

# Product Requirements Document (PRD)

## Travel Genius

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Group 04

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## Vision

For the voyager who might find planning a beautiful trip a real brain scratcher, the Travel Genius T.G. is an itinerary generator that will do the work for you while also letting you be in control of planning your memorable trip.

## Motivation

### Customer Segments

Our intended customers are people who love to travel but are confused about figuring out where to go and planning the itinerary. This broad segment includes anyone from a solo traveler, group travelers, families, students, beginner travelers, etc. from age 16 – 60 years. We are mainly targeting the segment of customers who are tech-savvy, who would prefer a one stop platform to plan and manage their trip with ease.

Following are the questions that we posed to our potential customers. The sample size was 90, through survey and interviews:

1. *How do you usually start planning for the trip/vacation?*
2. *How do you research for a trip?*
3. *What is the most frustrating part of planning a trip?*

Early adopters for the product would mostly be individuals who are frustrated on deciding on the destination and browsing through multiple websites. These are the people who do not have much knowledge of the destination to visit and face difficulty planning the itinerary. We also believe the people who love organizing and planning trip would love to use this platform for its ease of use.

**Sasha** a 25-year-old international student in Boston, is planning to go for a trip to some other state along with her friends. But the major issue is, since all her friends are new to the country. They are unable to decide on one location. Finally, after a long discussion which went on for a week, they ended up deciding New York City. But again, there was confusion on what locations to visit given the time limit and everyone's preferences. Sasha felt the need to have a one stop platform what would help her plan the itinerary for the trip, which would save her and her friends of the long discussions and confusion ultimately giving them a great NYC experience together.

**Adam** a 35-year-old software engineer who works remotely in Florida, wishes to plan a solo trip to New England for the fall foliage. But since he is unaware of the region and what would be the best place and perfect time to go makes him frustrated, as he wants to experience the beautiful fall foliage which comes once a year making sure he gets what he thinks is worth his time and money. After going through numerous resources like websites, talking to friends, etc. he is still unable to decide where exactly in New England he should go to. Adam realizes that he needs a one stop solution that'll help him with planning his solo trip perfectly, that he can track and manage as he goes on route.

"For additional information on our customer segments, please refer to the Appendix section, which includes detailed graphs and charts."

## Unmet Needs

We believe, most of the people when planning on taking a trip experience a lot of frustration when deciding on a destination or locations for the trip, and these people do not have a platform that would help them with this problem.

Our research indicated that most of the individuals struggle when it comes to deciding on location/destination. Additionally, we observed that the pain point for those people was to browse through numerous websites and applications trying to figure out their trip locations and perfect time to visit. Everyone wants to enjoy the trip and now feel it to be too much work. We also observed that sometimes people cancel the trip all together even when they needed that break just because they were unable to decide where they really wanted to go.

## Existing Solutions

(1) **"Wanderlog"** – It is a travel journal app that allows users to document and organize their travel experiences, including photos, notes, and maps. It also includes a feature for sharing and discovering new travel destinations.

(2) “**ChatGPT**” - Helps users plan their trip by providing information on destinations, places to visit, things to do, and how to get around. The app also makes suggestions on accommodations, restaurants, and activities based on user preferences.

(3) “**Syic Travel Maps**”- It is an offline map and travel guide app that provides detailed maps, points of interest and travel information for multiple destinations worldwide. It also includes features such as trip planning, recommendations, and the ability to save your favorite places.

## Differentiation

Even though the existing solutions are great and provide good solutions for different travel problems, still one might end up using multiple apps for their problem. All the solutions do not exactly offer one stop solution in planning and tracking the trip, there are too many distracting features that might end up confusing the customer even more. This is the niche that we hope to occupy i.e., to give an easy-to-use one stop travel guide to the customers.

In the following table you can find the competitive analysis, representing how our product will be different from the existing solutions:

<b>Features</b>	<b>Travel Genius</b>	<b>Wanderlog</b>	<b>ChatGPT</b>	<b>Syic travel maps</b>
<b>Offline Access to Itineraries and Maps</b>	<b>Yes</b> (Detailed travel itineraries and maps can be accessed offline.)	<b>Yes</b>	<b>No</b>	<b>Yes</b>
<b>Trip Itinerary Planning by app</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Pricing</b>	<b>Free and paid versions</b> (The first month is free and then we charge \$1.99/month)	<b>Free</b>	<b>Free</b>	<b>Paid</b>
<b>Inspired Travel recommendation</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Virtual Tours and Experiences</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Climate information for travel destinations</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>

<b>Travel Expense Tracking during the trip</b>	Yes	No	No	No
<b>Health and safety advisories for travel destinations and activities</b>	Yes (Recommend activities based on user's health history, covid updates)	No	No	No
<b>Unique features &amp; benefits</b>	<b>Itinerary plans suggested by the app based on the user's preferences.</b> <b>Virtual tour experience.</b> <b>Travel insurance and travel guide recommendations</b>	<b>Blog Integration, Photo diary</b>	<b>24/7 chat support</b>	<b>Real time traffic updates.</b> <b>Customizing maps based on previous trips.</b> <b>Interactive maps.</b>

## Why Now?

A travel guide app can offer recommendations from locals or experienced travelers that may not be found in traditional guidebooks, giving travelers a more authentic and unique experience. Overall, a travel guide application can enhance a traveler's experience by providing valuable information and insights, making travel planning and navigation more accessible and efficient. Also, as travel industry is getting back on track after the long downfall because of covid it'll be a great opportunity to gain traction and succeed in the market.

Additionally, if a travel guide app is well-designed, offers unique and useful features, and is promoted effectively, it can have a high success rate. According to Statista, the global revenue from travel apps is expected to reach 37.5 billion U.S. dollars, indicating a growing demand for such applications.

Additionally, the COVID-19 pandemic has led to a shift in travel behavior, with more people looking for digital solutions to plan and book their trips. This presents an opportunity for travel guide apps to gain traction and succeed in the market.

## Use Cases

### *Case 1: Destination Recommendations*

Jhanvi is looking forward to her spring break but is unsure of where to travel to. Fortunately, she discovers Travel Genius, an online travel platform that offers personalized destination suggestions based on her interests and budget requirements. By using Travel Genius, Jhanvi can save a significant amount of time that would have otherwise been spent researching and planning her trip independently.

### *Case 2: Itinerary Generation and Customization*

Julia is planning a 10-day trip to Japan and wants to make the most of her time there. She downloads a travel genius that has an itinerary generation and customization feature. She inputs her travel dates, budget, and preferences for activities and sights to see. The app generates a tentative itinerary that includes popular tourist spots, local experiences, and off-the-beaten-path attractions. Julia customizes the itinerary to fit her needs by adding, removing, or adjusting activities and transportation.

### *Case 3: Collaboration with friends & family*

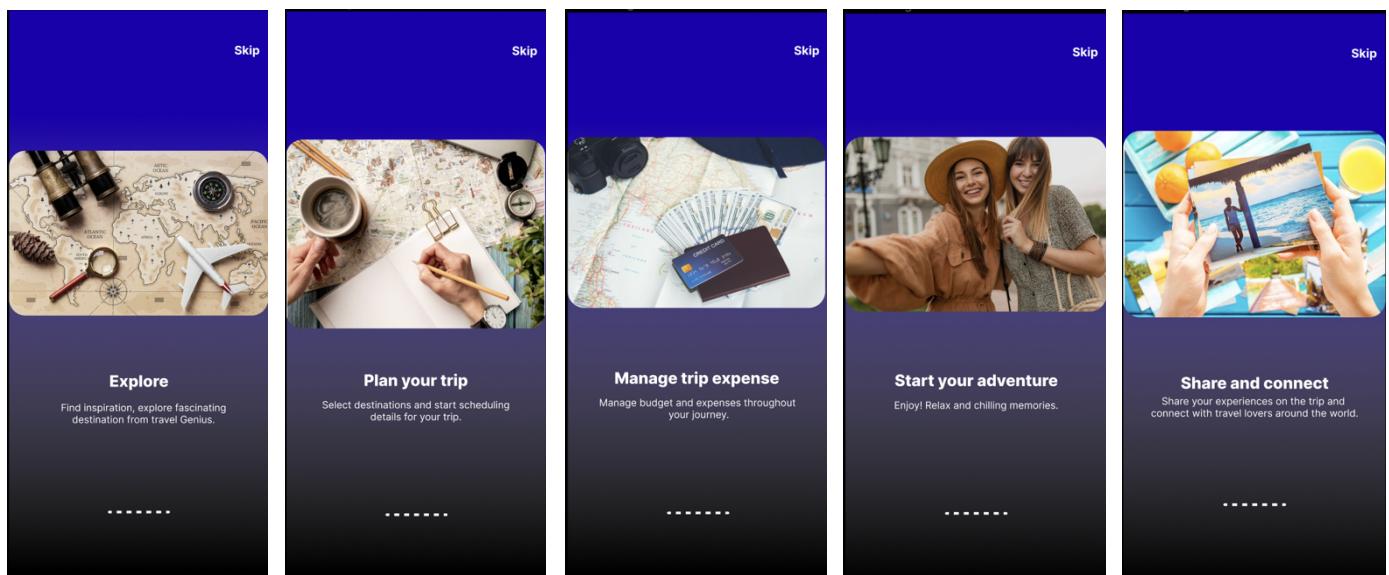
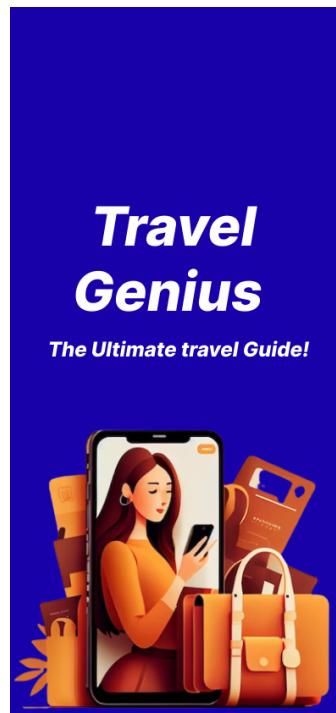
Samantha is planning a trip with her friends and family to visit Paris. She wants to make sure that everyone is included in the planning process and that the trip caters to everyone's interests. She decides to use a Travel genius that allows her to collaborate with her group and customize the itinerary. By using the app's collaboration and customization features, Samantha and her group can plan a trip that is inclusive, enjoyable, and tailored to everyone's preferences.

P.T.O.

# Verbal/Visual Walkthrough of Use Cases

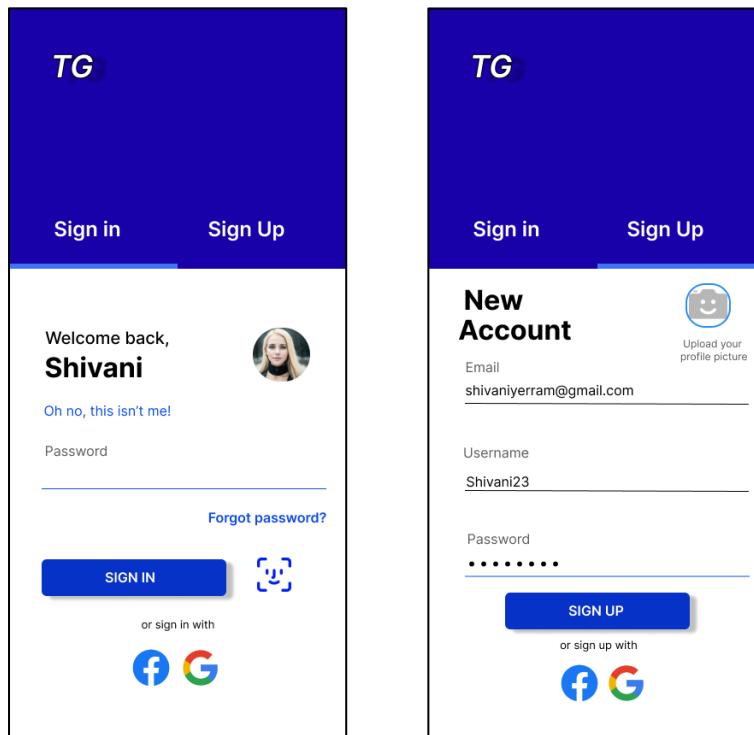
## Splash screen & onboarding

Upon app download and launch, the user will be presented with a splash screen as part of the initial onboarding process.



## 1. Simple & Secure Login

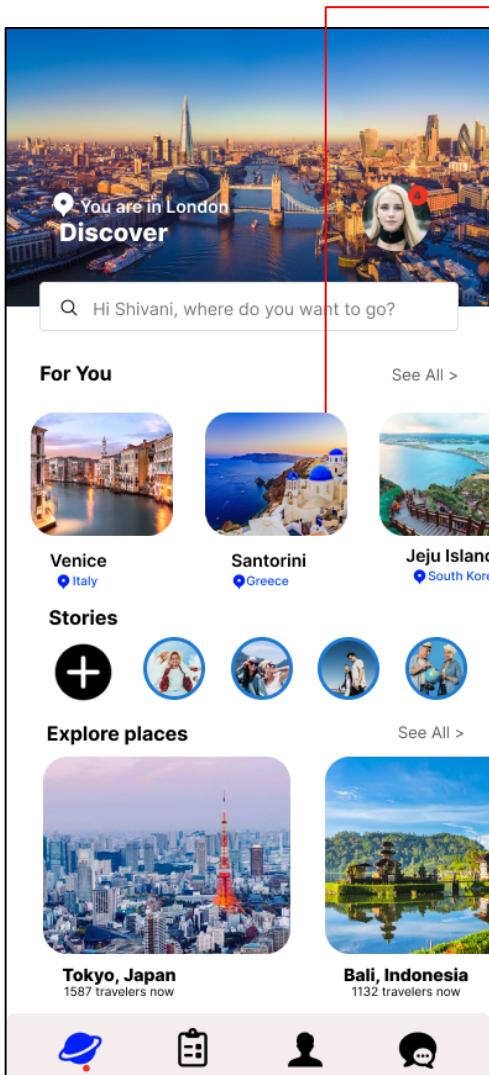
Users can login using the username/email, Facebook, or Google. Quick and secure login by Face ID.



Tell us a little bit about your interests, we can give you the most valuable experience!

## 02 Discover

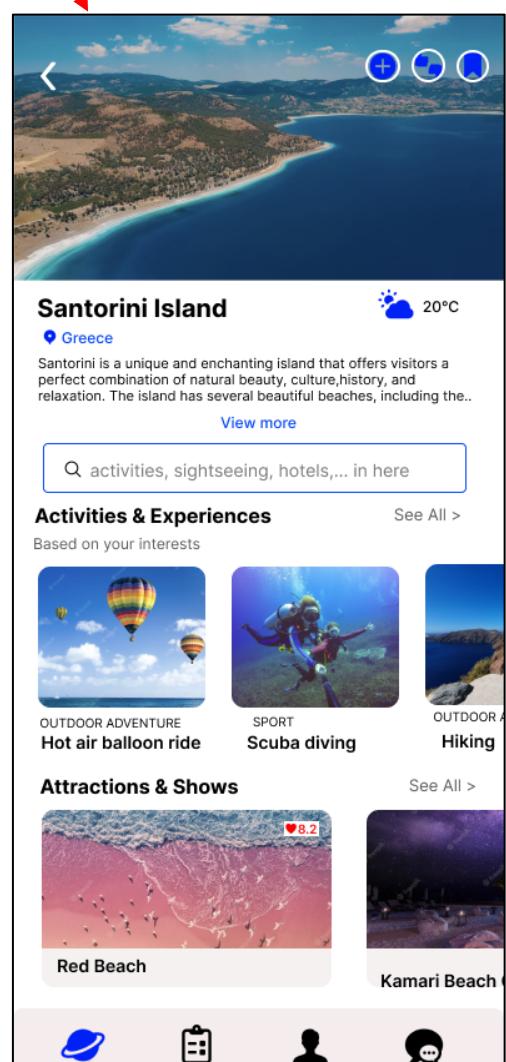
The default page is moved immediately when the user sign in successfully. This is the site of discovery, providing the latest and happening travel experiences.



**For You:** Based on the search habits and survey results after the user registers an account, this section will suggest the users where they might want to travel.

**Stories:** Allows user to share every moment of the day.

**Explore places:** Based on the number of user check-ins, this section will show the most interesting places to visit.

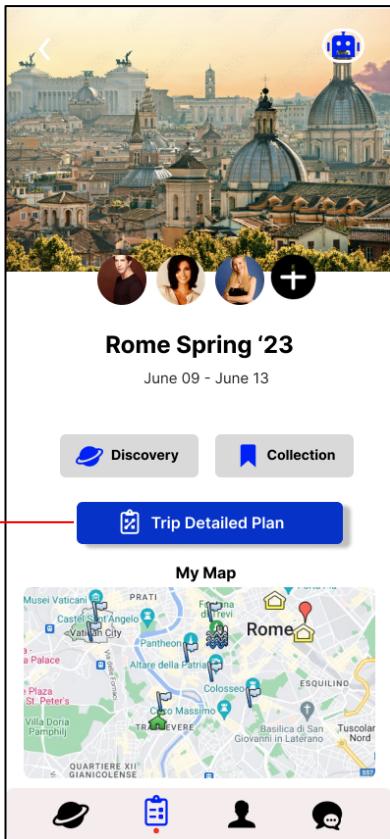


## 03 My Trips

This page is for managing and creating trips. Allows users to track on going trips, create new trips and review past trips.

**Feature:** after filling in the basic information of the trip travel genius will display a popup to ask, “if you want us to help create your journey for you”?

Managing the newly created trip



**Chatbot:** Chatbot icon always appears during the journey to make your plan, so that **TG** can assist you in finding any information quickly & effectively.

+ Can still invite more friends here.

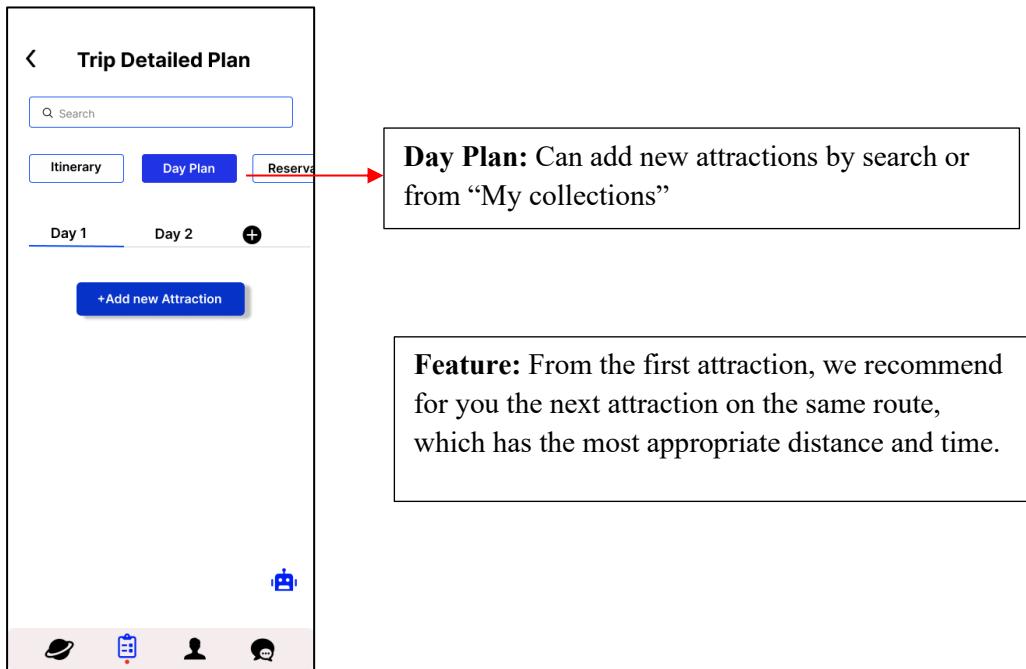
**Discovery** takes you to detail page of the trip “Rome spring ‘23.”

**Collection** keeps everything you saved here.

**My Map** displays all the details of the trip, including the route & the locations you plan to visit visually.

**Trip Detailed Plan:** All the information you need about the trip, including the itinerary, day-by-day plan, reservations, budget expenses, is included in your detailed plan.

**Itinerary:** Various itinerary types can be generated, and any changes to the itinerary can be made from the day plan, which will automatically update the itinerary.



## 04 User Profile

This is the profile page, where personal information can be edited and save changes, uploading images, stories about user trips including the settings: notifications, currency, language, privacy.....

**Shivani**  
49 Followers 72 Following  
London, 23y/o, unstoppable and always on the move.  
Capturing memories all over the world.....  
#travel #food #lifestyle

+Share your photos or journey

**My Photos**

Phuket Phuket Phuket + 16

**Settings** Sign out

**Shivani** shivaniyerram@gmail.com

**Preferences**

- Notifications >
- Language >
- Currency >
- Budget & Expenses >
- Privacy & sharing >
- Login & Security >
- Help & FAQs >
- My Collections >

Privacy policy >

Terms of use >

# Detailed Design & Features Description

## Design Principles

- Maintain design consistency
- Efficient and Standardized
- Data Privacy and Security
- Scalability and Accurate
- Symmetrical and Proportionate

## Design Features/Information Architecture

Feature	Detail	Dependencies	Priority
<b>Sign-up/Sign-in</b>	<p>The user can sign-up or sign-in to the app.</p> <p>User can reset the password using the forgot password</p> <p>Can use Google or Facebook to sign-up or sign-in</p>	<p>Maintaining data privacy and security.</p> <p>User should be an existing user. Link for authentication to reset the password</p> <p>Integration with Google and Facebook login into the platform.</p>	P0 P0 P1
<b>Select Interests and Follow Travel Influencers</b>	<p>The user can select and save their travel interests like the kind of places they like to visit, activities they like to do.</p> <p>The user can follow their favorite influencers</p>	Should have data classified/categorized for the interest and types of places necessary for AI algos.	P0 P2
<b>Destination Search</b>	Will have a destination search bar.	Will need API integration to search for destinations.	P0
<b>User Profile</b>	The user can edit	User authorization to	P0

	<p>their profile here, they can modify their demographical information, interests.</p> <p>User can access their pictures and media from past trips.</p>	<p>edit and update their personal profiles.</p> <p>Integration with camera and photo gallery.</p>	P1
<b>My Trip</b>	User can access their current (on-going) and past trips here.	Past and current trip database	P0
<b>Create New Trip</b>	User can create new trips and add those to my trip.	AI trained models to generate itinerary	P0
<b>Recommendations</b>	<p>User will be provided with trip/destination recommendations depending on their interests, budget, and past experiences</p> <p>Suggestions for trending or most visited places to visit that season.</p> <p>Top Journeys, users would be suggested top shared journeys rated so far. These will come with all the necessary trip details.</p>	<p>AI trained models to generate recommendations depending on the historic trip data and interests of the user.</p> <p>API call for suggesting trending vacation locations.</p> <p>User rating and feedback.</p>	P0   P1  P2
<b>Manage trip budget</b>	User can track and manage their expenses for the trip and can view those anytime they want.	Integration with calculator.	P1
<b>Customize Itinerary</b>	User can customize their itinerary; they can add or remove locations depending on their needs or mood.	API call for list of places to visit at the location.	P1
<b>Collaboration</b>	User can add members to their trips and trip plans to	Need to give user authorization and permissions to add or	P1

	collaborate on the trip  User can message the other users added on the trips through in-app messaging feature	invite different users to the trip. Added user needs to have authorization and permissions to edit and update the trip.  Safe, secure, End-to-end encryption.	P1
<b>Integrated Maps</b>	User can view itinerary on the map	Integration with maps	P2
<b>Offline Access</b>	User can have offline access to the itineraries	Need local storage permissions to save the map locally	P2

## v1 aka Minimum Viable Product (MVP)

The features with Priority Zero (P0), would be part of the MVP i.e., the Minimum Viable Product.

### vNext

1. **Sign-up/Sign-in:** Integration with Google and Facebook for easy sign-in.
2. **User Profile:** User can access their pictures and media from past trips.
3. **Recommendations:** Suggestions for trending or most visited places to visit that season.
4. **Manage trip budget:** User can track and manage their expenses for the trip and can view those anytime they want.
5. **Customize Itinerary:** User can customize their itinerary; they can add or remove locations depending on their needs or mood.
6. **Collaboration:** User can add members to their trips and trip plans to collaborate on the trip, they will also be able to message each other once added to the trip.

### v LongTerm

Our long-term goal would be to Implement all the P2 features and build a full-fledged interactive application where users will be able to plan and manage their trips while collaborating with their groups. Additionally, our goal would be to train our AI models to make better suggestions and keep working on improving the UI/UX of the platform.

Following are the P2 features that will be implemented post the first version launch:

- 1. Recommendations (Top Journeys):** This provides user with a list of the most popular trips that have been shared and rated highly by other users. This feature will include all necessary information about each trip, such as the destination, itinerary, and any other important details
- 2. Integrated Maps:** User can view itinerary on the map.
- 3. Offline Access:** User can have offline access to the itineraries.
- 4. Follow Travel Influencers:** The user can follow their favorite influencers or other users that interests them.

## Roadmap / Timing

Milestone	Timing	Notes
Internal Demo	Month 2	Internal demo of basic itinerary generator and personalization features to ensure they meet user needs
First Launch - Beta Launch	Month 5	Conduct beta testing with a small group of users to gather feedback and improve the app
Platform Design- Analyzing the key metrics and incorporating them according to customer requirements.	Month 7	The launch of the product will include all the screens from our wireframes as well as the necessary functionality for the beta launch. Once the beta launch is complete, we will gather feedback from customers to validate the design before proceeding with the full launch.
Full Launch	Month 10	Launch the app to the public with basic itinerary generator, personalization, and booking integration features
Smart Budgeting	Month 12	Introduce budgeting tools and recommendations to help users stay within their budget
Multi-destination Itineraries	Month 14	Allow users to create itineraries that include multiple destinations
Voice Assistant Integration	Month 16	Allow users to create and manage itineraries using voice commands
Social Recommendations	Month 18	Allow users to receive recommendations from their friends and social network

Reassessment	Every quarter	Continuously reassess user feedback and metrics to make improvements and prioritize new features
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## Metrics

Metrics	Computation
Number of Downloads	Count of unique downloads of the app from all platforms (play store and App store)
Percentage of Sign In	(total # of users downloading the app / total # of users signing in) *100
Daily Active Users (DAU)	Count of unique users who access the app on a daily basis
Monthly Active Users (MAU)	Count of unique users who access the app on a monthly basis
User Engagement	Average time spent by users on the app per session
User Retention	Percentage of users who return to the app within a specified time period
Conversion Rate	Percentage of users who make a booking through the app
Net Promoter Score (NPS)	Survey-based score that measures how likely users are to recommend the app to others
Customer Acquisition Cost (CAC)	Total amount spent on marketing and advertising divided by the number of new users acquired during the same period
Revenue	Total amount of revenue generated through bookings made on the app
Return on Investment (ROI)	Revenue generated divided by the total amount spent on the app's development and marketing

## International

By analyzing customer feedback, we can gain insight into the effectiveness of our approach to addressing their pain points and evaluate the success of our solutions. Using this feedback, we plan to expand our product's reach and internationalize the product, to make it more accessible and useful to a wider range of users worldwide. The international version would likely be available in 19<sup>th</sup> month on roadmap after all the planned features are added to the application. Internationalization will highly depend on the market response to the product. If the product

performs well, satisfying the set metrics, the team can then go forward with discussing on planning the internationalization. Further, discussing the risks such as the finances, foreign laws, political risks, local competitions and demands. Once after careful assessment of the risks and finances the decision would be made to internationalizing the product.

## Projected Costs

Engineers/ Maintenance and Machines	Average Hourly Pay (USD)	Average Annual Salary (USD)	Number of needs	Estimated duration	Total Estimated Expenses (USD)
Product Manager	54	110k	1	5 months	46k
UI/UX designer	45	95k	1	5 months	39k
Senior software Engineer	60	125k	1	5 months	51k
Front-end Developer	44	90k	2	5 months	38k
Back-end Developer	50	104k	2	5 months	42k
Quality Assurance (QA) Engineer	40	85k	1	5 months	34k
DevOps Engineer	44	90k	1	5 months	38k
<b>Total</b>					<b>288k</b>

### Personnel cost assumptions:

- Assuming this project would involve a work 5 months
- Assuming 1 product manager, 5 Developers, 1 Designer, 1 QA engineer, 1 DevOps Engineer = \$288k

Infrastructure and Maintenance Cost			
	Cost (USD)	Estimated Duration	Total (USA)
Server	300/ Month	5 Months	\$1500
Appstore	99/ Yr.	5 Months	\$99
Play store	25	5 Months	\$25
<b>Total</b>			<b>\$1624</b>

## Maintenance cost assumptions:

- The app can be downloaded from both App Store and Play Store
- We intend to use AWS (Amazon Web Services) for infrastructure. Cost of Amazon EC2 is \$0.07 per hour and cost of Amazon S3 costs \$0.03 per GB
- Considering Usage of 12 hr. per day = \$1 (0.03+0.07) \* 12hr \* 25 days = 300/ Month.

Machines Cost			
	Cost	Required Number	Total
Laptops	\$1200	9	\$10800
Total			\$10800

## Machines cost assumptions:

- Assuming each engineer assigned a laptop and spare 2 for emergency/ testing needs.

## Total cost assumptions:

- Personnel cost + Maintenance cost + Machines cost
- **\$288k + \$1.6k+ \$10.8k = \$300k**

# Operational Needs

**User Support:** When the software is made available to the general public, consumers could have queries or worries regarding how to use it. customer support offered by email, or a help desk can assist in resolving these problems and enhancing our customer happiness.

**Maintenance and updates:** There can be errors or problems with the app after its first release, just like with any software project. To keep the app operating properly, it will be crucial to put a team in place to handle these issues and deliver frequent updates.

**Contractor support:** Employing outside vendors or contractors to provide specialized knowledge or services may be necessary, depending on the individual project requirements. A graphic designer, copywriter, or marketing expert might be needed for the project, for instance.

**Ongoing commitment:** According to the project's unique requirements and the objectives of the associated stakeholders, support and operational assistance will be provided for the trip

itinerary project. The commitment might be limited in some circumstances, with support being offered while the app is available and stable. In other situations, continuing support can be necessary to guarantee that the app satisfies users' and the travel industry's changing needs.

## Addressing Caveats/Risks

Risk	Description	Mitigating Strategy
Privacy Concerns	The app may collect sensitive personal information from users, such as travel itineraries and payment information, which could be vulnerable to hacking or unauthorized access.	Can incorporate robust security measures such as SSL encryption, two-factor authentication, and regular security audits to protect user data. The app can also be transparent about its privacy policies and data usage to gain users' trust.
Legal/Patent Risks	The app may infringe on existing patents or trademarks, which could result in costly legal proceedings.	Conduct thorough research on existing patents and trademarks to avoid infringement. Consult with legal experts to ensure the app is compliant with relevant laws and regulations.
Piracy Concerns	The app may be susceptible to piracy, where unauthorized copies are distributed or sold without permission.	Implement anti-piracy measures, such as digital rights management and legal action against offenders. Monitor online marketplaces and take down any unauthorized copies of the app.
Availability of Required 3rd-Party Complements	The app may rely on third-party software or services that are not always available or may be discontinued, which could render the app unusable.	Conduct regular assessments of third-party software and services to ensure they are reliable and provide alternative solutions if necessary. Develop contingency plans in case third-party complements become unavailable.

User adoption	<p>There is a possibility that users may find it challenging to adopt a new travel app when there are already several other apps that serve a similar purpose in the market. This may result in low user engagement and adoption rates.</p>	<p>Offer user-friendly features such as an easy-to-use interface, personalized itinerary planning, and local recommendations to stand out from other apps. Additionally, the app can conduct extensive user research to understand the users' needs and preferences and make changes accordingly. Effective marketing strategies, such as social media campaigns and influencer collaborations, can also help to promote the app and encourage user adoption.</p>
Regulatory and legal risks	<p>The app may face regulatory and legal risks, such as complying with data protection laws and travel regulations, which can result in legal penalties and damage to the app's reputation.</p>	<p>The app can ensure compliance with all relevant laws and regulations and regularly monitor and update its policies and procedures accordingly. The app can also have legal advisors to help identify and mitigate any legal risks.</p>
Competitor threats	<p>There may be other well-established travel apps in the market that already have a large user base and loyal following. These competitors may pose a threat to the app's success.</p>	<p>The app can differentiate itself from competitors by offering unique features, such as offline access to itineraries and maps, currency conversion, language translation, and travel expense tracking. The app can also offer competitive pricing and promotional offers to attract and retain users.</p>
Technical issues	<p>The app may experience technical issues, such as system crashes or bugs, that can negatively affect user experience and retention.</p>	<p>Conduct rigorous testing before and after launch to identify and fix any technical issues. The app can also have a dedicated support team to address user complaints and issues in a timely manner. Regular app updates can also help to ensure that the app remains up-to-date and bug-free.</p>

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