<VIVU>

Vision Document

Version <2.1>

Revision History

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| 25/10/2023 | 1.1 | Fill out the content of 3.1 (Stakeholder Summary) and 3.2 (User Summary) | Hoàng Lê Cát Thanh |
| 25/10/2023 | 1.2 | Fill out the content of Product Features | Trần Trung Hiếu |
| 26/10/2023 | 1.3 | Fill out the content of 1 Introduction and 2 Positioning | Võ Cao Trí |
| 26/10/2023 | 1.4 | Fill out the content of Non-functional Requirements | Trần Trung Hiếu |
| 26/10/2023 | 1.5 | Fill out the content of 4. Product Overview | Đoàn Thị Yến Nhi |
| 27/10/2023 | 1.6 | Fill out the content of the 3. Stakeholder and User Descriptions | Lê Ngọc Thảo |
| 27/10/2023 | 1.7 | Review overall | All member |
| 28/10/2023 | 1.8 | Double-check | All member |
| 3/11/2023 | 1.9 | Add car rental statistics feature | Trần Trung Hiếu |
| 11/11/2023 | 2.0 | update feature view history to “View trip” and add “Cancel Current Trip” feature | Lê Ngọc Thảo |
| 11/11/2023 | 2.1 | Check the Detailed Vision Document. | Hiếu, Thảo |

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Vision (Small Project)

# Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of the VIVU. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how the VIVU fulfills these needs are detailed in the use case and supplementary specifications.

The introduction of the Vision document provides an overview of the entire document. It includes the purpose and references of this Vision document.

## References

This subsection provides a complete list of all documents referenced elsewhere in the Vision document. Identify each document by title, report number if applicable, date, and publishing organization. Specify the sources from which the references can be obtained. This information may be provided by reference to an appendix or to another document.

# Positioning

## Problem Statement

| The problem of | Finding and renting a car easily and quickly in an efficient way |
| --- | --- |
| Affects | Travelers, business people, and who needs temporary vehicle |
| The impact of which is | Difficult, time-consuming, and frustrating to find different cars from different companies, and compare prices. It can be difficult to find an available car at any desired time and location. Customers may have to overpay for a car. |
| A successful solution would be | Customers should have a wide choice of cars, including different types, sizes, prices, and locations. Customers should be able to see real-time pricing, with no hidden fees. Customers should compare rental cars, and then choose the best deal. Customers should be able to search and book a rental car quickly and easily with their smartphone or computer. |

## Product Position Statement

| For | Travelers, businesses, customers, and car owners. |
| --- | --- |
| Who | Have local Vietnamese driver's license and want to rent a car or rent out a car. |
| The (product name) | VIVU |
| That | Convenient, transparent and choice-rich platform for booking a rental car. The mobile app that allows users to compare prices and availability of different cars from different owners. |
| Unlike | Other rental car apps (MiOto, booking,...) |
| Our product | Offers a more user-friendly experience, the app should be easy to use and allow users to find and book a car in a minute. Offers a wide selection of cars to choose from, including different types, prices, and locations. Shows users real-time pricing with no hidden fees and availability. |

# Stakeholder and User Descriptions

## Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| Project Manager  Lê Ngọc Thảo | This is a stakeholder that is primary for leading the system development. | Plans, keeps the project team focused and ensures the success of the project. |
| Developer team  Lê Ngọc Thảo  Võ Cao Trí  Trần Trung Hiếu  Hoàng Lê Cát Thanh | This is a stakeholder that is primarily responsible for the development process of the product. | Drafts the product’s architecture  Implements the product, reviews the final result, and updates if needed. |
| Business Analyst  Đoàn Thị Yến Nhi | This is a stakeholder that is responsible for analyzing business requirements, processes, and information systems | Identifying customer requirements, and clarifying them to the development team. |
| Supervisor  Nguyễn Lê Hoàng Dũng | This is a stakeholder that ensures the project's result meets the expectation. | Supervise and evaluate application development and support development team. |

## User Summary

| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| --- | --- | --- | --- |
| Car owner | End-user of the system | Provide cars’ information.  Provide cars for renting.  Receive notification when a car is being requested for rent or when a car is returned. | Self |
| Customer | End-user of the system | View and choose which car to rent.  Request for renting a car and returning the car after use.  Pay the charge. | Self |

## User Environment

**Number of People Involved in Completing the Task:**

* Car Owners (Renters): A car owner typically manages and operates their vehicle information individually. The number of cars they manage may vary based on demand and availability.
* Car Renters: A car renter usually completes tasks alone.

**Duration of a Task Cycle:**

The mentioned times may vary based on the complexity of the transactions, specific circumstances, and the user's experience. The task cycles can change depending on the flexibility of the application and the specific requirements of car owners and car renters.

* Car Owners(30 minutes - 1 hour):

1. Vehicle Registration: In this phase, car owners need to register information about the vehicles they want to rent out. Registration details may include vehicle images, descriptions, availability, rental prices, and vehicle locations. The time required to complete this task can range from 10 to 20 minutes.
2. Managing Vehicle Information: After registration, car owners may need to modify or update vehicle details, rental prices, or availability. The time for this task can range from 10 to 20 minutes.
3. Checking Availability: Car owners often need to check the availability calendar to ensure they can accommodate bookings from car renters. The time required for this task can be from 5 to 15 minutes.
4. Transaction: When there is a booking request from a car renter, car owners need to approve the reservation, process payments, and arrange key handover or vehicle pick-up. The time for this task can range from 15 to 30 minutes.
5. Revenue comparison: Every month there will be a monthly revenue statistics table and comparison with other months in table form so that car owners can observe visually. The time for this task can range from 15 to 30 minutes.

* Car Renters(30 minutes - 1 hour):

1. Searching for a car: Car renters begin by searching for a car that meets their needs. They can search by type, brand, location, rental price range, and specific dates and times. The time required for this task can range from 5 to 15 minutes.
2. Booking: After finding a suitable car, they book it by selecting the car, choosing the rental period, and making a payment. The time for this task can range from 10 to 20 minutes.
3. Payment: Car renters need to make an online payment to confirm the rental. The time required for this task can be from 5 to 15 minutes.
4. Writing Reviews: After experiencing the service, they have the option to write reviews about their trip and share their feedback. The time for this task can range from 10 to 20 minutes.

**Unique Environmental Constraints:**

* Car Owners (Renters): Their working environment typically involves managing car information, checking availability, and conducting transactions from a personal device (computer or smartphone). This can take place both indoors and outdoors.
* Car Renters: They may perform tasks such as searching for and booking cars from various environments, including the workplace, home, or while on the go. This requires a mobile-friendly application for use on smartphones.

**Current and Future System Platforms:**

* Current: Users commonly use platforms like iOS and Android on smartphones and personal computers to access the car rental application.
* Future: There may be developments in the use of new platforms or updated versions of operating systems in the future.

**Other Applications in Use:**

* Car Owners (Renters): They may use applications for asset management or online payment services to manage their transactions.
* Car Renters: They may use travel-related, payment, and transportation applications to plan their trips.

## Summary of Key Stakeholder or User Needs

| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| --- | --- | --- | --- | --- | --- |
| Car Owners - Searching for car information and managing cars. | High | Complexity of searching and managing cars. | Using current car rental websites or apps, often relying on car descriptions and  images. | | Provide a robust vehicle information search tool, displaying ratings from previous renters and detailed vehicle information. |
| Car Renters - Searching for suitable cars and booking. | High | Ability to find suitable cars; Reliability of car information. | Searching for vehicle information online through car rental websites or apps, often relying on vehicle descriptions and images. | |
| Booking and Payment | High | Complexity of the booking process; Time spent on payment. | Booking vehicles through the app and making online payments; often require credit card information. | | Streamline the booking and payment process, and support various payment methods, including e-wallets. |
| Reviewing the rental experience. | Moderate | Ability to write reviews; Interaction in rating. | Writing reviews on social media or within the app, often in text format and reactions (emojis). | | Allow renters to write diverse reviews, including text, images, video, and rate according to various criteria. |

## Alternatives and Competition

**App Competitor:** MiOto

* Strengths:
* Having a diverse fleet of cars to cater to various customer preferences, including different car models, sizes, and features.
* The interface colors are harmonious, and the buttons are intuitive.
* Weaknesses:
* Complex interface, displaying too many functions and information on the homepage, presented in a non-logical sequence (booking by date at the top, followed by the list of vehicles and advertisements, etc.), which can be confusing for users in understanding the booking process and finding vehicles.
* Pricing Complexity: Pricing structures can sometimes be complex, with additional fees and charges that customers may find confusing.

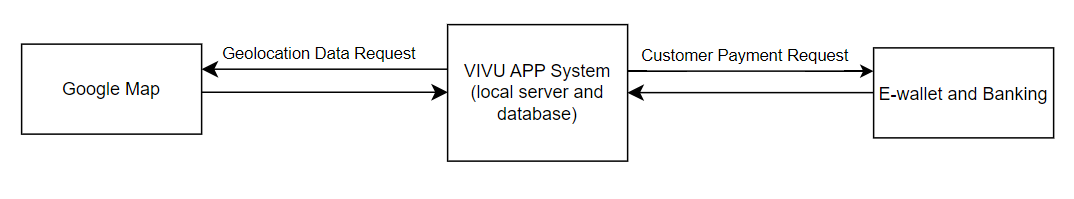
**Key Improvements Over Competitors: VIVU**

* User-Friendly Interface: The VIVU app will prioritize a visually appealing and easy-to-navigate interface to enhance the user experience.
* Focus on Core Functions: The VIVU app will concentrate on key features related to car rental, such as search, booking, payment, and reviews.
* Relevance: It will avoid displaying unrelated information, providing a streamlined experience for car owners and renters.

# Product Overview

A Product overview is a concise and high-level introduction to a specific product, providing key information about its purpose, features, benefits, and target audience. It serves as a quick reference or summary for stakeholders, customers, or anyone interested in the product. This section usually consists of two subsections, as follows:

## Product Perspective

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## Assumptions and Dependencies

* The app assumes that there will be a sufficient number of rental cars available for users to book. It depends on partnerships with rental car companies or individual car owners.
* The app assumes that the user will give it access to their device's GPS and location services to find nearby rental car locations and track the car's location over the rental period. But if there is a problem or maintenance of API geolocation, users will not be able to search and book cars effectively. And owners may have difficulty managing their vehicles.
* This application assumes that users can process payments securely and quickly. This depends on the payment method and payment processing system.
* The app assumes that users will provide feedback, rate, and rate their experience. To provide customers with information based on other people's experiences, the app depends on previous users' ratings and price reviews. This can affect other people's decisions to rent a car.
* This application assumes that a system is in place to handle customer inquiries and complaints. This depends on this system working well, customers will feel more satisfied and confident about the service and application.

# Product Features

| Number | Category | Priority | Feature | Description |
| --- | --- | --- | --- | --- |
| 1 | General | High | Register/Log in | Allows users to create an account and log in using the application. |
| 2 | High | Cancel Current Trip | Customers or Car owners can choose to cancel the trip if they change their need to rent a car or no longer need to rent a car. |
| 3 | Low | View Trip | Allows users to view the current trip and previous rental history including rented car information, rental time, and car rental amount,... |
| 4 | Low | Verify account | Confirm user information, ensure security, and protect user data. |
| 5 | Low | Rating | After using the car, customers can rate the service. Additionally, the owners can rate customers. |
| 6 | Low | Coupon | Voucher gives customers a discount when booking if they meet the requirements. |
| 7 | Low | Locating | Use Google Maps to display the current location of the car to help car renters easily move or help suggest cars near your area to rent a car. easily and conveniently. |
| 8 | Low | Create a user profile | After a user provides his or her information, a number will be displayed for others to see. The owner's profile will be visible to users and vice versa. |
| 9 | Car Rental Customer’s exclusive | High | Book car | Allows customers to choose to rent a car immediately or immediately. |
| 10 | Low | Payment | Customers can choose to pay in cash or online payment like Momo, etc. |
| 12 | Low | View car information | Before deciding to rent a car, customers can view car information such as car type, car make, number of seats, car rental price, car condition, so on... to be determined by the owner. |
| 13 | Car Owner’s exclusive | High | Add car information | Allows owners to add cars that the car owners have and want to rent to others. |
| 14 | High | Delete car information | Allows the car owner to delete information about the car that the owner no longer wants to rent out. |
| 15 | High | Edit car information | Allows the car owner to edit inaccurate information about that car. |
| 16 | Low | Car Rental Statistics | Chart analyzing the number of rented cars and the monthly revenue of car owners. |

# Non-functional Requirements

| Number | Category | Description |
| --- | --- | --- |
| 1 | Hardware | Device requirements of rental car and owner: must have Wi-Fi connection, personal location. |
| 2 | Performance requirements | The app shall be able to handle 200 concurrent users. |
| 3 | The application will restart no more than 10 minutes after the crash. |
| 4 | Operations must be processed less than 5 seconds after the customer performs the function |
| 5 | Applicable standards | Avoid car rental conflicts: 1 car at a time can only be rented by 1 person, avoiding the situation where 2 people can rent a car at the same time. |
| 6 | An account can only be a car renter or car owner, not both because it will affect the car owner and car rental data while avoiding overwriting and data misunderstandings. |
| 7 | Renting a car must have legal documents, contracts, and insurance to ensure safety and compliance with the law. |
| 8 | The person renting the car is not allowed to rent the car to another person. Only that person's account can rent the car. |
| 9 | When registering to rent a car, the system displays a sample car rental contract. |
| 10 | Platform requirements | User data security: user data is applied with security techniques to avoid data overflow or theft. |
| 11 | Car renters need to have collateral to secure the car rental process. |
| 12 | There is an evaluation between car owners and car renters to create a better environment |