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TITLE:

GuidedGlobe - Mobile Application For Tour Guides

Student:

Majd Alwaheidi

Hongxia Xie

PROJECT DIRECTOR:

PROFESSOR Sérgio Gonçalves Monteiro

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SUMMARY

This investigation delves into the development and impact of a mobile application tailored for tour guides and a dedicated social media platform focused on sharing travel escapades. In today's digital era, modern travelers increasingly seek customized and immersive adventures, acknowledging the pivotal role tour guides play in offering authentic insights and local knowledge. The mobile application is intricately designed to establish direct connections between travelers and tour guides, offering features such as real-time navigation, personalized itineraries, and interactive guides.

Furthermore, the social media platform serves as a dynamic community hub where travelers can exchange anecdotes, recommendations, and travel tips, fostering collaboration among travel enthusiasts. The research meticulously examines user experience, functionality, and the transformative influence of these digital tools on enriching travel experiences.

Research methodologies encompass extensive user surveys, stakeholder interviews, thorough app prototyping, and meticulous user testing to assess usability and user satisfaction. The outcomes highlight strong endorsement from users, emphasizing the convenience, engagement, and additional value facilitated by the app and platform. Notably, the direct interaction with tour guides fosters heightened trust among travelers and ensures competitive pricing, thereby enhancing the overall travel experience.

The investigation concludes with actionable suggestions for future improvements and strategic insights into leveraging technology to empower tour guides, build trust, and curate exceptional travel experiences for global adventurers.

Keywords: Travel, Tour Guide, Mobile App, Social Media.

ABSTRACT

This thesis explores the comprehensive development and significant impact of an innovative mobile application created to revolutionize the travel experience for tourists. Our app combines intuitive design, advanced functionality, and strong social connectivity to provide a seamless and engaging platform for travelers worldwide. The methodology employed in this project is meticulously detailed, highlighting user-centric design principles and a dynamic change management process that ensures continuous improvement and adaptation to user needs. Distinguishing itself in the competitive travel technology market, the app offers personalized tour planning, real-time recommendations, and a vibrant community interface that enables users to connect, share experiences, and explore together.

A crucial aspect of our app is its emphasis on usability and accessibility, ensuring an inclusive experience that caters to diverse user needs. By fostering a sense of community among travelers, the app transcends geographical and cultural barriers, allowing users to build meaningful connections and share valuable insights. This thesis highlights the app's ability to enhance travel planning, promote global interactions, and uncover hidden gems and local favorites through user-generated content. Through iterative design improvements based on user feedback and analytics, the app continually evolves to meet the dynamic demands of the travel market. This work underscores the transformative potential of technology in enriching travel experiences and fostering a global community of explorers, demonstrating how a thoughtfully designed application can revolutionize the way people explore, connect, and engage with the world.

Key words: Travel, Tour Guide, Mobile App, Social Media.

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Chapter 1. INTRODUCTION.

1.1 STATEMENT OF THE PROBLEM

The rapid advancements in technology have brought about significant changes in the travel and tourism sector, particularly with the widespread adoption of mobile applications that redefine the way people plan and experience their trips. Nevertheless, a persistent issue remains in the domain of travel guidance and exploration, where conventional methods often lack personalized interactions and immediate assistance. This thesis aims to tackle this challenge by developing a mobile app that enhances communication between tourists and tour guides during their travels to new destinations. The core question guiding this research is: How can a mobile application transform the travel experience by facilitating direct communication and personalized assistance between tourists and tour guides? To answer this query, an extensive examination of the current state of affairs and historical context of the problem is essential, encompassing an assessment of existing mobile apps in the tourism sphere, understanding user preferences and pain points, harnessing technological advancements, and recognizing industry best practices. Through this comprehensive approach, the thesis aims to propose an innovative solution that not only meets the present demands of travelers but also anticipates future trends in the travel and tourism sector. Additionally, the proposed mobile app seeks to establish trustworthiness and offer better pricing by enabling direct contact between travelers and tour guides, enhancing transparency and fostering a more engaging and cost-effective travel experience.

1.2 PROJECT VISION

Our vision is to make travel more accessible, enjoyable, and authentic for everyone. We're building a platform where travelers can easily find unique experiences tailored to their interests and budget. At the same time, we're empowering tourist guides by giving them a space to showcase their expertise and connect with travelers from around the world. By fostering transparency, trust, and community, we aim to create a global network where people can explore new places, learn from locals, and create unforgettable memories.

1.3 PROJECT MISSION

Our mission is to create a user-friendly online platform that supports tourist guides worldwide and changes how people find and book genuine travel experiences. We want to connect travelers with personalized offers, beautiful trip photos, and detailed trip info. Our platform will also let tour guides share their journeys and build a following. By making money from ads and a small cut of bookings, we aim to build a sustainable community where travelers and guides around the world can connect and share their love for exploration.

1.4 PROJECT OBJECTIVES

1.4.1 Develop an Intuitive User Interface

Develop a user-friendly interface enabling tourist guides to effortlessly showcase their services and communicate with travelers.

Integrate features like in-app messaging, social sharing, and language support to promote smooth interactions between guides and travelers.

1.4.2 Enhance User Engagement and Experience

Integrate interactive elements like social media posts and communication tools to stimulate user engagement and participation.

Establish a reviews and ratings mechanism for travelers to share feedback and rate guides, fostering transparency and building trust within the platform.

1.4.3 Ensure Cross-Platform Compatibility

Create the mobile application for both iOS and Android to extend its reach to a diverse audience including leisure travelers, adventure enthusiasts, cultural admirers, and global tourists.

Guarantee seamless performance across various devices and operating systems for a consistent user experience.

1.4.4 Provide Reliable Customer Support

Provide strong customer support directly within the app to swiftly handle user inquiries, problems, and issues.

Introduce functionalities like FAQs, live chat support, and user guides to aid users in navigating the app and utilizing services efficiently.

1.4.5 Differentiate from Competitors

Recognize and capitalize on distinctive features that differentiate the app from competitors such as TripAdvisor, Airbnb, and Viator.

Emphasize personalized experiences, a range of cultural perspectives, and community-building aspects via social networking functionalities.

1.4.6 Measure and Improve User Satisfaction

Incorporate analytics and data monitoring tools to track user behavior, engagement metrics, and satisfaction levels.

Utilize feedback from users, reviews, and ratings to iteratively enhance the app's features, functionality, and overall user experience.

1.5 PROJECT STRUCTURE

This thesis study is structured to comprehensively explore the development and implementation of a mobile app tailored for tour guides and travelers, aiming to address challenges prevalent in traditional travel methods. The introductory chapter sets the stage by elucidating the necessity for a mobile app solution in the tourism industry, emphasizing the objectives of the study in creating a user-friendly platform to connect tourists with tour guides and elevate their travel experiences. Subsequently, the literature review delves into existing research on mobile apps in tourism, dissecting the functionalities of industry giants like TripAdvisor and Airbnb while discerning user preferences crucial for an optimal app experience. The methodology chapter outlines the research approach encompassing qualitative and quantitative methods, with an agile development methodology highlighted for iterative app refinement. Key features of the app, including in-app messaging, social sharing, language support, and customer service, are detailed alongside a competitive analysis to differentiate from market competitors like Viator. The subsequent chapters delve into the

app's development process, evaluation through user feedback and performance metrics, and culminate in a conclusive reflection on the app's impact and recommendations for future enhancement.

Chapter 2. Problem

2.1 Background

The Background section offers a detailed overview of the context and factors leading to the project's development. It lays a foundation for understanding the problem statement and the necessity for the proposed solution. This section usually includes the following components:

2.1.1 Introduction to Tourism

- **Significance of the Tourism Industry:**

The tourism industry plays an important role in the global economy, including hospitality, transportation, and entertainment, and contributes significantly to GDP in many countries. It also provides chances for job creation, economic growth, cultural exchange and so on.

- **Impact of Technological Advancements:**

Technological advancements, particularly in the area of mobile applications, have been changing the way people engage with the tourism industry. Mobile apps have become necessary tools for travelers, offering convenient access to information, booking services, and personalized experiences. For example, apps like Airbnb and TripAdvisor have transformed the way people book accommodations and plan their trips, providing users with an efficient travel experience.

2.1.2 Challenges in Traditional Tour Guide Services

- **Limitations of Conventional Tour Guide Services:**

In many times, travelers may struggle to find reliable information about local attractions or encounter language barriers when interacting with tour guides, and additionally, traditional tour guide services may rely on paper-based maps or brochures, which can be inconvenient and impractical for modern travelers who prefer digital solutions. Those are the limitations that traditional tour guide services often face such as limited accessibility for travelers and outdated communication methods.

- **Impact on Traveler Experiences:**

These challenges produce a significant impact on travelers' experiences and satisfaction levels. For instance, if travelers cannot easily access relevant information or communicate with tour guides with outdated communication methods, they may feel depressed and frustrated for their overall experience.

2.1.3 Rise of Mobile Apps in Tourism

Increasing Prevalence of Mobile Apps:

Due to the ability to address service dissatisfaction and enhance the overall travel experience, mobile apps have become increasingly popular in the tourism sector. For example, apps like Google Maps provide travelers with real-time navigation and location-based recommendations, while booking platforms like Airbnb offer convenient access to accommodations worldwide. These apps empower travelers with instant information and booking capabilities, making it easier for them to plan and manage their trips.

Existing Mobile Apps for Tourist Guide Services:

There are numerous mobile apps available for tourist guide services, each offering a range of functions to assist travelers during their journeys. For instance, apps like TripAdvisor provide user-generated reviews and recommendations for attractions, restaurants, and accommodations, helping travelers make informed decisions about their itinerary. Similarly, tour guide apps like Viator offer planned tours and experiences led by local guides, allowing travelers to explore destinations with expert guidance.

2.1.4 Identifying Gaps and the Need for Innovation

Analysis to Identify Gaps:

The first step is to conduct a thorough analysis to identify gaps and inefficiencies within current tourist guide services. This involves checking existing processes, communication methods, and user experiences to point areas that need improvement. For example, we may find that traditional tour guide services lack real-time communication options or struggle to provide personalized recommendations to travelers or other similar problems. By identifying these gaps, we can emphasize on the necessity for innovative solutions to solve them and improve the overall quality of tourist guide services.

Exploring Innovative Solutions:

Next step is to discover how emerging technologies, such as mobile apps, can bridge these gaps and improve service delivery. Mobile apps have the potential to revolutionize tourist guide services by providing features like real-time communication with guides, personalized trip recommendations, and seamless booking experiences. An innovative tour guide app that provide interactive maps, multimedia content and instant messaging functionalities, is an disruptive tool to enhance the overall travel experience for users. Gaps identified in traditional tourist guide services can be filled by leveraging these technologies, travelers can be provided with more efficient and personalized experiences.

2.1.5 Research Aim and Objectives

Research Aim:

Our research aim is to develop a mobile app for tourist guide services, that means creating an app that improves accessibility, communication channels, pricing structures, and overall service quality to improve the travel experience for users all over the world. More specifically, the purpose could be to develop a user-friendly mobile app that allows travelers to easily connect with local tour guides, access relevant information about attractions and activities, and book personalized experiences.

Specific Objectives:

In order to achieve the above research aim, specific objectives are outlined, such as improving accessibility and communication channels, pricing structures and service quality. For instance, one objective could be to realize features in the app that enable real-time communication between travelers and tour guides, enhancing the accessibility of services. Another objective might focus on optimizing pricing models to make sure affordability and transparency for users. Additionally, objectives could include upgrading service quality by adopting user feedback mechanisms and providing comprehensive information about destinations and experiences.

2.1.6 Significance of the Project

Impact on the Tourism Industry and Customer Satisfaction:

The project plays a significant role in tourism industry and customer satisfaction. By creating a tour guide app that offers comprehensive services and enhances the overall travel experience, the project has the potential to change the way tourists explore destinations and

engage with local guides. For example, the app's features such as real-time communication with guides, personalized trip recommendations, and user-generated content can greatly improve customer satisfaction by providing travelers with convenient access to information and services during their trips.

Alignment with Industry Trends and Advancements:

The project keeps the same step with current industry trends, and it contributes to advancements in mobile app development for tourism. With the increasing reliance on smartphones and mobile applications for travel planning and navigation, there is a growing demand for innovative solutions that cater to the needs of modern travelers. By using emerging technologies and incorporating industry best practices, the project aims to set new standards for tour guide services in the digital age. For instance, integrating features like augmented reality for immersive experiences or machine learning algorithms for personalized recommendations can position the app as a leader in the field of tourism technology.

2.2 Detecting the problem

This phase involves a comprehensive exploration of the issues appeared in the tour guide services sector, especially within mobile application platforms. It uses various methods such as industry scrutiny, engaging stakeholders, reviewing literature, analyzing data, pinpointing specific problems, conducting root cause analysis, assessing impact, performing gap analysis, and formulating objectives.

2.2.1 Industry Examination

The initial step is to carry out an in-depth analysis of the tourism industry, with a focus on tour guide services offered through mobile apps. This includes studying market trends, technological advancements, user preferences, and competitors' landscapes to gain valuable insights into the industry's operational dynamics and evolving demands.

Studying Market Trends:

We'll look at what's happening in the tourism world. For instance, if we notice that more people are interested in eco-friendly travel, we'll pay attention to that trend, which means people might prefer tours that focus on nature and sustainability. So, we might consider including eco-friendly tour options in our app.

Technological Advancements:

We'll explore the latest tech stuff that can make our app awesome, imagine we find out that lots of tourists are using smartphones with powerful cameras, then we could think about letting users upload their trip photos directly from their phones to share with others on our app. people can see real-life snapshots of the tours by this way.

User Preferences:

We'll find out what users like and don't like in apps, if we see that many users prefer apps with simple layouts and easy-to-read information, we'll make sure our app is user-friendly by keeping things clear and organized. For example, we might use icons and short descriptions to help users quickly find what they're looking for.

Competitors' Landscapes:

We'll take a look at what other tour guide apps are doing, if we notice that some apps offer special discounts or loyalty programs for repeat users, we might think about doing something similar. This could mean rewarding users with points or discounts when they book multiple tours through our app.

2.2.2 Engaging Stakeholders

Cooperating with key stakeholders plays a crucial part in understanding the challenges within the tour guide app ecosystem. Through structured interviews, surveys, and workshops, opinions from tour guides, tourists, travel agencies, and app developers are gathered to identify critical pain points and areas requiring to be improved.

Structured Interviews, Surveys, and Workshops:

We'll talk to different people involved in the tour guide app world in organized ways. Structured interviews mean we ask everyone the same questions in the same order, like a checklist. Surveys are like questionnaires that people can fill out on their own time, giving us a wide range of opinions. Workshops are group sessions where people brainstorm ideas together. For example, we might interview tour guides to understand what challenges they face in their work, survey tourists to learn about their preferences when using tour guide apps, and hold workshops with app developers to brainstorm new features and improvements.

Insights from Tour Guides, Tourists, Travel Agencies, and App Developers:

We'll collect information from different types of people involved in the tour guide app world. Tour guides will tell us about their experiences and what they need to better serve their customers. Tourists can share what they like and dislike about existing tour guide apps. Travel agencies can provide opinions into industry trends and customer demands. And app developers can offer technical expertise and suggestions for improving the app's functionality. For example, tour guides might tell us that they struggle to find reliable apps to connect with tourists, while app developers might suggest integrating a feature for live chat support to enhance communication between guides and travelers.

2.2.3 Extensive Literature Review

A thorough review of existing industry reports and scholarly works related to tour guide apps and project management in tourism is carried out. This helps in finding out common challenges, best practices, and gaps in current tour guide service delivery methods through mobile platforms.

Reading Lots of Stuff:

We're going to read a bunch of things like books, reports, and research papers about tour guide apps and how projects are managed in tourism. These readings tell us what other people have learned and shared.

Finding Problems and Good Ideas:

We'll figure out what problems tour guide apps usually have and what tricks work well to solve them, we might find out that it's tough for apps to keep information about tours up-to-date ,and a good idea to fix this could be to let users give feedback to update info regularly.

Seeing Where Things Could Be Better:

We'll also look for places where tour guide apps aren't doing a great job, maybe they don't let guides and tourists talk easily, so this will be a chance for us to make our app stand out by making communication smoother between guides and travelers.

2.2.4 Data-Driven Analysis

We will use qualitative and quantitative data analysis methodologies to extract meaningful insights from user feedback, app usage metrics, customer reviews, and performance

indicators. This data-driven approach facilitates the identification of recurring issues, patterns, and trends effecting the effectiveness of tour guide services facilitated by the app.

Looking at Data:

We're going to look at a bunch of information to understand how people are using our app. This includes things like feedback from users, how often people use the app, what they say in reviews, and how well the app is doing overall.

Figuring Out What's Working and What's Not:

By looking at all this data, we'll figure out what's going well with the app and what needs improvement. If we see that lots of people are giving positive feedback about a certain feature, we'll know to keep that feature and maybe even improve it. On the other hand, if we notice that people are having trouble with a specific part of the app, we'll focus on fixing that.

2.2.5 Specific Problem Identification

Based on the collective findings from industry analysis, stakeholder engagement, literature review, and data analysis, we can identify specific problems and challenges within the tour guide app domain precisely. These includes issues such as communication barriers, scheduling complexities, service quality discrepancies, and operational inefficiencies.

Finding the Problems:

We're going to figure out what's not working well in tour guide apps. We'll look at a bunch of things like what's happening in the industry, what people are saying, and what the data tells us.

Getting Specific:

After looking at everything, we'll pinpoint exactly what's wrong. This could be things like problems with communication between guides and tourists, difficulties in scheduling tours, issues with the quality of services provided, or inefficiencies in how things are run.

Understanding the Issues:

Once we know what the problems are, we can start thinking about how to fix them. For example, if we find out that tourists often have trouble reaching their guides, we might consider adding a chat feature to our app so they can easily communicate.

2.2.6 Root Cause Investigation

We will conduct a deep investigation into the root causes contributing to the identified problems, this involves examining technological constraints, user experience challenges, operational bottlenecks, and project management deficiencies to understand the basic reasons why tour guides management operations are not well through the app.

Finding the Real Reasons:

We're going to dig deep to figure out why the problems exist in our tour guide app. We'll look at things like technical limitations, issues with how users interact with the app, problems with how things are run, and where the project management might be falling short.

Understanding the Core Issues:

Once we've identified the problems, we'll investigate further to understand why they're happening. For example, if users are having trouble uploading trip photos, we might find out it's because the app doesn't support certain file types or sizes, this could be a technological constraint that needs fixing.

Getting to the Bottom of It:

By uncovering these root causes, we'll get a better understanding of what's really going on. This will help us come up with effective solutions to address the underlying issues and improve the overall management of tour guide services through our app.

2.2.7 Impact Assessment

The study evaluates the broader impact of the identified problems on stakeholders and the tourism ecosystem. Financial implications, operational disruptions, and reputational risks related with unresolved challenges are assessed to emphasize the urgency of addressing these issues effectively.

Understanding the Effects:

We're going to look at how the problems in our tour guide app affect everyone involved, like users, guides, and the tourism industry as a whole, this includes looking at how it affects money, how things are done, and what people think about our app.

Seeing the Big Picture:

We'll evaluate the bigger consequences of these problems. For example, if users can't easily find offers or upload trip photos, it might lead to fewer people using the app, which could mean less money from advertising and unhappy tour guides, this could harm our app's reputation and make it less attractive to users and advertisers.

Recognizing the Urgency:

By understanding the impact of these problems, we'll realize how important it is to fix them quickly, if unresolved issues lead to financial losses or damage our app's reputation, it's crucial to address them as soon as possible to prevent further harm.

2.2.8 Objective Formulation

Clear and achievable objectives are formulated for the thesis project based on the insights learned from the problem detection process, each objective is closely tied to addressing a specific challenge or improvement area within the tour guide app's functionality, user experience, and project management capabilities, ensuring a focused research trajectory.

Setting Clear Goals:

We're going to define specific and achievable goals for our thesis project based on what we've learned about the challenges in our tour guide app, each goal will focus on fixing a particular problem or making an improvement in how the app works for users and guides.

Addressing Specific Challenges:

Each goal will be directly linked to solving a problem or enhancing a certain aspect of the app, such as its features, how easy it is to use, or how well the project is managed. For example, if one problem we've found is that users struggle to find offers easily, one objective could be to redesign the app interface to make offers more accessible.

Staying Focused:

By setting these clear objectives, we'll ensure that our research stays on track and we're working towards tangible improvements in the app, which will help us prioritize our efforts and make meaningful progress in addressing the identified challenges.

2.3 Competitor Analysis

Table 1 - Competitor Analysis

Features				
Main Focus	✓	✓	✓	✓
User-Generated Content	✓	✓	✓	✓
Booking Integration	✓	✓	✓	✓
Personalized Recommendations	✓	✗	✓	✗
Community Engagement	✓	✓	✓	✗
Local Expert Content	✓	✓	✓	✓
Global Reach	✓	✓	✓	✓
Pricing Transparency	✓	✗	✗	✗
Community Involvement	✓	✓	✓	✗
Revenue Model	✓	✓	✓	✓
Customer Support	✓	✓	✓	✗

In this section, we carried out a thorough exploration of the competitive landscape within the tour guide app industry, focusing on TripAdvice, Airbnb, and Viator as prominent competitors. We can form strategic decision-making for our tour guide app project through insights from examination and analysis of their respective market positions, business strategies, technological capabilities, customer feedback and overall user experience.

Detailed competitor profiles are developed, highlighting key aspects such as business models, target demographics, geographical reach, revenue streams, and unique value propositions. This serves as a foundational understanding of their operational dynamics and competitive positioning within the market.

The market shares held by TripAdvice, Airbnb, and Viator can be measured by carried out quantitative analysis, providing insights into their relative dominance and competitive standings. Metrics such as user penetration rates, app downloads, customer reviews, and industry rankings are used to make sure their market influence.

A meticulous review of their product offerings, technological ability, marketing strategies, customer engagement practices, and pricing structures is conducted to identify areas of

differentiation and competitive advantage.

According to above facts, our tour guide app project aims to leverage competitive advantages, enhance user experience and strategically position itself for success in the dynamic tour guide services market.

2.3.1 TripAdvisor Analysis

General introduction

TripAdvisor is an online travel platform offering a large amount of user-generated reviews, ratings, and recommendations for hotels, restaurants, attractions, and activities worldwide. Founded in 2000, it has become a go-to resource for travelers seeking trusted advice and insights for trip planning. With its comprehensive database and booking integration, TripAdvisor helps millions of users make informed travel decisions and create memorable experiences.

Strengths:

Extensive Database: TripAdvisor has a vast database of user-generated reviews, photos, and ratings for hotels, restaurants, attractions, and tours worldwide. This extensive content provides valuable insights for travelers when planning their trips.

Booking Integration: TripAdvisor offers seamless integration with third-party booking platforms, allowing users to book hotels, flights, and activities directly through the app. This convenience streamlines the booking process and enhances the user experience.

Community Engagement: TripAdvisor fosters a vibrant community of travelers who actively contribute reviews, photos, and travel tips. This user-generated content helps build trust and credibility, as travelers rely on peer recommendations when making travel decisions.

Global Reach: With a presence in multiple countries and languages, TripAdvisor caters to a diverse international audience. Its global reach makes it a go-to platform for travelers worldwide, offering comprehensive information and resources for various destinations.

Areas where TripAdvisor could be improved:

Personalization: While TripAdvisor provides a wealth of information, the sheer volume of content can be overwhelming for users. They enhance their users' experience by improving personalized features such as tailored recommendations based on user preferences and past behavior.

Local Expertise: TripAdvisor relies primarily on user-generated content, but it could benefit from incorporating insights from local experts and professional tour guides. Offering curated recommendations and insider tips from knowledgeable locals could add value and authenticity to the platform.

Social Networking: While TripAdvisor allows users to follow friends and see their reviews, it lacks robust social networking features compared to platforms like Instagram. Enhancing social networking capabilities, such as user profiles, photo sharing, and follower interactions, could increase user engagement and foster a sense of community.

Differences between TripAdvisor and our app:

Focus on Tour Guides: Unlike TripAdvisor, which primarily aggregates information from various sources, our app focuses on connecting users directly with local tour guides. This personalized approach allows for tailored travel experiences and authentic interactions with knowledgeable locals.

User-Generated Content: Similar to TripAdvisor, our app incorporates user-generated content such as trip photos and reviews. However, our app places a stronger emphasis on storytelling and community engagement, enabling users to share their travel experiences and connect with like-minded travelers and tour guides.

Revenue Model: While both TripAdvisor and our app generate revenue through advertising and commissions on bookings, our app introduces a unique revenue-sharing model for tour guides. By taking a percentage of the profits when users book tour guide services through the app, we reward tour guides to promote their services and contribute to the platform's content.

2.3.2 Airbnb Analysis

General introduction:

Airbnb is a popular online marketplace connecting travelers with unique accommodations and experiences around the world. Founded in 2008, Airbnb offers a diverse range of lodging options, including vacation rentals, apartments, and private rooms, allowing users to book accommodations that suit their preferences and budget. In addition to lodging, Airbnb provides curated activities and tours hosted by local experts, enabling travelers to immerse themselves in authentic cultural experiences during their trips.

Strengths:

Authentic Experiences: Airbnb provides travelers with authentic and immersive activities by offering unique, curated experiences hosted by locals.

Community Engagement: The platform encourage a sense of community by enabling hosts and guests to connect directly and share their experiences.

Flexible Booking: Users have the flexibility to book experiences individually or as part of their overall trip itinerary, enhancing convenience and customization.

Areas for Improvement:

Limited Availability: The availability of experiences may vary depending on the destination, and users in less popular locations may have fewer options to choose from.

Lack of Reviews: Some experiences may have limited or no reviews, making it challenging for users to assess their quality and authenticity.

Price Transparency: The pricing for experiences may not always be transparent, with additional fees or costs not clearly outlined upfront.

Difference from our App:

Focus on Experiences: While Airbnb Experiences offers a wide range of activities hosted by locals, our app focuses specifically on connecting users with tour guides for guided tours and personalized travel experiences.

User-Generated Content: Both apps incorporate user-generated content, but our app places a stronger emphasis on trip photos and storytelling, allowing users to share their travel experiences and connect with tour guides and fellow travelers.

2.3.3 Viator Analysis

General information:

Viator is a leading online platform specializing in tours, activities, and experiences for travelers worldwide. Established in 1999, Viator offers a vast selection of curated tours and attractions in destinations across the globe, ranging from guided city tours to adventure activities and cultural experiences. With easy booking options and verified reviews, Viator helps millions of travelers discover and book memorable experiences tailored to their interests and preferences.

Strengths:

Comprehensive Listings: Viator provides a comprehensive database of tours, activities, and attractions in various destinations worldwide, offering users a wide range of options to choose from.

Verified Reviews: The platform features verified reviews from past travelers, helping users make informed decisions and choose reputable tour operators.

Booking Integration: Users can easily book tours and activities directly through the app, with secure payment options and instant confirmation, enhancing the booking experience.

Areas for Improvement:

Limited Personalization: Viator's recommendation engine may lack personalization, with users receiving generic recommendations based on their location or search history.

High Competition: The app faces competition from other tour booking platforms and online travel agencies, making it challenging to stand out in the market.

Customer Support: Some users may experience issues with customer support or refunds, particularly for canceled or rescheduled tours.

Difference from our App:

Tour Guide Focus: While Viator offers a wide range of tours and activities from various operators, our app focuses specifically on connecting users with individual tour guides for personalized experiences.

Social Networking Features: our app incorporates social networking features similar to Instagram, allowing users to follow tour guides, share trip photos, and connect with other travelers, creating a sense of community within the platform.

2.4 Five Forces of Porter

Figure 1 - Porter's Five Forces



2.4.1 Threat of New Entrants

Entering the tour guide app industry poses significant challenges for new players due to various critical factors. To start, substantial initial capital investment is essential for developing a robust and user-friendly app platform. This encompasses expenses related to app development, server maintenance, and marketing endeavors aimed at gaining traction in a fiercely competitive market. Moreover, established entities like TripAdvisor, Airbnb, and Viator have already secured substantial market shares, benefiting from strong brand recognition and customer loyalty. These circumstances erect formidable barriers to entry for newcomers, who must contend with entrenched platforms offering diverse services and

functionalities. Additionally, grappling with regulatory complexities, securing essential permits, and forging alliances with local tour guides and agencies add further layers of complexity to penetrating this industry.

2.4.2 Bargaining Power of Buyers

Customers in the tour guide app industry hold significant bargaining power, mainly due to the wide array of options available and the ease of switching between platforms. With numerous tour guide apps accessible, offering various services from general travel guidance to specialized experiences, consumers have the ability to compare prices, review feedback, and choose services that best suit their preferences and financial capabilities. This heightened price sensitivity and the transparent nature of app reviews empower users to demand competitive pricing and expect top-notch services. Consequently, tour guide app providers must continually innovate, offer distinct value propositions, and deliver outstanding customer experiences to both retain existing customers and attract new ones.

2.4.3 Bargaining Power of Suppliers

The influence of suppliers in the tour guide app sector varies based on their scale and role. While individual tour guides with specialized knowledge may have some negotiating power, larger tour companies and technology providers wield more significant leverage. These major suppliers set terms and pricing for services like booking platforms and payment gateways, especially impacting smaller tour operators reliant on these platforms for visibility and bookings. Despite this, the presence of alternative distribution channels and advancements in technology can moderate supplier influence to a certain extent.

2.4.4 Threat of Substitutes

Tour guide apps face competition from traditional travel agencies and guidebooks, but their distinct features and advantages help to counter this threat effectively. These apps provide real-time updates, interactive maps, user-generated content, and personalized recommendations, which significantly enhance the travel experience compared to traditional substitutes. Furthermore, the increasing trend toward digitalization and mobile-centric travel planning has solidified the position of tour guide apps as indispensable tools for modern travelers. This shift in consumer behavior reduces the immediate risk of substitution by traditional alternatives, highlighting the resilience and relevance of tour guide apps in the evolving travel landscape.

2.4.5 Competitive Rivalry

In the tour guide app industry, competition is fierce among global giants like TripAdvisor, Airbnb, and Viator, alongside niche platforms and upcoming startups. These established brands hold sway with large user bases, comprehensive services, and strong brand recognition. Niche players often target specific travel segments for differentiation, while startups rely on technology, intuitive interfaces, and smart marketing to gain traction. This competitive milieu fuels innovation, partnerships, and customer-centric strategies as companies vie for market dominance, emphasizing distinct value propositions and exceptional user experiences to stand out in a crowded market.

2.5 Validation Method

We use several methods to make sure our tour guide app meets users' needs and industry standards. These methods include user testing, surveys, interviews, analytics, expert evaluation, and pilot testing. Each method helps us gather feedback and data to improve the app's usability, functionality, and overall experience.

User Testing: We invite a diverse group of people in different countries, including potential users, tour guides, and experts, to test the app. They help us see how easy for the app to use and how well it works and their feedback helps us fix any problems early on.

Surveys and Questionnaires: We create surveys and questionnaires to gather data on what users like, how satisfied they are, if they would pay for extra features, and if they would recommend the app to others and so on. This information helps us understand what needs to be improved.

Interviews and Focus Groups: We talk to users and stakeholders in interviews and focus groups to get detailed feedback on their experiences and suggestions for the app. This will help us get deeper insights into how to make the app better.

Analytics and Usage Metrics: We use analytics tools to track how users interact with the app. This includes how long they use it, which features they use the most, and how often they use it. This data helps us understand what works well and what needs improvement.

Expert Evaluation: We ask experts like UX designers, software developers, and tourism

professionals to review the app, they can help us ensure the app meets industry standards and works as it should, then we can use their feedback to make the app better.

Pilot Testing: We do a pilot test with a small group of users before launching the app to everyone, this helps us find and fix any technical issues or bugs. Feedback from this test helps us make final improvements before the full launch.

By using these validation methods, we hope to create a tour guide app that is easy to use, efficient, and meets high industry standards and make sure a successful launch and happy users.

2.6 Metrics and indicators

Thoroughly evaluating competitor apps provides valuable insights into industry trends, user expectations, market gaps, and potential opportunities for differentiation. This analysis helps refine our app's strategy, features, user experience, pricing, and marketing approach for a competitive advantage in the tour guide app market. Customizing metrics based on specific competitors, market dynamics, and strategic goals ensures relevance and actionable insights to enhance our app's performance and positioning effectively.

2.6.1 User Base Metrics

Number of Users:

This shows how many people are using GuidedGlobe. It's important to track this to see if our app is growing.

Characteristics of the User Base:

This tells us information about our users, like their age, gender, and location and it helps us understand who is using our app.

User Retention Rate:

This shows how many users keep coming back to use our app over time and a high retention rate means users like our app and keep using it.

User Engagement:

This measures how much users interact with our app, like how often they open it and how long they stay on it. It's important for keeping users interested.

Active Users:

These are the users who regularly use our app, we track active users to get to know how many people are actually using our app regularly.

Churn Rate:

This shows how many users stop using our app over time. A high turnover rate means we're losing users, which can be a problem.

User Feedback:

This includes reviews, ratings, and direct feedback from users. It helps us understand what users like and don't like about our app so we can make improvements.

The expense of acquiring customers:

This measures how much it costs to get new users for our app, like through advertising or marketing. It's important to keep this cost low to make sure our app is profitable.

2.6.2 Feature Analysis

By looking at what other apps like TripAdvisor, Airbnb, and Viator are doing, and by including our app's features, user experience, pricing, and how we tell people about it using what we learn from looking at other apps and hearing from users, we can enhance our tour guide app's competitiveness and get more people to use it.

Feature Analysis

Industry Trends: Look at what's popular in tour guide apps, like Airbnb provide virtual tours or sharing photos. If people like virtual tours, we will add them to our app.

User Needs: See what users want, like TripAdvisor provide real-time updates on tours or maps that work offline. If users want real-time updates, we add a feature to show tour availability instantly, and another example about Viator app could be sometime slow loading or hard to find things, and then make that easier in ours.

Market Gaps: we find Viator is missing things users want, like language options or coverage of certain places and we add more to ours, like ways to talk to other users or good support to make users happy.

Improving App Features:

Maps and Navigation: Make maps easier to use with things like GPS and offline maps, for example to add GPS so users can find their way easily.

User Interaction: Let users talk to tour guides and share photos, we can add a chat feature so users can ask guides questions. See what users want most, like good information and nice pictures, we will have them on our app too.

Personalization: Make suggestions based on what users like and recommend tours based on what users have done before.

Making the App Easier to Use:

Simple Design: Make the app easy to understand with clear buttons and menus such as making menus simple so users can find things quickly.

Performance: Make sure the app works well and doesn't crash by testing the app to make sure it's fast and doesn't break.

Price Advice

We can advise the tour guide about different prices for different levels of service according to different markets.

Marketing: Tell people about the app in a way that makes them want to use it like advertising on social media and travel websites to show off what the app can do.

By analyzing competitor apps like TripAdvisor, Airbnb, and Viator and addressing usability and user experience based on industry trends, user needs, and market gaps, we can improve the overall quality of our tour guide app and provide a more enjoyable and intuitive experience for users.

2.6.3 Market Positioning and Pricing

By implementing this pricing and positioning strategy, our tour guide app can effectively attract users and stand out in the competitive travel market.

Pricing Strategy:

1. Freemium Model:

We will offer basic features of the app for free, allowing users to access trip photos, destination information, and basic booking functionalities. Additional premium features such as live updates during trips and exclusive discounts can be unlocked through a subscription or one-time payment.

2. Commission-based Model:

We will charge tour guides a commission fee for each booking made through the platform. This fee can be a percentage of the total booking amount, ensuring that tour guides pay only when they earn income through the app.

3. Advertising Revenue:

We will generate revenue through targeted advertising from hotels, restaurants, and other tourist services featured on the app, advertisers can pay for sponsored posts or placements within the app to reach users at various stages of their travel journey.

Positioning Strategy:

- 1. Unique Value Proposition:** We position the app as the go-to platform for travelers seeking personalized and authentic experiences curated by local experts, and emphasize the app's unique features such as live updates, community connection, and inspiring content to differentiate it from competitors like TripAdvisor and Airbnb.
- 2. Global Accessibility:** Highlight the app's global reach and extensive database of destinations, we can make it suitable for travelers who are planning trips anywhere in the world. Position the app as a one-stop solution for discovering, planning, and booking travel experiences worldwide.

3. **User Experience:** Position the app as user-friendly and intuitive, catering to both tech-savvy users and those less familiar with mobile applications and emphasize the ease of use and seamless booking process to attract users looking for hassle-free travel planning.
4. **Community Engagement:** Position the app as a platform for building connections and fostering community among travelers and tour guides and encourage user-generated content and interaction to create a vibrant and engaged user base.
5. **Safety and Reliability:** Position the app as a trusted source for travel information and services, with stringent vetting processes for tour guides and a commitment to safety and quality. Highlight the app's reputation for reliability and transparency to instill confidence in users.

2.6.4 Technological Capabilities

By adding these technological capabilities into our app, we can create a comprehensive and user-friendly platform that will improve the travel experience for users and provide valuable insights into destinations and attractions.

Maps We Can Interact With: Give users maps they can zoom in and out of, move around, and mark places on.

GPS Directions: Let users get directions in real-time using GPS, showing them how to get to places and how long it'll take.

Maps We Can Use Without Internet: Allow users to download maps so they can use them even when they don't have internet, showing important places and routes.

Support for Different Languages: We will let users can use the app in different languages so everyone can understand it.

Connecting with Social Media: Let users share their experiences on social media directly from the app, and connect with other travelers.

Updates in Real-Time: Give users updates right away about things like tour availability or

local events.

Personal Recommendations: Give users suggestions for things they might like based on what they've done before.

Messaging Inside the App: Make it easy for users to talk to tour guides or ask questions right in the app.

Access to Info Without Internet: Manage to let users see important info about places and tours even when they don't have internet.

Safe Payments: Make sure any payments users make in the app are safe and secure.

Reviews and Feedback: Let users leave reviews and feedback about tours and places they've been to help other users.

2.6.5 Marketing and Promotion

A Market Research Overview of the Growing Need for GuidedGlobe

In recent times, more and more people are turning to tour guide apps to make their travel experiences better. Let's take a closer look at why this is happening and what it means for travelers and the tourism industry.

Market Research Findings:

Recent studies show that the number of people using tour guide apps is going up fast. Over the past few years, there's been a big increase in the number of people downloading these apps and using them while traveling.

For example, a study by Ajust found that travel apps had made a big bounce back in 2021 and can with the 2023 average so far 18% above the Q4 2019 average. In terms of growth, H1 2022 saw an increase of 8% year-over-year (YoY), and then H1 2023 enjoyed a YoY increase of 5%.

Table 2 - Travel app installs

Travel app installs June 2021 - June 2023 (Global)



<https://www.adjust.com/blog/travel-apps-2023/>

Q1 2023 outshone them both in terms of app session frequency, as illustrated on the chart below.

Table 3 - Travel app sessions per user per day

Travel app sessions per user per day Q3 2022 vs. Q4 2022 vs. Q1 2023 (Global)



<https://www.adjust.com/blog/travel-apps-2023/>

Understanding What Users Want:

We looked into why people are using these apps and what they like about them. Here's what we found out:

Personalized Travel Plans: People want tour guide apps to give them personalized recommendations and let them plan their trips the way they want, and they like features such as being able to make their own itineraries and get updates in real-time.

Local Knowledge: Travelers value getting insider tips and information about the places they're visiting, they rely on tour guide apps to connect them with local guides who know a lot about the area and can tell them interesting things.

Sharing Experiences: People enjoy sharing their travel experiences with others and they like being able to post pictures and reviews on the app and connect with other travelers.

Safety and Trust: Users want to feel safe and know they can trust the information on the app. They look for things like clear pricing, reviews from other users and secure payment options.

Implications for Tourism:

The increasing popularity of tour guide apps is changing the way people travel and it's also affecting the tourism industry in several ways:

Opportunities for Growth: Tour operators and local guides can use apps to reach more travelers and provide them with better experiences.

Challenges to Address: There are also challenges, like making sure tourism is sustainable and respectful of local cultures and environments.

In conclusion, tour guide apps are becoming more important for travelers and the tourism industry. We believe GuidedGlobe will offer a way for people to have better, more personalized travel experiences about how people travel and explore the world.

Marketing Mix:

Use a combination of digital marketing channels to reach potential users and tour guides.

1.Social Media Advertising:

Social media ads involve putting up ads for our tour guide app on sites like Facebook, Instagram, and Twitter. These sites let us show our ads to certain groups of people based on what they're interested in, where they are, and what they do online.

First, we make ads that catch people's eyes and tell them about what makes our app special, like personalized tours and real experiences and so on. *Then*, use the settings on each site to make sure our ads reach the right people. Keep an eye on how well our ads are doing and change them if needed to get better results.

2. Influencer Partnerships:

We can team up with popular people on social media who talk about travel and have lots of followers, these influencers can tell their followers about our app, which helps more people know about it.

We tell them our app's features and advantages and offer them something in return, like free access to special features or discounts. Work with them to make posts or videos that show how great our app is to their followers.

3.Content Marketing:

Content marketing is all about making useful and interesting stuff that our target audience will like. This could be blog posts, videos, or social media posts that give people helpful tips and info about travel and easy to share.

We think about what our customer wants to know about travel, then make good quality content that helps them, and make it possible for more people to find it by search engines. Share our content on social media to reach more people.

4.Email Marketing:

We can send emails to people who want to hear from us and to tell them about our app, share updates, and keep them interested.

For example, we build a list of people who want to get emails from us. Split our list into groups based on things like age or interests. Make emails that show off what makes our app cool, like special offers or new features. Use pictures and clear messages to get people excited about our app. Watch how well our emails will do and make changes where necessary.

Getting New Customers:

Offer incentives for users to download the app, such as discounts on their first tour booking or exclusive access to curated travel guides. Encourage tour guides to promote their services on the platform through referral programs or special promotions.

Keeping Customers:

We encourage a sense of community and engagement within the app by encouraging users to share their travel experiences, interact with tour guides, and connect with other travelers. Offer rewards or recognition for users who actively contribute content and engage with the community.

Marketing Materials

App Store Listings:

Title: GuidedGlobe - Your Travel Friend

Description: Discover, plan, and book your trips with GuidedGlobe. Explore the world, connect with local guides, and get tips for your journey. Download now and start exploring!

Icon: A picture of a globe or compass to show it's a travel app.

Screenshots: Pictures showing how the app works, like finding trips and beautiful places.

Website:

Homepage: A nice page with pretty pictures and a short explanation of what GuidedGlobe does.

About Us Page: Learn about GuidedGlobe, who we are, and what we do.

Features Page: See what GuidedGlobe can do for you, like finding trips and connecting with guides.

Download Page: Get the app from Apple or Google stores, and see how to use it.

Blog Section: Read fun stories and tips about travel on our blog.

Social Media:

Facebook: We share cool travel stuff and updates about GuidedGlobe. Like and share our posts!

Instagram: Beautiful travel pictures and stories. Follow us for inspiration!

Twitter: Quick updates and tips about travel. Follow us and join the conversation!

LinkedIn: Learn about GuidedGlobe and connect with us professionally.

Partnership Collateral:

Partner Brochures: Flyers that explain why companies should work with GuidedGlobe. They have our contact information.

Partnership Presentations: Cool slides showing why GuidedGlobe is great to work with. We

show how we helped other companies.

Referral Program:

Referral Cards: Cards for our users to give to friends. They get rewards for inviting friends to use GuidedGlobe.

Referral Incentives: Rewards for both users and their friends when they join GuidedGlobe.

Offline Promotion:

Flyers and Brochures: Papers with info about GuidedGlobe to give out at events. They show how to use the app.

Branded Merchandise: Stuff with GuidedGlobe logo on it, like pens and bags, to give away at events.

2.6.6 Customer Support and Satisfaction

By putting these customer support and satisfaction features into our app, we can improve user experience, build trust and loyalty, and ensure that users have a positive and memorable experience throughout their journey.

7 days and 24 hours Customer Support: Offer all day and night customer support to assist users with any inquiries, bookings, and troubleshooting issues.

Live Chat: Provide a live chat function where users can instantly connect with customer support representatives for immediate assistance.

FAQ Section: Include a comprehensive FAQ section that answers common questions and concerns users may have about the app, tours, and destinations.

Email Support: Allow users to reach out to customer support via email for non-urgent inquiries and assistance.

Phone Support: Offer a phone support hotline for users who prefer to speak with a customer support representative directly.

In-App Help Center: Create an in-app help center with tutorials, guides, and step-by-step instructions on how to use the app's features and functionalities.

User Feedback Surveys: Implement user feedback surveys to gather insights, suggestions, and opinions from users about their experiences with the app and tours.

Personalized Assistance: Provide personalized assistance and recommendations based on user preferences, travel history, and previous interactions with customer support.

Multi-language Support: Offer customer support in multiple languages to cater to an international user base and enhance accessibility for non-native speakers.

Accessibility Features: Ensure accessibility for users with disabilities by providing support for assistive technologies, such as screen readers and voice commands.

Community Forums: Create community forums or discussion boards where users can interact, share experiences, ask questions, and provide tips and recommendations to fellow travelers.

Social Media Engagement: Engage with users on social media platforms to address inquiries, respond to feedback, and showcase user-generated content.

Acknowledgment and Appreciation: Acknowledge and appreciate user feedback, suggestions, and contributions to encourage a positive relationship with users and demonstrate commitment to their satisfaction.

Chapter 3. PROPOSED SOLUTION

3.1 Business Model Canvas

According to Osterwalder and Pigneur (2010), it is essential to establish a common understanding of what a business model is, and they define it as "a business model describes the basis on which a company creates, provides, and captures value." The canvas they propose as a tool to describe what would be a pre-project of the strategy that will lay the foundations and processes of the future company uses the description of nine relevant areas: customers

and their relationship, channels, value proposition, revenue streams, costs, resources, activities, and key partnerships.

Figure 2 - Business model canvas template



The information required by each of these nine modules can be summarized as follows:

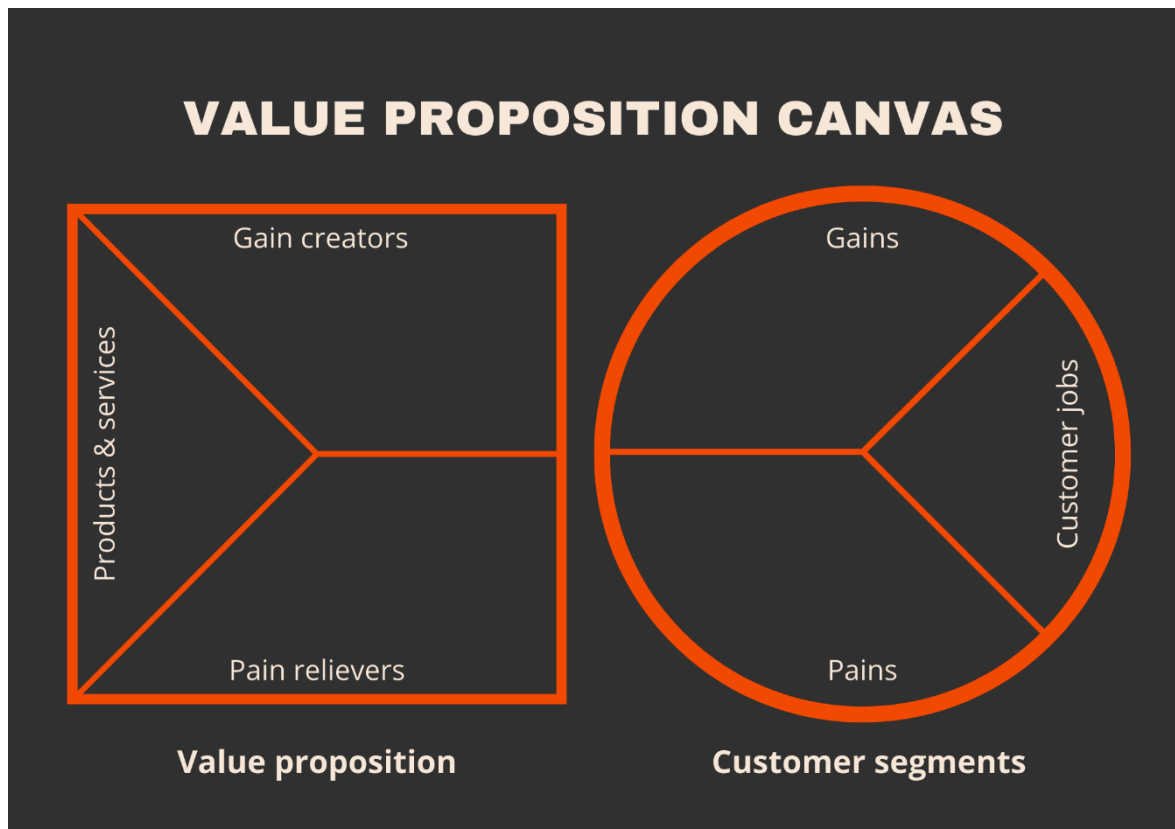
- **Customer Segments:** Identifying the specific target audience for the tour guide app, including leisure travelers, cultural enthusiasts, adventure seekers, and international tourists. This involves understanding their needs, preferences, and behaviors to tailor the app's offerings effectively.
- **Value Proposition:** Describing the unique value proposition of the tour guide app, highlighting the personalized travel experiences, real-time information updates, interactive maps, and user-generated content that differentiate it from competitors and appeal to the target market.
- **Channels or Distribution:** Outlining the communication and distribution channels utilized by the tour guide app to reach and engage customers. This includes direct channels such as in-app messaging and social media, as well as indirect channels like partnerships with tourism agencies and travel platforms.
- **Relationships with Customers:** Defining the type of relationships the tour guide app aims

to establish with customers, whether it's focused on customer acquisition, loyalty building, or sales stimulation. This encompasses personalized interactions, automated features, and strategies for enhancing customer satisfaction.

- **Revenue Streams:** Detailing the revenue generation model of the tour guide app, whether through one-time transactions, subscription-based models, in-app purchases, or partnerships with local businesses for commission-based earnings.
- **Key Resources:** Identifying the essential resources required for the tour guide app's operation, including technological infrastructure, content creation tools, human resources for customer support, and partnerships with tour guides and agencies.
- **Key Activities:** Listing the critical activities that the tour guide app must perform to deliver value to customers, such as app development, content curation, customer support, marketing, and partnership management.
- **Key Partnerships:** Describing strategic partnerships and collaborations that contribute to the success of the tour guide app, such as alliances with tour operators, tourism boards, local businesses, and technology providers to enhance services and expand reach.
- **Cost Structure:** Analyzing the cost components involved in developing, launching, and operating the tour guide app, including initial investment, app maintenance, marketing expenses, personnel costs, and partnership fees.

Osterwalder and Pigneur introduced a valuable tool known as the value proposition canvas, designed to enhance the management of existing or new value propositions within the previously outlined business model (Osterwalder et al., 2014). This supplementary canvas aids in aligning the understanding of the customer segment with the value map, which outlines the description of the value proposition. The integration of these elements streamlines the process of refining or creating value propositions that resonate effectively with the target customer profile, as shown in the following figure:

Figure 3 - Value proposition canvas



To establish the client profile, it is crucial to delve into the clients' tasks, encompassing both their personal and professional endeavors, along with the challenges they face and the desired outcomes they strive for. This involves understanding their frustrations and aspirations deeply.

Once the client profile is well-defined, as depicted in the right section of the canvas (Figure 4), attention shifts to delineating the value map within the left sector. Here, three key components are elaborated upon: the products and services to be offered, the sources of joy or benefits these offerings provide to clients, and the frustration relievers outlining how client issues will be addressed or mitigated.

By aligning the customer profile with the value proposition in this manner, businesses can effectively cater to customer needs and deliver the expected value. These tools facilitate a structured approach to understanding market segments and crafting value propositions that resonate with customers' expectations, as illustrated in Figure 5.

3.1.1 Customer segment

The customer segments targeted by the tour guide app are diverse, reflecting a wide range of travelers with distinct preferences and motivations.

These segments encompass Leisure Travelers seeking relaxation and enjoyment, Adventure Seekers craving adrenaline-fueled experiences, Cultural Enthusiasts eager to explore heritage and traditions, Food Enthusiasts interested in sampling diverse cuisines, Family or Solo Travelers embarking on memorable journeys, and International Tourists exploring new destinations. Each segment represents individuals with unique travel styles and interests, contributing to the rich diversity of users the app aims to serve.

Figure 4 - Client profile summary



Please: Elaborate on the plant at

https://www.canva.com/design/DAGEML_gEis/ksmgMDQWrg0ce_vEj7NRug/edit

Customer jobs: Among the customers who can use the tour guide program are:

- Leisure Travelers.
- Adventure Seekers.
- Cultural Enthusiasts.
- Lovers of trying food from different cultures.
- Family/Solo Travelers.

-International Tourists.

Pains: Customer pains related to their daily activities are:

- Difficulty finding unique experiences.
- Limited options for adventure tour bookings.
- Language barriers and cultural challenges.
- Limited information on food tours.
- Safety concerns while traveling
- Limited family-friendly or solo options.
- Lack of understanding of local customs.
- Difficulty finding trustworthy guides.

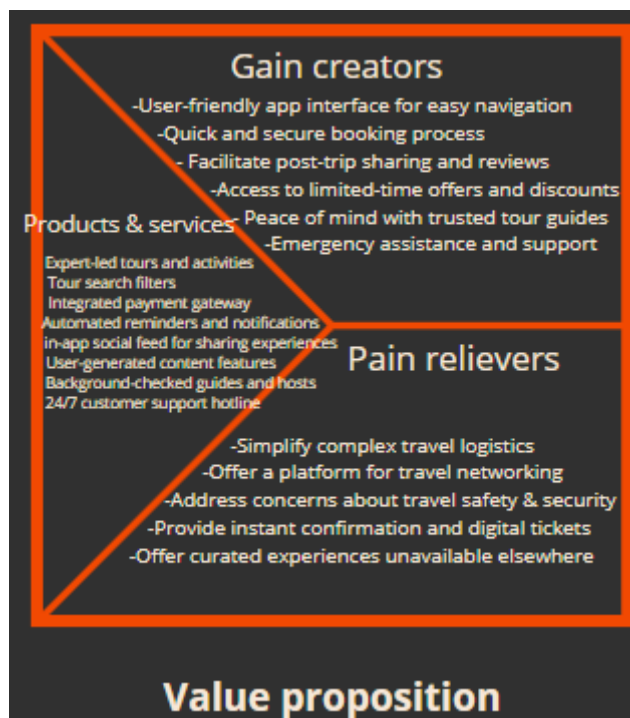
Gains: The Gains that the client works with that identify the siguientes:

- Deep insights into local cultures.
- Access to historical sites & museums.
- Sharing experiences and communicating.
- Opportunities for outdoor exploration.
- Access to unique destinations.
- Food tours and tastings to explore.
- Family-friendly activities.
- Safe and enjoyable experiences.
- cultural immersion.

3.1.2 Value Proposition

Taking into account all the information collected about customers, a value map is prepared as shown in Figure 6.

Figure 5 - Summary Value Map



Please: Elaborate on the plant at

https://www.canva.com/design/DAGEML_gEis/ksmgMDQWrg0ce_vEj7NRug/edit

This map describes the services that will be offered according to the business proposal and how gains will be created and the client's pains will be alleviated:

Products and services: The main service of the program will be tourism services and a social networking site for guides and guides, which has great quality and service and is easy to use. It will also have:

Expert-led tours and activities: Tailored experiences guided by knowledgeable experts to enrich the tour experience with valuable insights.

Tour search filters: Customizable search criteria (like duration, budget, and location) to simplify finding suitable tours based on individual preferences.

Integrated payment gateway: A secure and seamless payment system within the app for convenient and trustworthy booking transactions.

Automated reminders and notifications: Timely alerts and notifications for upcoming tours,

payments, or important updates to keep users well-informed and organized.

In-app social feed for sharing experiences: A dedicated platform within the app allowing users to share their travel experiences, photos, and reviews, fostering community engagement.

User-generated content features: Tools enabling users to contribute content like reviews, ratings, and recommendations, enhancing the platform's authenticity and credibility.

Background-checked guides and hosts: Ensuring all guides and hosts undergo thorough checks to provide a safe and reliable experience for users.

24/7 customer support hotline: Accessible customer support available round-the-clock to address queries, resolve issues promptly, and provide assistance as needed, enhancing user satisfaction and confidence in the app.

Gain creators:

User-friendly app interface for easy navigation: The app is designed with a simple and intuitive layout, making it easy for users to find what they need without confusion.

Quick and secure booking process: Streamlined booking system with robust security measures in place to protect user data and transactions.

Facilitate post-trip sharing and reviews: Features that enable users to share their travel experiences, photos, and feedback after their trip, fostering a sense of community and providing valuable insights for others.

Access to limited-time offers and discounts: Providing users with exclusive deals and discounts on tours and activities to incentivize bookings and enhance affordability.

Peace of mind with trusted tour guides: Ensuring that all tour guides are vetted and reputable, offering users confidence in the quality and safety of their experiences.

Emergency assistance and support: Offering 24/7 support and assistance services in case of emergencies or unexpected situations during the trip, ensuring user safety and comfort

throughout their journey.

Pain relievers:

Simplify complex travel logistics: The app streamlines the intricate details of travel planning, making it effortless for users to manage their itineraries and arrangements.

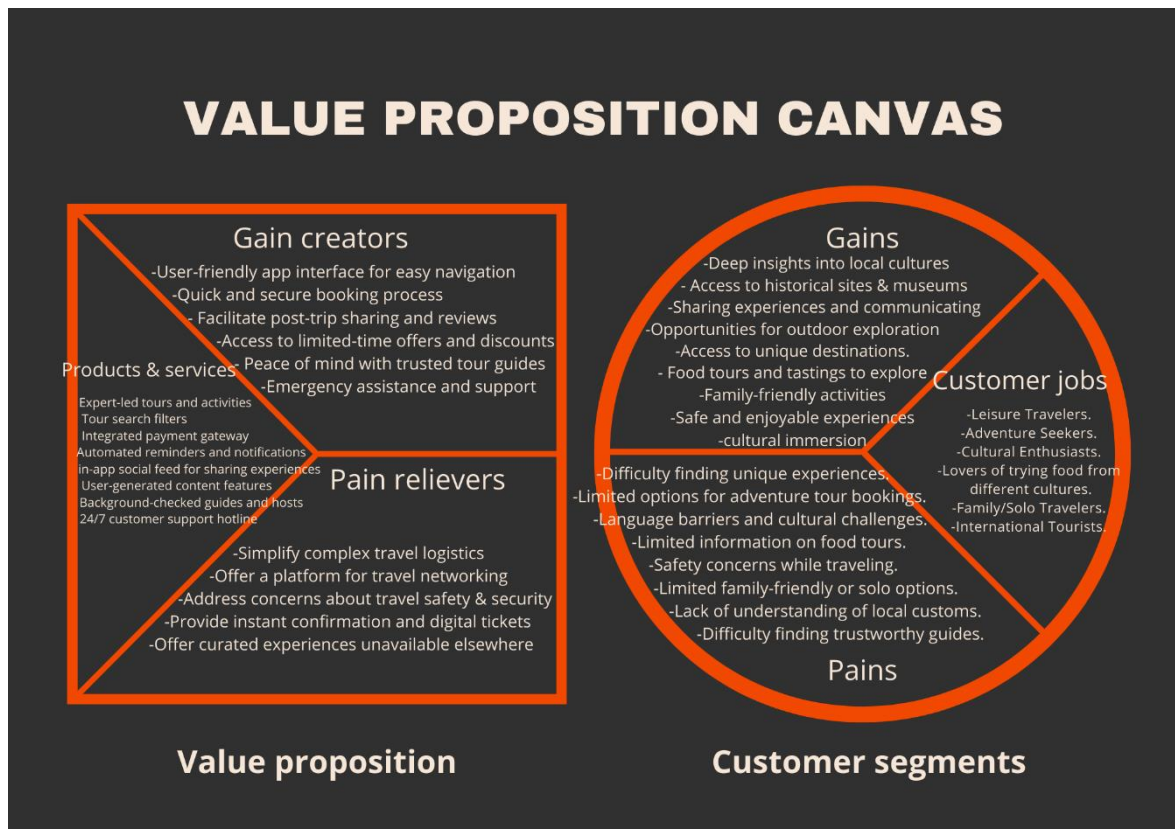
Offer a platform for travel networking: Users can connect with fellow travelers and share insights, tips, and experiences, enhancing their overall travel journey.

Address concerns about travel safety & security: The app prioritizes safety by providing comprehensive safety guidelines, emergency contacts, and real-time alerts to ensure a secure travel experience.

Provide instant confirmation and digital tickets: Users receive immediate confirmation for bookings and access digital tickets, eliminating the need for paper documents and enhancing convenience.

Offer curated experiences unavailable elsewhere: The app curates unique and exclusive travel experiences that cannot be found elsewhere, providing users with memorable and one-of-a-kind adventures.

Figure 6 - Final canvas of the value proposition



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When looking at the end result of the value proposition, the value map (left) is achieved Fully respond to the customer's needs and expectations (right) regarding the software. In this way, it is specified in the value proposition as the details below:

An ideal blend of wanderlust, cultural immersion, and convenience.

Our tour guide app strives to offer users an optimal blend of exploration, cultural insight, and seamless experiences. From personalized guided tours to curated local experiences, our platform connects travelers with expert guides and exclusive insights, ensuring memorable and enriching journeys.

The app will initially feature a range of customizable tour options and unique experiences crafted by local experts, providing travelers with authentic and unparalleled adventures.

In addition, the value proposition of our tour guide app is designed to meet the diverse

preferences of leisure travelers, adventure lovers, cultural admirers, food connoisseurs, individual or family explorers, and global tourists. Central to our offering is an emphasis on local expertise and insights, connecting users with experienced local guides who provide insider perspectives and personalized recommendations, enriching their travel experiences. Along with this, our platform prioritizes convenience and seamless booking by providing a user-friendly interface for browsing tours, booking and processing secure in-app payment, simplifying travelers' planning journey.

Furthermore, our app underscores Social Sharing and Community Building, fostering a culture of sharing travel experiences, images, and suggestions within the app's community hub. This cultivates a sense of community and trust among users, fostering an engaged and connected user base. Exclusive Access and Special Deals are integral elements of our value proposition, granting users curated tours, unique experiences, local event access, and enticing discounts to enhance affordability and overall value. Safety and Reliability are paramount, as we collaborate with accredited and vetted tour guides and service providers, implement stringent safety protocols, and offer real-time support to prioritize user safety during travel. This comprehensive value proposition aligns seamlessly with the discerning needs and expectations of our target customer segments, ensuring a memorable and rewarding travel experience for all app users.

3.1.3 Channels or Distribution

The distribution channels for the app will primarily leverage mobile app stores as the main platform for user acquisition and download. Additionally, influencer marketing will play a significant role, targeting travel influencers to promote the app's unique value propositions and reach a wider audience. Advertising campaigns across various digital channels will further amplify brand visibility and attract potential users. Partnerships with relevant industry players, such as tourism boards, travel agencies, and hospitality businesses, will facilitate strategic collaborations and tap into existing customer bases. Community engagement initiatives, including social media campaigns, user-generated content, and community forums, will foster user interaction and enhance brand loyalty. These diverse channels collectively aim to maximize reach, drive user acquisition, and ensure sustained engagement with the app's target audience.

3.1.4 Relationships with Customers

The focus is on fostering a strong and interactive relationship with customers through various engagement strategies within the app. Users will be encouraged to share their tour experiences, provide feedback, and rate services, contributing to a transparent and trustworthy platform. Robust customer support services will ensure timely assistance for inquiries and technical issues, enhancing user satisfaction and loyalty.

Post-tour follow-ups will gather valuable insights and improve service quality based on user feedback. Community building initiatives will create a sense of belonging and encourage user-generated content, fostering a vibrant and engaged user community. Continuous improvement efforts will drive ongoing enhancements to the app's features, functionality, and user experience, ensuring relevance and competitiveness in the market.

3.1.5 Key Resources

The main resources required to start the mobile application are:

- **Technology Infrastructure:** Servers, databases, and software tools necessary for app development, hosting, and maintenance.
- **Legal & Regulatory Compliance:** Ensuring adherence to laws and regulations governing the tourism and mobile app industries.
- **Marketing & Branding Team:** Responsible for promoting the app, creating brand awareness, and attracting users through strategic campaigns.
- **Data and Analytics Team:** Gathering and analyzing user data to inform decision-making and enhance app performance.
- **Network of Local Guides and Partnerships:** Providing access to expert guides and enriching the user experience through collaborations.
- **Customer Support Team:** Addressing user inquiries, resolving issues, and maintaining high levels of user satisfaction.
- **App Development Team:** Responsible for ongoing app enhancements, updates, and

feature integrations to ensure a seamless user experience.

3.1.6 Key Activities

The key activities for the app include app development and maintenance, focusing on continuous updates and improvements to ensure a seamless user experience. Partnership management will be crucial for establishing and nurturing relationships with tour guides, travel agencies, and other stakeholders to expand the app's offerings and reach. Customer support and engagement will involve providing timely assistance, addressing user queries, and fostering positive interactions to enhance user satisfaction and retention. Marketing and user acquisition efforts will encompass digital marketing campaigns, content creation, and promotional activities to attract new users and increase app adoption. These key activities are integral to the app's success in delivering value to users and maintaining a competitive edge in the market.

3.1.7 Key Partnerships

Key partnerships play a vital role in the success and sustainability of the tour guide app. These partnerships can be categorized into initial collaborations necessary for launching the app and ongoing relationships crucial for its continuous operation. Initially, key partners include local guides and tour operators who provide valuable insights and experiences for users. Travel agencies, hotels, and accommodations also form essential partnerships to expand the app's reach and offerings. Additionally, partnerships with local businesses and attractions enhance the app's value by providing users with a comprehensive travel experience.

As the app evolves and operates, maintaining partnerships with tourism influencers, content creators, and investors becomes crucial for marketing, promotion, and financial support. These partners contribute to the app's visibility, credibility, and growth in the competitive tourism market. Furthermore, maintaining a strong partnership with the app developer ensures continuous technical support, updates, and enhancements to meet user needs and expectations effectively.

3.1.8 Cost Structure

The main costs for the operation of the app are, as shown in the table:

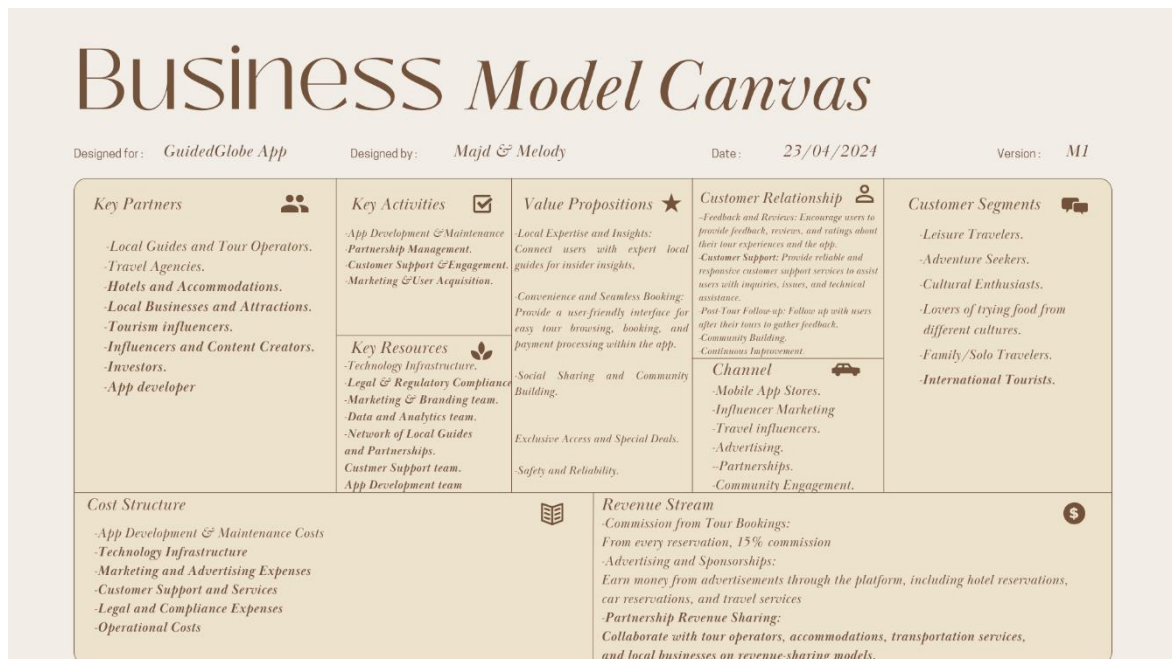
Figure 7 - Detalle costes de operación mensual app

Cost Category	Monthly Cost (USD)
App Development & Maintenance	\$5,000
Technology Infrastructure	\$2,500
Marketing and Advertising	\$3,000
Customer Support and Services	\$1,500
Legal and Compliance	\$1,000
Operational Costs	\$4,000
Total Monthly Operation Costs	\$17,000

3.1.9 Revenue Streams

The revenue streams for the tour guide app encompass multiple avenues to generate income. Firstly, a commission structure is in place where the app earns a 15% commission from every tour booking made through the platform. Additionally, revenue is generated through advertising and sponsorships, leveraging partnerships with hotels, car rental services, and other travel-related businesses to display targeted advertisements. Moreover, the app employs revenue-sharing models with tour operators, accommodations, transportation services, and local businesses, allowing for mutually beneficial partnerships and increased revenue opportunities. These diverse revenue streams contribute to the financial sustainability and growth of the tour guide app.

Figure 8 - Canvas business model for GuidedGlobe tour guide App



3.2 Business Case

Overview:

The objective of the tour guide application is to transform the travel sector by establishing direct connections between travelers and local tour guides. This initiative aims to improve trustworthiness, transparency, and the sharing of travel experiences. Utilizing innovative functionalities and an intuitive interface, the app intends to offer a streamlined platform for users to explore, reserve, and relish tailor-made tours led by knowledgeable guides.

3.2.1 Target Audience

1. **Leisure Travelers:** Individuals who prioritize leisurely travel and wish to immerse themselves in local culture and exploration.
2. **Adventure Seekers:** Travelers who seek adventurous activities and unique experiences beyond typical tourist attractions.
3. **Cultural Enthusiasts:** Those interested in gaining insights into diverse cultures, traditions, and histories through guided tours.
4. **Food Enthusiasts:** Individuals passionate about exploring local cuisines and culinary scenes guided by experts.

5. Family/Solo Travelers: Families and solo adventurers seeking customized and memorable travel experiences.

6. International Tourists: Visitors from overseas seeking authentic and enriching travel adventures in new destinations.

3.2.2 Unique Value Propositions

Access to Local Expertise and Insights: The app will connect users with knowledgeable local guides who offer unique insights and in-depth knowledge about destinations.

Effortless Booking Experience: With a user-friendly interface, travelers can easily browse, book tours, and securely process payments within the app.

Social Interaction and Community Engagement: Users will be able to share their travel experiences, reviews, and photos within the app's community, fostering connections and engagement.

Exclusive Offers and Deals: App users will gain access to special discounts and exclusive deals, enhancing the value of their travel experiences.

Emphasis on Safety and Reliability: The app will prioritize safety measures and ensure reliable tour operations, instilling confidence and trust among users.

3.2.3 Market Analysis

Competitors: Airbnb, Tripadvisor, and Viator are prominent competitors offering similar travel-related services, but with different focuses and target markets.

Analyze competitors' strengths, weaknesses, market share, and user demographics.

Explore trends in travel preferences, technology adoption, and consumer behavior.

3.2.4 Revenue Model

Commission from Tour Bookings: The app will generate revenue by charging a 15% commission from every tour booking made through the platform.

Advertising and Sponsorships: Additional revenue will be earned through advertisements, including hotel reservations, car rentals, and other travel-related services.

Partnership Revenue Sharing: Collaborating with tour operators, accommodations, and local businesses will involve revenue-sharing models to further monetize the platform.

3.2.5 Additional Features

Feedback and Reviews: Implementing a feedback system to collect user insights and enhance services.

Utilize user feedback to improve user experience, tour offerings, and app features.

Customer Support: Providing reliable customer support services for inquiries and assistance. Establish support protocols, response times, and training for support teams.

Post-Tour Follow-up: Engaging with users post-tour to gather feedback, testimonials, and reviews.

Utilize surveys and follow-up communications for post-tour engagement.

Community Building: Fostering a traveler community through forums, events, and social media.

Create strategies for community engagement, user-generated content, and loyalty programs.

Continuous Improvement: Continuously improving the app based on feedback, market trends, and technology.

Follow an agile development approach, prioritize feature enhancements, and monitor app performance metrics.

3.3 Outcomes

Sprint 1: Initial Planning and Requirements Gathering

Outcome: Collect detailed requirements from stakeholders including tour guides, travelers, and advertisers, and create user stories to outline key features such as real-time messaging, personalized recommendations, and social sharing capabilities.

Sprint 2: Design and Prototype Development

Outcome: Developed initial wireframes and prototypes of the app, including basic layouts for the user interface, interactive maps, and tour guide profile pages. Conducted user testing sessions to gather feedback on the design. For example, create a prototype with screens for user registration, guide profiles, and a messaging interface, and users test the prototype and provide feedback on the design and usability.

Sprint 3: Core Feature Implementation

Outcome: Implement core features such as user registration, tour guide profiles, and trip information pages. Refine these features based on feedback from Sprint 2. Users can create accounts, view detailed tour guide profiles, and access comprehensive trip information. Make necessary adjustments to improve navigation and information presentation.

Sprint 4: Real-Time Communication and Social Features

Outcome: Add real-time messaging and social sharing features, travelers can now communicate directly with tour guides through in-app messaging, tour guides can post updates and photos, similar to Instagram.

Sprint 5: Integration and Testing

Outcome: Integrated all features and conducted extensive testing to ensure compatibility across different devices and operating systems. Ensured the app runs smoothly for all users, for example, test the app on various smartphones and fixed bugs, and verify that features like messaging and social sharing work seamlessly across different devices.

Sprint 6: User Feedback and Iteration

Outcome: Release the app to a beta group of users to gather real-world feedback, make improvements to the user interface such as clearer navigation buttons and more intuitive menus, enhance personalization algorithms, and fix any bugs based on user feedback.

Sprint 7: Advertising and Revenue Model Implementation

Outcome: Integrate advertising features, allowing hotels and tourist services to advertise within the app, apply a revenue-sharing model where the app takes a percentage of the profits from bookings made through the platform, such as add ad spaces for hotels and tourist services, set up a system where the app earns a commission on bookings, providing a steady

revenue stream.

Sprint 8: Final Testing and Launch Preparation

Outcome: Conduct final testing to ensure all features are working correctly and bug-free and the app is ready for public release, prepare marketing materials and user guides to assist new users in navigating the app such as creating tutorials and FAQs to help new users get started.

Sprint 9: Launch and Post-Launch Support

Outcome: Officially launch the app with a marketing campaign, attracting a large number of initial users, set up a support team to handle user inquiries and issues, and set up a system for regular updates and feature enhancements based on user needs.

3.4 GuidedGlobe Prototype

Project Overview:

GuidedGlobe is a mobile application designed to specially cater to the needs of both tourists and tour guides. The app focuses on providing trip offers, trip photos, and detailed trip information to travelers, while also offering a social platform similar to Instagram where tour guides can share their experiences and travelers can interact with them. The app aims to generate revenue through advertising from hotels and tourist services, as well as by taking a percentage of the profits from tour guide services booked through the app.

Project Management Method: Agile Development

Initial Development

User Registration and Authentication:

Users can sign up for an account using email or social media.

Implement authentication to make sure access to the app safety.

Trip Offers Section:

Develop a section where users can browse trip offers.

Include filters for destination, duration, activities, and budget.

Tour Guide Pages

Tour Guide Profile Creation:

Allow tour guides to create profiles with basic information and contact details.
Include options to upload profile pictures and bio.

Social Platform Features:

Set up a platform where tour guides can post trip photos and stories.
Make it possible for users to like, comment, and share posts from tour guides.

Advertising Integration

Ad Placement:

Integrate advertisements from hotels and tourist services into the app.
Ensure ads are displayed in relevant sections without disrupting user experience.

Revenue Tracking:

Set up tracking mechanisms to monitor revenue generated from advertisements.

Payment Integration

Payment Gateway Integration:

Integrate secure payment gateways for users to book tour guide services.
Allow users to make payments for trip bookings directly through the app.

Commission Calculation:

Develop a system to calculate and deduct the app's commission from tour guide service payments.

Testing and Quality Assurance

Functional Testing:

Conduct thorough testing of all app features to ensure they work as intended.
Address any bugs or issues discovered during testing.

User Feedback Collection:

Gather feedback from users to identify areas for improvement.
Make necessary adjustments based on user suggestions.

3.5 Portfolio Management

Portfolio management for GuidedGlobe app project including overseeing the entire project from start to finish, ensuring how it meets its objectives and delivers value to stakeholders. Here's how portfolio management can be approached for our project:

Project Objectives and Scope:

Clearly define the objectives of the GuidedGlobe app project, which include creating a user-friendly app for tourists worldwide and a platform for tour guides to showcase their trips.

Define the scope of the project, including features such as trip offers, trip photos, trip information, and social media-like pages for tour guides.

Stakeholder Engagement:

Identify and engage stakeholders such as tourists, tour guides, hotels, and tourist services to gather requirements and ensure their needs can be satisfied.

Maintain open communication channels with stakeholders throughout the project to resolve any concerns or changes.

Resource Allocation:

Allocate resources such as human resources, technology, and finances to the project based on its requirements and priorities.

Ensure resources are used for meeting project deadlines and deliverables efficiently.

Risk Management:

Identify potential risks to the project such as technical challenges, budget constraints, or changes in market demand.

Develop strategies to reduce risks and minimize their impact on project outcomes.

Project Planning and Execution:

Develop a detailed project plan outlining tasks, milestones, and timelines for app development, testing, and launch.

Execute the project plan according to the defined schedule, monitoring progress and making adjustments as needed.

Quality Assurance:

Implement quality assurance measures to ensure the app meets high standards of usability, reliability, and performance.

Conduct regular testing and reviews throughout the development process to identify and address any issues.

Monitoring and Control:

Monitor project progress, budget, and resources to ensure adherence to the plan and make adjustments as necessary.

Implement controls to track project performance and address any deviations from the plan.

Benefits Realization:

Ensure that the project delivers the intended benefits, such as increased revenue from advertising and tour guide services. Measure and evaluate the impact of the app on stakeholders and make improvements as needed to maximize benefits.

We can make sure GuidedGlobe's successful development, launch, and ongoing operation, ultimately delivering value to both tourists and tour guides alike, by effectively managing the portfolio for the GuidedGlobe app project.

Chapter 4. SOLUTION IMPLEMENTATION

4.1 Project Management Methodology

We selected Agile (Figura 8.) as our methodology because it is renowned for being the most effective approach for app development projects. Agile's focus on flexibility, collaboration, and iterative progress makes it ideal for the constantly changing nature of app development. By incorporating Agile principles, we can swiftly respond to user feedback, market shifts, and technological innovations, ensuring we deliver a high-quality product that meets user needs.

In the modern, interconnected world, the tourism industry is constantly evolving due to technological advancements and shifting consumer preferences. With the widespread use of smartphones and mobile apps, travelers have unparalleled access to information, resources, and experiences. Therefore, developing and implementing an efficient methodology is crucial for successfully creating a tour guide app with integrated social media features.

This methodology aims to utilize Agile principles, combined with Lean and Scrum frameworks, to guide the development and deployment of the tour guide app. By adopting an Agile approach, our project team will embrace flexibility, collaboration, and iterative progress, allowing rapid adaptation to changing user needs and market trends. Integrating Lean principles will ensure efficient resource use, waste reduction, and continuous improvement throughout the development process. Additionally, employing Scrum practices will promote transparent communication, effective task management, and timely delivery of high-quality features.

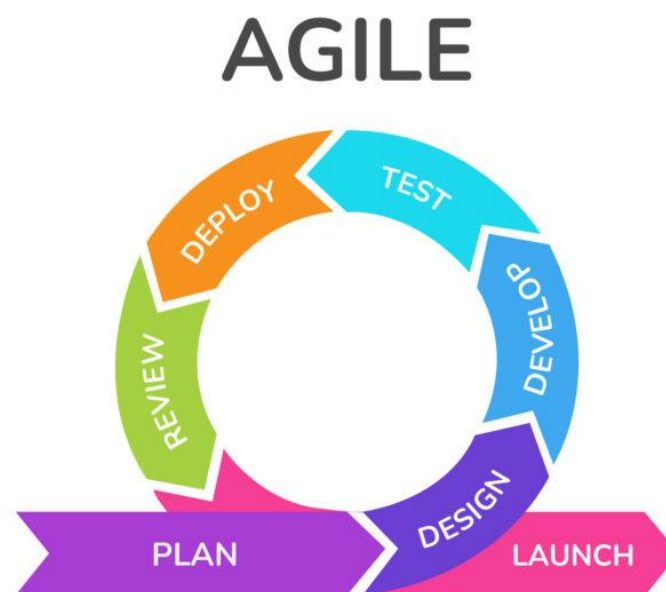
To gain a deeper understanding of our target users' desires and challenges, we conducted a quantitative survey with 65 participants. This survey provided valuable insights into user preferences, pain points, and expectations, which have been crucial in shaping the app's design and functionality. By directly addressing these needs, we aim to create a platform that truly resonates with our users and enhances their travel experiences.

The tour guide app will serve as a comprehensive platform for travelers to discover, plan, and book personalized tours, as well as a social media hub for sharing experiences, recommendations, and insights. By seamlessly integrating tour guide functionalities with

social media features, the app aims to create a vibrant community of travelers, tour guides, and enthusiasts, fostering meaningful connections and enriching travel experiences.

Through this methodology, we strive to realize our vision of creating a user-centric, innovative, and sustainable tour guide app that transforms how people explore and engage with the world. By embracing Agile principles and leveraging Lean and Scrum frameworks, we are dedicated to delivering a seamless, intuitive, and transformative experience for travelers worldwide.

Figure 9 - The Agile Development Process



Please: Elaborate on

<https://www.krasamo.com/agile-development-process/>

4.2 Why choose Agile methodology

Figure 10 - Advantages of using agile



https://www.turing.com/blog/agile-mobile-app-development-for-building-successful-apps/#Why_choose_Agile_methodology_for_mobile_app_development

Excellent Product Quality:

Agile development prioritizes high-quality outcomes by incorporating testing into each iteration of the process. Developers test the app at the end of every cycle, promptly addressing any bugs or errors. Regular retrospectives allow the team to review their work, identify improvements, and implement changes in future iterations. Continuous client involvement throughout development ensures that necessary adjustments are made promptly, enhancing overall product quality.

Faster Time-to-Market:

The iterative nature of Agile development allows for the creation and release of a basic version of the tour guide app quickly. This version can then be refined and enhanced through subsequent iterations, incorporating immediate feedback and ongoing fine-tuning. This approach minimizes the need for extensive changes at the end of the project, significantly reducing overall development time and ensuring a faster time-to-market.

Reduced Development Costs:

Agile development efficiently utilizes resources by breaking work into prioritized sprints. This method saves time by focusing on critical aspects first and addressing less important elements later. Regular testing and frequent iterations help identify and resolve errors early, avoiding costly fixes later in the project. Additionally, the ability to accommodate changes at any stage further reduces development costs.

Enhanced Flexibility:

Agile methodology offers significant flexibility in project management. Its iterative and incremental approach allows for easy integration of changes at any point in the development process, making it more adaptable than traditional methods. Planning and development evolve as the project progresses, facilitating the implementation of new changes as needed.

Improved Control with Scrum:

Agile provides an adaptable framework that allows project managers to respond to changes quickly. The Scrum framework within Agile enhances this control through defined roles such as Product Owner, Scrum Master, and Development Team. The Scrum Master ensures the team follows Agile principles, while daily stand-ups (scrums) provide continuous feedback, enabling early identification and correction of issues. This structure ensures that the app development aligns with customer requirements, allowing project managers to make informed decisions and streamline the development process.

Eliminating Waste with Lean Principles:

Incorporating Lean principles ensures that the development process is efficient and free of waste. Lean focuses on maximizing value while minimizing unnecessary activities and resources. By continuously improving processes and eliminating waste, the team can focus on delivering valuable features and functionalities without unnecessary delays or expenses. This results in a more efficient development cycle and a higher-quality product.

Increased Customer Satisfaction:

Agile development involves customers throughout the entire process, not just during the planning phase. This continuous involvement ensures that the app aligns closely with customer requirements. The development team can make modifications based on real-time feedback, significantly enhancing customer satisfaction. Additionally, the Agile method's

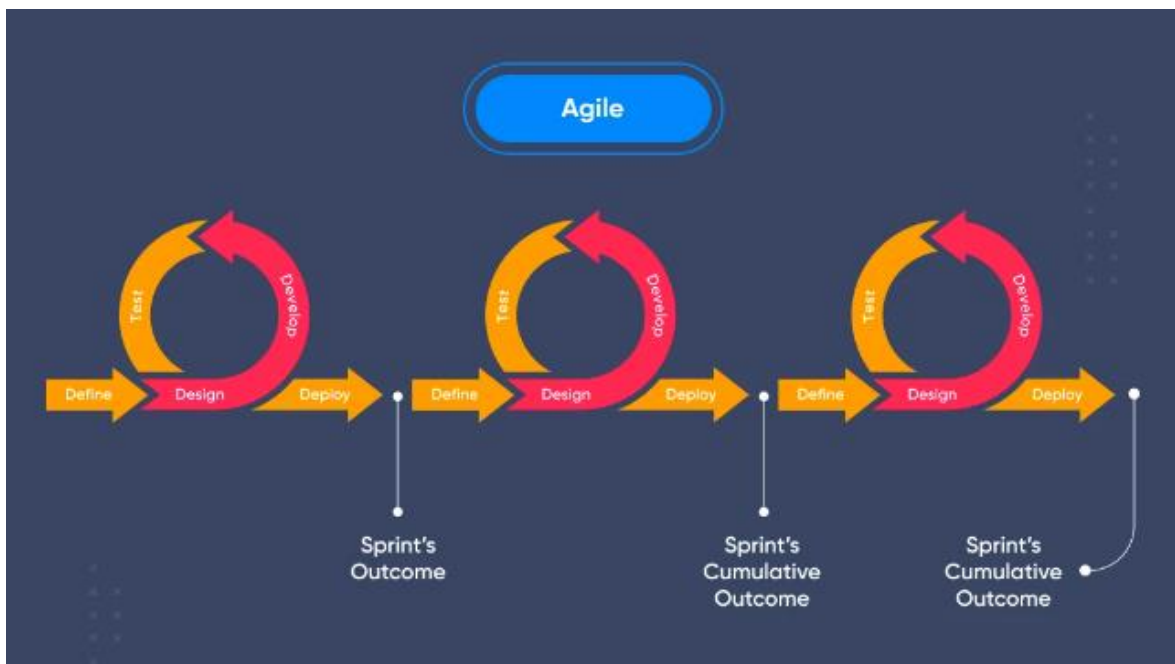
ability to reduce development time further boosts customer satisfaction by delivering a functional product more quickly.

By adopting Agile development principles, incorporating Scrum for effective team management, and applying Lean principles to eliminate waste, our tour guide app will benefit from superior quality, faster release cycles, reduced costs, greater flexibility, improved control, and increased customer satisfaction, ensuring a robust and user-friendly product.

4.3 Outputs & Deliverables

The successful completion of our tour guide app project, using Agile methodology, requires several key outputs and deliverables. These will serve as tangible markers of progress and success, ensuring that all project objectives are met in a systematic and structured manner. The outputs and deliverables are categorized into different sprints of the project lifecycle, each contributing to the overall vision of creating a comprehensive tour guide app with integrated social media functionalities.

Figure 11 - The Agile Development Process



<https://www.netsolutions.com/insights/everything-about-new-product-development/>

Phase 1: Requirement Analysis & planing

In this initial stage, the development team conducts a thorough analysis of the app's requirements by considering business goals, user needs, and current market trends. This phase involves engaging all stakeholders to gather their inputs regarding desired features,

functionalities, and outcomes for the tour guide app. The collected information forms the foundation for the subsequent development phases, ensuring the app aligns with user expectations and business objectives.

Phase 2: Design

The design phase focuses on creating a comprehensive plan that defines both the visual and functional aspects of the app. This critical phase shapes the user interface (UI), user experience (UX), and technical framework of the tour guide app. Key activities include:

User Interface (UI) Design: Developing the visual elements and layout, including screens, icons, buttons, and navigation.

User Experience (UX) Design: Ensuring a smooth and intuitive user experience that makes the app efficient and easy to use.

Technical Design: Outlining the technical aspects, such as system architecture, data models, APIs, and third-party integrations.

Interaction Design: Defining how users will interact with the app and how it will respond to user inputs.

Phase 3: Development

The development phase, also known as the implementation phase, is where the actual coding takes place. This stage is conducted iteratively using Agile methodology, divided into short cycles called sprints, each lasting 2-4 weeks. During each sprint, the team focuses on specific features and functionalities outlined in the design phase. Daily stand-up meetings, or scrums, help track progress and address any bottlenecks, ensuring smooth project advancement.

Phase 4: Testing

Testing is a continuous process that begins early in development and extends through each sprint. Agile methodology emphasizes automated testing to streamline verification. Key testing activities include:

Unit Testing: Testing individual components to ensure they function correctly.

Integration Testing: Ensuring different modules interact smoothly.

Functional Testing: Verifying the app functions as expected.

Performance Testing: Assessing the app's speed, responsiveness, and resource usage.

Security Testing: Identifying vulnerabilities and ensuring data protection.

Regression Testing: Ensuring existing features remain unaffected by new changes.

Phase 5: Deployment

In the deployment phase, the app is released on various platforms for users to download and install. The quality assurance team performs final tests to ensure full functionality and performance. Any defects or bugs are promptly addressed by the development team. User training, establishing release schedules, and setting up communication channels also occur during this stage. Once these activities are completed, the app is released to production.

Phase 6: Review

After deployment, the review phase begins, focusing on evaluating app performance and user feedback. This phase involves monitoring user interactions, collecting feedback, and identifying areas for improvement. The goal is to enhance functionality and performance, ensuring the app meets user expectations and continues to deliver a high-quality experience.

Phase 7: Maintenance

The maintenance phase ensures the app remains functional, secure, and up-to-date post-deployment. This phase includes:

Bug Fixes: Addressing any issues that arise after the app is in use.

Updates and Enhancements: Continuously improving the app by adding new features and refining existing ones based on user feedback and technological advancements.

Performance Monitoring: Regularly checking the app's performance metrics to maintain optimal functionality.

User Support: Providing ongoing support to address user queries and issues promptly.

Figure 12 - The Agile Development Process

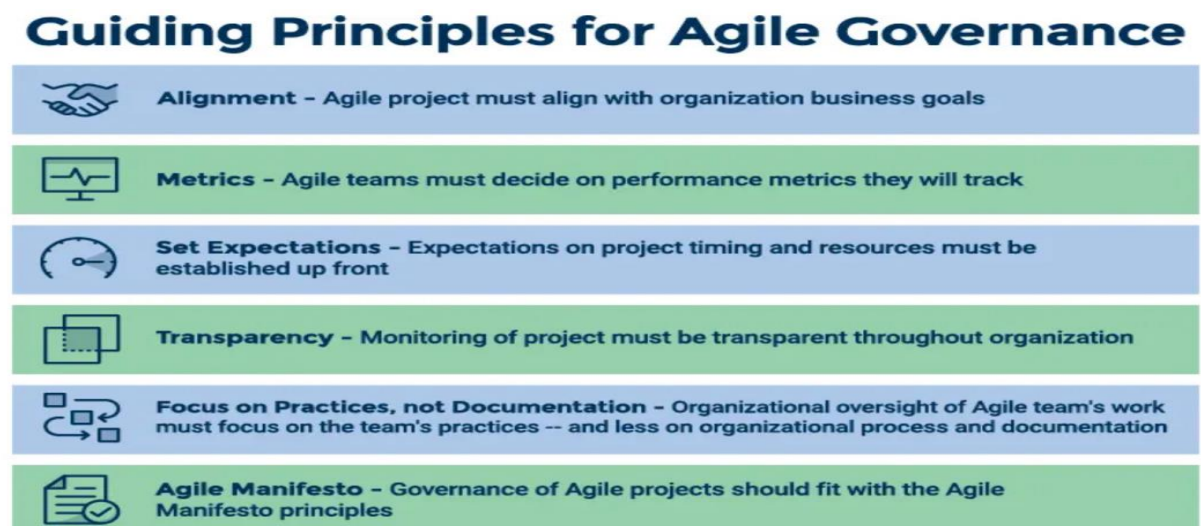


By following these seven phases, the development and management of the tour guide app can be effectively organized, ensuring a high-quality product that meets the evolving needs of travelers and tour guides.

4.4 Project Governance

4.4.1. Agile Governance for GuidedGlobe

Figure 13 - Guiding principles for Agile governance



<https://www.smartsheet.com/content/agile-governance>

For an agile project like GuidedGlobe, project governance ensures that the project is well-managed and meets its goals. Governance involves oversight, decision-making, and ensuring that the project stays on track. The following contents show how governance is applied to the GuidedGlobe project:

Stakeholder Involvement

Description: Engage stakeholders regularly to ensure their needs and feedback are addressed.

Practical example: Hold bi-weekly meetings with stakeholders (tour guides, tourists, hotel partners) to review progress and gather feedback. Use their input to adjust priorities and features. And another example is during a sprint review, a hotel partner may suggest adding a feature to highlight special offers. The team discusses this feedback in the Sprint Planning meeting and prioritizes it for the next sprint.

Clear Roles and Responsibilities

Description: Define who is responsible for what to avoid confusion.

Practical example: Assign roles such as Product Owner, Scrum Master, and Development Team. Majd as Product Owner will prioritize features, and another one as Scrum Master will facilitate sprints and remove obstacles.

Sprint Planning and Reviews

Description: Plan work in short iterations (sprints) and review progress at the end of each sprint.

Practical example: Every two weeks, hold a Sprint Planning meeting to decide which features to work on. At the end of the sprint, hold a Sprint Review to demo what has been built and get feedback. In Sprint Planning, the team decides to focus on implementing the user registration and login system. By the end of the sprint, they demo this feature to stakeholders and gather feedback for improvements.

Daily Stand-Up Meetings

Description: Short, daily meetings to keep the team aligned.

Practical example: Every morning, have a 15-minute stand-up meeting where each team member shares what they did yesterday, what they will do today, and any blockers they face. Such as one member shares an issue with integrating the payment system that he or she's facing, the scrum master offers to help resolve the issue after the stand-up meeting.

Backlog Management

Description: Keep a prioritized list of features and tasks.

Practical example: Use a tool like Jira to maintain a backlog. Majd, the Product Owner, will prioritize the backlog items based on stakeholder feedback and project goals. The Product Owner updates the backlog after receiving feedback from users that they want a better search filter, then he moves this feature up in priority for the next sprint.

Continuous Integration and Testing

Description: Regularly integrate and test code to catch issues early.

Practical example: Set up a continuous integration pipeline using tools like Jenkins. A developer checks in new code for the booking system. Automated tests run and catch a bug, which is fixed before the end of the day, ensuring the system remains stable.

Retrospectives

Description: Regularly reflect on the process and make improvements.

Practical example: At the end of each sprint, hold a retrospective meeting to discuss what went well, what didn't, and how to improve. For instance, if feedback loops are too slow, discuss the quicker ways to get feedback from users. In the retrospective, if the team realizes they are spending too much time on daily stand-ups, then limit each person's update to one minute to keep the meetings concise.

Performance Metrics

Description: Track key metrics to measure progress and success.

For example: Track metrics such as number of active users, booking rates, and user satisfaction scores, and use these metrics to make data-driven decisions about the project.

Risk Management

Description: Identify and reduce risks early.

For example: During sprint planning, identify potential risks such as technical challenges, delays in feedback, then develop plans such as additional testing or backup plans for key features.

Documentation and Knowledge Sharing

Description: Maintain clear and accessible documentation.

Practical example: Use shared online documents to follow with project decisions, architecture, and how-to guides, make sure all team members have access and contribute to it.

GuidedGlobe can stay on track, adapt to changes quickly, and deliver a high-quality product that meets user needs, after we execute these governance practices in an Agile manner.

4.4.2 Governance Model for GuidedGlobe

Figure 14 - Governance Structure



<https://coding.abel.nu/2012/03/scrum-and-project-governance/>

The Governance Model for the GuidedGlobe project will ensure effective oversight, decision-making, and be accordance with project goals while maintaining the flexibility and adaptability of Agile methodologies.

Governance Structure

a. Stakeholder Committee

Members: Key stakeholders including tour guides, tourism industry representatives, and potential users.

Responsibilities: Provide strategic direction, prioritize high-level requirements, and offer feedback on major milestones.

Meetings: Bi-monthly meetings to review project progress and provide input.

b. Product Owner (Majd)

Responsibilities: Define product vision, manage and prioritize the backlog, communicate with

stakeholders, and ensure the product delivers value.

Authority: Final decision-maker on feature priorities and acceptance criteria.

c. Scrum Master

Responsibilities: promote Scrum events, remove impediments, ensure the team abide Agile practices, and coach the team on Agile principles.

Authority: Operational decision-maker on process and team efficiency.

d. Development Team

Members: Cross-functional team including developers, designers, and testers.

Responsibilities: Deliver potentially shippable product increments at the end of each sprint, comply quality standards, and participate in Agile ceremonies.

Authority: Self-organize to accomplish the sprint goals.

Agile Ceremonies and Governance

a. Sprint Planning

Frequency: Start of each sprint.

Participants: Product Owner, Scrum Master, Development Team.

Purpose: Define the sprint goal, select backlog items to work on and create a sprint plan.

b. Daily Stand-Up

Frequency: Daily.

Participants: Scrum Master, Development Team.

Purpose: Provide a quick status update, identify impediments, and align team efforts.

c. Sprint Review

Frequency: End of each sprint.

Participants: Product Owner, Scrum Master, Development Team, Stakeholders.

Purpose: Demonstrate the completed work, collect feedback and adapt the backlog based on opinions.

d. Sprint Retrospective

Frequency: End of each sprint.

Participants: Scrum Master, Development Team.

Purpose: Reflect on the sprint, identify areas for improvement, and create an action plan for facilitate team processes.

Decision-Making Processes

a. Backlog Management

Responsibility: Product Owner.

Process: Regularly refine and prioritize the backlog based on stakeholder feedback and project needs, and he can tools like Jira for transparency and tracking.

b. Change Management

Responsibility: Product Owner and Scrum Master.

Process: Assess the impact of changes on the project scope, timeline, and resources and make adjustments during sprint planning or backlog refinement sessions.

c. Risk Management

Responsibility: Scrum Master and Development Team.

Process: Identify risks during sprint planning and daily stand-ups and develop mitigation plans and adjust the sprint backlog if necessary.

Quality Assurance and Control

a. Continuous Integration and Testing

Process: Use automated testing and continuous integration tools such as Jenkins, GitHub Actions to ensure code quality and early detection of issues.

b. Definition of Done

Responsibility: Development Team and Product Owner.

Criteria: Clearly define what makes up a “done” increment such as coding standards, testing requirements, and documentation.

c. Peer Reviews and Pair Programming

Carry out peer reviews of code and practice pair programming to enhance code quality and knowledge sharing.

Performance Metrics and Reporting

a. Key Performance Indicators (KPIs)

Metrics: User engagement rates, booking completion rates, system performance, and user satisfaction scores.

Reporting: Regularly update stakeholders on these metrics during sprint reviews and stakeholder meetings.

b. Progress Tracking

Tools: Use Agile project management tools such as Jira to track progress and manage tasks through sprint reports.

Documentation and Knowledge Sharing

a. Wiki or shared repository

Content: Maintain documentation on project decisions, architecture, user guides, and meeting notes.

Access: Ensure all team members and stakeholders have access to updated information.

b. Sharing knowledge regularly

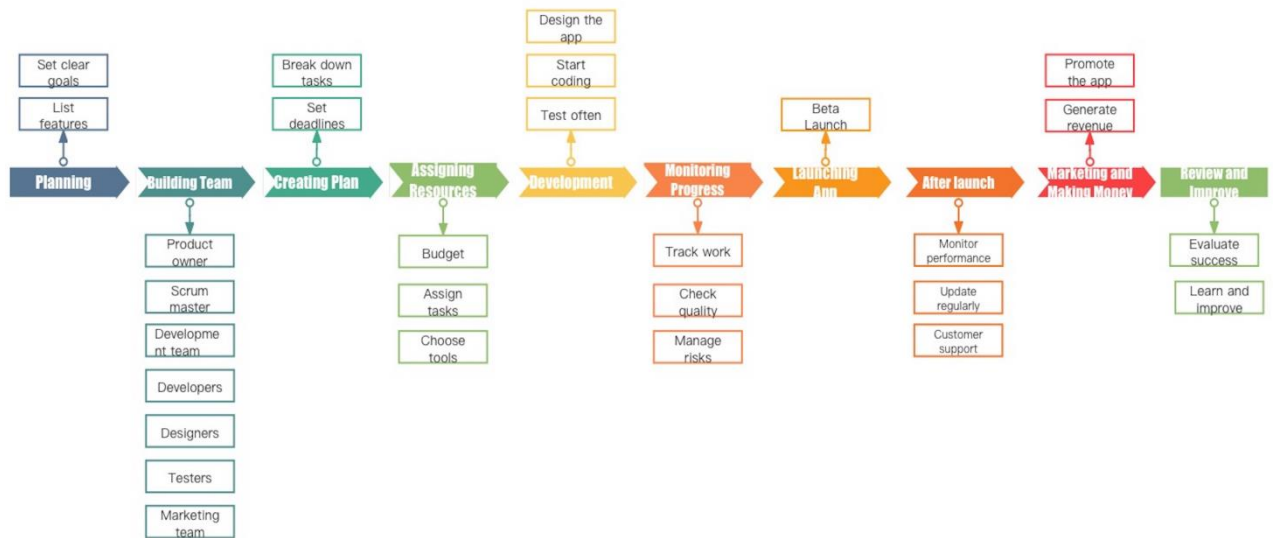
Frequency: Bi-weekly.

Purpose: Share lessons gained, new techniques, and insights obtained during the project.

After executing this Governance Model, GuidedGlobe will benefit from structured oversight while maintaining the flexibility to adapt and respond to changing requirements and stakeholder feedback.

4.5 Role

Figure 15 - Role structure



Planning:

Set Clear Goals: Decide what the app should achieve, write down all the things the app should do, this includes showing trip offers, allowing photo uploads, and having social media-like pages for guides.

Building the Team:

Product Owner:

People who define the product vision, manage and prioritize the backlog, communicate with stakeholders, and ensure the product delivers value, and he has final decision-maker on feature priorities and acceptance criteria.

Example: Majd, as the product owner, he can prioritize the feature of integrating a social media-like page for tour guides based on user feedback.

Scrum Master:

People who facilitate Scrum events, remove impediments, ensure the team adheres to Agile practices, and coach the team on Agile principles, and he is the operational decision-maker on process and team efficiency.

Example: people who as the scrum master, schedules and leads daily stand-up meetings, sprint planning, reviews, and retrospectives, ensuring the team remains focused and productive.

Development Team:

Members: A cross-functional team including developers, designers, and testers. The team's responsibilities is to deliver potentially shippable product increments at the end of each sprint, adhere to quality standards, and participate in Agile ceremonies, and they are kind of self-organize to accomplish the sprint goals.

Example: The development team works together to create and test the user registration and login system within a two-week sprint.

Developers:

The persons who write code, implement features, and fix bugs.

Example: Developers implement the photo upload feature, allowing tour guides to share trip photos.

Designers:

The persons who design the app's user interface and user experience.

Example: Designers create wireframes and mockups for the app's booking system.

Testers:

The people who test the app to find and fix problems, ensuring it meets quality standards.

Example: Testers perform regression testing on the booking feature to ensure no new bugs are introduced.

Marketing Team:

The persons whose responsibilities is to promote the app and attract users.

Example: The marketing team plans a social media campaign for the app's launch.

Creating a Detailed Plan:

Break Down Tasks: Breakdown the project into small tasks like designing the user interface, developing the app, and testing it.

Set Deadlines: Create a timeline with key dates for when tasks should be finished.

Assigning Resources:

Budget: Plan how much money we will spend on development, marketing, and operations.

Assign Tasks: Give specific tasks to team members based on their skills.

Choose Tools: Pick the right tools and technologies for building the app.

Development:

Design the App: Create simple sketches and designs of what the app will look like.

Start Coding: Begin writing the code to build the app's features.

Test Often: Regularly test the app to find and fix any bugs or problems.

Monitoring Progress:

Track Work: Use tools to keep track of each task and make sure everything is on schedule.

Check Quality: Regularly review the app to ensure it meets quality standards.

Manage Risks: Identify any potential problems early and plan how to deal with them.

Launching the App:

Beta Launch: Release a test version to a small group of users to get feedback and find issues.

Final Launch: After fixing any issues from the beta, release the final version to everyone.

After Launch:

Monitor Performance: Keep an eye on how the app is performing and gather user feedback.

Update Regularly: Make updates to fix bugs, improve features, and add new ones.

Customer Support: Provide help for users who have questions or problems.

Marketing and Making Money:

Promote the App: Use social media, ads, and partnerships to get more users.

Generate Revenue: Make money from ads and take a small percentage from tour guide bookings.

Review and Improve:

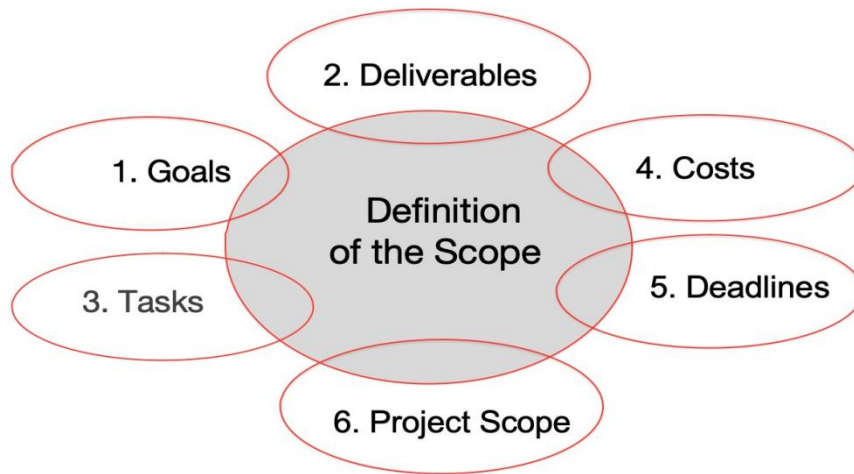
Evaluate Success: Check if the app meet its goals by looking at user numbers, engagement, and revenue.

Learn and Improve: Note what worked well and what didn't to improve future projects.

By following these steps, the solution implementation for our tour guide app will be practical and effective, ensuring the app is high-quality, user-friendly, and successful.

4.6 Definition of the Scope

Figure 16 - Definition of the scope



1. Specific Project Goals

First we need to develop a Functional Tour Guide App, including creating a user-friendly interface for browsing and booking tours, and use features for uploading and viewing trip photos and information.

Second goal is to create Social Media Pages for Tour Guides, this includes allow tour guides to create profiles, post photos, and share experiences, also enable users to follow guides and interact with their posts.

The third is to generate revenue, it includes integrate advertisements from hotels and tourist services and set up a system to collect a percentage of the fees from tour bookings.

2. Deliverables

App Interface means user-friendly design for easy navigation and secure booking and payment system.

Tour Guide Profiles are created including profile pages for guides with photos, tour offers, and reviews. Features for posting and sharing content.

We also build advertising platform including spaces within the app for advertisements and system to manage and display ads.

The revenue Collection System will be created to collect fees from tour bookings and reporting tools to track revenue.

3. Tasks

We set up planning such as define project goals and scope, and create a project plan with tasks, timelines, and resources.

For development part, we will design the app interface, develop the booking and payment system, create the tour guide profile features and implement the advertising platform.

About testing task, it should include conducting beta testing with real users, identifying and fixing bugs and issues, and ensuring the app is secure and user-friendly.

Launch task we will release the app to the public and promote the app through marketing efforts.

For post-Launch, we will monitor app performance and user feedback and carry out updates and improvements as needed.

4. Costs

Development Costs contains salaries for developers, designers, and project managers. Costs for software and tools also needed for development.

Marketing Costs include budget for promoting the app through various channels and costs for advertisements and promotional materials.

Operational Costs will include ongoing costs for server hosting and maintenance and customer support and administrative expenses.

5. Deadlines

Project Planning Completion: 1 month from start

Development Phase Completion: 6 months from start

Testing Phase Completion: 2 months from end of development

App Launch: 9 months from start

Post-Launch Monitoring and Updates: Ongoing

6. Project Scope

In Scope:

Designing and developing the app for global use.

Creating detailed trip offer pages with photos and information.

Creating social media features for tour guide profiles.

Integrating advertisement spaces and a commission-based payment system.

Providing customer support and maintenance post-launch.

Out of Scope:

Development of a desktop version of the app.

Any offline promotional activities.

Providing physical tour guide services or direct customer service for travel arrangements.

Through defining these goals, deliverables, tasks, costs, deadlines and the project scope, we ensures that all activities are aligned to achieve the successful development and launch of the tour guide app.

4.7 Stakeholder Analysis

Table 4 - Power - Interest Grid



Comprehensive stakeholder analysis will help ensure the successful development and implementation of our tour guide app. The following content is about how we analyze each stakeholder's role, interests, and influence on the project, as well as strategies for effectively

engaging and managing stakeholders throughout the project lifecycle.

1. Tourists:

Role: Primary users of the tour guide app, seeking information and services for their travel needs.

Interests: They desire convenience, reliability, and personalized experiences during their travels.

Influence: Their satisfaction and feedback directly impact app adoption and reputation.

Engagement Strategy: Regular surveys, feedback forms, and user testing sessions to gather insights and improve user experience.

Needs and Expectations: Tourists expect the app to provide comprehensive information about destinations, attractions, and activities, as well as seamless booking and communication functionalities. They value user-friendly interfaces, accurate recommendations, and real-time updates during their travels.

2. Tour Guider:

Role: Provide guided tours and local expertise to tourists using the app.

Interests: Seek opportunities for bookings, efficient communication tools, and recognition for their services.

Influence: Their engagement and satisfaction influence app usage and quality of service.

Engagement Strategy: Regular communication channels, training sessions, and incentive programs to maintain their involvement and motivation.

Needs and Expectations: Tour guides expect the app to connect them with potential clients, streamline booking and payment processes, and provide tools for communication and itinerary management. They value features that help them showcase their expertise and attract more bookings.

3. Travel Agencies:

Role: Act as intermediaries between tourists and tour guides, facilitating bookings and travel arrangements.

Interests: Seek reliable tour guide services, seamless integration with booking systems, and revenue-sharing opportunities.

Influence: Their endorsement and partnerships can enhance app credibility and reach.

Engagement Strategy: Collaborative partnerships, tailored packages, and regular updates on app features and offerings.

Needs and Expectations: Travel agencies expect the app to provide reliable and verified tour guide services, seamless integration with their booking systems, and opportunities for collaboration and revenue-sharing.

4. Advertisers and Partners:

Role: Advertise on the app or collaborate with developers to promote their tourist services.

Interests: Look for targeted advertising opportunities, measurable ROI, and access to a large user base.

Influence: Contribute to revenue stream and app monetization strategies.

Engagement Strategy: Clear value proposition, customizable advertising packages, and performance analytics to demonstrate impact.

Needs and Expectations: Advertisers and partners expect the app to provide targeted advertising opportunities, measurable ROI, and access to a large and engaged user base. They seek mutually beneficial partnerships that drive traffic and revenue to their businesses.

5. App Developers and Technical Team:

Role: Design, develop, and maintain the app's infrastructure, functionality, and security.

Interests: Require clear project requirements, resources, and opportunities for innovation.

Influence: Critical for app development, performance, and user experience.

Engagement Strategy: Regular updates, technical support, and involvement in decision-making processes.

Needs and Expectations: Advertisers and partners expect the app to provide targeted advertising opportunities, measurable ROI, and access to a large and engaged user base. They seek mutually beneficial partnerships that drive traffic and revenue to their businesses.

6. Regulatory Bodies and Legal Advisors:

Role: Ensure compliance with legal and regulatory requirements in the tourism industry.

Interests: Maintain legal integrity and mitigate risks associated with data privacy, intellectual property, and consumer protection.

Influence: Shape app features, policies, and terms of service to comply with regulations.

Engagement Strategy: Regular consultations, legal reviews, and updates on regulatory changes.

7. Community and Local Authorities:

Role: Represent local communities and authorities where tours take place.

Interests: Preserve cultural heritage, minimize environmental impact, and ensure responsible tourism practices.

Influence: Influence app content, itineraries, and policies to align with community interests.

Engagement Strategy: Community consultations, sustainable tourism initiatives, and transparent communication channels.

When we understand and address the needs of stakeholders, we can enhance collaboration, mitigate risks, and ensure the success of our tour guide app.

Table 5 - Stakeholders

Stakeholder	Power	Interest	Category	Action
Tour Guides	High	High	Manage Closely	Prioritize their needs and keep them engaged
Advertisers and Partners	High	High	Manage Closely	Keep them happy with regular updates and engagements
Regulatory Bodies and Legal Advisors	High	Low	Keep Satisfied	Provide periodic updates to keep them satisfied
Community and Local Authorities	High	Low	Keep Satisfied	Ensure they are informed of key developments without overloading
Tourists	Low	High	Keep Informed	Regularly update them and seek feedback
App Developers and Technical Team	Low	High	Keep Informed	Keep them informed about project progress and changes
Travel Agencies	Low	Low	Monitor	Provide occasional updates without too much detail
General Community	Low	Low	Monitor	Inform them periodically about major developments

4.8 Tools to manage the Project

Efficient project management is crucial for the successful development and launch of our tour guide app, which combines social media features for sharing travel experiences. Utilizing the right tools enhances processes, fosters collaboration, and ensures timely delivery of high-quality features. Below are the primary tools we will use to manage this project, aligned with Agile, Scrum, and Lean methodologies:

Figure 17 - Project Mangment Tools Exampels



<https://www.linkedin.com/pulse/project-management-tools-what-use-when-ryan-mcquitty>

4.8.1 Project Management and Collaboration Tools

-ClickUp

ClickUp is a comprehensive project management tool designed for Agile teams. It aids in managing tasks, tracking progress, and fostering collaboration. ClickUp will be used to:

- Organize and manage tasks, user stories, and sprints.
- Monitor progress through customizable workflows and dashboards.
- Facilitate sprint planning and retrospectives.
- Integrate with other tools (like GitHub and Slack) for seamless workflow management.

-JIRA

JIRA is another robust project management tool utilized for specific Agile and Scrum practices. It assists with:

- Detailed tracking of issues and user stories.
- Managing backlogs and sprint boards.
- Generating comprehensive reports and performance metrics.

-Confluence

Confluence integrates seamlessly with JIRA and ClickUp, enabling team collaboration and documentation. It will be used for:

- Storing project documentation, including design specs and meeting notes.
- Collaborating on documents in real-time.
- Creating a central repository for all project-related information.

4.8.2 Development and Testing Tools

-GitHub

GitHub is a version control platform essential for managing our codebase. It offers:

- Repository hosting for storing and managing source code.
- Branching and merging features for collaborative development.

- Issue tracking and pull requests for code reviews and bug management.

-Jenkins

Jenkins is a continuous integration and continuous deployment (CI/CD) tool. It automates the building, testing, and deployment processes. Key features include:

- Automated testing to ensure code quality.
- Continuous integration to detect and resolve issues promptly.
- Deployment automation to streamline the release process.

4.8.3 Communication Tools

-Slack

Slack is a messaging platform designed for team collaboration. It will be used for:

- Real-time communication among team members.
- Creating channels for different project aspects (e.g., development, design, testing).
- Integrating with other tools (JIRA, ClickUp, GitHub) for updates and notifications.

-Zoom

Zoom will be used for virtual meetings, including:

- Daily stand-ups to discuss progress and challenges.
- Sprint planning and retrospective meetings.
- Stakeholder meetings for updates and feedback.

4.8.4 Design Tools

-Figma

Figma is a web-based design tool perfect for collaborative interface design. It allows us to:

- Create wireframes, mockups, and prototypes.
- Collaborate in real-time with designers and developers.
- Share designs with stakeholders for feedback.

-Adobe XD

Adobe XD is another powerful tool for UI/UX design. It will be used to:

- Develop interactive prototypes.
- Design high-fidelity user interfaces.
- Test user flows and interactions.

-Canva

Canva is a graphic design tool that simplifies creating visual content for our app. It helps in:

- Designing social media posts and promotional materials.
- Creating visual elements for the app's interface.
- Collaborating on design projects with ease.

4.8.5 Analytics and User Feedback Tools

-Google Analytics

Google Analytics will be integrated into the app to track user behavior and engagement. It provides:

- Insights into user interactions and app performance.
- Data on user demographics and usage patterns.
- Reports to inform data-driven decisions.

-SurveyMonkey

SurveyMonkey is an online survey tool that will help gather user feedback. It allows us to:

- Create and distribute surveys to users.
- Collect and analyze user feedback.
- Identify areas for improvement based on user responses.

-Google Forms

Google Forms will be used to conduct surveys and gather quantitative data. It allows us to:

- Design custom surveys to understand user needs and preferences.
- Collect and analyze responses efficiently.
- Share survey results with team members for collaborative analysis.

4.8.6 Lean and Continuous Improvement Tools

-Kanban Boards (Trello)

Trello, a visual project management tool, will be used to implement Lean principles. It helps:

- Visualize workflow and identify bottlenecks.
- Prioritize tasks and manage work in progress.
- Foster continuous improvement through iterative processes.

-Value Stream Mapping (Lucidchart)

Lucidchart is a diagramming tool that will be used for value stream mapping. It helps:

- Identify value-adding and non-value-adding activities.
- Streamline processes to minimize waste.
- Enhance overall efficiency and productivity.

4.9 Risk Management

Effective risk management is crucial for the successful development and deployment of our tour guide app with integrated social media functionalities. Identifying potential risks early and developing strategies to mitigate them can significantly enhance the project's chances of success. Here, we outline the primary risks associated with the project and the measures we will take to address them, in alignment with our Agile methodology.

Figure 18 - Risk management



4.9.1 Customer-Related Risks

Requirement Analysis Risks

Requirement analysis is critical in developing our tour guide app, involving extensive market research and client interaction. Misinterpreting any requirement by the design team or developers poses a significant risk. Proper understanding and documentation of customer requirements are essential before starting the project. Often, customers may not clearly specify their needs due to a lack of technical knowledge, leading to misinterpretation and a final product that does not meet expectations. Inadequate analysis of customer requirements results in time loss and affects software quality. Frequent design changes can lead to bugs and a decline in overall project quality. Unreasonable customer demands, such as rapid development for a first-mover advantage, can also compromise quality.

To mitigate these risks, we will engage in continuous client interaction throughout the Agile sprints. Regular feedback loops and iterative updates will ensure that the evolving requirements are accurately captured and addressed promptly.

4.9.2 Communication-Related Risks

Streamlined communication between the client and developers is essential to produce a software product that meets all requirements. Developers must have a clear understanding of the end product and its target audience to avoid costly design errors. Investing adequate time in explaining the application's vision promotes team enthusiasm and coordination.

To mitigate these risks, we will use tools like ClickUp for task management and Slack for communication, ensuring transparent and regular updates among all stakeholders.

4.9.3 Market Risks

Before implementing new mobile software, thorough market research is necessary. Releasing a product that does not cater to market needs or customer demands is risky. It is also crucial to offer something new or add value to existing options. The research should consider the existing market, competitive products, customer purchasing power, and user interface issues.

To mitigate these risks, we conducted a quantitative survey to understand user needs and preferences better. This data will guide our design and feature prioritization.

4.9.4 Resource Risks

Resource Dependency

Developing a mobile application depends on various shared resources such as memory, servers, and skilled staff. Ensuring the availability of these resources is essential for the app's proper functioning.

Platform Dependency

Applications must adhere to platform-specific features and security protocols. Some features may be supported on one platform but not another (e.g., sharing music files in iOS vs. other platforms). Developing applications with a GUI separate from the core logic allows easier adaptation across different OS platforms.

Stakeholder Investment

Stakeholders significantly influence the development and launch of a mobile application through their financial support and promotional policies. The amount invested and the marketing strategies used are critical factors.

To mitigate these risks, we will ensure our app design is modular, allowing easy adaptation and integration of new features without disrupting the core functionality.

4.9.5 Financial Risks

Budget and cost estimation are vital in developing any mobile software application. Clear communication with clients regarding estimated expenses and potential costs is essential before starting the project. Having a buffer amount helps prevent financial crises during various project stages and increases profitability.

To mitigate these risks, we will use Lean principles to minimize waste and optimize resource utilization, ensuring the project stays within budget.

4.9.6 Technical Risks

Application Design

A correct application design is half the work done. Faulty designs consume significant time and money and can be risky in the long run. Key aspects include:

Algorithm: The algorithm should be both cost and space-efficient.

Platform: The chosen platform should be stable and secure, with popular options being Android, iOS, and Windows.

Graphical User Interface (GUI): The GUI should be user-friendly and attractive, as a complex and unappealing GUI can fail to engage users.

Testing Strategies: Employ various testing strategies to ensure proper functionality. Testing on multiple models, including network-related testing, helps identify and resolve issues.

Field testing, such as beta testing with clients, provides valuable feedback for improvement. Stress and load testing can identify potential performance issues and ensure stability.

4.9.7 Managerial Risks

In a competitive market, being the first to release a product can provide significant advantages. However, meeting deadlines and platform updates can lead to overlooked scenarios, causing instability and security risks. Proper project management practices are essential to maintain quality and security.

To mitigate these risks, we will follow Scrum practices, including regular sprint reviews and retrospectives, to ensure continuous improvement and timely identification of issues.

4.9.8 Performance Risks

Security is paramount for any application. Enhanced security check algorithms, proper validation, and sound encryption are essential to protect against external threats. Ensuring platform stability and addressing unstated requirements is also crucial to avoid serious flaws upon release.

To mitigate these risks, we will incorporate automated testing and regular security audits into our development process.

4.9.9 Maintenance Risks

The developer's job continues after the app's launch. Providing post-release support and adapting to platform updates is vital for product success. Regular updates and addressing

customized client needs are necessary for maintaining user satisfaction.

To mitigate these risks, we will establish a dedicated maintenance team to handle updates and support issues promptly.

4.9.10 External Risks

Many applications require specific conditions for proper functioning, such as GPS services or internet connectivity. Testing under various conditions ensures the app's reliability. For example, testing internet-dependent applications on both slow and fast connections can prevent crashes or unwarranted behavior. Battery usage and handling sudden data connection drops should also be considered.

To mitigate these risks, we will perform extensive field testing and user trials under different environmental conditions to ensure robust performance.

Summary

Developing a tour guide app with integrated social media functionalities involves navigating various risks unique to mobile application projects. By leveraging Agile methodologies, Lean principles, and Scrum practices, we aim to proactively address these risks, ensuring a high-quality, user-centric product. Our continuous focus on user feedback, efficient resource management, and robust testing strategies will help us mitigate potential issues and achieve our project goals successfully.

4.10 Budget for the Tour Guide App (iOS and Android)

Introduction

This section provides a detailed budget outline for the development and deployment of the tour guide app on both iOS and Android platforms. The budget encompasses costs associated with requirement analysis, design, native app development for both platforms, testing, deployment, maintenance, and contingency expenses. The goal is to ensure a high-quality product that meets user needs through all project phases.

4.10.1 Budget Breakdown Methodology

Research and Analysis

To establish the budget breakdown for our mobile application, we employed a comprehensive

approach, integrating thorough internet research with detailed market analysis. The steps taken were as follows:

- 1- Internet Research: We conducted extensive online research to gather budget estimates for similar mobile applications. This involved consulting reliable sources such as industry reports, case studies, and articles detailing the costs associated with developing mobile apps for both iOS and Android platforms.
- 2- Market Analysis: The collected data was analyzed to understand the cost structure of mobile app development. This included examining expenses for various components like design, development, testing, marketing, and post-launch support. Sources such as blogs from app development companies, tech websites, and forums provided valuable cost breakdowns.
- 3- Comparison with Similar Apps: To ensure accuracy, we analyzed the budgets of several comparable apps. These comparisons focused on applications with similar functionalities, target audiences, and complexity levels. The aim was to identify the average budget required for developing a mobile app within the same category as ours.

Budget Calculation

Based on the gathered data, the average budget for similar mobile applications was calculated. This average served as the baseline for estimating our app's budget. However, considering the unique features and higher complexity of our app, adjustments were made to account for additional costs. The following factors were considered:

- 1- Complexity of Features: Our app includes advanced functionalities such as real-time recommendations, a robust social community interface, and personalized tour planning. These features require additional development time and resources, increasing the overall budget.
- 2- User Experience Design: Emphasizing a user-centric design to ensure an intuitive and seamless user experience necessitated investment in skilled UI/UX designers and extensive usability testing.

- 3- **Market Positioning and Marketing:** To effectively position our app in a competitive market, a substantial marketing budget was allocated. This includes costs for digital marketing campaigns, user acquisition strategies, and promotional activities.
- 4- **Post-Launch Support:** Recognizing the importance of continuous improvement and user support, a portion of the budget was dedicated to post-launch activities such as updates, bug fixes, and customer service.

Final Budget Allocation

After considering these factors, the budget for our app was set higher than the industry average to accommodate its complexity and ensure high-quality outcomes. The comprehensive budget breakdown included:

- **Requirement Analysis:** Costs associated with detailed market research and initial requirement gathering.
- **Design:** Expenses for creating a user-friendly interface and ensuring an optimal user experience.
- **Native App Development:** Development costs for both iOS and Android platforms, covering salaries of developers and project managers.
- **Testing:** Thorough testing to guarantee a bug-free and reliable application.
- **Deployment:** Costs related to launching the app on both the Apple App Store and Google Play Store.
- **Maintenance:** Ongoing support and updates to enhance user satisfaction and incorporate feedback.
- **Contingency Reserve:** Allocated at 10% of the total budget to cover unforeseen expenses.
- **Management Reserve:** Set at 5% of the total budget to handle unexpected management-related costs.

By following this detailed and methodical approach, we ensured our budget was well-justified and aligned with the app's goals and complexity, ultimately setting the stage for a successful launch and sustained growth in the market.

4.10.2 Budget Breakdown

1. Requirement Analysis

Market Research: Conducting surveys, interviews, and analyzing market trends.

Cost Estimate: \$5,000

Stakeholder Meetings: Travel, accommodation, and meeting expenses.

Cost Estimate: \$3,000

2. Design

UI/UX Design Tools: Subscriptions to design tools like Canva.

Cost Estimate: \$1,200

Design Team Salaries: Compensation for UI/UX designers.

Cost Estimate: \$15,000

Prototyping Tools: Costs for tools like Figma or Sketch.

Cost Estimate: \$800

3. Native App Development

Development Tools and Software: Licenses for development software (e.g., Xcode for iOS, Android Studio for Android).

Cost Estimate: \$2,000

Developer Salaries: Compensation for frontend and backend developers working on both iOS and Android.

Cost Estimate: \$100,000

Hardware: Servers, development machines, and devices for testing (both iOS and Android devices).

Cost Estimate: \$15,000

Backend Development: Costs for setting up and maintaining the server, databases, and APIs.

Cost Estimate: \$20,000

4. Testing

Automated Testing Tools: Licenses for automated testing software (e.g., Selenium, Appium).

Cost Estimate: \$2,500

Testing Team Salaries: Compensation for QA engineers.

Cost Estimate: \$15,000

Beta Testing: Costs associated with beta testing (incentives for beta testers, etc.).

Cost Estimate: \$2,500

4.11 Requirements Management Plan for GuidedGlobe App

Introduction

This plan explains how we will collect, document, validate, and manage the requirements for the GuidedGlobe App, and it ensures that all requirements are accurately captured, communicated, and managed throughout the project.

Project initiation documents:

Project charter:

We can create a document outlining the app's purpose, objectives, and scope as following appears. For example:

- Purpose: Develop a global tour guide app connecting travelers with guides worldwide.
- Objectives: Provide a platform for sharing trip offers, photos, and guide experiences.
- Scope: Includes app development, user engagement, and revenue generation through advertising and guide services.

Stakeholder Register:

We can identify all stakeholders, such as travelers, tour guides, advertisers and developers.

Document their roles and how they will interact with the project. For example:

- Users: Travelers seeking personalized experiences.
- Tour Guides: Individuals offering guided tours and experiences.
- Advertisers: Hotels and tourist services interested in promoting their offerings.

Requirement identification:

We can conduct interviews with a diverse group of travelers, guides, and advertisers to gather detailed needs and expectations.

For Stakeholder Interviews, we interview travelers, tour guides, and advertisers to get to know their needs and expectations. For instance, interviewing travelers reveals a desire for user-friendly trip browsing and access to authentic guide recommendations.

For market research, we can analysis existing tour guide apps, noting features , user preferences and collect data on trends like personalized travel and social sharing.

Requirements Specification & Evaluation:

Functional Requirements: Specify features like trip browsing, guide profiles, photo sharing, and advertising space. For example, users can search for tours by location, date, and type of experience, or users can book tours directly through the app and guides can post photos and receive ratings.

Non-functional Requirements: Define constraints such as app performance, security, and user interface design. For instance, the app must load trip photos within two seconds to ensure a smooth user experience, or the app must support at least 10,000 simultaneous users and ensure data encryption for user privacy.

Requirements Approval:

We will organize meetings to present the requirements documentation to stakeholders, collect feedback and make necessary adjustments. At the same time, we can obtain formal approval from key stakeholders, such as project sponsors and major advertisers, to proceed with the development based on the agreed requirements.

Requirements Implementation:

Development Plan: Break down requirements into tasks and assign them to the development team. Development team implements the requirement for photo sharing by integrating a photo upload feature into guide profiles.

Agile Development: Use an iterative approach like Scrum, with sprints to implement and test features. For instance, "Sprint 1: Implement user registration and login."

Quality Assurance: Develop test cases for each requirement and conduct thorough testing to ensure functionality and performance. Example: "Test the photo upload feature for different image sizes and formats."

Requirements Control & Validation:

Change Control Process: Establish a procedure for managing changes to requirements throughout the project. If a stakeholder requests additional filtering options for trip searches, requiring a change request and evaluation of its impact on project timeline and resources.

Validation Testing: Conduct usability testing with real users to validate the app meets their needs, gather feedback and make improvements accordingly, such as users test the photo

sharing feature and provide feedback on its functionality and usability.

Traceability Matrix: Maintain a traceability matrix to track the status of each requirement from identification through implementation and validation, this ensures no requirements are overlooked.

Requirements Documents:

Requirement Specification Document: Details all identified requirements, including functional and non-functional requirements.

Requirement Traceability Matrix: Follow requirements throughout the project lifecycle, ensuring they are implemented and validated.

We can effectively collect, document, and validate requirements for our tour guide app by following this requirements management plan, and then we can make sure successful project implementation and stakeholder satisfaction.

4.12 Project Planning, Deadlines & Milestones

Table 7 - Project planning , deadlines & Milestones

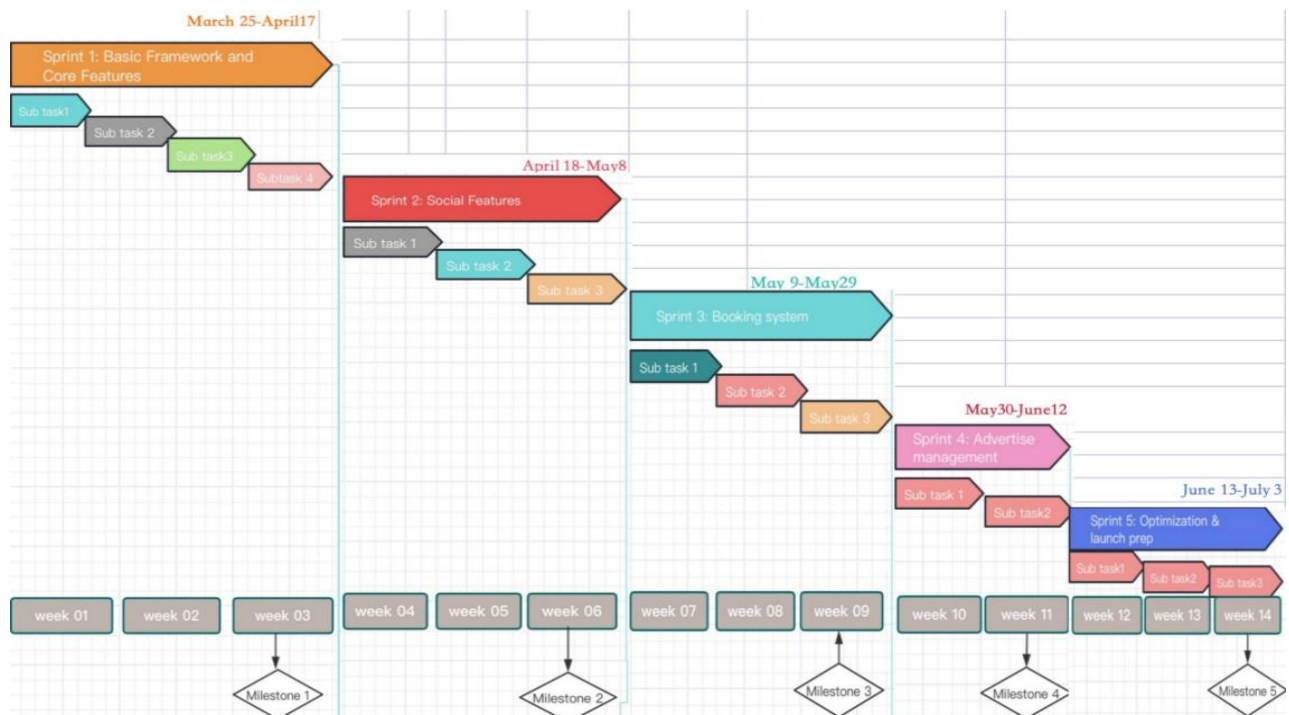


Table 8 - project sprints explainaion

Task Name	Priority	Product Owner	Start Date	End Date	Description	Milestone
Sprint 1: Basic Framework and Core Features						
Set up project environment	High	Majd	2024/3/25	2024/3/27	Configure development tools, set up version control, and establish coding standards.	Basic app framework and core features ready
Create basic app framework	High	Majd	2024/3/28	2024/4/3	Build the main structure of the app using React for the front-end and Node.js for the back-end.	
Implement user registration and login	High	Melody	2024/4/4	2024/4/10	Develop a registration form, login functionality, and user authentication.	
Implement browsing and searching for offers	High	Melody	2024/4/11	2024/4/17	Develop a homepage with a search bar and filters for viewing tourist offers.	
Sprint 2: Social Features						
Implement guide profile creation and management	High	Majd	2024/4/18	2024/4/24	Allow guides to set up profiles, upload photos, and add descriptions.	Social features implemented
Implement photo uploading and sharing	Medium	Melody	2024/4/25	2024/5/1	Add functionality for guides to upload photos from their tours.	
Implement user following and interaction	Medium	Melody	2024/5/2	2024/5/8	Users can follow guides and comment on their posts.	
Sprint 3: Booking System						
Implement booking functionality	High	Majd	2024/5/9	2024/5/15	Create a booking form and calendar for selecting tour dates.	Booking system fully functional
Integrate payment system	High	Melody	2024/5/16	2024/5/22	Set up credit card payment way for secure payments.	
Implement booking management and confirmation	High	Majd	2024/5/23	2024/5/29	Develop a dashboard for users to view and manage their bookings.	
Sprint 4: Advertisement Management						
Implement advertisement content management	Medium	Melody	2024/5/30	2024/6/5	Admins can upload and schedule ads through an admin panel.	Advertisement management features ready
Implement advertisement display and tracking	Medium	Majd	2024/6/6	2024/6/12	Ads are displayed on user feeds, and clicks are tracked for performance analytics.	
Sprint 5: Optimization and Launch Prep						
Optimize app performance and user experience	High	Melody	2024/6/13	2024/6/19	Conduct performance testing, optimize loading times, and improve UI/UX based on feedback.	App optimized and prepared for launch
Fix any discovered bugs	High	Majd	2024/6/20	2024/6/26	Address bugs reported during testing phases.	
Prepare for app launch and marketing	High	Melody	2024/6/27	2024/7/3	Develop a marketing strategy, prepare press releases, and plan social media campaigns.	

1. Key Roles

Product Owner: Responsible for defining stories and prioritizing the team backlog to streamline the execution of program priorities.

Majd: Senior Developer, responsible for back-end development, setting up environments, and integrations.

Melody: Front-end Developer, responsible for user interface, user experience, and client-side functionalities.

2. Project Overview

-Project Name: GuidedGlobe

-Description: GuidedGlobe is a global tour guide app designed to help travelers find authentic and affordable tourist experiences. The app will feature:

Offers, trip photos, and detailed information about trips.

Social media-like pages where tour guides can post pictures and experiences, and build a following.

-Revenue Model:

Advertising from hotels and tourist services.

Commission from tour guide service bookings.

3. Objectives

-Direct Access to Trusted Guides: Ensure users can easily find and book reputable tour guides.

Example: A user can search for guides in Rome, view profiles, see reviews, and book directly through the app.

-Transparency and Reliability: Make the process transparent with clear pricing and reviews.

Example: Each tour guide profile shows total cost, no hidden fees, and customer ratings.

-Community Sharing: make is possible for users and guides to share their experiences.

Example: Users can post pictures and reviews of their tours, while guides can share their latest trips and tips.

-Global Reach: Expand to various destinations to cater to a wide user base.

Example: Initial launch in major tourist cities like Paris, New York, Tokyo, followed by expansion to lesser-known destinations.

4. Agile Project Management Strategy

-Product Backlog:

User Story 1: As a user, I want to browse and search for tourist offers.

Example: Execute a search bar and filter options to sort offers by price, rating, and location.

User Story 2: As a user, I want to see photos and reviews from previous customers.

Example: Each tour offer page includes a photo gallery and a review section.

User Story 3: As a tour guide, I want to create and manage my page.

Example: Guides can upload photos, describe their services, and update availability.

User Story 4: As a user, I want to book tour guide services.

Example: Include a “Book Now” button with available dates and secure payment options.

User Story 5: As an admin, I want to manage advertisements.

Example: Admin dashboard to upload ads, set display parameters, and track performance.

User Story 6: As a user, I want to see advertisements and recommended services.

Example: Display targeted ads for hotels and tours on relevant pages.

-Sprint Planning:

Sprint Duration: 2 weeks per sprint.

Sprint 1: Basic Framework and Core Features

Set up project environment.

Example: Configure development tools, set up version control, and establish coding standards.

Create basic app framework (front-end and back-end).

Example: Set up the main structure of the app using React for the front-end and Node.js for the back-end.

Create user registration and login.

Example: Develop a registration form, login functionality, and user authentication.

Implement browsing and searching for tourist offers.

Example: Develop a homepage with a search bar and filters for viewing tourist offers.

Sprint 2: Social Features

Implement tour guide profile creation and management.

Example: Allow guides to set up profiles, upload photos, and add descriptions.

Implement photo uploading and sharing.

Example: Add functionality for guides to upload photos from their tours.

Implement user following and interaction features.

Example: Users can follow guides and comment on their posts.

Sprint 3: Booking System

Implement booking functionality for tour guide services.

Example: Create a booking form and calendar for selecting tour dates.

Integrate payment system.

Example: Set up credit card integration for secure payments.

Create booking management and confirmation.

Example: Develop a dashboard for users to view and manage their bookings.

Sprint 4: Advertisement Management

Create advertisement content management.

Example: Admins can upload and schedule ads through an admin panel.

Implement advertisement display and click tracking.

Example: Ads are displayed on user feeds, and clicks are tracked for performance analytics.

Sprint 5: Optimization and Launch Preparation

Optimize app performance and user experience.

Example: Conduct performance testing, optimize loading times, and improve UI/UX based on feedback.

Fix any discovered bugs.

Example: Address bugs reported during testing phases.

Prepare for app launch and marketing.

Example: Develop a marketing strategy, prepare press releases, and plan social media campaigns.

-Daily Stand-ups:

15-minute daily meetings to discuss:

What was done yesterday?

Example: “Completed the user registration feature.”

What will be done today?

Example: “Working on the search functionality.”

Any blockers or issues?

Example: “Encountered an issue with the payment gateway integration.”

-Sprint Reviews:

End of each sprint to showcase completed features.

Example: Demo the new booking system and get feedback from stakeholders.

Gather feedback and determine next steps.

Example: Based on feedback, adjust the next sprint’s focus to improve user interaction features.

-Sprint Retrospectives:

Review what went well and what needs improvement.

Example: “The user registration feature was well received, but we need to improve the photo upload speed.”

Plan how to improve in the next sprint.

Example: Allocate more time for optimizing image upload and processing.

5. Risk Management

Technical Risk: Learning and applying new technologies.

Time Risk: Falling behind schedule.

Market Risk: Changes in user needs.

6. Quality Assurance

-Regular code reviews and unit testing.

Example: Implement peer code reviews and write unit tests for key functionalities.

-Maintain high standards of code quality and documentation.

Example: Use linting tools and maintain comprehensive documentation.

-User testing and feedback to ensure the app meets user needs.

Example: Conduct testing with a group of users and collect their feedback for improvements.

4.13 Documentation Management

Efficient management of project documentation is a cornerstone of our tour guide app project, ensuring that all project-related information is meticulously organized, readily accessible, and continuously updated. This section delineates our comprehensive strategy for overseeing documentation throughout the project's lifecycle, encompassing creation, storage, dissemination, and review processes, with a keen eye on aligning with our chosen Agile methodology.

4.13.1 Document Categories and Details

1. Project Planning Documents

Project Charter: Establishes the project's scope, objectives, and key stakeholders, providing a foundational roadmap.

Project Plan: Elaborates on the project schedule, milestones, resource allocation, and risk management strategies, outlining our project's trajectory.

Budget Plan: Provides a detailed breakdown of financial considerations, including cost estimates, budget allocation, and potential contingencies, ensuring fiscal prudence.

2. Requirement Documents

Requirement Specifications: Articulates user needs and system specifications, serving as the bedrock for development endeavors.

Survey Reports: Presents findings and analyses from user surveys, offering valuable insights into user preferences and pain points.

3. Design Documents

UI/UX Design: Encompasses wireframes, mockups, and design prototypes, elucidating the app's visual and functional aesthetics.

Technical Design: Delivers intricate details on system architecture, data models, and technical specifications, underpinning robust development strategies.

4. Development Documents

Code Documentation: Provides comprehensive insights into the codebase, including annotations and comments, fostering transparency and ease of collaboration.

API Documentation: Outlines APIs utilized or developed in the project, facilitating seamless integration and interoperability.

5. Testing Documents

Test Plans: Maps out our testing strategy, delineating test cases and schedules to ensure rigorous quality assurance.

Test Reports: Chronicles testing outcomes, including identified issues and corresponding remedial actions, ensuring a polished end-product.

6. Deployment Documents

Deployment Plan: Charts out the deployment process across different platforms (iOS and Android), ensuring smooth and efficient rollouts.

User Manuals: Furnishes end-users with comprehensive guides on app usage, enhancing user experience and satisfaction.

7. Review and Feedback Documents

Review Reports: Aggregates feedback from stakeholders and users post-deployment, driving iterative improvements and optimizations.

Improvement Logs: Logs enhancement suggestions and actions taken, fostering a culture of continuous refinement and innovation.

4.13.2 Tools and Processes

1. Creation and Approval

Creation: Task-specific team members undertake the creation of relevant documentation, ensuring a collaborative and distributed approach.

Approval: Key documents undergo rigorous review and approval processes, involving Project Managers and pertinent stakeholders, guaranteeing alignment with project objectives.

2. Storage and Organization

Central Repository: All documents find a home in a centralized repository, such as Google Drive, meticulously organized by project and document type for ease of retrieval.

Access Control: Document access privileges are meticulously managed, safeguarding sensitive information and ensuring adherence to security protocols.

3. Version Control

Version Tracking: Document versions are meticulously tracked, with comprehensive version histories maintained to facilitate traceability and auditability.

Final Versions: Finalized documents are prominently labeled and stored in designated folders within the repository, promoting clarity and accessibility.

4. Distribution

Access Sharing: Documents are disseminated to team members and stakeholders via shared links or direct communication channels, ensuring widespread access and visibility.

Notifications: Automated notifications are deployed to alert team members of document

updates or new additions, fostering timely awareness and engagement.

5. Review and Update

Regular Reviews: Scheduled reviews ensure documents remain current and reflective of project progress, affording opportunities for refinement and enhancement.

Feedback Incorporation: Stakeholder and team feedback are meticulously integrated into document revisions, promoting inclusivity and responsiveness.

Continuous Improvement: Documentation processes are subject to continual improvement, informed by project experiences and emerging best practices, fostering a culture of ongoing optimization.

6. Archiving

Project Completion: Upon project culmination, all project documents are systematically archived in dedicated folders within the repository, ensuring long-term preservation and retrieval.

Long-term Storage: Archived documents are retained for future reference and compliance purposes, safeguarding institutional knowledge and insights.

Conclusion

Effective documentation management lies at the heart of our tour guide app project, serving as the bedrock for transparent communication, informed decision-making, and seamless collaboration. By embracing a structured approach to document creation, storage, distribution, and review, we fortify our project's foundations, ensuring that project information remains accurate, accessible, and actionable throughout its lifecycle. This meticulous attention to documentation cultivates a culture of excellence, driving project success and stakeholder satisfaction.

4.14 Change Management

4.14.1 What exactly is change management

Change management in software projects involves transitioning from the current state to an improved state, ensuring that any alterations are systematically implemented without disrupting project progress.

Consider the scenario of managing a tour guide app development project. Everything is progressing smoothly, with the project on track. Suddenly, stakeholders decide to incorporate a new, cutting-edge technology that was not part of the initial plan. This new requirement necessitates significant adjustments, potentially altering the original project trajectory.

This is where change management strategies become crucial. A well-defined change management process ensures a smooth transition from the current state (before integrating the new technology) to the future state (with the new technology fully implemented). By following a structured approach, changes can be managed effectively, minimizing disruption and ensuring project success.

Figure 19 - change management process



<https://www.miquido.com/blog/change-management-in-software-development/>

4.14.2 Reasons for Changes

Changes in software development projects can arise for various reasons, including:

- **Evolving Project Requirements:** Initial project requirements may change due to new insights or stakeholder inputs.
- **Bug Fixes:** Identifying and addressing defects that were not apparent initially.
- **Team Changes:** Adjusting to the departure or addition of team members.
- **Organizational Reorganization:** Adapting to changes in company structure or processes.
- **Market Shifts:** Responding to new market demands or competitive pressures.
- **Performance Enhancements:** Implementing improvements to optimize project outcomes.

4.14.3 Benefits of change management

Implementing changes in a thoughtful manner can significantly benefit our tour guide app project:

1-Cost Reduction

Properly managing changes can lead to more efficient processes and better resource allocation, resulting in cost savings. By adopting more efficient methods or technologies, we can reduce expenses and improve overall profitability.

2-Enhanced Performance

Introducing changes can increase the development team's productivity and enhance the quality of their work. By continuously optimizing workflows and addressing bottlenecks, we can achieve higher performance levels and deliver a superior product.

3-Encouraging Innovation

Changes drive innovation, which is crucial in software development. Embracing new technological advancements and future-oriented solutions ensures our app stays at the forefront of the industry, offering unique and valuable features to users.

4-Improved Product-Market Fit

The software market is dynamic, with needs and trends evolving rapidly. Thoughtfully managed changes allow us to adapt our app to these shifts, ensuring it remains relevant and meets the latest market demands. This adaptability helps maintain a strong product-market fit, making our app more appealing to users.

Incorporating changes through a structured change management process ensures that our project remains aligned with business goals, user needs, and market trends. This approach not only mitigates risks but also leverages opportunities for growth and improvement, ultimately leading to a more successful and sustainable tour guide app.

Figure 20 - Benefits of change management



<https://www.miquido.com/blog/change-management-in-software-development/>

4.14.5 Change management process in 6 steps

Figure 21 - Change management process



<https://www.miquido.com/blog/change-management-in-software-development/>

Implementing a structured change management process is essential for the success and adaptability of our tour guide app project. This detailed approach ensures that any changes are systematically managed to minimize disruption and optimize project outcomes. Here are the steps we will follow:

1. Change Request

The process starts with a change request. This can come from various sources, such as a team member, an organizational leader, a change manager, or the client. Each request must be well-supported and clearly justified. This includes:

Purpose: The specific reason for the change, such as improving app performance, addressing a critical bug, or integrating new technology.

Supporting Evidence: Data or feedback supporting the need for the change, such as user complaints, market analysis, or performance metrics.

Expected Outcomes: A detailed description of the anticipated benefits, including improved user experience, increased efficiency, or competitive advantage.

Potential Risks: A comprehensive risk assessment outlining possible negative impacts, such as delays, additional costs, or technical challenges.

Impacted Areas: Identification of which parts of the project will be affected, such as specific modules, team structures, or timelines.

It's crucial to avoid unnecessary changes, as they can lead to confusion, wasted resources, and project delays.

2. Change Request Review

Once a change request is submitted, it undergoes a rigorous review process. This review is conducted by the project manager, key stakeholders, or the product manager, depending on our organizational structure. The review process includes:

Feasibility Analysis: Assessing whether the change is practical and achievable within the current project constraints.

Impact Assessment: Evaluating how the change will affect the project, including timelines, budgets, resource allocation, and team dynamics.

Risk Analysis: Identifying potential risks and side effects of the change, and developing mitigation strategies.

Benefit Analysis: Determining the extent to which the change will contribute to project goals and objectives.

Team Consultation: Discussing the proposed change with the software development team to gather insights and ensure alignment.

The decision to approve or reject the change request is based on a balanced consideration of these factors.

3. Change Plan

Once a change request is approved, the next step is to develop a detailed change management plan. This plan should include:

Objectives: Clear, measurable goals for the change.

Requirements: Specific technical and functional requirements needed to implement the change.

Timeline: A realistic schedule that includes milestones, deadlines, and dependencies.

Budget: Detailed cost estimates, including additional resources, tools, and potential contingency funds.

Resource Allocation: Identification and assignment of necessary resources, such as team members, software tools, and hardware.

Risk Mitigation: Strategies to address identified risks, including fallback plans and contingency measures.

Communication Plan: A strategy for keeping all stakeholders informed and engaged throughout the change process.

Approval: Formal approval from all decision-makers, ensuring that everyone is on board and committed to the change.

4. Change Implementation

With the change plan in place, the actual implementation begins. Key activities during this phase include:

Execution: Carrying out the tasks and activities outlined in the change plan.

Monitoring: Continuously tracking progress against the plan, using metrics and key performance indicators (KPIs).

Documentation: Keeping detailed records of all changes made, issues encountered, and solutions implemented.

Communication: Regularly updating stakeholders on progress, challenges, and any adjustments to the plan.

Effective implementation requires meticulous attention to detail and proactive management to ensure that the change is integrated smoothly.

5. Change Review & Reporting

After the change is implemented, a thorough review is conducted to evaluate its effectiveness.

This involves:

Performance Evaluation: Measuring the impact of the change against the defined objectives and KPIs.

Feedback Collection: Gathering feedback from team members, users, and stakeholders to assess the change's reception and effectiveness.

Issue Resolution: Identifying and addressing any problems or issues that arose during implementation.

Reporting: Preparing a detailed report that documents the entire change process, including:
Objectives and rationale for the change.

Implementation details and any deviations from the plan.

Outcomes and impact analysis.

Lessons learned and recommendations for future changes.

This report serves as a valuable reference for future projects and change initiatives.

6. Change Closure

The final step is formal change closure, which involves:

Confirmation: Verifying that all change-related activities are complete and objectives are met.

Documentation: Ensuring all documentation is finalized and stored appropriately.

Reflection: Conducting a post-implementation review to reflect on what went well and what could be improved.

Stakeholder Communication: Sharing the results of the change evaluation with all stakeholders to build trust and transparency.

Archiving: Archiving all relevant documents and reports for future reference and compliance purposes.

By thoroughly documenting and closing the change process, we can ensure that lessons learned are captured and future projects benefit from our experiences.

By adhering to this detailed change management process, we can effectively manage and implement changes in our tour guide app project, ensuring minimal disruption and maximum benefit. This structured approach helps us stay aligned with our project goals, adapt to evolving requirements, and deliver a high-quality product that meets user needs.

Chapter 5. Application Overview and Social Impact

5.1 Introduction

Our tourist guide application stands out from competitors by offering a user-friendly and intuitive experience tailored to the needs of travelers. Attention has been paid to every aspect of the design, ensuring not only ease of use but also comfort for the user. From a sleek and accessible interface to innovative features that enhance usability, our application has been meticulously crafted to provide a seamless experience. We will show and elucidate these design elements through this chapter, allowing users to grasp the app's functionality and user-centric approach effortlessly.

Figure 22 - The App interface



Here we see the start page when opening the application, with a comfortable eye design and a distinctive design

Figure 23 - Login page



Here is the start page, and from here we can log in or create a new account and reset the password.

5.2 App Features

This part explains the work and benefits of the program's buttons, and it will be explained how the design of our program helps users and provides comfort for all types of travel lovers, as we have provided a selection bar to specify the types of trips, and also a filter to specify the required features, and many useful buttons that we will explain in the following images.

Figure 24 - Home Page



Here this is the switch button from tour guide app to the social media part

Here this is the Search area with the

The selection bar to specify the types of trips

Here we show the top 10 travel destinations to our users to help them with ideas

Here we show the near coming trips

Here we show Distinctive random trips

Figure 25 - Search area

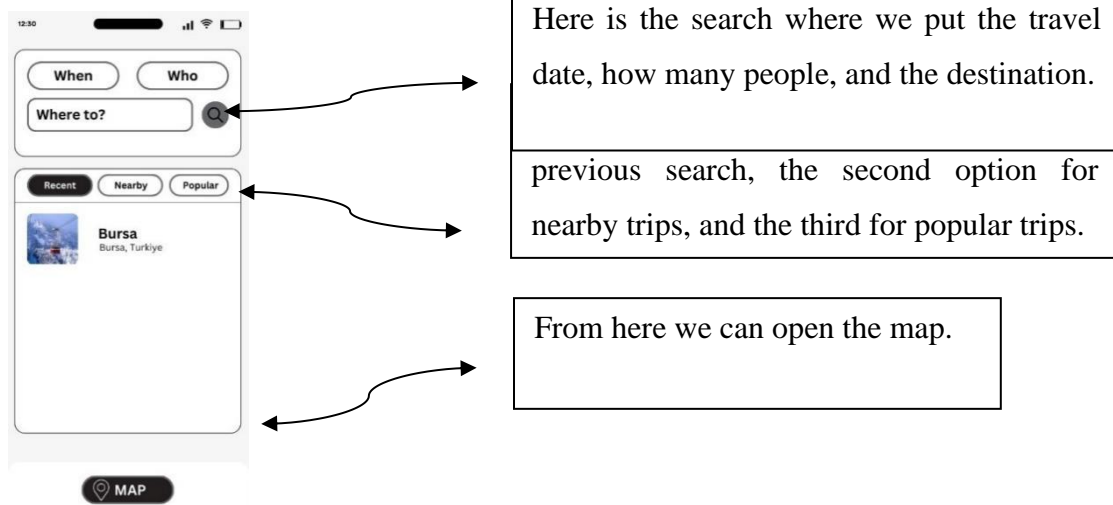
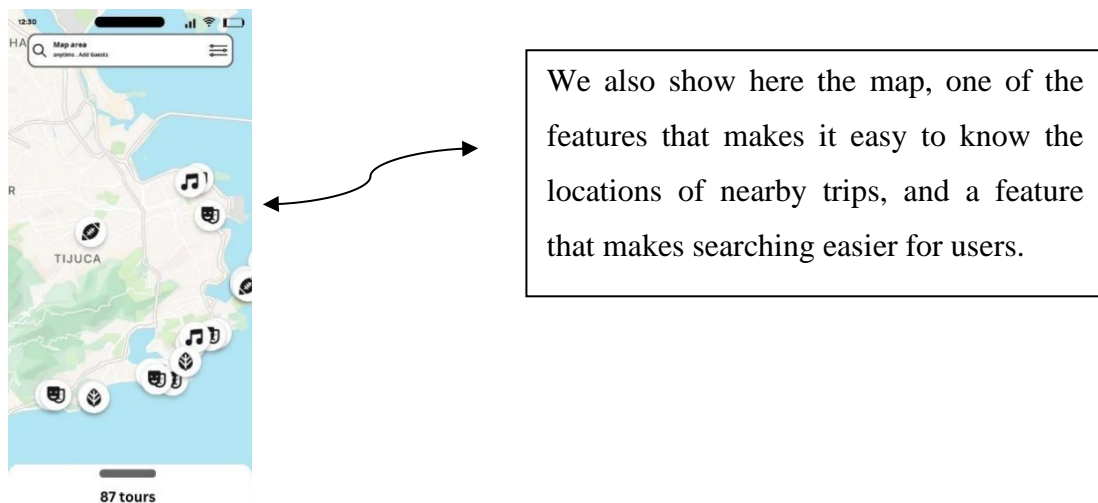


Figure 26 - Map page



Now we will give a glimpse of the other side of the application, which is the social interface, which enhances interconnection and allows users and tourist guides to form a strong community and enhances sharing of experiences and trips, which makes trips more clear and transparent.

Figure 27 - Home page of the social platform

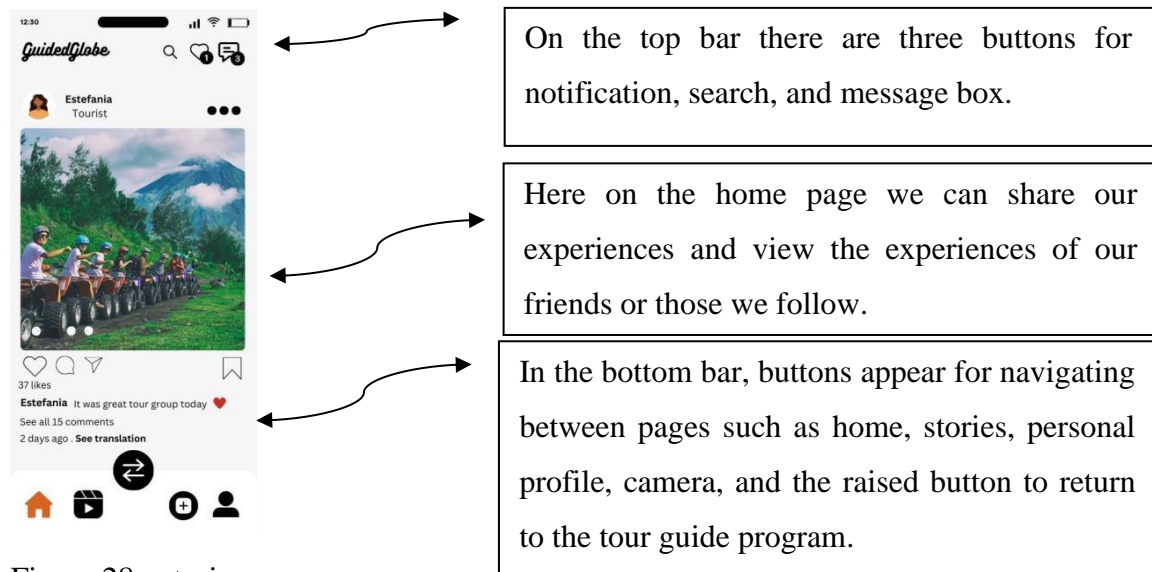


Figure 28 - stories page

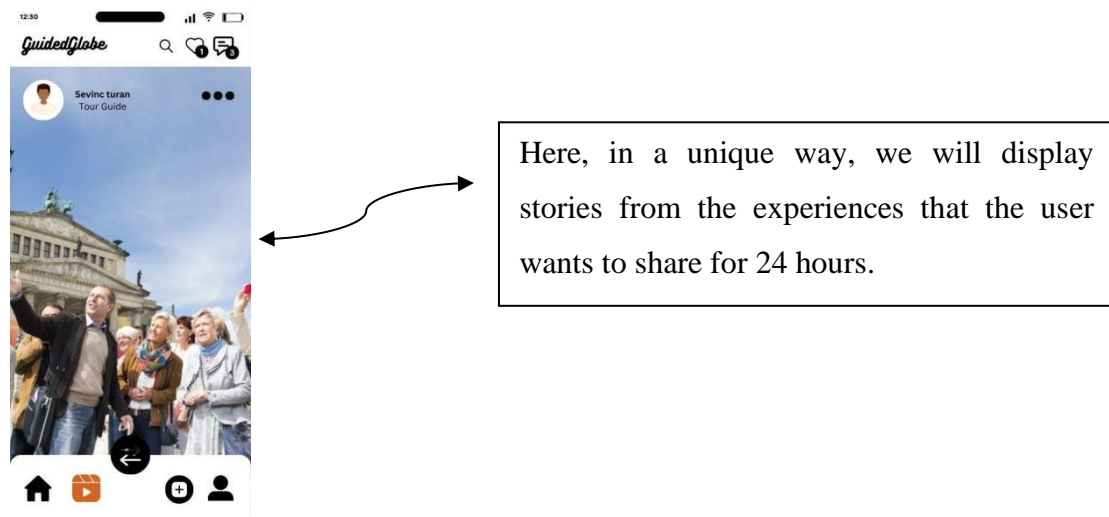
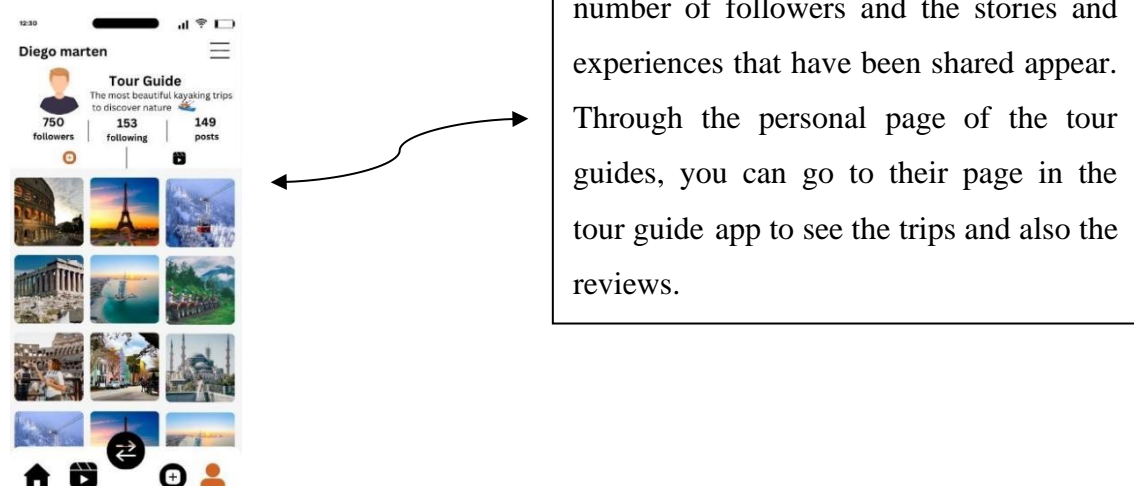


Figure 29 - Profile page



5.3 Usability and User Experience

User Interface (UI):

Our tourist guide app features an intuitive design, carefully constructed to ensure seamless navigation and a visually appealing experience. The layout is organized with precision, boasting a clean and minimalist design that avoids user fatigue and confusion. Essential features are prominently displayed, enabling users to access key functions swiftly without excessive clicks. The color scheme and typography are selected to enhance readability and visual comfort, while interactive elements like buttons and icons are easily recognizable and user-friendly. Consistent placement of navigation bars and menus ensures users can effortlessly find their way around the app, regardless of their tech proficiency.

User Experience (UX):

The user experience is designed to maximize usability and simplify the tour planning process. From the moment users launch the app, they encounter a smooth onboarding process that acquaints them with the primary features and functionalities. The search function is both powerful and user-friendly, allowing users to quickly find tours that match their preferences. Filters and sorting options help narrow down choices to find the ideal tour that aligns with their interests and schedule.

Interactive maps and location-based services enable users to explore tours nearby or plan for future travels, adding convenience. Personalized recommendations based on user history and preferences make browsing more engaging and tailored. Additionally, the app encourages social interaction by allowing users to share experiences, join group tours, and connect with other travelers, fostering a community spirit.

The booking process is streamlined to reduce steps and prevent frustration. Secure payment options and instant confirmations provide peace of mind. Throughout the app, user feedback mechanisms are in place to allow for continuous improvements based on actual user experiences. All these elements combine to create a fluid and enjoyable user experience, making tour planning not just straightforward but also enjoyable and enriching.

5.4 Social Impact

Fostering Connections:

Our tourist guide app does more than just provide tour information; it actively cultivates a

sense of community among travelers. By incorporating social features, the app enables users to connect with others who have similar interests and travel plans. Travelers can join group tours, engage in community discussions, and organize meet-ups. This transforms the app into a social platform where users can form friendships and create shared memories. Through user profiles, reviews, and shared photo galleries, individuals can communicate, exchange tips, and offer support, fostering a dynamic and interactive explorer community.

Overcoming Barriers:

A key feature of our app is its ability to transcend geographical, cultural, and language barriers, uniting travelers from diverse backgrounds. With translation tools and multilingual support, language is no longer a hurdle. Cultural insights and etiquette tips are integrated into the app, helping travelers navigate new environments with respect and understanding. By connecting individuals from around the world, the app promotes cultural exchange and mutual appreciation, creating a global traveler community that learns and grows together.

Enabling Exploration:

The app empowers users to venture beyond typical tourist routes and discover hidden gems, local favorites, and off-the-beaten-path destinations. Through user-generated content and personalized recommendations, travelers can uncover unique experiences that might otherwise be overlooked. Whether it's a secluded beach, a charming local café, or an uncharted hiking trail, the app encourages exploration and adventure. Users can share their discoveries with the community, enhancing the collective knowledge and inspiring others to explore beyond the ordinary. This feature not only enriches individual travel experiences but also supports local economies and promotes sustainable tourism by highlighting lesser-known attractions.

By integrating these social impact features, our app enhances the travel experience and builds a global community of informed, respectful, and connected travelers. This social connectivity is at the core of our app's mission, making travel a more enriching, inclusive, and socially engaging experience for everyone.

5.5 Design Excellence

Design Principles:

Our app's design is based on principles that enhance user engagement and usability. The

chosen color schemes are carefully curated to create an appealing and cohesive visual experience that improves overall user interaction. Bright, inviting colors guide users throughout the app, while soothing tones provide a comfortable browsing experience. The typography is selected for both readability and style, ensuring text is clear and complements the app's aesthetic. Intuitive and consistent iconography allows users to navigate the app with ease and quickly understand functions. Every design element is thoughtfully crafted to produce an interface that is both attractive and practical, encouraging users to engage more fully with the app.

Accessibility:

Creating an inclusive app is a fundamental aspect of our design strategy. We are dedicated to making the app accessible to users with a wide range of needs and abilities. This includes features like adjustable text sizes, high-contrast modes, and voice-over support for those with visual impairments. Our design aligns with WCAG (Web Content Accessibility Guidelines) standards, ensuring seamless navigation for users who rely on screen readers. Interactive elements are designed to be operable through various input methods, such as touch, keyboard, and voice commands. By incorporating these features, we aim to make the app usable for everyone, regardless of their physical or cognitive abilities.

Iterative Improvement:

Continuous enhancement is crucial for maintaining design excellence. We collect user feedback through surveys, usability testing, and direct user interactions. Analytics provide insights into user behavior, highlighting areas for improvement. This data-driven approach allows us to make informed decisions about design updates. Each iteration focuses on refining the user experience by addressing issues and integrating user suggestions. By adopting an iterative process, we ensure that the app evolves to meet the changing needs and preferences of our users, delivering a product that is both superior and user-centric. Our commitment to continuous improvement demonstrates our dedication to providing a travel app that consistently adapts and improves.

5.6 Conclusion

In conclusion, our tourist guide application distinguishes itself with its cutting-edge features, significant social impact, and outstanding design principles. The app offers a user-friendly interface, complete with intuitive navigation and visually appealing elements, ensuring that

users can plan and enjoy their travels effortlessly. Its social impact is notable, creating a global community of travelers who connect, share experiences, and explore together, overcoming geographical and cultural divides.

The app's design excellence showcases a keen attention to detail, prioritizing accessibility and user engagement. Our dedication to inclusivity ensures that individuals with diverse needs can use the app effectively, while our iterative improvement process continuously refines the app's functionality and design based on user feedback.

This application is more than just a tour planning tool; it is a groundbreaking platform that transforms the way people explore and interact with the world. By enabling users to discover hidden gems and local favorites through community-shared recommendations, the app turns travel into a more enriching and connected experience. It bridges gaps, breaks down barriers, and fosters a vibrant network of travelers who support and inspire one another.

Chapter 6. CONCLUSIONS AND FUTURE LINES OF WORK

6.1 General conclusion

In reflecting on our journey of developing the tour guide app, it's evident that our methodology played a pivotal role in shaping not only the product but also the community it fosters. By embracing Agile principles and integrating Lean and Scrum frameworks, we cultivated a development process that prioritized flexibility, collaboration, and iterative progress. This approach allowed us to swiftly adapt to changing user needs and market trends, ensuring that our app remained relevant and impactful.

One of the defining features of our app is its emphasis on community-building. Beyond serving as a mere tool for travel guidance, our platform is designed to facilitate meaningful connections and shared experiences among travelers. Through features like integrated social media functionalities, user-generated content, and real-time interactions, we aimed to create a vibrant ecosystem where travelers could connect, collaborate, and inspire one another.

Our commitment to user-centric design guided every aspect of the app's development, ensuring that it resonated deeply with our target audience. From intuitive user interfaces to personalized recommendations, every feature was meticulously crafted to enhance the

traveler's experience and foster a sense of belonging within the community.

Throughout the development process, our team remained dedicated to transparency, accountability, and continuous improvement. By establishing clear governance structures and comprehensive documentation, we ensured that everyone involved in the project was aligned with our vision and objectives. This not only facilitated effective decision-making but also empowered team members to contribute their unique insights and expertise.

As we conclude this chapter of our journey, we do so with a profound appreciation for the transformative power of technology in bringing people together. Our app represents more than just a digital tool—it's a testament to the enduring human desire for connection, exploration, and shared adventure. And as we look to the future, we remain committed to evolving our platform, enriching the traveler's experience, and building a global community united by a passion for discovery.

6.2 limitations and future works

In every project, there exist inherent constraints and avenues for potential future enhancement. While our tour guide application represents a substantial leap forward in transforming the travel experience, it's crucial to acknowledge the obstacles we faced and the prospects for advancement that lie ahead.

One notable constraint of our current application revolves around its reliance on internet connectivity. Although digital platforms offer unparalleled access to information and resources, they are inherently tethered to internet access, which may not always be accessible in remote or off-grid locales. Addressing this constraint might involve exploring offline functionalities or alternative communication technologies to ensure travelers can access vital features regardless of their connectivity status.

Moreover, while our application endeavors to cultivate a dynamic community of travelers, tour guides, and enthusiasts, there exists room for expansion and augmentation. Subsequent iterations of the application could delve into features facilitating even deeper collaboration, such as group trip planning, shared itinerary development, or live chat forums. By fostering more profound connections and interactions among users, we can further enrich the communal experience and foster enduring bonds between travelers.

Additionally, with technology evolving rapidly, numerous opportunities exist to leverage

emerging innovations to enhance the application's functionality and user experience. For instance, advancements in augmented reality (AR) and virtual reality (VR) could unlock new possibilities for immersive travel experiences, enabling users to explore destinations virtually before embarking on their journeys.

Lastly, it's vital to recognize that our tour guide application is merely a component of the broader travel ecosystem. Collaborating with other industry stakeholders, like transportation providers, lodging services, and local enterprises, offers exciting prospects to craft seamless end-to-end travel experiences for our users. By forging strategic alliances and integrating with existing platforms, we can position our application as an indispensable companion for travelers worldwide.

In conclusion, while our tour guide application has made significant advancements in enhancing the travel experience, there remain constraints to address and future prospects to pursue. By remaining receptive to user feedback, embracing emerging technologies, and partnering with industry peers, we can continue innovating and evolving our application to meet the evolving needs of travelers world.

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- 15-<https://www.techtarget.com/searchcio/definition/project-scope>
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APPENDIX

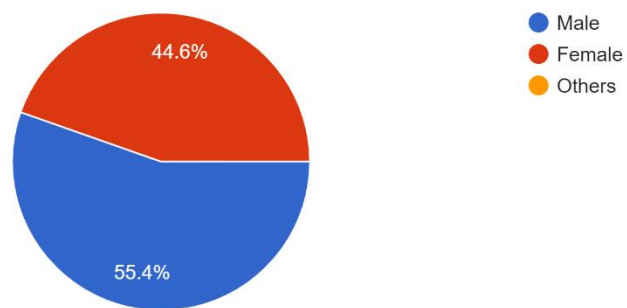
- Survey questions and results:

You can find all survey questions on the link below.

https://docs.google.com/forms/d/1Yed1u4uMM05N4mDD548mMn1cEzIlygb1qC6YI_xqjWT4/edit#responses

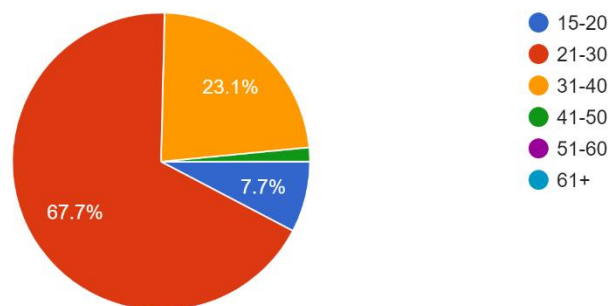
Gender

65 responses



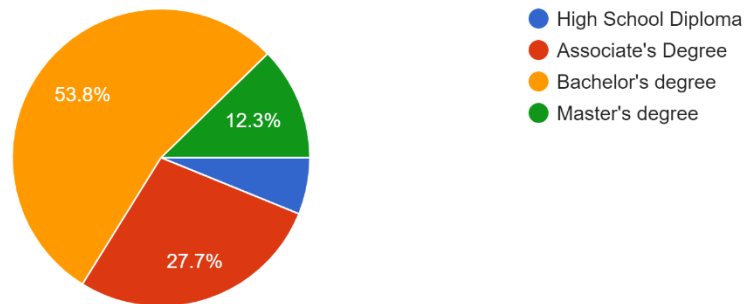
Age:

65 responses



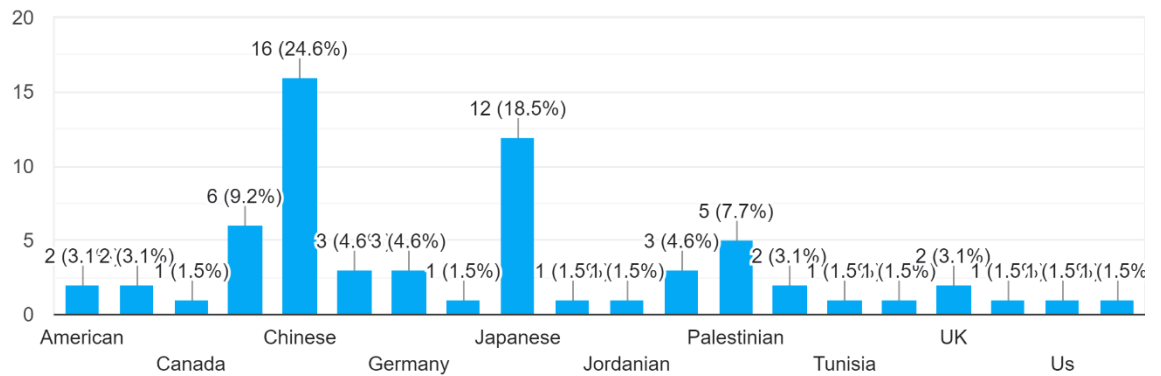
Qualification

65 responses



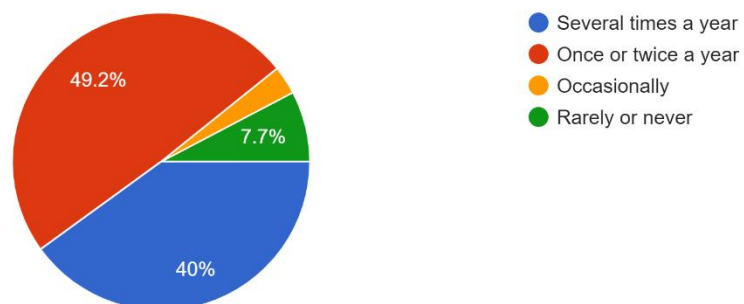
Nationality:

65 responses



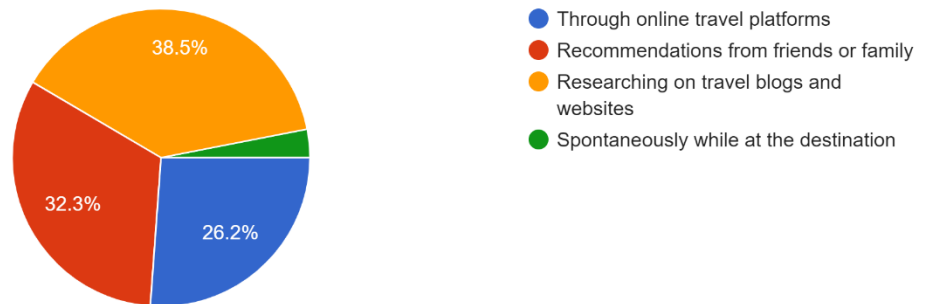
How often do you travel for leisure purposes?

65 responses



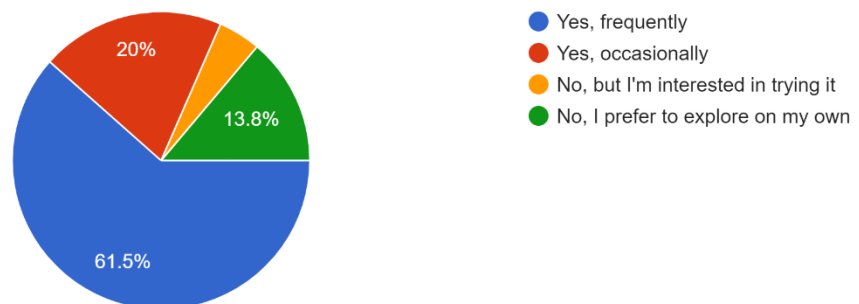
When planning a trip, how do you typically find and choose your activities and tours?

65 responses



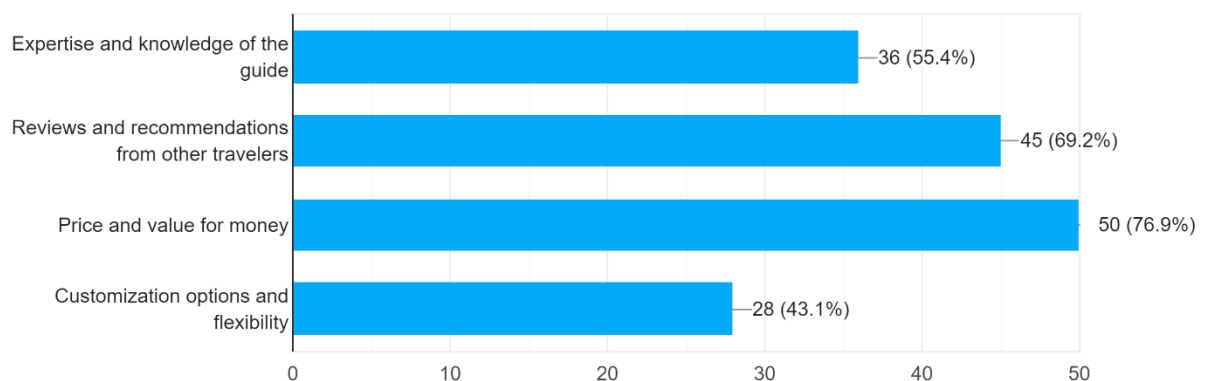
Have you ever used a tourist guide service or platform to book guided tours or experiences while traveling?

65 responses



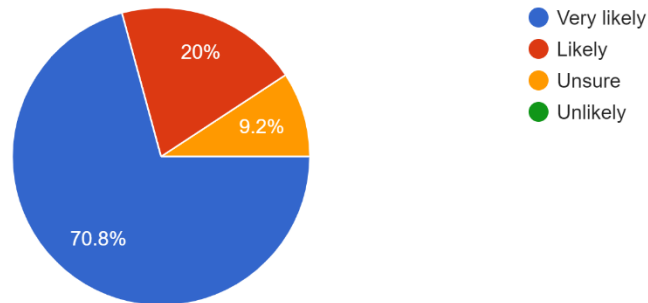
What factors are most important to you when selecting a tourist guide or tour service?

65 responses



How likely are you to use a platform dedicated to tourist guides, offering offers, trip photos, and trip information?

65 responses



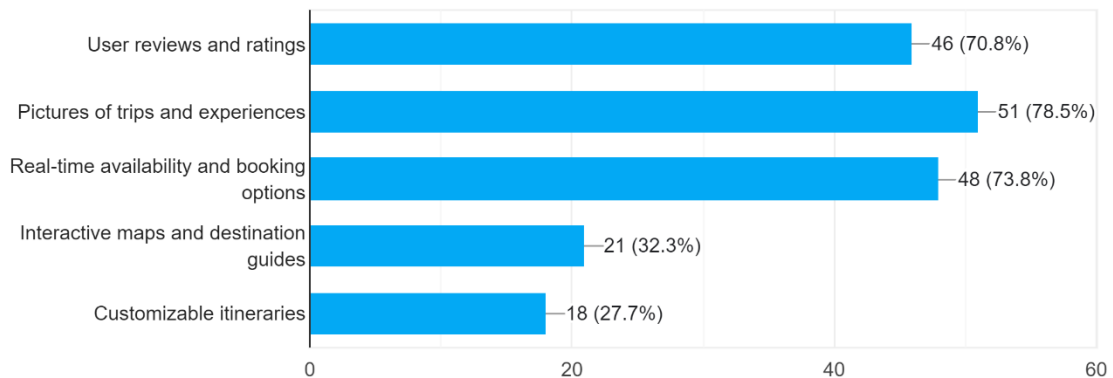
If you answered previous question unsure/unlikely to use the app, why not?

4 responses

- Not my thing
- I like to explore on my own
- I don't trust the guide, because all of them only marketing for the places that can get a financial benefit from it „ they don't advise the good choices, no they only advise for theirs advantages and benefits
- I don't know

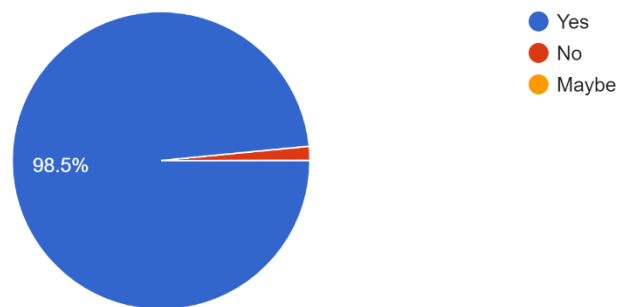
What features would you like to see in a platform dedicated to tourist guides?

65 responses



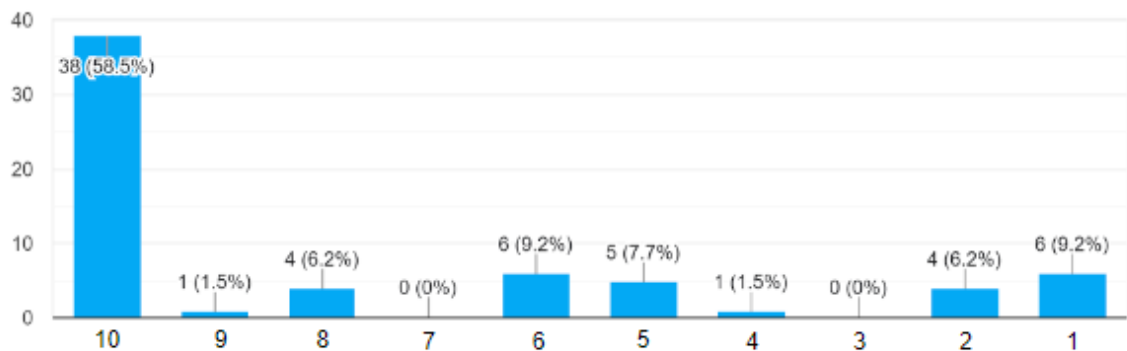
Would you be interested in following tourist guides on a platform similar to Instagram, where they share photos and experiences from their trips?

65 responses



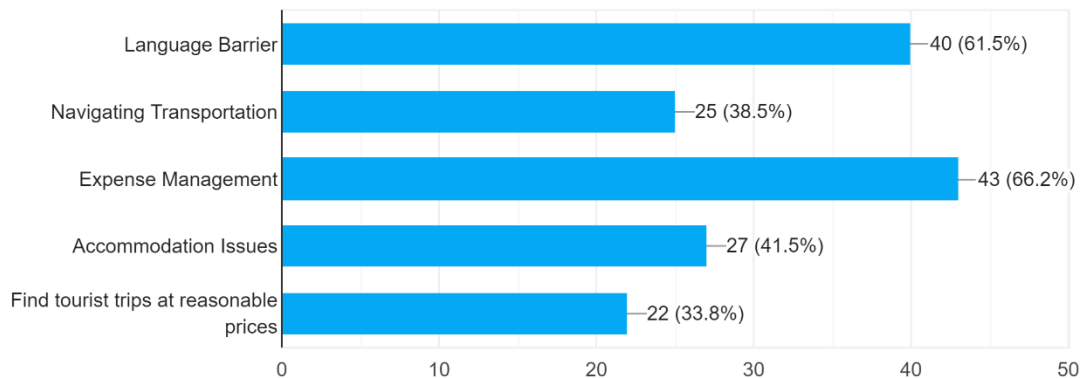
From 1 to 10, how difficult is it to travel and find tourist trips?

65 responses



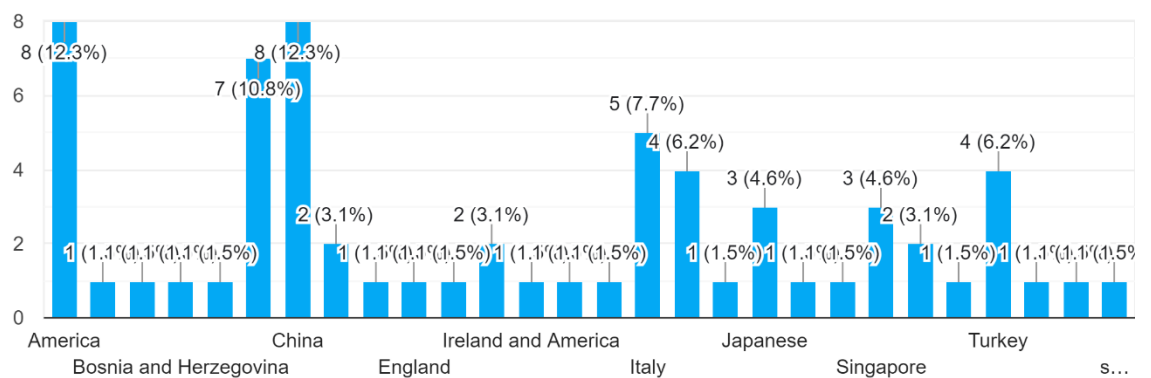
What difficulties do you face while traveling?

65 responses



What is your favorite tourist destination?

65 responses



What other suggestions or feedback do you have for improving a platform dedicated to tourist guides?

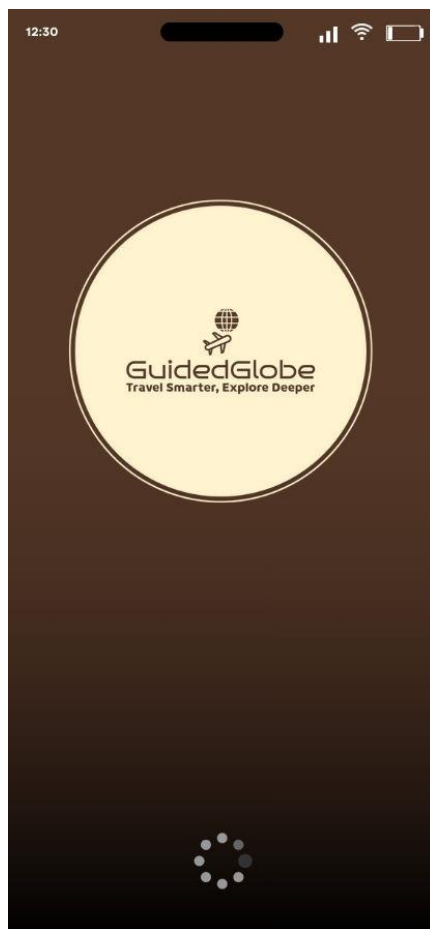
65 responses

- no
- Receive more offers that students could offer it
- Safe environment and crime reporting
- nothing
- Nothing to add.
- Improving local tips
- I advise the guides to pay attention for the quality of places like restaurants and activities and care about the quality „ and give the time of the trip for real activities not the promotion for some markets
- i thought doing something to help about the language which is the communication between the people
- Detailed guide introduction
- Some useful information

- keep real information
- Some cheap flights
- it's good
- fine
- it's great
- no suggestion
- Nothing
- I would try it why not

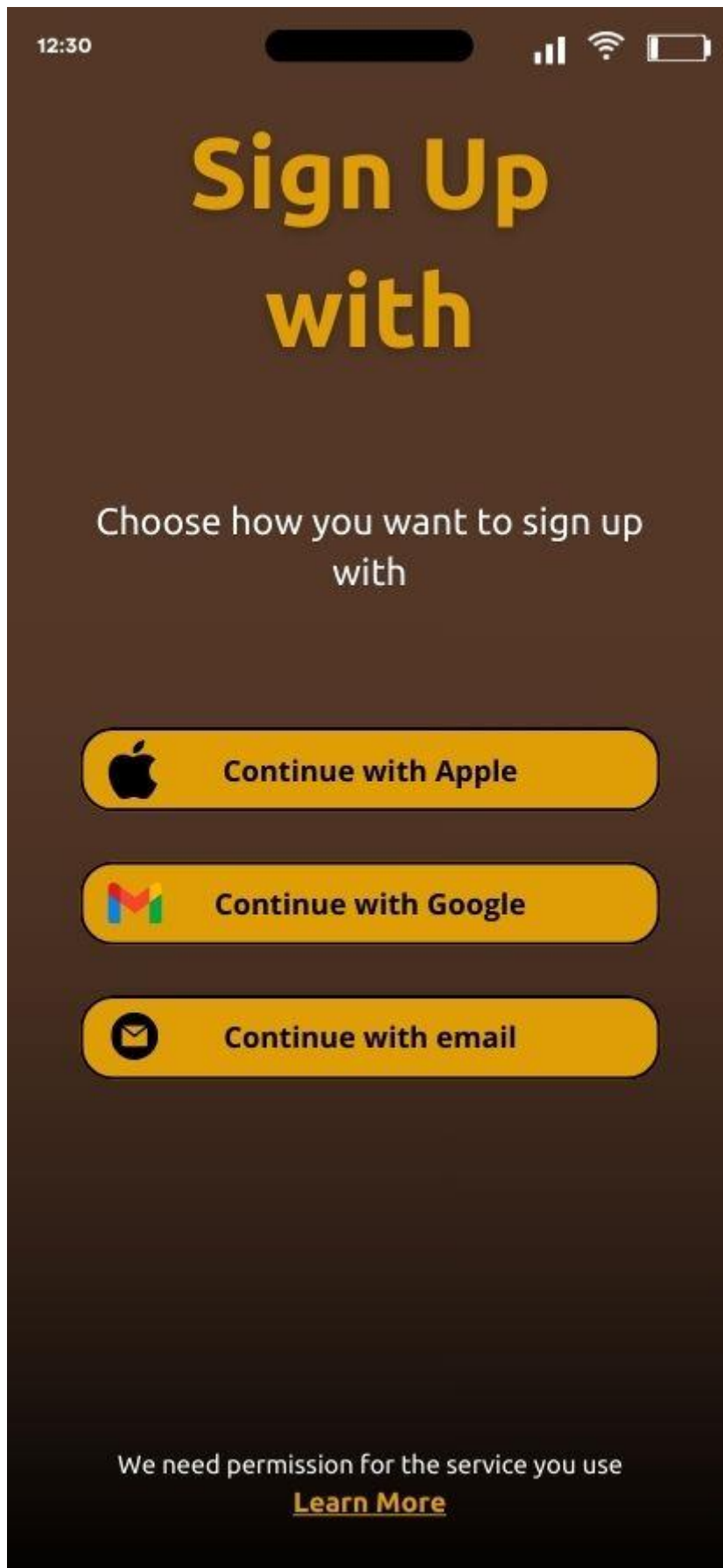
-Being able to gather information on all of the local amenities and hidden spots locals mainly know about is the real challenge. The ability to offer foreigners a real local experience of the city or location they're visiting outside of a controlled tourist environment. Tourists generally want to experience an adventure unique to each individual's specific hobbies, or experience something entirely new. Advertising the area's specialties and uniqueness and rating those aspects will give the traveller an idea of whether or not the destination is worth an investment of their time and money.

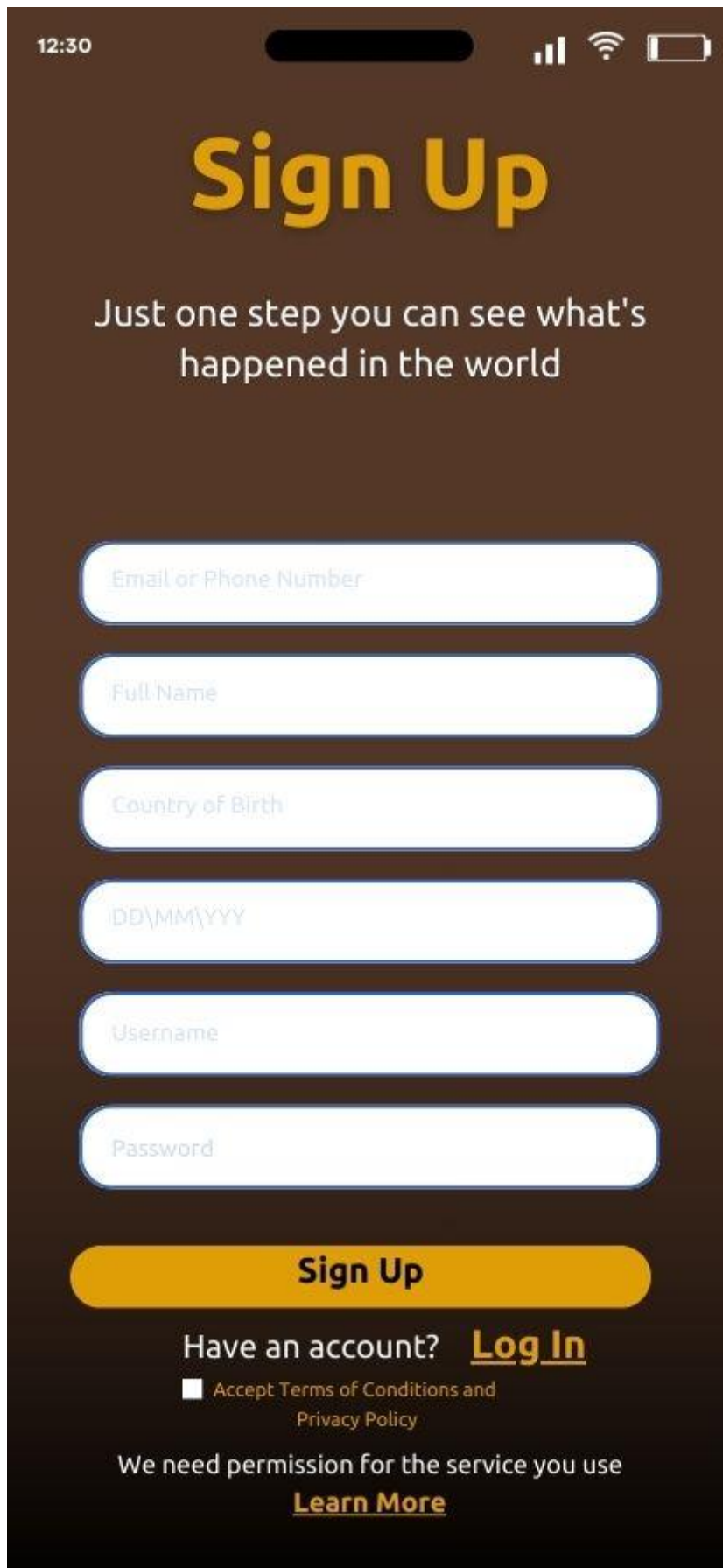
Our App Design









A mobile application sign-up screen with a dark brown background. At the top, the status bar shows the time 12:30, signal strength, Wi-Fi, and battery icons. The title "Sign Up" is in large, bold, yellow font. Below it, a subtitle in white text reads "Just one step you can see what's happened in the world". There are six white input fields with rounded corners and blue borders, each containing a placeholder text: "Email or Phone Number", "Full Name", "Country of Birth", "DD\MM\YYY", "Username", and "Password". Below the input fields is a large yellow button with the text "Sign Up" in black. Under the button, the text "Have an account?" is followed by a yellow link "Log In". Below that is a checkbox with the text "Accept Terms of Conditions and Privacy Policy". At the bottom, the text "We need permission for the service you use" is followed by a yellow link "Learn More".

12:30

Sign Up

Just one step you can see what's happened in the world

Email or Phone Number

Full Name

Country of Birth

DD\MM\YYY

Username

Password

Sign Up

Have an account? [Log In](#)

☐ Accept Terms of Conditions and Privacy Policy

We need permission for the service you use [Learn More](#)



