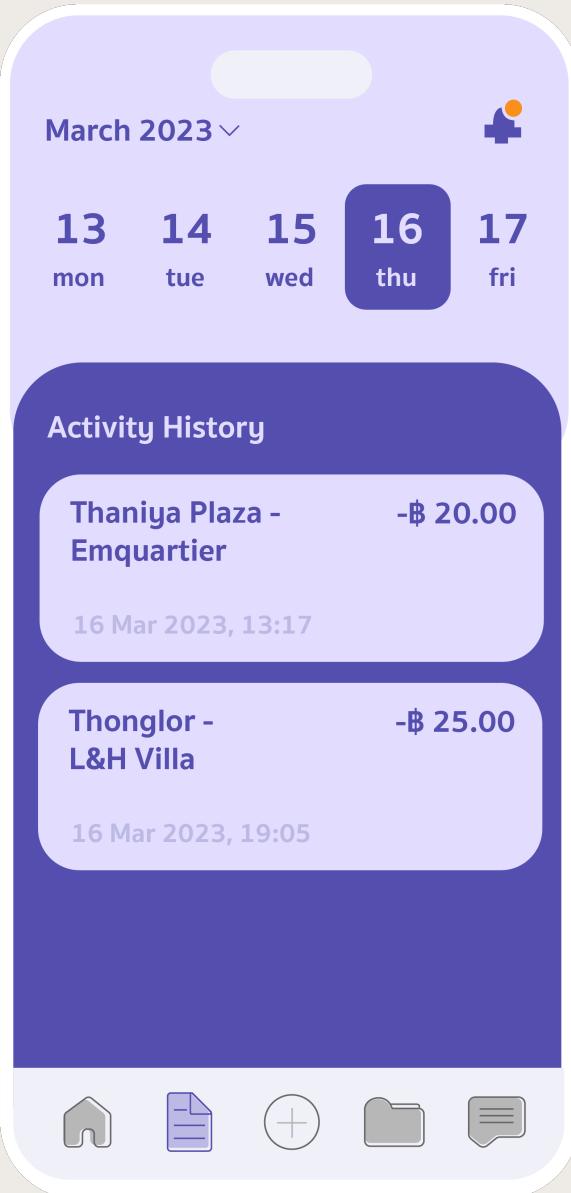
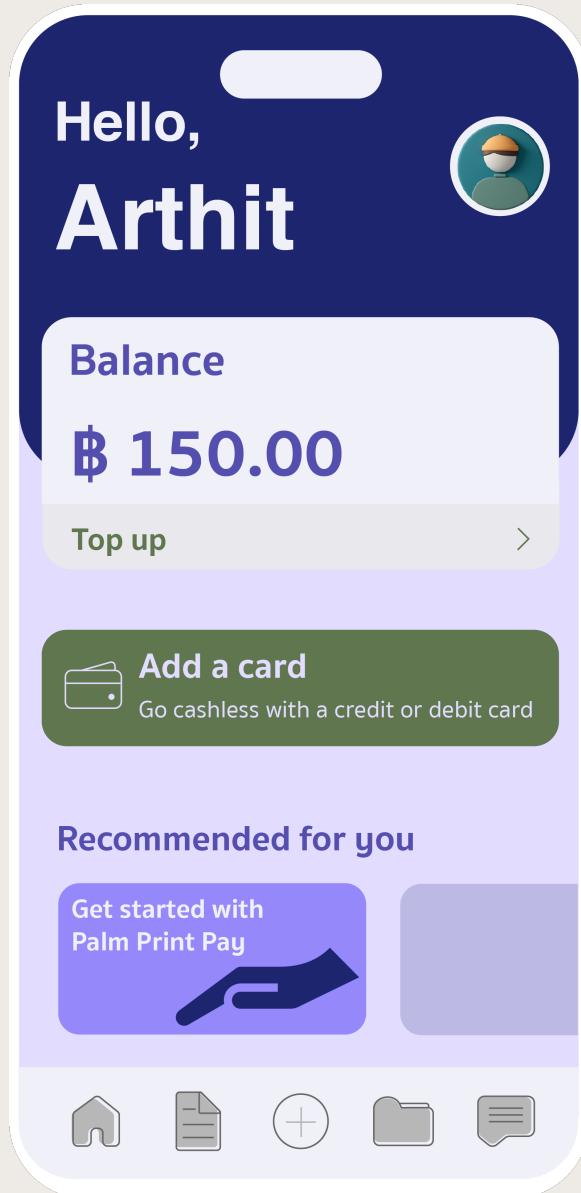


# SOLUTION

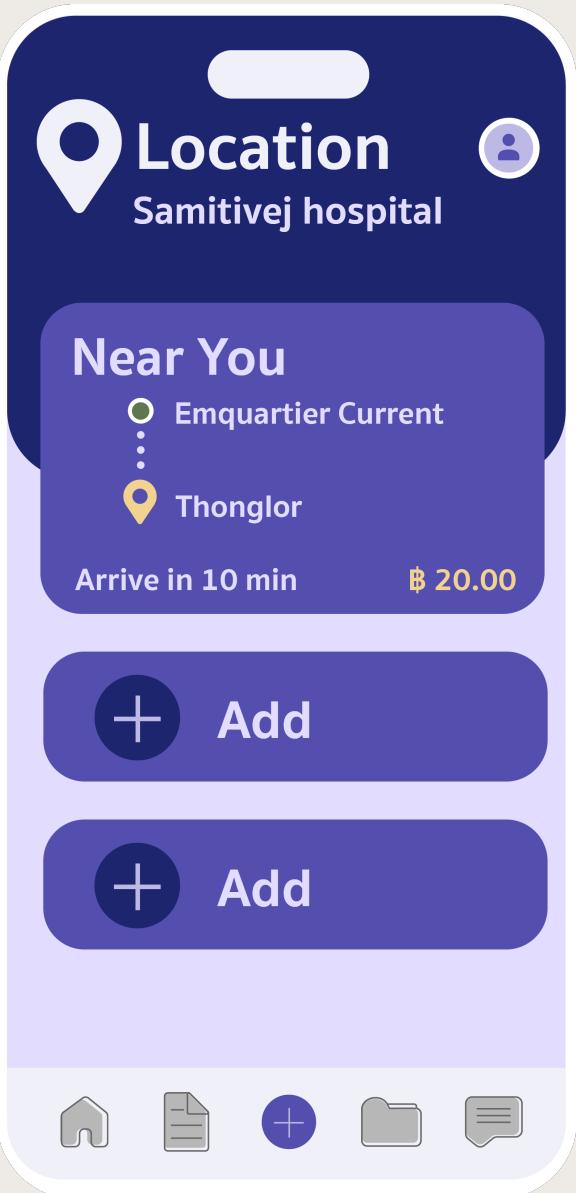
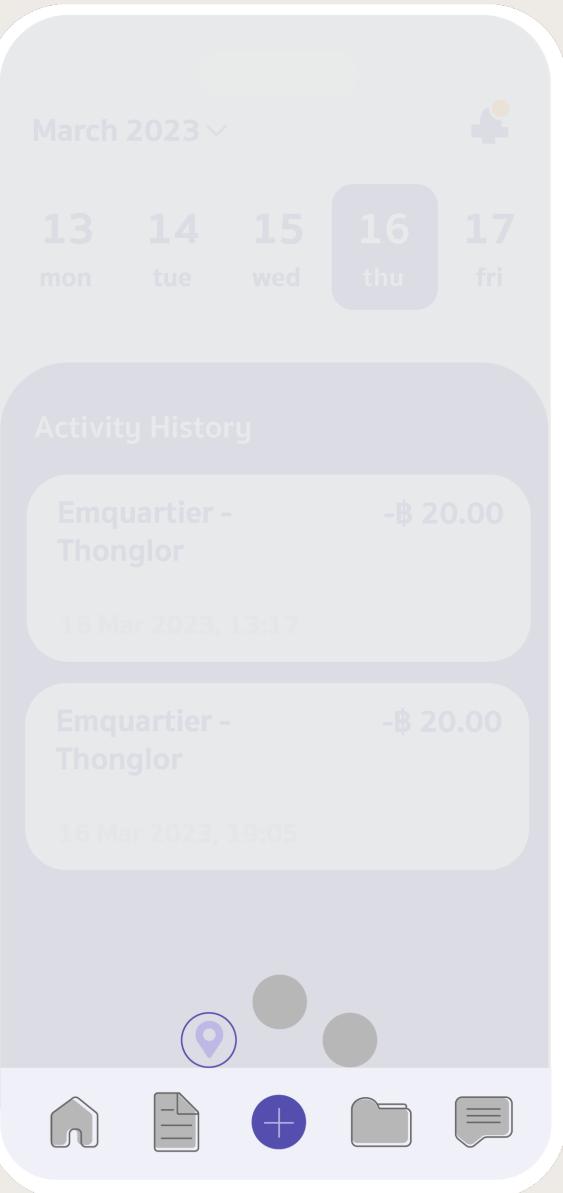
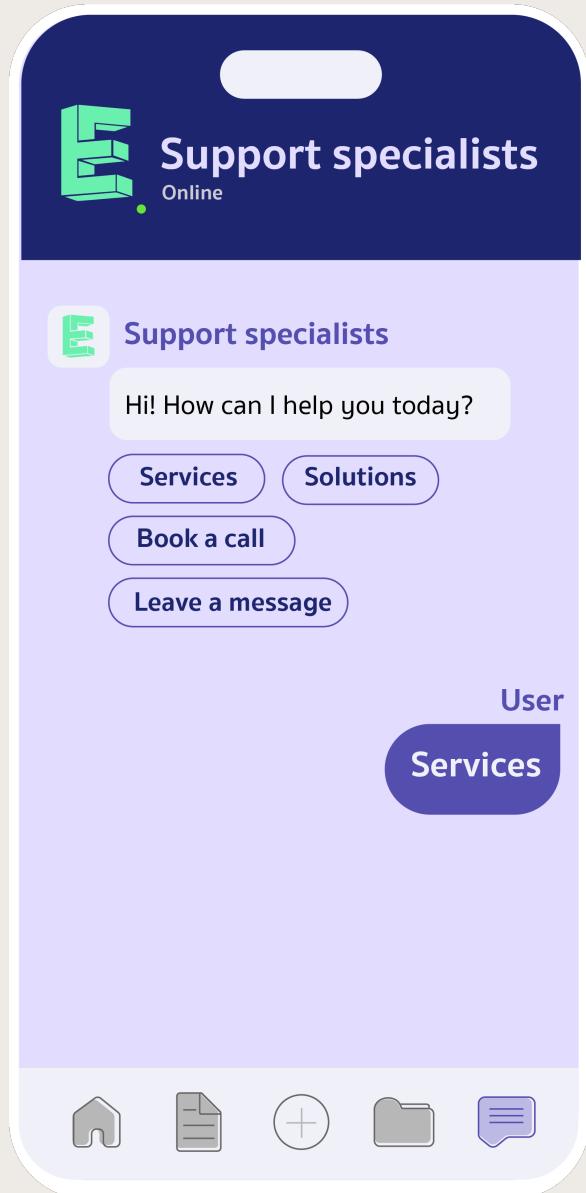


**When accessing the app, passengers will find the default page as shown beside**

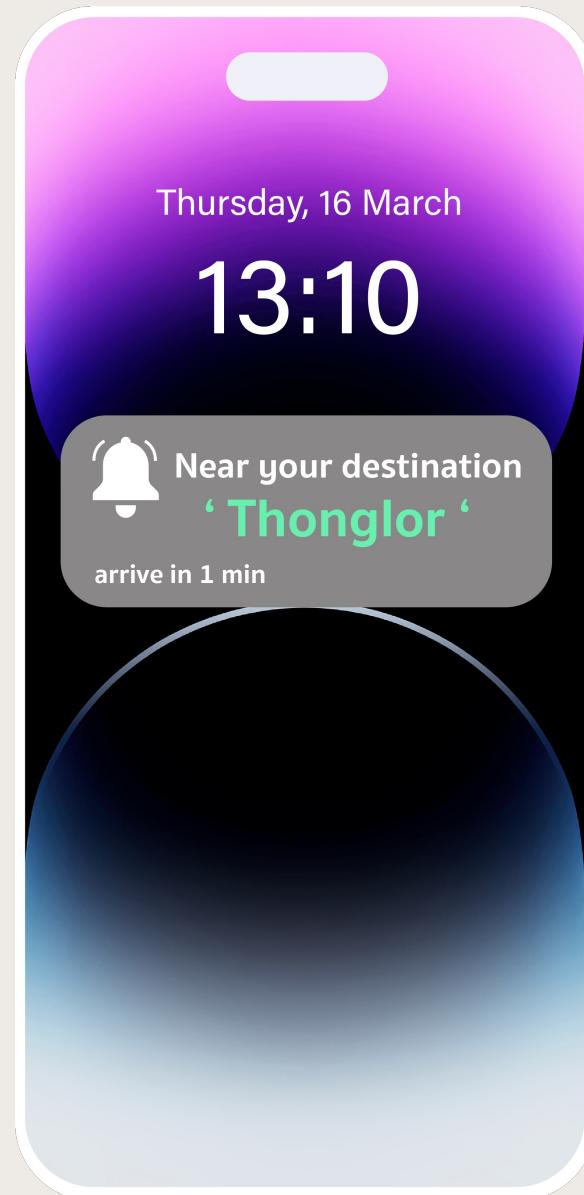
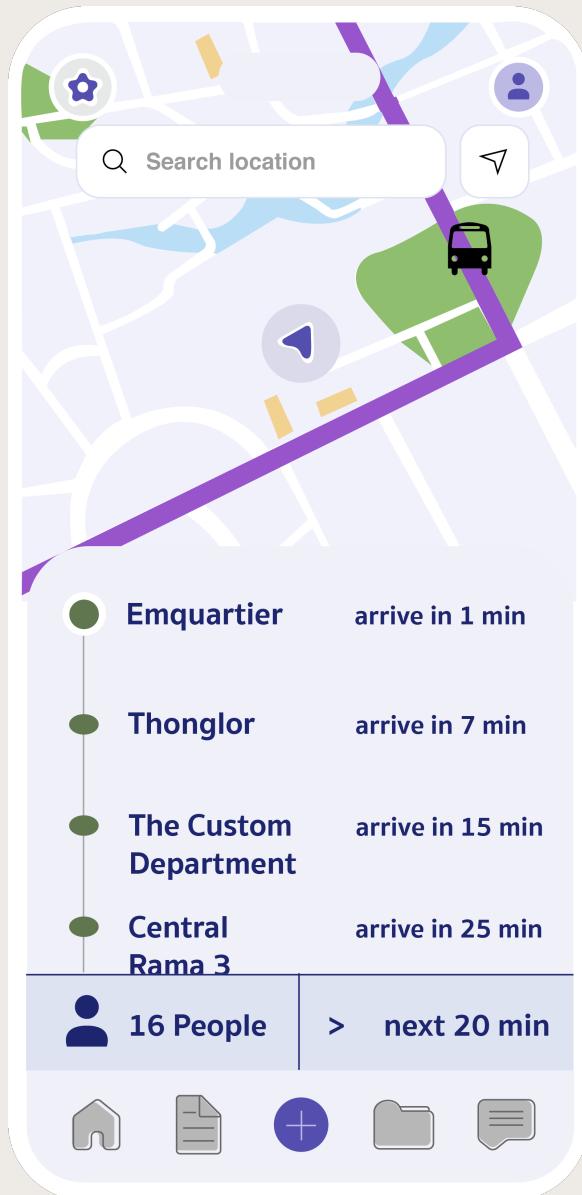
# SOLUTION



# SOLUTION



# SOLUTION



# SOLUTION

## Technology in Bus



### Computer vision

use for payment by having passengers scan  
their palms

### Deep learning

powers computer vision  
trains algorithms to work on the program to  
correctly identify passengers

# SOLUTION

## Technology in Bus

AI weapon-scanning technology



Innocuous Item Test Object - The system will not  
alarm on commonly carried items (>5%)

(Paper Research)

EV bus



reduce smoke  
eco-friendly automobile

# SOLUTION

## Features in Bus



Free Wi-Fi

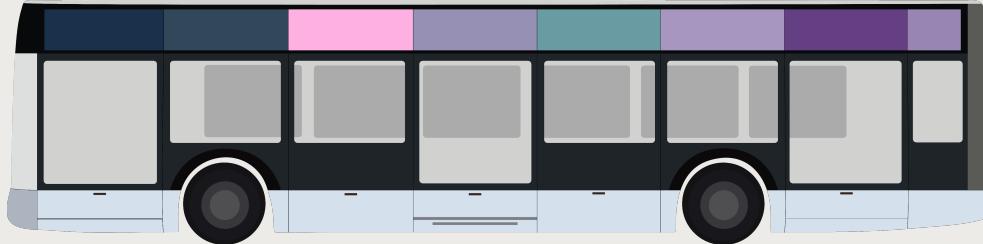


The luggage storage area



Informing

- The next station's arrival time
- Location



Appearance

- **Stairs up low automobiles** - older persons and kids can get in and out of the bus more easily
- **Look** - contemporary and usable

# Revenue Model

# Framework

- Customer or passenger
- Advertisers
- Partners
- Sponsors

Who Pays?

What's paid

- Money
- Data or Insight

- Dynamic Pricing
- Volume Discounts
- pricing

How much  
Is Paid

Revenue  
Model

For What  
Is Paid?

- Transaction revenue
- Cost per Result
- Pay per use

- Subscription
- Paid directly

How are you Paid?

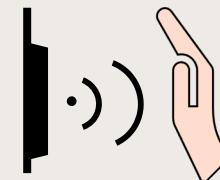
# Revenue Model

## Transactional Revenue Model

0-4 km.	20				
4-8 km.	20	20			
8-12 km.	25	20	20		
12-18 km.	25	25	20	20	
18-25 km.	30	25	25	20	20

- Sells products or services directly (B2C)
- Pay through palm print recognition or QR-Code on the bus.

Scanned Palm Device



Or

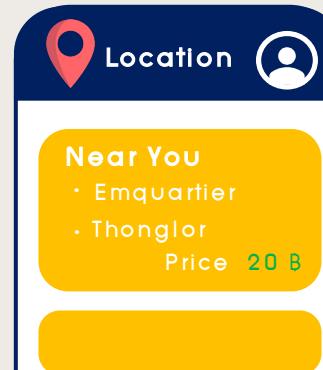
Scan QR-Code



## Subscription Revenue Model

- **Regular** payments
- **Membership** will receive special privileges of fare
- **Coupons** of discounts for members monthly or yearly.

Regular



Membership



Coupons



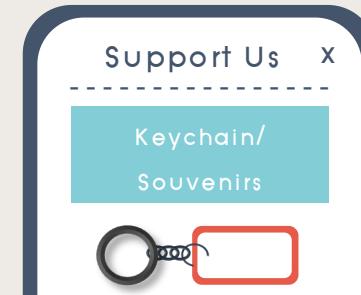
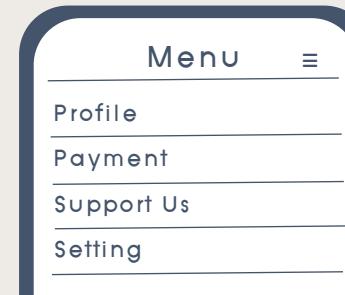
# Revenue Model

## Type

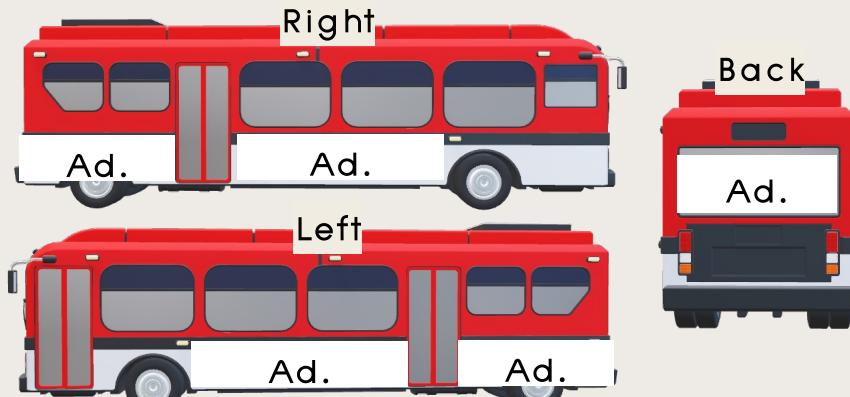
### Sales Revenue Model



- Sell **products** or **souvenirs** in the application
- Example: keychain or souvenirs belonging to the company.

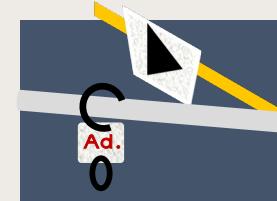


### Advertising Revenue Model



- Advertisements in the form of **e-mail** if the user of the Application.
- Promote with a **billboard** or a **sign** on the buses

Inside



handgrip

Standard

LCD in bus

# Others



**Consent** to provide  
personal information

Palm Print

# PDPA

(Personal Data Protection Act)

## “Passenger’s Palm Print”

**Biometrics** - sensitive personal data

Purpose for Payment



**Do not** consent to  
personal information

QR-Code

Others

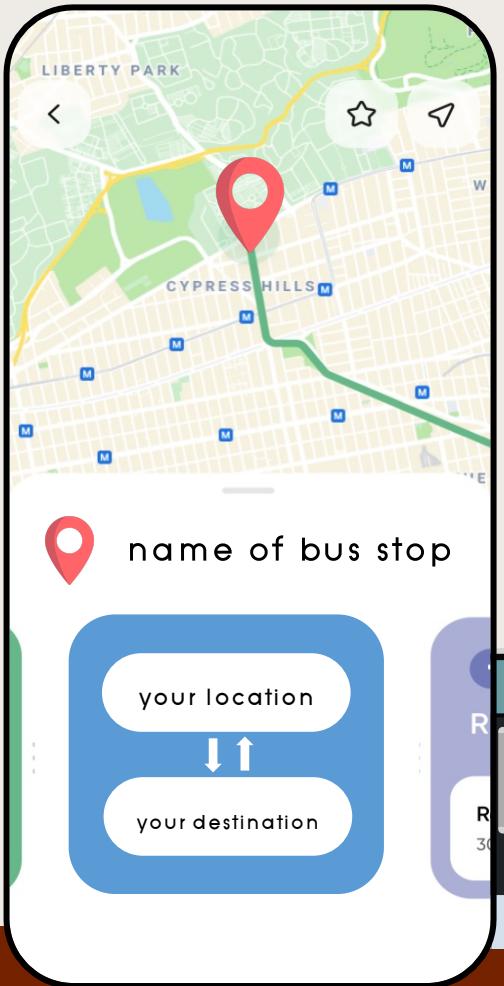
Funds



This technology has **a high investment**  
in Long-Term Profits.

“We want to control the fare that  
passengers have to bear.”

## Others



## GPS

Our application service has a **detailed description** of every bus.



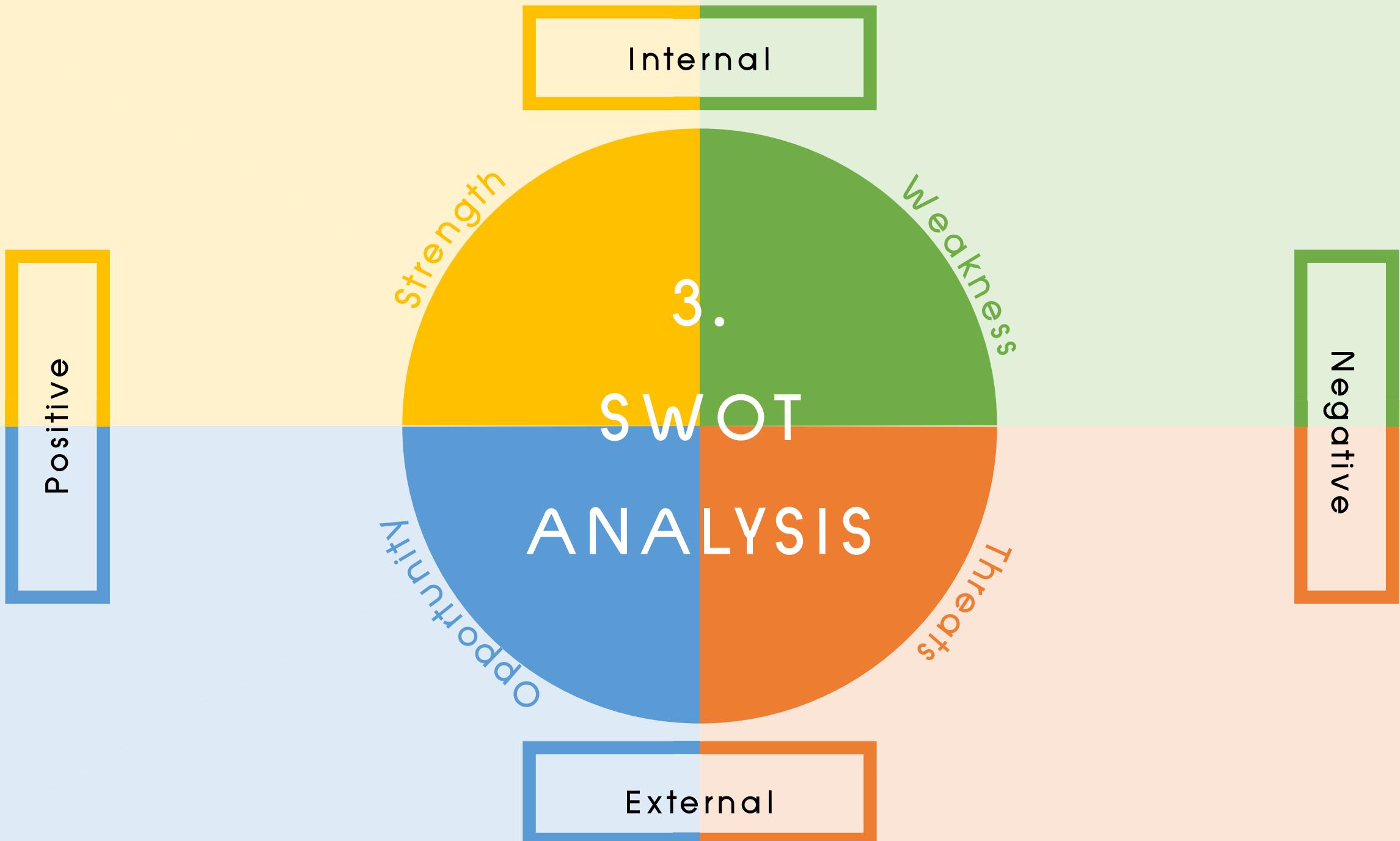
## Concession



there must be an **auction** of bus routes that respond to more users than the existing companies that exist today.



## Compare competitor



# Strength

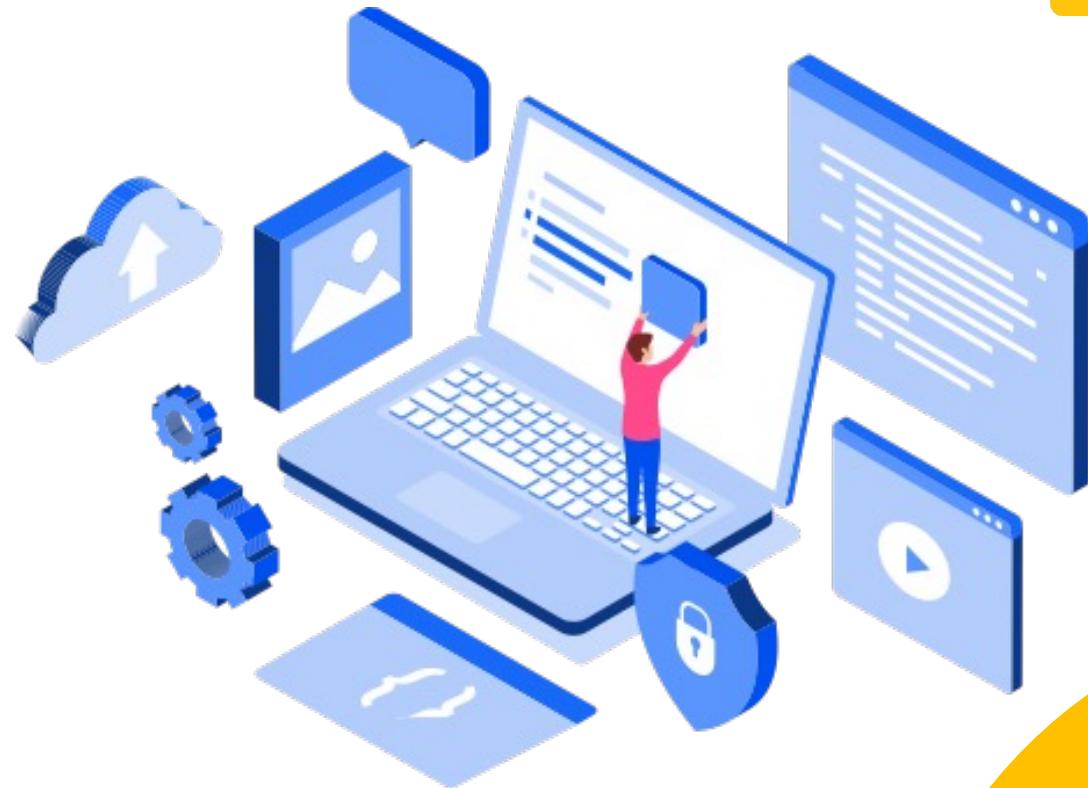


- ▶ Personnel with expertise and experience in bus operations
- ▶ Import touchless technology for payment by hand palm



# Strength

- ▶ Loyal customers
- ▶ Excellent Customer service
- ▶ Technology Innovations
- ▶ Best software applications



# Weakness



- ▶ Limited Advertisement 
- ▶ Honestly
- ▶ Charging Time
- ▶ Maintaining Battery 
- ▶ Registering for a Palm-scanned device 
- ▶ Lack of experience in marketing commercial vehicles

# Opportunity

## รัฐบาลหนุนไทยเป็นฐานการผลิตรถยนต์ EV ชู บทบาทสู่ Detroit of

--อินโฟเควสท์ โดย ฐานิสทร์ ทองนกอก/กษมาพร/รัชดา โทร.02-2535000 ต่อ 317 อีเมล์:  
rachada@infoquest.co.th--

ข่าวเศรษฐกิจ Monday December 20, 2021 10:20 —สำนักข่าวอินโฟเควสท์ (IQ)



### ▶ Government Support EV Cars

#### EV only ทำเนียบ ประยุทธ์ คิกออฟ เปิดจุดชาร์จแบต รถยนต์ไฟฟ้า

pum • วันที่ 14 พฤศจิกายน 2565 - 09:41 น.



#### ประยุทธ์ หนุนไทย ศูนย์กลางผลิตรถยนต์ไฟฟ้า-ชีน ส่วนของภูมิภาค

Chatchanok Ketamornwattana • วันที่ 19 ธันวาคม 2565 - 12:00 น.



#### ครม. เห็นชอบแผนส่งเสริมรถ EV ในไทย ตั้งเป้าปี 2573 ผลิตรถยนต์ไฟฟ้า 30% ของการผลิตใน ประเทศ

THE  
STANDARD



## SWOT ANALYSIS

# Opportunity



- ➡ Oil Price in the Global Market
- ➡ Depletion of oil resources

oil forecast 2023		
Oil	2022	2023
internationally	99.93	100.67
• OPEC	34.09	34.37
• Non-OPEC	65.84	66.30
United States	11.83	12.31

Compare	Demand	vs	Supply
2022	99.82	<	99.93
2023	100.98	>	100.67

# Opportunity



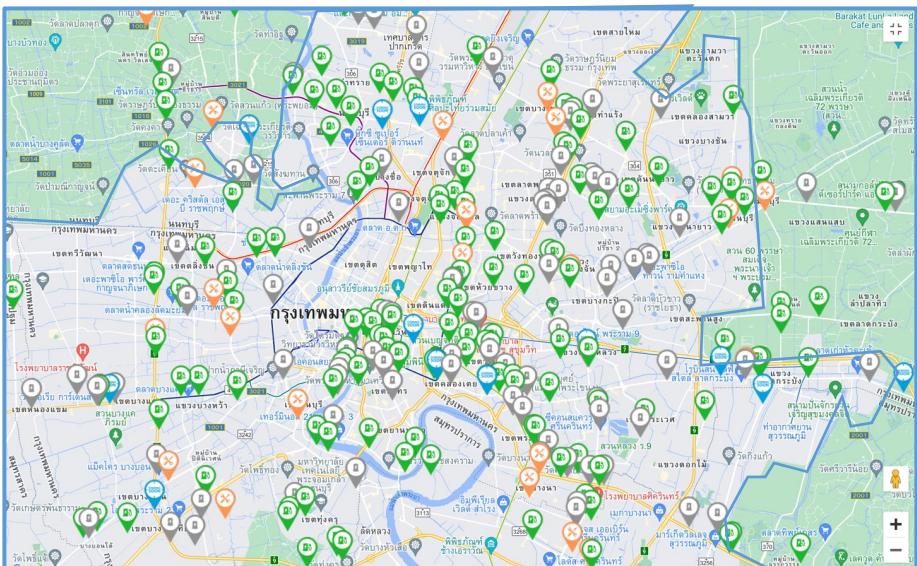
- ▶ Cheap for charging energy

type of car	Price per kilometer
Electric cars	0.37 baht/km
Gasoline vehicles	1.76 baht/km
hybrid car	1.25 baht/km

# Opportunity



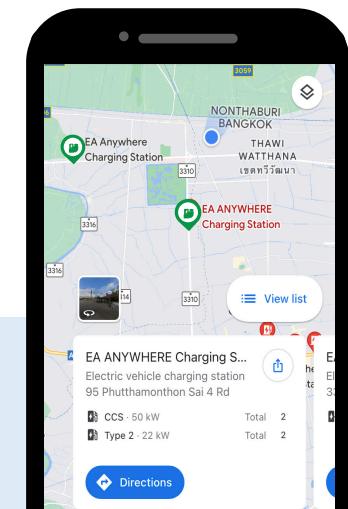
- ▶ Expanding Electric Vehicle charging points (EA ANYWHERE)



Bangkok



476 stations  
throughout Thailand



## SWOT ANALYSIS

# Opportunity



- ▶ Rents in Bangkok are more expensive



Upgrade

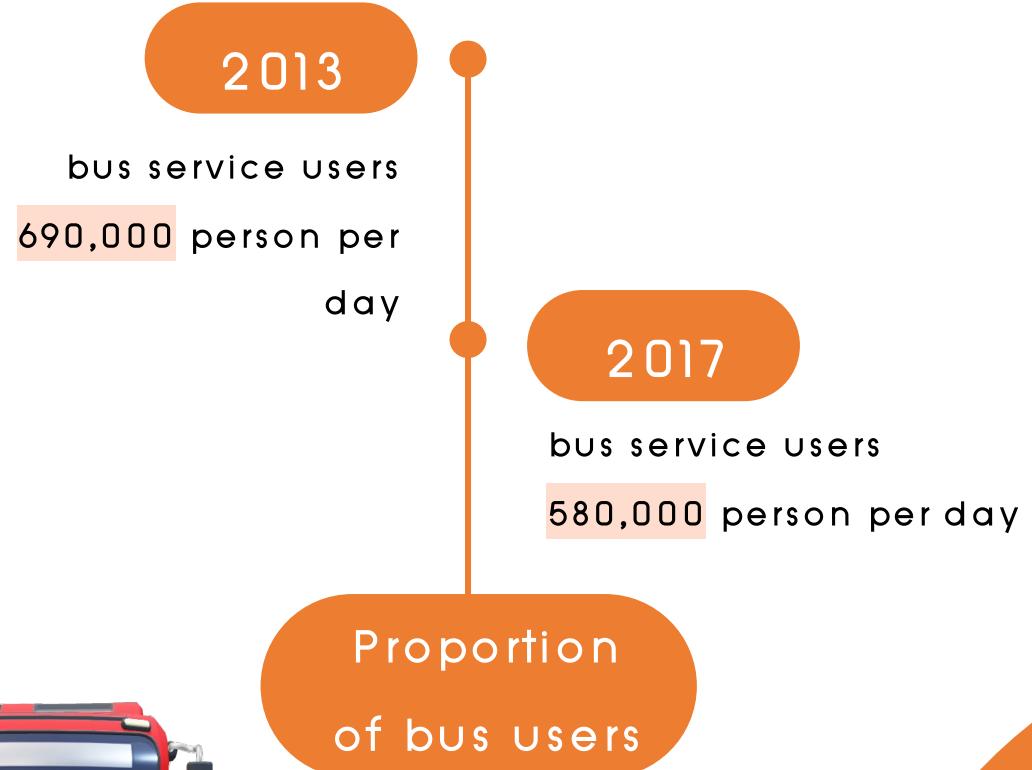


## Threats

- Low GDP in Thailand



### Timeline



Proportion  
of bus users

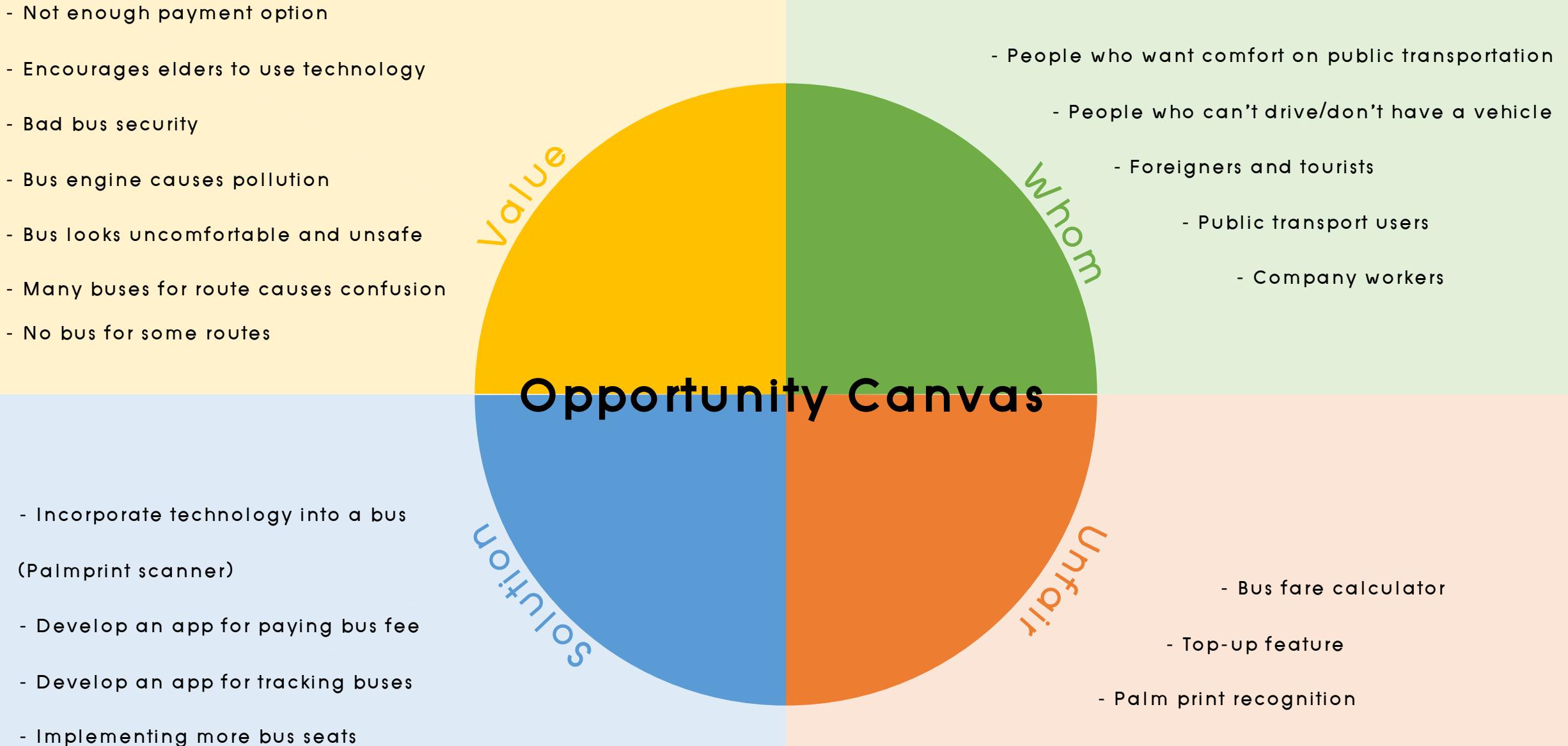


# Threats



## ► Bangkok's Minimum Wage

Daily Minimum Wage Rates in Thailand 2022	
Province	Daily minimum wage
Bangkok, Nonthaburi, Nakhon Pathom, Samut Prakan, Pathum Thani, Samut Sakhon	353 baht (US\$9.24)



# Business Model Canvas



# E-Bus Business Model Canvas

Value



Proposition

For passengers:

- The new image of bus public transport
- Reduce air pollution with electric vehicle
- Bring fast passengers transport services with reasonable prices
- Passengers use the service in a safe and clean environment
- Cashless society
- GPS tracking system by which passengers will get to about the bus's current situation
- The status of the available number of seats on the bus
- Free Wi-fi

# E-Bus Business Model Canvas

Value



Proposition

For passengers:

- Experience a new way of using technology to pay with the palm of your hand on the bus
- Functional applications responding to all bus services

(E.g., Bus status on the road, Available seat, Suggest the best route for your destination)

- Luggage storage on the bus
- The screen shows the route on the bus. Both Thai and English
- Voice prompts when arriving at each stop
- Passenger safety with weapon scanners

For customers who are businesses:

- Providing advertising services with reasonable prices and efficiency

# E-Bus Business Model Canvas

## Customer Segments



- People
  - Worker (at BKK) 25-50 years: can't drive, drunk, no license
  - Student 13-24 years
  - Foreigner
- Advertisers, Ad Agencies

# E-Bus Business Model Canvas

## Channels



### Online:

- Application – Google Play/App store
- Website; Ebus.co.th
- E - Bus YouTube channel
- Email

### Offline:

- Register palm print at bank
- Hotlines

# E-Bus Business Model Canvas

Customer



Relationships

Personal assistance:

- Responding to customers via chat application
- Registration policies that apply to customers
- Palm registration point according to banks
- A better travel experiences
- Promotion for advertisers' company
- Advertising on application / Web
- Bus billboard promotion for 3 / 6 / 12 months

Auto service:

- Chatbot gather problems and solutions obtained from talking to customers
- Provide customers with assistance guidelines to help reduce queue times and speed up service.
- Accurate data
- Rich and real-time set of data that help passengers plan the best route

# E-Bus Business Model Canvas

## Key Activities



- Driver training
- Vehicle maintenance management
- Vehicle operation management system
- Data gathering
- Data analysis
- Platform development (Mobile applications)
- IT operation
- Personal Data Protection Policy
- Develop a technology to be faster when scanning palm print

# E-Bus Business Model Canvas

## Key Partners



- Payment provider
- Bank
- Advertising company
- Bus manufacturing company
- Electric provider
- Map API providers
- Technology providers (In terms of buy technology)

# E-Bus Business Model Canvas

## Key Resources



- Investment
- Developer
- EV Bus
- Management team
- Customer support center
- IT infrastructure
- Skilled drivers
- Lawyer

# E-Bus Business Model Canvas

## Revenue Streams



- Passengers fare on per Km.
- Subscription fee
- Revenue from advertising: base on the time and number of buses use for advertising
- E-bus application is available for free
- Advertising on the application / website
- Payment fee (E.g., Visa, MasterCard)

# E-Bus Business Model Canvas

## Cost Structure



- The cost of purchasing technology, making the bus palm print payment technology is the most important cost inherent in our EV bus service
- Technological infrastructure
- Vehicle electric
- Customers support
- Palm print register station construction
- Product development
- AWS infrastructure
- Development of proprietary software
- Data acquisition – Crowdsourcing helps to reduce costs
- Maintenance

# E-Bus Business Model Canvas



Thank  
You



# Q & A

# Members

Netithorn	Inamnuay	6488026
Suphavadee	Cheng	6488120
Ponnapassorn	Iamborisut	6488179
Thadeeyaa	Duangkaew	6488181
Ravikarn	Jarungjitvittawas	6488210

Mongkol Company