

The New Self-Driving Infotainment System

TRUXI

TRUXI is an infotainment system for autonomous taxis that focuses on user experience and building trust.

Its simple interface and friendly character agent deliver clear and predictable information, making the experience less intimidating for users.

TRUXI aims to set a standard for more accessible and inclusive self-driving vehicle infotainment systems.

Its focus on user-centered design and trust-building is crucial in establishing a new standard in the emerging market of autonomous vehicles.



How can we improve unmanned taxi experience?

1 Users cannot trust self-driving cars

Reference : Deloitte (2020)

Percentage of users who consider self-driving cars unsafe



People still do not have confidence in the safety of self-driving vehicles. This is due to not only the incomplete driving system, but also having no control of the vehicle.

2 Users are disappointed with Self-Driving Cars

Reference : A Study on Driver Experience in Autonomous Car Based on Trust and Distrust Model of Automation System , Lee, Jiin-in; Kim, Na-eun; Kim, Jin-woo, 2017

Dry Interaction
with AI

Uncertainty about
whether System is
Working

Absence of Driver
to Ask

Many people do not believe that mechanized AI will be able to replace interaction with traditional drivers and complaints have emerged. Users need an human-like agent to communicate.

3 How to collaborate with AI effectively? : Trust & Humanlike

Computational Human-Machine Trust Model based on Trustworthiness Measurement and its Applications, Lee soo yeong, 2018

Technical Capability

Willingness to cooperate

Human-likeness

4 The functions users want

Primary Research: Focus interview with 4 people and N=184 survey responses

40s housewife, FGI

"As I get older, I forget the functions a lot. I hope the UI is **intuitive and easy to learn.**"

20s college student, FGI

"I hope the taxi becomes my own personal space where I can make the most of my time."

User survey

"I think taxis **should be efficient,** functions like going fast, taxi reservation, and etc ."

In a human-machine collaboration interface, trust is determined by technical capability, willingness to cooperate, and **human-like behavior**. **People tend to trust AI systems that interact in a human-like manner**, and they trust and follow agents that have similar tendencies even more.

Users view self-driving taxis as a **fast, efficient way to reach destinations** with a personal, independent space. Also, an intuitive UI is key to a comfortable experience.



Yeong-hun

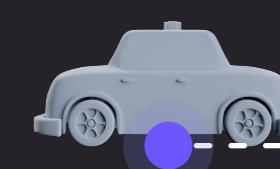
32, Salaryman

#Introvert #Newbie #Passive

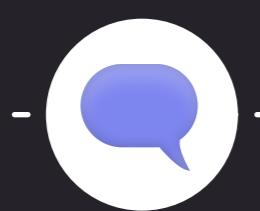
" I'm feeling anxious because I took an unmanned taxi for the first time and **there is no driver.**"

Persona

Younghoon had a busy morning and needed to go to a client's office for a meeting, then return in the afternoon. Despite his lack of trust in autonomous taxis, he had no other option and took one. Private space without anyone else allowed him to relax temporarily. As the meeting approached, he soon became anxious. "I wish the taxi could go faster!" Eventually, he decided to stop at a cafe to buy coffee as an apology for being late. However, there is no one in the car. To whom should he make his request?



Taxi arrived



Check destination and start



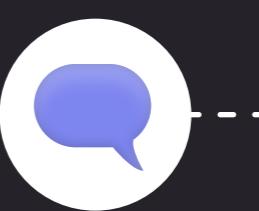
Change seat, temperature, etc



Anxiety due to being late for an appointment.



Want to stop by a cafe.



Book a taxi to return



Get off and check luggages

“

I have many requirements. What should I do without a driver?

”

Solution

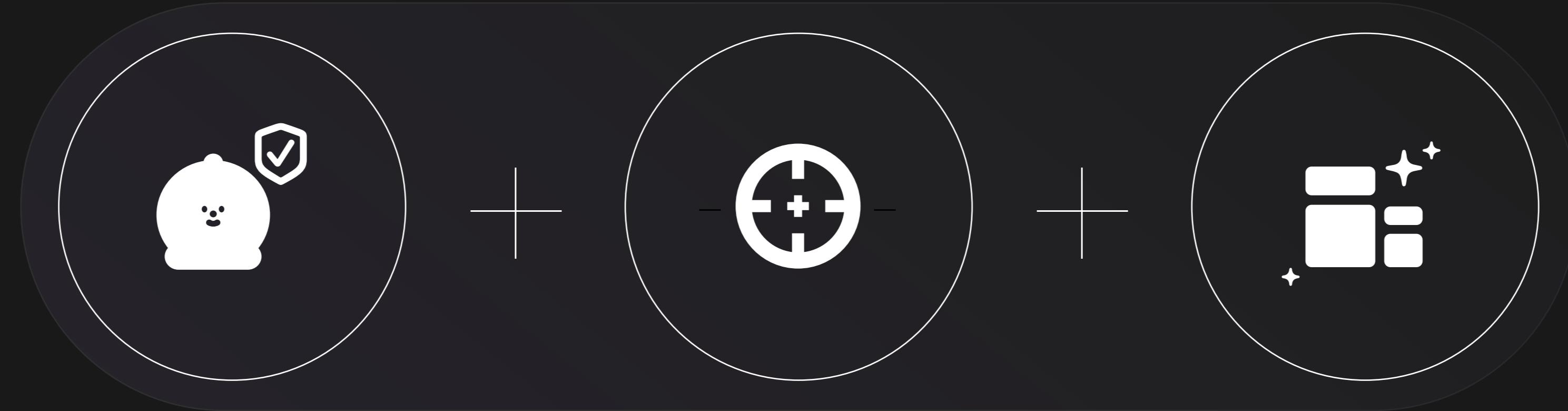
- ✓ Who should I tell all these requirements to? → **Frendly Agent**
- ✓ How can i know the taxi is functioning well? → **Trustful Information**

- ✓ How can I control car system without difficultness? → **Clear functions with intuitive UI**
- ✓ How can I spend time inside a taxi ? → **Movement Full of Joy with Built-in Applications**

“Request Easily, Move efficiently.”

Unmanned, but more than Manned Experience

We aim to address the drawbacks of current self-driving taxis by incorporating the benefits of manned taxis into our infotainment system. This will help resolve the issues of driver absence and mistrust in mechanized car control.



1

Comport from trust

- <TRUXI> is designed for comfortable use in any situation.
- Its approachable character, through both verbal and non-verbal communication, makes it easy for anyone to use self-driving taxis, reducing entry barriers.
- The interior of the vehicle can be personalized and adjusted to the user's preferences at any time."

2

Focused on user needs

- TRUXI focuses on essential functions to simplify the experience.
- The quickest route is automatically set, but can be changed by the user at any time.
- Users who wish to visit multiple locations can adjust their journey or pause the taxi nearby.
- Upon leaving the taxi, they can effortlessly reserve another for their next destination."

3

Comprehensiveness

- The screens are divided into sections that each feature is displayed separately, making it easier for the user to understand.
- The well-organized first screen allows users to quickly access the new features of self-driving taxis.
- During important communication processes like payment, the system has been designed to perform the process sequentially.

Styles & Composition

Screen Layout

Status Block ←

Check the current status destination, time, and fare.

Preferences Shortcuts ←

Customizable preferences shortcuts

Map ←

Change the route in here, Explore the surroundings. Take a closer look at the route.

Driving Mode

Select driving mode anytime. Two kinds of modes are provided. One is fixed route that user can easily configure their route. The other is flexible which can changeable.

Agent Talk

Friendly agent is always on standby so it makes user to feel more human-like. User can ask about the functions and settings of self-driving taxis. Also, user can have daily conversations with agent.

Apps

App Library Shortcut Button. Mirroring the content of your smartphone. Enjoy music or OTT and Karaoke services.

Now Playing

Display the app currently running

Preferences

Adjust the whole condition of car and tablet.

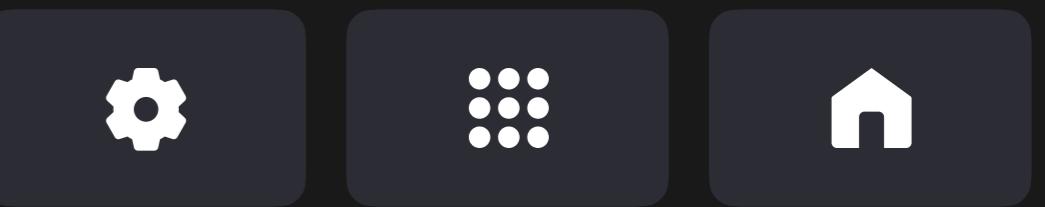
Color

Colors that reminded us of the various colors of the sky outside the taxi window. Colors could feel mood of futuristic.



#393073 #7D85EF #FFC63B #FFE268

Icon



Poppins

28px Poppins

20px Poppins

Font

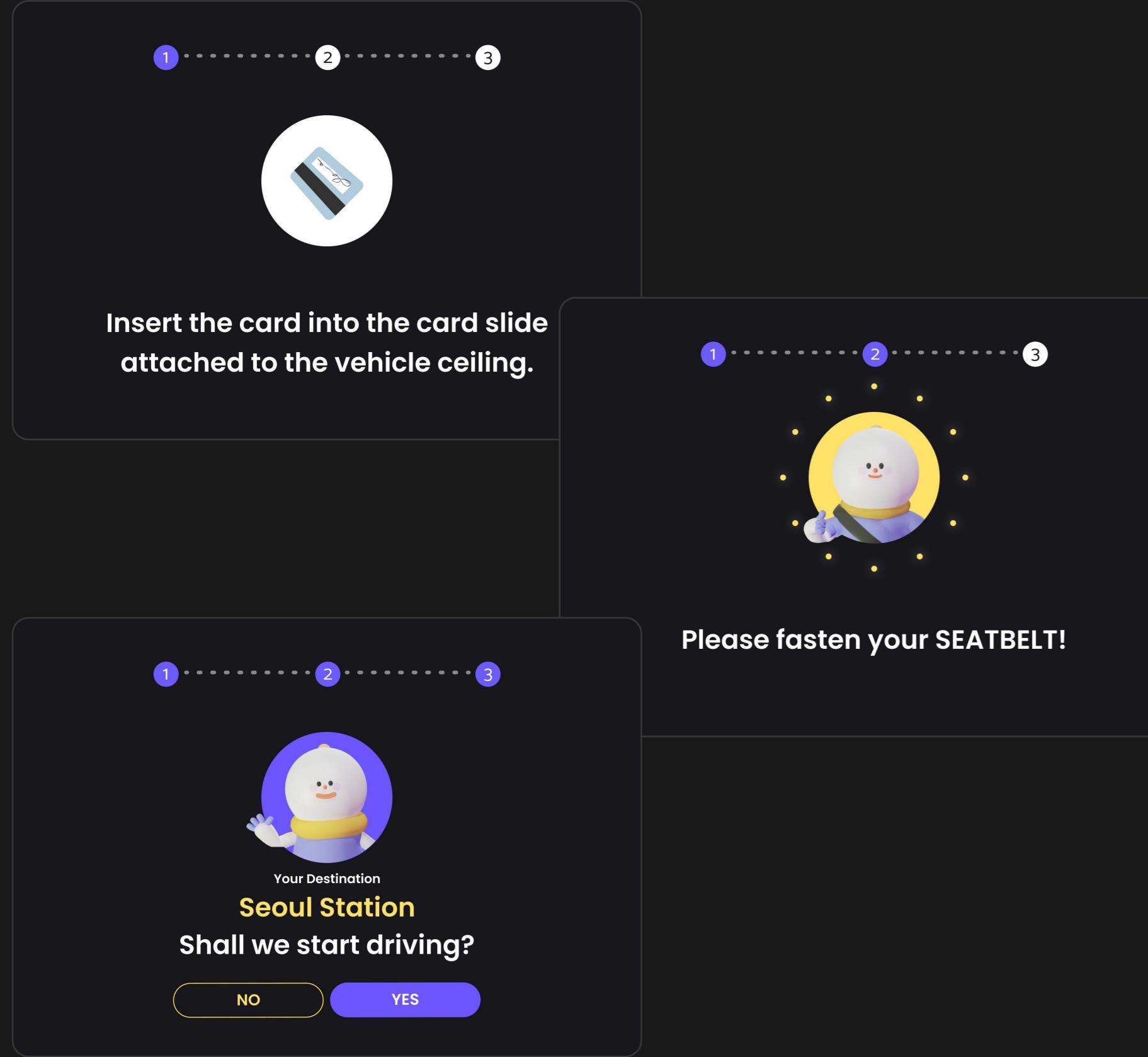
Neat and Familiar Font

Radius

Button
full radius

Card
10px radius

User Interface



The first step to build trust

Start Driving with Essential Settings

After inserting a card into the POS, buckling their seatbelt, and confirming their destination, users are ready to start driving.

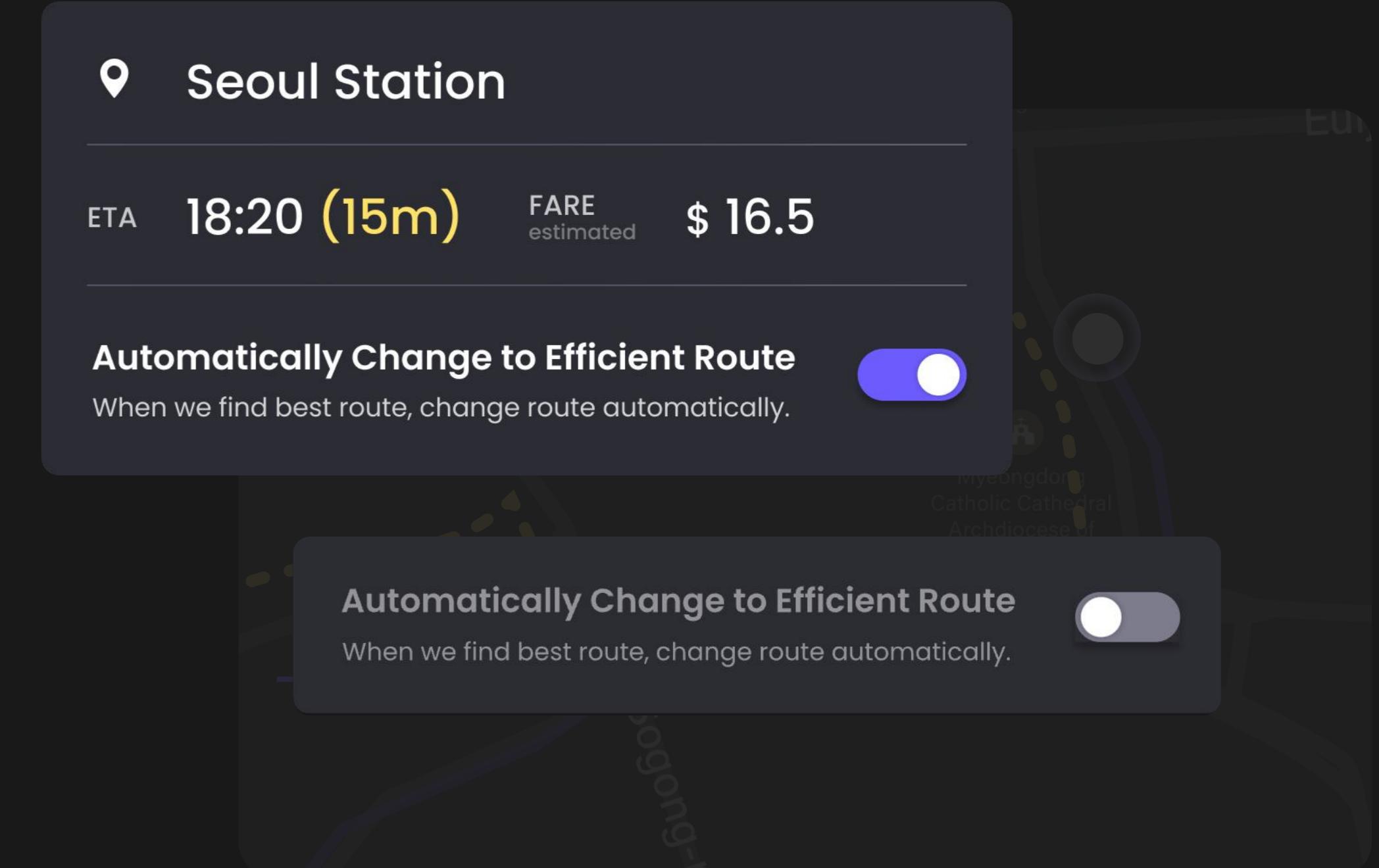
Each step is automatically checked and confirmed upon completion.



Visible agent is always on standby

Ask Agent about Functions

The agent is always available to assist the user. Simply ask any question and receive a prompt response. If you need help with common inquiries, tap the "Most users asked" button or say "Hey!" for quick access. The agent is also equipped with tailored conversations for various situations.

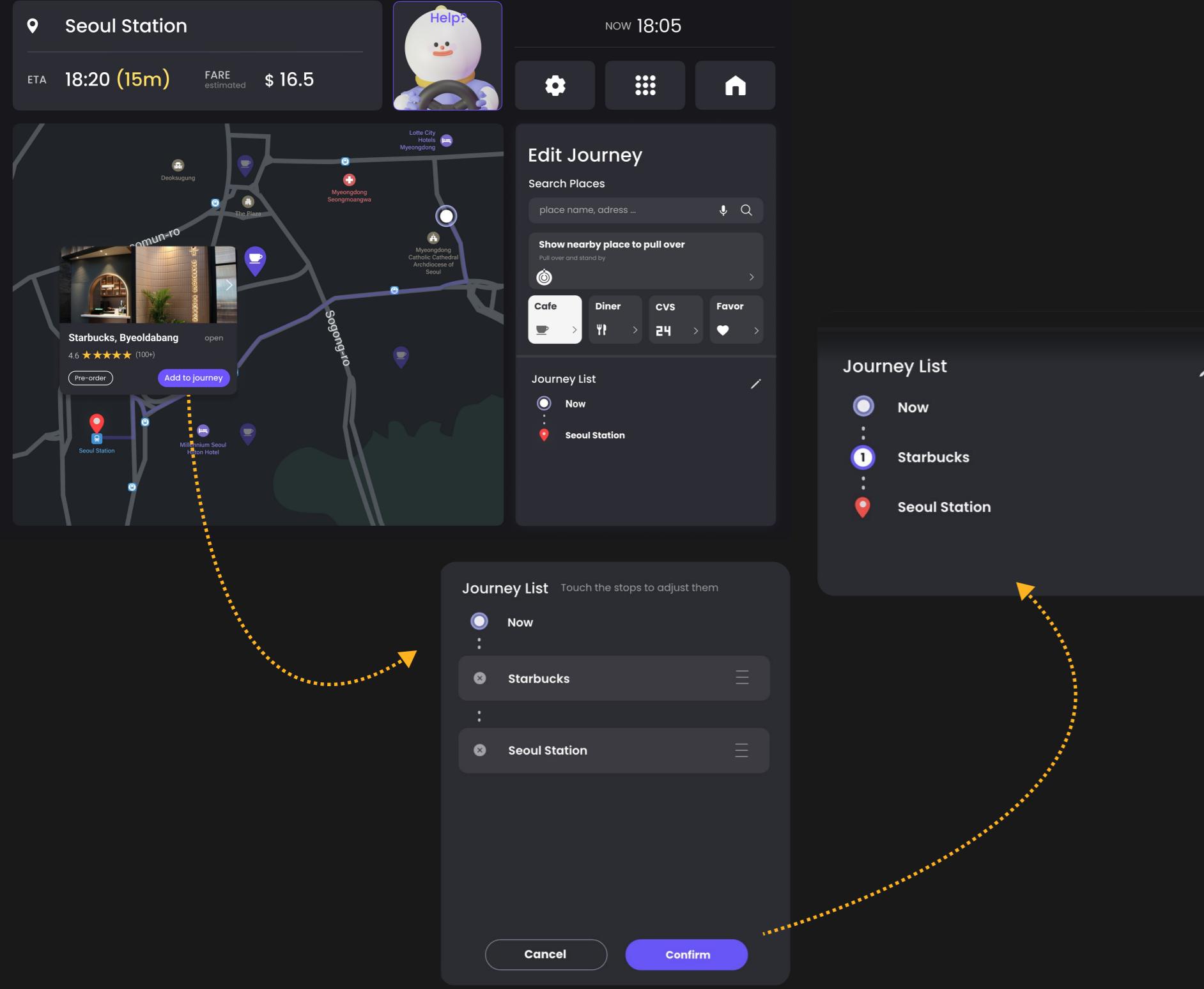


The taxi should be efficient

Automatically Change to Efficient Route

The road conditions often change, and our system adapts by automatically re-routing to the fastest path. The map, which displays road conditions with color-coded lines, helps users understand the system's decisions and increases their trust. If desired, the user can turn off the "Automatically Change" mode.

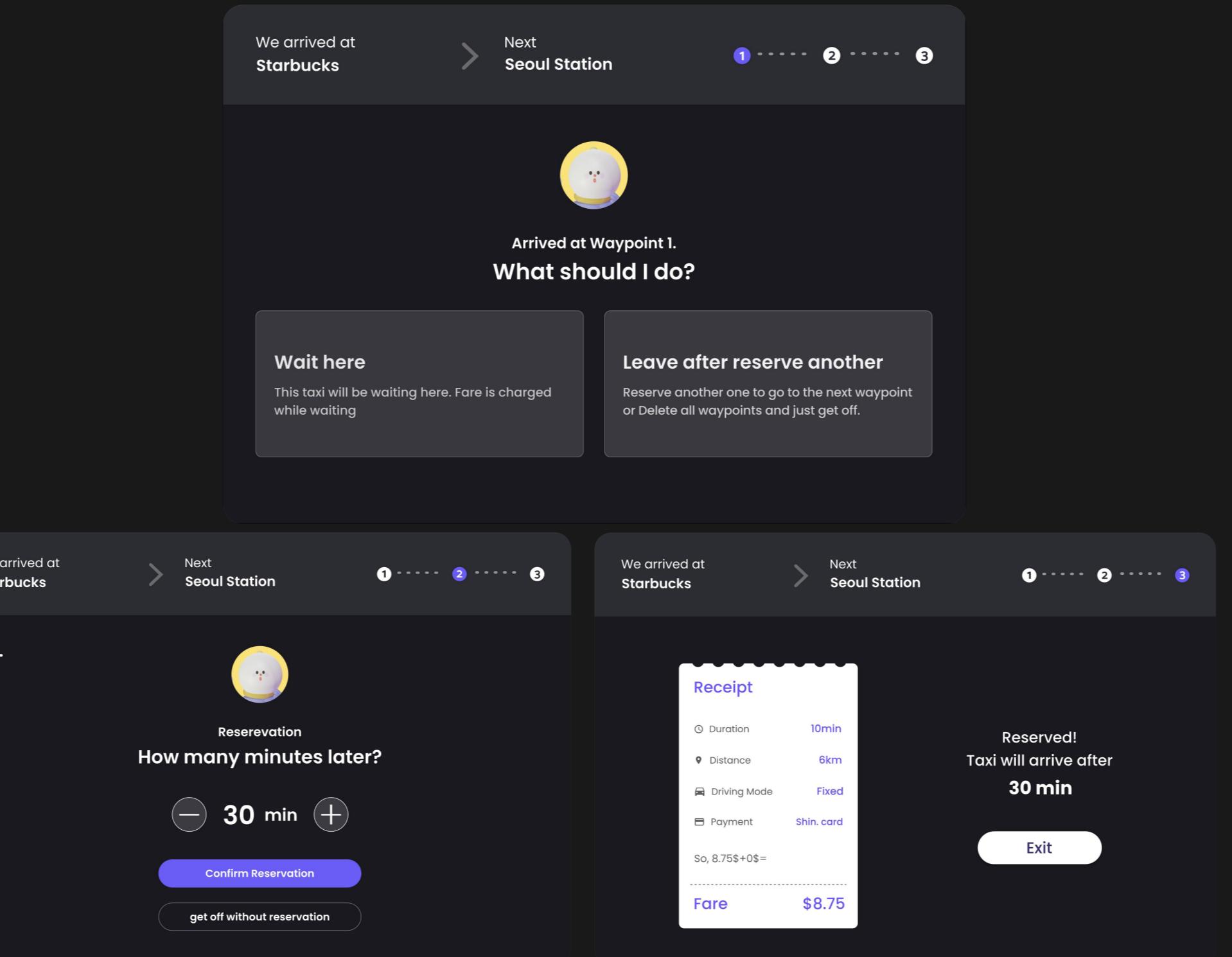
User Interface



Removes hesitation from users in changing routes

Easy Searching and Adding Stops

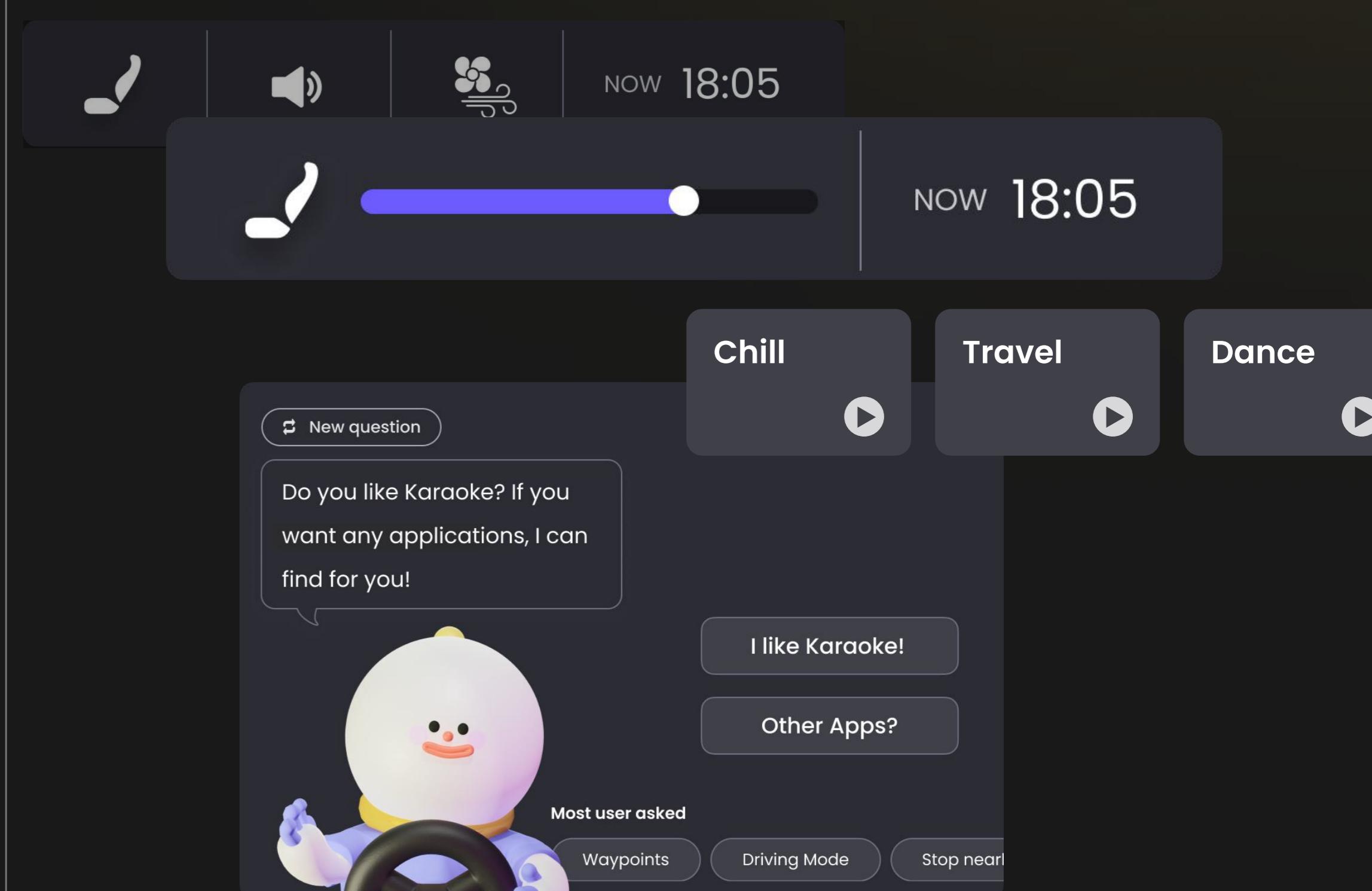
The user can add an additional waypoint by tapping "Edit journey" on the "Map" screen. They can search for the desired location using the search bar, and add a stop by selecting the location pin.



Reduces the hassle of users having to redo the task

Check the Next Destination

If the users reach a stopover, they have two options before exiting the taxi. They can either choose to park the taxi and do their jobs(ex. buying a coffee), or leave this taxi by reserving next one.



Making it easy to use for users unfamiliar with the new UI

Accessible Controls and New Features

The home screen allows users to easily control their environment using shortcuts and provides a simple connection between the infotainment system and the user through the agent, who can assist with other applications.

Meet self-driving with warm eyes

Unmanned, but more than Manned Experience

Personal

Everyone can enjoy their personal space&Time

Trustworthy and comfortable spaces provided by the agent allow users to focus on their personal space and time. Our easy and efficient infotainment system will improve the convenience of people of all ages, including those with disabilities.

With the addition of waypoint functions, passengers can experience drive-throughs, and facilities and services will be expanded to maximize valuable time during travel.

Corporate

New Possibility

Our system aims to help self-driving technology companies go beyond just driving technology and explore new possibilities. It functions as a new framework for the infotainment system in self-driving transportation, providing scalable services like customer service, adjustments, and applications. If self-driving technology were to adopt our framework, it could become more intuitive and user-friendly, and at a low cost, thus making it easier for people to interact with the service.

Social

Technology for Human

We aim to promote social development for people, not technology. Our service focuses on smooth human-machine communication and trust building. Our goal is to create a people-oriented technology development. This approach can alleviate people's anxieties about AI and encourage greater adoption of AI services, ultimately leading to a more convenient society. Also, Communication-focused technology can benefit people with disabilities or language barriers, making AI-powered services more accessible and inclusive.