

# PRD: Transact Ride

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## Vision

TransactRide envisions simplifying the daily commuting experience by seamlessly integrating digital payments for public transportation in Boston. TransactRide provides a modern, user-friendly platform that simplifies ticketing, and eliminates the need for physical cards/cash. TransactRide is an innovative app that ensures a convenient and efficient journey for all users by having a virtual Charlie card.

## Motivation

### Customer Segments

1. University and High School Students (e.g., Venkatesh, Shashanka, Emily): This category includes college and high school students who rely on public transportation for both their daily commutes and leisure activities. They will likely be open to modern, digital payment solutions and seek enhanced convenience. This demographic, consisting of the younger generation, is generally tech-savvy and adaptable to new technologies, making them inclined towards digital solutions, which also eliminates the need to carry a physical wallet.
2. Occasional Travelers (Business Trips, Visitors, etc.) (e.g. Prathamesh Malgae): Individuals falling within this segment use public transportation sporadically, primarily for social events, occasional work-related trips, and other irregular journeys. This group comprises people from various age groups and may not be well-versed in the intricacies of transit systems and their payment methods. They often encounter challenges when it comes to acquiring tickets or making payments in an unfamiliar city. Therefore, the TransactRide app would be instrumental in simplifying the ticket purchase process and reducing the hassles associated with commuting for this user group.
3. Working professionals (eg: Parth Doshi): These individuals use public transportation daily for their commute to work. They are frequent users of the Charlie card and other payment methods, and they might prioritize convenience and reliable payment options. Time is an important factor for this segment and waiting in queues to reload their Charlie cards will just put them behind their schedule.

Evidence for Customer Segments and Unmet Needs: The evidence was collected through interviews with individuals with varying usage patterns and experiences. This information provides insights into their preferences, pain points, and potential unmet needs. The sample size of interviews is nearly 50.

Early Adopters vs. Mainstream Users: Early adopters are likely to be more tech-savvy individuals, such as students and software-working professionals, who are open to and actively seek out digital payment solutions. Mainstream users, which include regular commuters and visitors, may adopt these technologies once they become more established and widely accepted.

Personas:

A. Emily the Busy Student:

Emily is an undergraduate student who manages a hectic schedule along with her part-time job at a fashion magazine. She heavily relies on the public transit system for her daily commute to both university and her workplace. Due to her busy routine, she sometimes forgets her Charlie card or lacks sufficient cash for transportation fares. Emily seeks a convenient and stress-free solution for her daily commute payments.

B. Parth Doshi the working Professional:

Parth Doshi is a diligent and outgoing professional who frequently participates in social gatherings and events. Public transportation is an essential component of his life. Parth Doshi aims to simplify his payments for public transportation services through a digital application. He's tech-savvy and prefers digital solutions to streamline the payment process. Parth Doshi desires an app that simplifies payment procedures and provides digital tickets or confirmations for his travels. He is clumsy as a person who loses his valuables very frequently.

C. Prathamesh Malgae the Travel Enthusiast:

Prathamesh Malgae is an introvert who cherishes his solitude. He resides in Texas, where public transport isn't prevalent. Prathamesh has a passion for traveling, exploring different cities, and visiting friends residing in cities different from his own. During his visit to Boston, he encountered public transportation for the first time and found it challenging to navigate the ticketing process. His primary need is a user-friendly method to access and manage digital tickets and passes. Prathamesh Malgae, upon discovering the TransactRide application, opts to use it to simplify ticket management.

## Unmet Needs

1. Real-time Balance Monitoring: Users from various segments have shown a strong demand for a feature that enables them to keep a constant check on their public transportation card balances. They are in search of a solution that allows them to conveniently view their card's remaining funds, thus avoiding unpleasant situations like running out of balance during a journey. It's a common concern, especially when they're pressed for time due to commitments like work or classes. In many instances, recharging facilities are not readily available at bus stations or stops, which is where our app becomes invaluable.

2. Lost Card Retrieval: Concerns have been raised by users regarding the misplacement of their Charlie cards. They are actively seeking a remedy for the swift recovery of their lost cards or an alternative method of accessing public transportation without the physical card. Several users have encountered the unfortunate experience of losing their Charlie card while traveling. In such cases, they often have a substantial amount, ranging from \$30 to \$50 in cash value, stored on the card, and losing it leads to financial loss.

3. Occasional travelers, especially those unfamiliar with the city's public transportation system, require a simpler method to buy tickets without relying on physical cards. They express a common unmet need for a mobile app that enables them to purchase tickets for one-time or weekend trips, making it more convenient for visitors from other cities who may not be aware of the location and usage of recharge stations. This digital payment solution aims to streamline their experience.

## Existing Solutions

Existing solutions for public transportation payment in Boston primarily include the following:

1. CharlieCard: The CharlieCard, a popular choice among daily commuters, is a physical card allowing riders to load funds or monthly passes for travel in the Boston network. It can be conveniently recharged at multiple locations.

2. MBTA (mTicket app): The MBTA offers mobile ticketing apps designed for smartphones, specifically catering to digital payments for commuter rail services.

3. City-Specific Transit Apps: Different cities have dedicated transit apps like the Transit App, Moovit, Ventra, mTicket, pronto, etc. However, these apps are city-specific and do not offer a comprehensive digital payment solution for public transportation in Boston.

Features	MBTA (Massachusetts)	MTA (NewYork)	Metropolitan Transit System (San Diego)	Transact Ride (our idea)
Digital Payment Integration	NO	NO	NO	Yes
Coverage Area	Massachusetts	New York	San Diego County, CA	Boston
Types of Transit Services	Buses, Commuter Rail, Ferries, Subway, Light Rail	Buses, Subway, Light Rail	Buses, Trolleys, Light Rail	Buses, Rail, CommuterRail, Ferry
Existing Payment Systems	Charlie Cards	Cards,Coins	Compass Card, Mobile Payment, Cash	Charlie Cards
Mobile App Availability	Yes	Yes	Yes	Developing prototype
Real-Time Information	Yes	Yes	Yes	No
Subscription fee for app	No	Yes	No	No

The existing public transportation payment solutions in Boston, including the CharlieCard and city-specific transit apps like MBTA's mTicket app, suffer from several limitations. These solutions lack integration of digital payment in the city transit networks, necessitating the use of physical cards and cash when traveling to different places. They also do not embrace the convenience of digital payments, relying on traditional methods. TransactRide, in contrast, offers a comprehensive, in-city digital payment platform for public transportation. It eliminates the need for card/cash, integrates seamlessly with popular digital payment services, and caters to a wider audience, making it a more modern and convenient choice for public transportation in Boston.

## Differentiation

TransactRide is exceptionally well-suited to seize this opportunity by offering a comprehensive digital payment solution for all of Boston's public transportation services. What sets us apart is our commitment to seamlessly integrating digital payment methods across the entire spectrum of public transportation options. We possess the vision to transform this concept into reality. While there are existing apps, none of them address the critical need for digital payment solutions in the realm of public transportation in Boston. Therefore, our innovative app distinguishes itself as a novel and highly advantageous idea, appealing to various demographics.

## Why Now?

The increasing adoption of public transportation among students and daily commuters, driven by the desire to save both money and the time lost in traffic congestion, combined with the surging popularity of digital payment methods and the widespread ownership of smartphones, presents an ideal moment to introduce an integrated digital payment system for public transportation.

## Verbal/Visual Walkthrough of Use Cases

**A.** College students, who often run low on funds and tend to forget their wallets, can register for TransactRide as follows:

1. Firstly, they need to download the TransactRide app.
2. Next, they create a user profile by providing their personal information.
3. The user then links their preferred payment methods, such as credit cards or mobile wallets, to the app.
4. They set up personalized preferences and notification settings.
5. With the app, they can purchase tickets, recharge their Charlie card, or use a digital Charlie card.

**B.** For Users who have to travel frequently and requires monthly pass card for public transportation, the process is as follows:

1. Initially, the working professional downloads the TransactRide app and creates a profile if they haven't already.
2. The user selects the type of transportation service they need, whether it's a bus, subway, or tram.
3. They navigate to the "My Tickets" section within the app, where they can view active tickets, their expiration dates, and usage history. They can also book new tickets or use their history for reference.
4. The user then purchases or activates passes, such as monthly or weekly passes, as needed.
5. The app deducts the fare from the linked payment method. The user receives a digital ticket or confirmation.
6. In this way user won't lose the card and the money on the card.

**C.** Occasional travelers or visitors who are new to the city and aren't sure about the amount required to recharge or where to obtain a card can follow these steps:

1. The occasional traveler downloads the TransactRide app and creates a user profile.
2. They navigate to the "Buy Tickets" section within the app.
3. Depending on their stay duration, they can purchase a weekly pass or choose according to their needs, make the payment, and view the confirmation ticket in the "My Tickets" section.
4. If applicable, digital tickets can be shared with other users and can be accessed on multiple

devices.

5. This way users don't have to worry about recharging the card and this app can be accessed at their convenience.

Look at **Exhibit – 1** for the Wireframes and storyboard.

## Detailed Design & Features Description

### Design Principles

We aim to develop an application that is simple and user-friendly. The following are the design principles:

- Ease of usability, simplicity, fast across all demographics.
- Ensure that One-Time Tickets, Monthly Pass, and Transit Cards have a QR code easily accessible whenever required and are scannable at the gates.
- Easy integration with payment methods.
- Safe and Secured Transactions.
- Data Security.
- Availability and Scalability to other regions in the US.

Infrastructure and Analytics	User Interface
<ul style="list-style-type: none"><li>• The application will use a public cloud platform like AWS, Azure, or Google Cloud.</li><li>• We will be using the storage services available on public cloud platforms to store our application data.</li><li>• Adobe Analytics or Google Analytics Tool will be used to monitor user usage metrics.</li></ul>	<p>The application will be available to download on the following platforms:</p> <ul style="list-style-type: none"><li>• App Store</li><li>• Play Store</li></ul>

### Features/information architecture [draft]

Feature	Details	Dependencies	Priority
Landing Page	This will be the page users will use without registration or setting up	The dependency is to get analytics on how	1

	an account. They will be provided with an option to enter their credentials, Forgot Password option, Create Account or Continue as a Guest. There will also be a Help section, where users will get more information about the app and FAQs and Terms and Conditions icon for reference.	many users prefer to set up an account vs guest users	
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<b>Login</b>	Users will be able to log into the registered account with a username (email ID) and password set up by them while registering. The user's name and password will be validated.	Use Case	1
<b>Registration</b>	Users will be able to register and create an account and agree to terms and conditions with the following details:  First Name Last Name Email ID Mobile Number Username Password Security Question	The dependency is to get the terms and conditions and get legal approvals to store applicants' information.	1
<b>Forgot Password</b>	Users can set up a new password by answering a question and by entering an OTP sent to them registered email ID/phone number.	Use Case	1
<b>Profile</b>	Users will be able to view/update the following profile information:  First Name Last Name Email ID Mobile Number Username Password	Use Case	1
<b>Home</b>	The home page will consist of buying a one-time ticket, monthly pass, and create/recharge card options. There will also be a hamburger option. The home icon will be displayed on the bottom right of each page.	Get analytics of which option is used most.  Refer Use Case	1
<b>Hamburger</b>	On clicking on the hamburger, the user will have the following option: My cards, Travel History, Plan a Travel <b>My Cards:</b> On clicking on My Cards,	Refer Use Case	1



	<p>Users will be taken to the My CardPage, where the transit card is stored.</p> <p><b>Travel History:</b> This will give a record of all past purchases.</p> <p><b>Plan a Travel:</b> The user will be taken to the scheduled travel page.</p>		
<b>One Time Ticket</b>	<p>On clicking the one-time ticket option, the user will be taken to a page, where an Several train options like MBTA Bus, Subway, and Commuter Rail will be displayed.</p> <p>Users will select any of these, and select several travelers, sources, and destinations. A ticket will be generated at the bottom of the page. If the user wants to continue, they can click on the checkout option.</p>	<p>Metrics: Number of one-time tickets created vs Number of one-time tickets purchased.</p> <p>Refer Use Case</p>	1
<b>Monthly Pass</b>	<p>Users can create a monthly pass for Bus and Subway. The pass will be displayed at the bottom of the page. First Name, Last Name, Date of creation and Expiry Date, QR code will be included in the pass. If all the details are correct, the user can move to checkout.</p>	<p>Metrics: Number of monthly passes created vs Number of monthly passes purchased.</p> <p>Refer Use Case</p>	1

<p><b>Create/Recharge Card</b></p>	<p>Users will be taken to a page selecting the Create/Recharge Card option, where they can create a card, view an existing card, and recharge the card. On clicking the + option user will be asked which card to create from options like Charlie, NJ Transit, etc. A digital card will pop up with the user's name, last name, and date of card created. There will also be a QR that the user can scan. Post a card is created and all the cards will be displayed on this page. Users can select one of them, and they will be taken to a page, where they can view the card, QR to scan at the gate, available amount, and an option to recharge will be available.</p> <p>On clicking on the recharge card, pre-defined amounts (\$10, \$20, \$30) and a text box where user can enter their desired amount will be available. Users can continue by clicking on checkout.</p>	<p>Metric: Number of cards created Average amount of card recharge.  Refer Use Case</p>	<p>2</p>
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<b>Checkout</b>	The checkout page will give a summary of the one-time ticket/monthly pass/recharge card. Users can verify the details and click continue. A page will display all the payment options like debit/credit card, Apple Pay, PayPal, etc. Users will be asked to add details on selecting any of these options. There will be a pop-up asking if the user wants to save the payment option. If yes, the details will be saved as underpayments, or else the user will move ahead as a time payment. User purchases will be stored under travel history and accessed whenever required.	Number of users purchasing one-time/monthly pass/recharge cards.  Refer User Case	1
<b>Hamburger Option : My Cards</b>	Users will be taken to a page where they can view their existing cards, and an option to create new cards. On selecting an existing card, the user can view the QR code to scan at gates, the available balance, and an option to recharge.	Refer Use Case	2
<b>Hamburger Option: Travel History</b>	User Purchases like one-time- tickets, and monthly passes will be displayed here. Users can scan them (only once for a one-time ticket) and till the expiry date (monthly pass). Once the ticket expires it will be removed from the display. The records button will be available at the bottom of the page. On clicking this option, the user will view all the past purchases. Tickets/passes expired will move to this table	Refer Use Case	1

<b>Hamburger Option: Plan a Travel</b>	By clicking on this option, users will be taken to a page where they can book a time ticket in advance. Users will have to put details like Source, Destination, and Number of Travellers. A ticket will be generated, and the amount will be displayed on it. Post verifying the details, the user can move to checkout.	Refer Use Case	3
<b>Account</b>	<p>The account option will be displayed on the left bottom side of each page. Clicking on this user will have options like Profile where all the user details First Name, Last Name, email ID, etc are present, and an option to update the profile. Payments: User-saved payment options are stored and an option to update.</p> <p><b>Help:</b> User guide and FAQs. Option to report and reach out to customer care.</p> <p><b>Settings:</b> Option to update profile, update payments, update password, manage notification. Setup Auto Pay</p> <p><b>Sign Out:</b> Option to Log out of the account</p>	<p>Metrics: Number of reported incidents.</p> <p>Refer Use Case</p>	1
<b>Payments</b>	On clicking on account>>Payments>> User will view saved payments and, the option to create new or update existing ones. Users can create a preferred option in the following steps: Select mode of payment: Debit/ Credit card, Apple Pay, PayPal, etc, Enter Credentials>> Terms and Conditions>> Mark as preferred payment.	Refer Use Case	1
<b>Help</b>	<p>On clicking on this page, the user will view two options:</p> <p><b>FAQs:</b> Commonly asked questions and</p>		1

	answers to resolve queries. Cancellation/ Refund: Refund policies and an option to cancel a purchase. <b>Customer Care:</b> Users can post their queries and a customer care employee will connect to them via email or directly call customer care		
<b>Notifications</b>	Alert sent to user 3 days from monthly pass expiry. Alert sent to the user when transit card balance is \$5.		3
<b>Auto- Pay</b>	Users can set up auto-pay under Account>>Settings>>Auto Pay to re-purchase monthly pass.	Metrics: Number of Monthly passes Re-purchased	3
<b>Chat Box</b>	Chatbox displayed on each page to answer user queries and to start the cancellation/ refund process	Metrics: Number of cancellations/refunds	3

### **v1 aka Minimum Viable Product (MVP)**

The Minimum Viable Product (MVP) for the launch of TransactRide focuses on delivering essential features that ensure a functional and user-friendly experience. We have a landing page (Look **exhibit- 2**) to showcase the features that we are going to offer.

#### **Priority 0 (P0):**

- Cross-platform compatibility (iOS and Android)
- Guest Login / User Login
- Create Digital Charlie card
- Digital Ticket Purchase (one-time ticket, monthly pass, recharge card)
- Payment Integration (e.g., Credit/Debit Cards, Apple Pay)
- Booking Confirmation to scan the ticket.
- Tech Support

**Priority 1 (P1):**

- Historical Transaction Records
- Security Features (e.g., Lock-screen Protection)

**Priority 2 (P2):**

- Additional Payment Methods (e.g., PayPal, Zelle, Venmo)

**Chore (C):**

- Customized User Profile
- Forgot Password

**vNext**

vNext aims to build upon the MVP, introducing improvements and additional features. Key elements include:

- Integration of Loyalty Programs or Discounts
- Marketing to various customers segments
- Multi-language Support
- Advanced Security Features
- Secured login through FaceID
- Plan Ahead for travel
- Notifications for alerts
- Repeat buying ticket from history.

**v longterm**

- Integration with Additional Cities and Transit Systems
- Introduction of Subscription Plans for Regular Commuters
- Advanced Predictive Analytics for Travel Planning

## Roadmap / Timing

Milestone	Timing	Notes
Performing market research	January	Conducting market research to know your customer base, places you will find them and to study the market size.
Creating user personas and user stories	January	User stories and personas would be developed to analyze user behavior in different scenarios leading in the development of various use cases.
Finalizing on the design of the application and developing the wireframes	January	Develop the wireframes to visualize how the application and each page would look like and to bring structure to the application.
Creating the landing page, login and registration page for the application	February	Work on the features of landing page which allows the user to insert their credentials to access the application. Further working on the login and registration page of the application which comprises allowing the user to enter their personal information to register and create credentials for them.
Developing forgot password page, profile, home page and the hamburger section on the left	February	Working on the features of forget the password page where they can setup a new password by answering a security question, profile page that includes all their information, home page where they can select monthly passes and other options and the hamburger section including features of travel history and my cards.
Working on one time ticket, monthly pass, create/recharge the card and checkout pages.	February	Developing further pages of one time ticket access, monthly pass and to create or recharge their cards which will allow them to travel hasslefree.
Constructing the user account, payments and help section	February	Working on payments help section of the application to enable the users to have secured payments and have customer support in case of any doubts.
Perform testing for the application and make the application ready for	March	Perform quality testing and fixing bugs if any.

launch		
Launch the beta version of the application	March	Launching the beta version will help in knowing the user feedback.
Analyze the user feedback and fix bugs	March	Using analytics work on the necessary parts
Launch the application.	March	Launch the final version of application on Google PlayStore and AppStore.
Work on marketing strategy and conduct awareness campaigns	March	Develop a marketing strategy to and conducting campaigns to create brand awareness using various social media platforms.
Provide customer support	March	Provide personalized customer support service for users to solve and understand their problems and work on the application accordingly.
Introducing real-time balance monitoring	April	This feature will allow users to check the balances on their card in real-time.
Expansion of ticketing options	May and June	The addition of this feature will help in providing discounts for bulk purchases which will increase the in-app ticket purchase by approximately 15%.
Work on push notifications and alerts	July	Developing the push notifications and alerts will help in enhancing user experience.
Adding feature for multiple transit cards and scheduling future trips	August and September	Working and enabling these features would allow users to save multiple transit cards in the application like Charlie, Metro card and users would also be able to plan ahead for their travel.
Introducing a chat box feature in the application	October	An additional chat box feature will help resolve issues of customers within less time.
Adding history of the trip feature	November	With this feature users can check their previous trips
Partnering with local colleges	December	Collaborating with colleges will help in promoting the application as students comprise of customer segment.

See **Exhibit-3** for Product roadmap.



## Scenarios for Service Introduction

The introduction of the service will adopt a gradual approach, commencing with an alpha release primarily targeted at students and a select user group for initial testing and feedback. Subsequently, a beta release will follow, expanding the user base to include a broader audience and diverse customer segments, refining features based on valuable user inputs. The full launch will encompass a widespread release to the public. To generate awareness about the app, we will leverage word-of-mouth referrals and collaborate with student influencers across various universities. The rollout will progress gradually, extending first to working professionals and eventually reaching a wider population in the city. This chosen strategy involves a phased launch starting in Boston. This approach enables focused testing, iterative enhancements, and customized adaptations to address the unique needs of the city.

## Metrics

1. User Conversion Rate (UCR):  $(\text{Number of Ticket Purchases} / \text{Total App Downloads})$
2. Daily Transaction Volume:  $(\text{Number of Daily TransactRide Transactions} / \text{Total Daily Public Transport Users in Boston})$
3. Geographic and Demographic Usage: Analyzing app usage patterns across regions and age groups.
4. Frequency of App Usage: Number of Weekly/Daily App Openings
5. User Feedback and Ratings: Average Ratings and User Feedback Analysis
6. Average Revenue Per User (ARPU):  $\text{Total Revenue from Ticket Purchases} / \text{Total Number of Users}$
7. Annual User Base Growth:  $(\text{Current Year's User Base} - \text{Previous Year's User Base}) / \text{Previous Year's User Base}$
8. Feature Popularity: Usage Frequency of Specific Features (e.g., Monthly Pass Purchases, Trip Planning)
9. User Account Status: Percentage of Registered Account Holders
10. Payment Method Breakdown: Percentage of Transactions through Various Methods (e.g., Apple Pay, Debit/Credit Cards)

11. Average Rides Per User:  $\text{Total Rides} / \text{Total Number of Users}$
12. Failed Transactions Analysis: Number of Failed Transactions due to Gateway Issues
13. Impact of Promotions: Correlation between Promotional Initiatives and Transaction Volume Increase
14. Feature Adoption Rate: Number of users actively using a new feature divided by the total number of users.
15. Time to Complete Transactions: Measures the time taken by users to complete a transaction within the app. short transaction times contribute to a smoother user experience.

## International

Our main emphasis is on introducing the application in Boston initially, followed by expansion into major U.S. cities, featuring multilingual capabilities. The choice to forego internationalization is based on our strategic method of a step-by-step release, starting in Boston and progressively reaching major U.S. cities. This approach allows us to tailor the application to conform with regional regulations and user preferences. Internationalization entails dealing with governmental entities and facing uncertainties regarding the existing infrastructure in particular countries, prompting our decision to refrain from entering the international market at this point.

## Projected Costs

1. UX Designers:  $2 \text{ designers} \times \$70,000/\text{month} \times 3 \text{ months} = \$420,000$
2. Product Manager:  $1 \text{ manager} \times 60,000/\text{month} \times 5 \text{ months} = \$300,000$
3. Project Manager:  $1 \text{ manager} \times 60,000/\text{month} \times 4 \text{ months} = \$240,000$
4. Backend Engineers:  $3 \text{ engineers} \times 80,000/\text{month} \times 6 \text{ months} = \$1,440,000$
5. Frontend Engineers:  $2 \text{ engineers} \times 80,000/\text{month} \times 6 \text{ months} = \$960,000$
6. AWS Cloud (Initial Deployment): \$5,000

7. Customer Support Team: 3 representatives x 60,000/month x 3 months = \$900,000

8. Legal and Compliance Team: 1 x expert x 100,000/ month x 1 month = \$100,000

9. Data Analytics Team: 3 analysts x 70,000/ month x 3 months = \$630,000

To calculate the total engineer \* months for the project, we can sum the individual contributions:

2 UX designers×3 months+1 Product Manager×5 months+1 Project Manager×4 months+3 Backend Engineers×6 months+2 Frontend Engineers×6 months+3 Customer Support Representatives×3 months+3 Data Analysts×3 months = 63 Months

Number of Machines required one machine per month (Amazon EC2 10TB/month = \$0.09/GB)

No. of machine required 2 x 24hr x 365 x \$ 0.09 = \$ 1,576\$

Amazon web services: 250 GB per month (Amazon S3 cost \$0.023/GB).

**Total costs:** \$420,000 + \$300,000 + \$300,000 + \$1,440,000 + \$960,000 + \$5,000 + \$900,000 + \$100,000 + \$630,000 = **\$ 5 million appox.**

## Operational Needs

### 1. User Support:

- A dedicated user support system is essential to assist customers in using the digital payment platform. This may include a customer service team available through various channels (Chatbot, Email, Phone) to address user queries, troubleshoot issues, and guide users through the platform.
- Providing users with ongoing assistance as they become accustomed to and use the TransactRide application.

### 2. Technical Support:

- The duties of the Technical Support team include fixing technical issues, guaranteeing system stability, and helping users who are having technical issues.
- Continuously keep up with updates and enhancements to the technical infrastructure regularly.

### 3. Training for Users:

- Training program for users, including both customers and public transportation staff, to ensure a smooth onboarding process and effective utilization of the TransactRide App.

- Initial intensive training during the launch, followed by periodic refresher sessions and updates as the platform evolves.

#### 4. Collaboration with Transportation Authorities:

- Forming and upholding a partnership with transportation authorities to smoothly incorporate the digital payment platform into the current framework.  
This includes adhering to regulatory requirements, coordinating data exchange, and integrating the system.
- Constant cooperation to handle changing requirements for transportation, system upgrades, and regulatory adjustments.

#### 5. Partnership with Contractors or Sources:

- Depending on the size and complexity of the project, collaborating with contractors to provide specialized services like software development, security evaluations, or marketing campaigns may be necessary.
- Finite commitment for specific project phases, with the possibility of ongoing collaboration for updates, enhancements, or expansions.

#### 6. Data security and Privacy Compliance:

- Putting policies in place to protect user data privacy and security, including adhering to industry standards and pertinent laws.
- Keeping an eye on new threats and implementing security protocol updates to preserve user confidence.

#### 7. Marketing and Outreach Teams:

- A group tasked with marketing and outreach initiatives to spread awareness of the TransactRide platform or App among the intended clientele. This covers collaborations, awareness campaigns, and digital marketing.
- Maintaining a strong market presence, with periodic campaigns to attract new users and retain existing ones.

#### 8. regular Platform Monitoring and Maintenance:

- Constant observation of system analytics, user comments, and platform performance  
Frequent upkeep to fix bugs, enhance performance, and apply updates.
- Ensuring the platform remains reliable, efficient, and aligned with user needs.

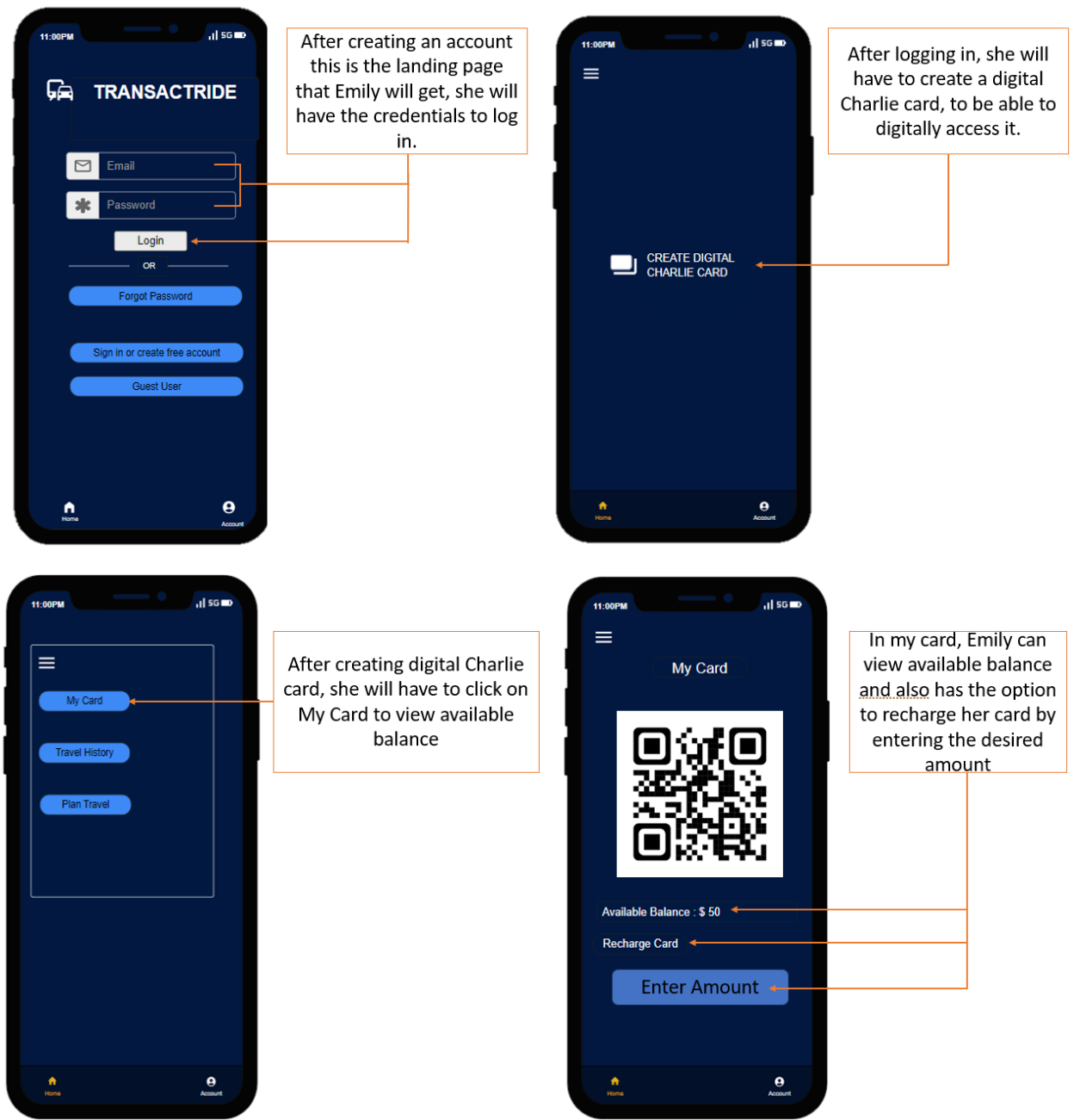
## Addressing Caveats/risks

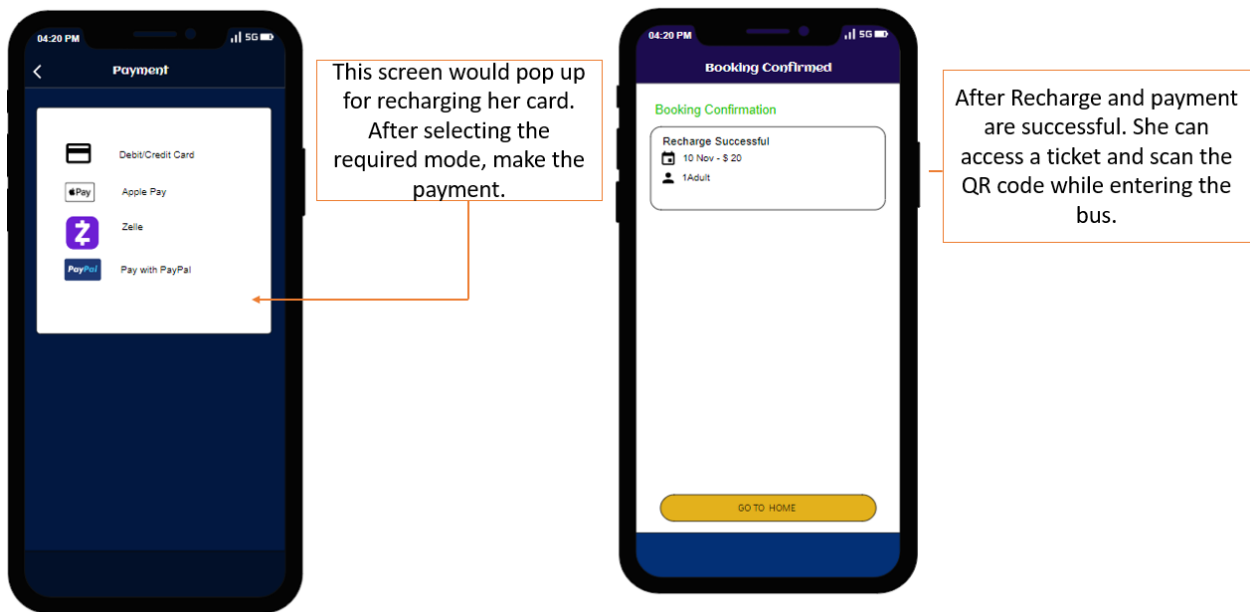
Risk Description	Mitigation Strategy
System Reliability (inability to access login details on multiple devices)	Conduct thorough system testing to ensure reliability. Implement redundancy measures, such as backup login options and synchronized user profiles across devices.
Dependence on Third-Party Apps	Forge partnerships with essential service providers to ensure seamless integration. Develop contingency plans in case of disruptions with third-party services.
User Adoption Challenges	Implement a robust marketing strategy, including engagement with potential users, promotional offers, and collaborations with influencers. Engage with government entities to incentivize adoption.
Infrastructure and Compatibility Issues	Continuously update the application to ensure compatibility with the latest devices and operating systems. Engage with government entities to enhance infrastructure where necessary.
Regulatory Compliance	Stay updated on regulatory changes, collaborate with legal experts to ensure compliance, and maintain flexibility in the app's design to adapt to evolving regulations.
Technical Glitches and Downtime	Establish a robust technical support system, monitor for potential issues proactively, and implement rapid response protocols to minimize downtime.
Security Risks (Hacking, stealing debit/credit cards, and Privacy Concerns)	Implement stringent data protection policies, including encryption measures and secure coding practices. Obtain explicit user consent for data collection. Introduce robust security features like two-factor authentication and regular security updates. Educate users about password security.

# APPENDIX

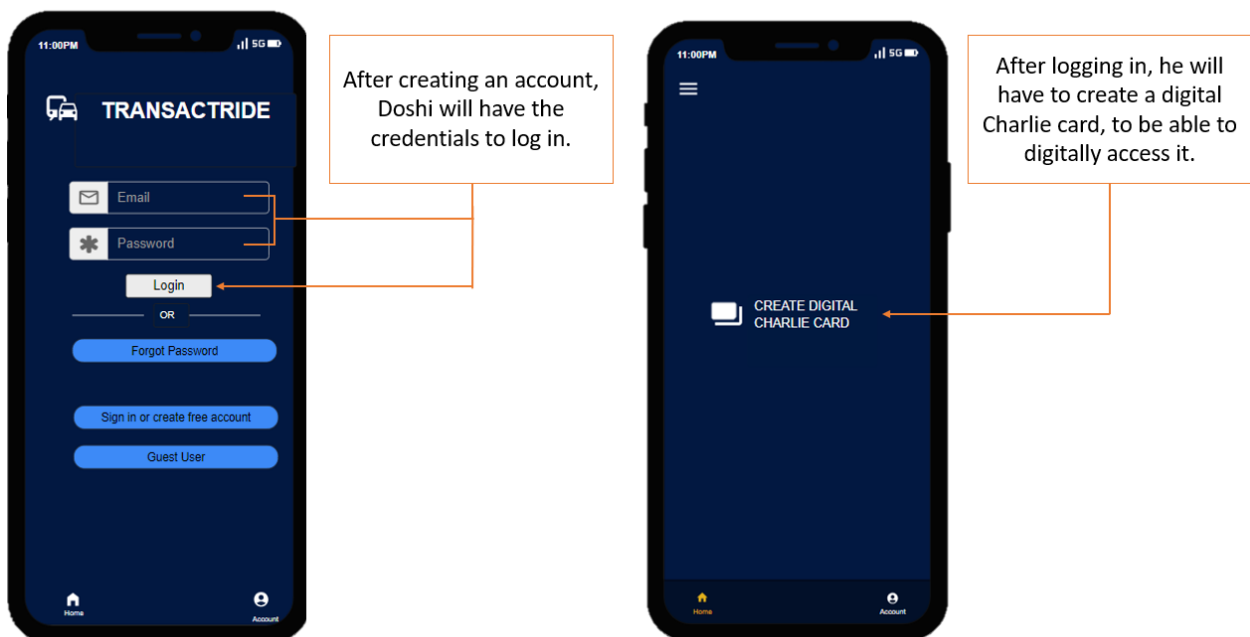
## Exhibit – 1: Story Boards

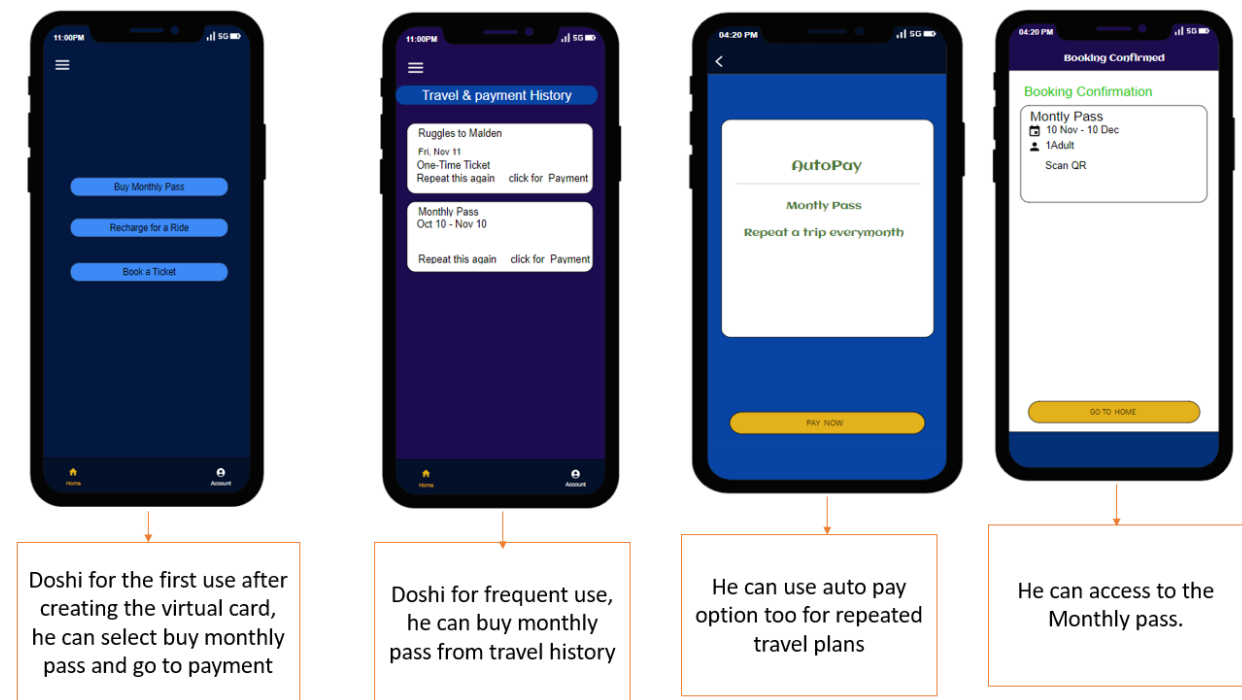
Emily is a student who studies alongside works part-time, she wants to book tickets and keep an eye on all the transactions for her traveling history and needs to come up with the traveling expenses and budget. Emily uses public transport as her commute, she is always quite unsure about how much balance she has and wants to recharge if required.



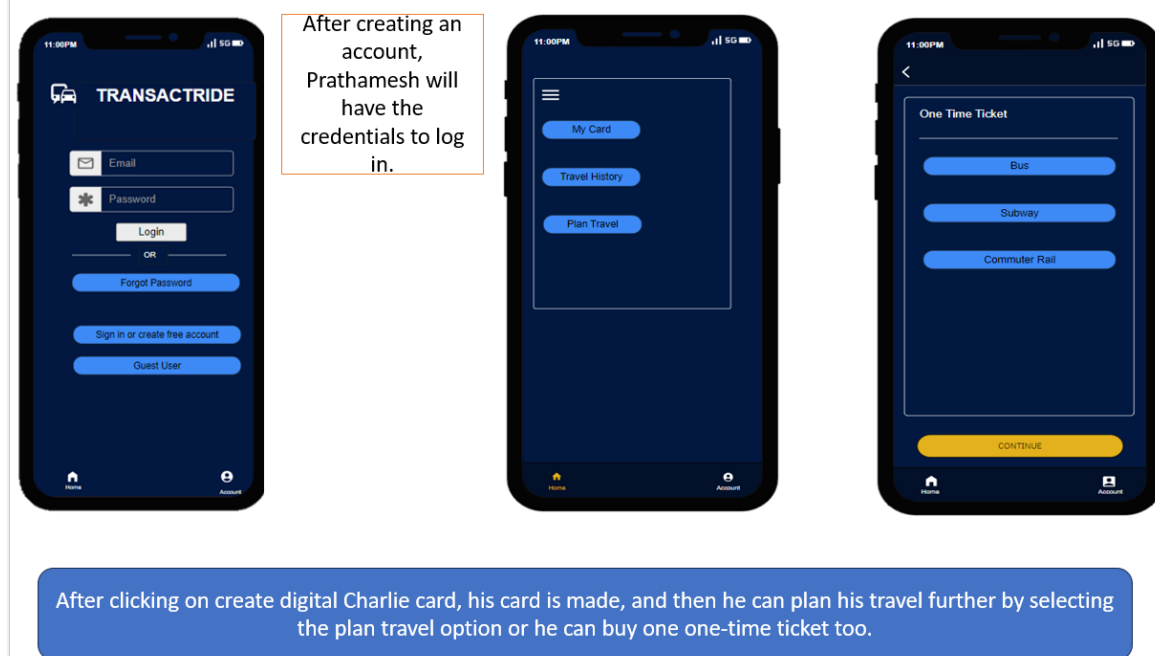


**Use case – 2:** Parth Doshi, a professional working in Boston, utilizes public transportation daily and enjoys an active social life. Given his regular reliance on public transport and his tech-savvy nature, he expresses interest in adopting the TransactRide app.





**Use case-3:** Prathamesh lives in Minneapolis, traveling to Boston for his meeting, and doesn't know how public transportation works and wants to use the Transact Ride App.





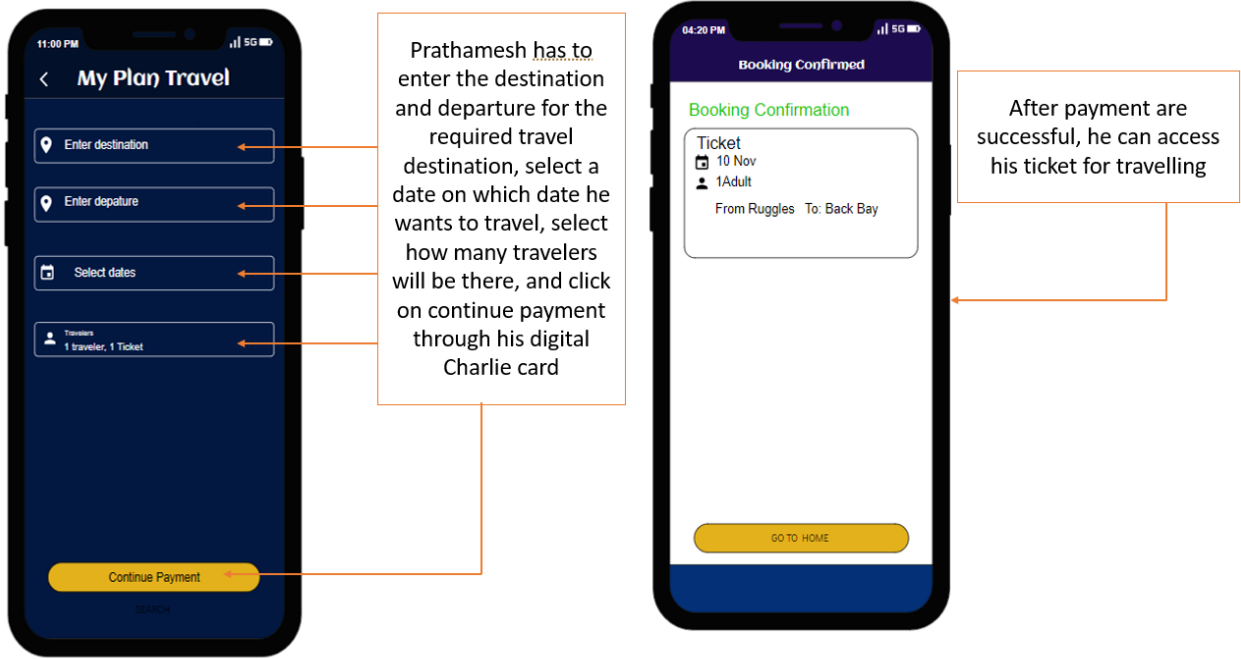
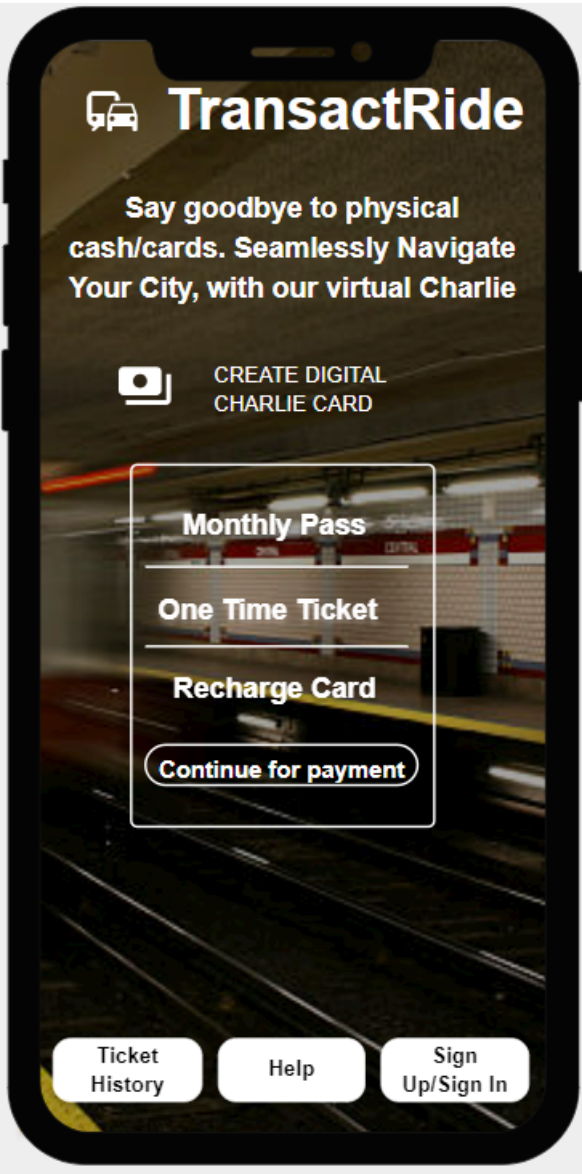


Exhibit - 2: Landing Page for Phone



## Exhibit – 3: Product Roadmap

THEMES	Q1	Q2	Q3	Q4
<b>Marketing &amp; Customer Retention</b>	<b>Initial Launch</b> <b>Goal:</b> Successfully launch the TransactRide app in Boston and Achieve 10,000 app downloads in the first month. <b>Priority:</b> High <b>Effort Size:</b> L	<b>Real-time Balance Monitoring</b> <b>Goal:</b> Implement a feature allowing users to monitor their card balances. A minimum of 80% of users actively should use real-time balance monitoring. <b>Priority:</b> High <b>Effort Size:</b> M	<b>Push Notifications and Alerts</b> <b>Goal:</b> Implement push notifications for balance alerts and promotions. Increase user engagement by 15% through push notifications. And check the user retention from the launch date. <b>Priority:</b> High	<b>Retain Customers</b> <b>Goal:</b> Allow users to set an auto-pay option for monthly pass renewal. Purchase now pay later option for tickets/monthly pass. <b>Priority:</b> medium <b>Effort Size:</b> L
<b>User Engagement and Accessibility</b>	<b>User Feedback &amp; Fixing Bugs</b> <b>Goal:</b> Collect user feedback & optimize onboarding processes and achieve a 70% user satisfaction rate in the first month. <b>Priority:</b> High <b>Effort Size:</b> M	<b>Community Building and Bug fixing</b> <b>Goal:</b> Establish a user community for feedback and feature discussions and it should also increase mouth of referrals and retention of users. Fix bugs and improve the user interface. <b>Priority:</b> Medium <b>Effort Size:</b> S	<b>Multiple Transit Cards</b> <b>Goal:</b> A wallet to store multiple transit cards like Charlie, NJ Transit. <b>Priority:</b> High <b>Effort Size:</b> L	<b>Launch the chat box and history of the <a href="#">trip</a></b> <b>Goal:</b> Introduce a Chat box for additional help for the customers if they are stuck with any issues. Along with making a feature to check the history of the trips. <b>Priority:</b> High <b>Effort Size:</b> M
<b>Features &amp; Enhancements</b>	<b>Marketing and Awareness Campaign</b> <b>Goal:</b> Increase brand awareness through social media and campaigns etc. <b>Priority:</b> High <b>Effort Size:</b> M	<b>Ticketing Options to attract <a href="#">customers</a></b> <b>Goal:</b> Expand ticketing options, including discounts for bulk purchases. Increase in-app ticket purchases by 15%. <b>Priority:</b> Medium <b>Effort Size:</b> M	<b>Schedule future trip</b> <b>Goal:</b> Enable users to purchase tickets in advance for the future. <b>Priority:</b> Medium <b>Effort size:</b> Medium	<b>Partnership with Local college</b> <b>Goal:</b> Establish partnerships with local college students for mutual promotions. Increase in-app purchases linked to partner promotions by 20%. <b>Priority:</b> Medium <b>Effort Size:</b> M