WATERFALL DELIVERABLES – 1

TOUR MANAGMENT SYSTEM (SMART TOUR)

DOCUMENT 1: BUSINESS CASE DOCUMENT TEMPLATE

Q Why is this project initiated?
Ans To eliminate booking errors like double reservations and delays.
- To enhance customer experience with real-time availability and instant confirmations.
- To reduce manual workload and operational inefficiencies.
- To integrate secure and seamless payment processing.
- To ensure smooth third-party integrations with hotels, airlines, and transport.
- To offer personalized tour packages and flexible booking options.
- To stay competitive in the travel industry with a modern, user-friendly platform.

Q What are the current problems?
Ans The current problems are mentioned above :
- **Double Bookings & Availability Issues**-Lack of real-time synchronization leads to multiple users booking the same slot.
- **Delayed Booking Confirmations**-Slow processing time results in uncertainty for customers.
- **Payment Failures & Refund Delays**-Technical glitches cause transaction failures and slow refunds.
- **Lack of User-Friendly Interface**-Complicated booking steps frustrate users, leading to high abandonment rates.
- **Poor Integration with Third-Party Services**-Inefficient communication with hotels, airlines, and tour operators results in mismatched availability.
- **Inadequate Customer Support**-Slow response to booking issues affects customer satisfaction.
- **Limited Customization Options**-Users cannot modify tour packages easily, reducing flexibility.
- **Security Concerns**-Weak data protection increases the risk of fraud and information breaches.

Q With this project how many problems could be solved?
Ans Among all the problems here are the few problems that have been solved :
- Eliminates Double Bookings: Real-time updates prevent overbooking and scheduling conflicts.
- Faster Booking Process: Automated workflows reduce manual entry and delays.
- Seamless Payment Integration: Secure and multiple payment options enhance convenience.
- Improved Customer Experience: Instant confirmations and easy modifications boost satisfaction.
- Reduced Operational Costs: Automation minimizes manual intervention and errors.
- Better Data Accuracy: Centralized system ensures correct availability and pricing.
- Enhanced Scalability: The system can handle high traffic during peak seasons.
- Stronger Fraud Prevention: Secure transactions and identity verification reduce risks.
- Efficient Cancellations & Refunds: Automated refund processing ensures customer trust.
- Easy Multi-Channel Access: Users can book via mobile, web, or customer service.

Q What are the resources required?
Ans Here are all the resources used in this project :
1. People (Project Team)
A typical project team for developing a app would include the following key roles:

Project Manager: Oversees the entire project, coordinates team members, and ensures timely delivery.

Business Analyst: Gathers and analyzes project requirements, defines features and functionalities.

UI/UX Designer: Designs user interfaces, ensuring an intuitive and user-friendly experience.

Mobile App Developers: Develops the front-end (UI) and back-end (server-side) of the app for iOS and Android platforms.

Quality Assurance (QA) Engineer: Ensures the app is free from bugs and meets functional and performance standards.

Database Administrator (DBA): Manages the app's database, ensuring security and efficiency.

Marketing and Sales Team: Promotes the app, engages with customers, and manages user acquisition strategies.

Third-Party Consultants

Travel Industry Experts: Consultants who provide insights into industry best practices, market trends, and user preferences.

Payment Gateway Providers: Consultants to integrate secure and reliable payment systems (e.g., Stripe, Razorpay).

Legal Advisors: To ensure compliance with data protection laws (e.g., GDPR) and handle any legal aspects of booking and cancellation policies.

Data Security Experts: To implement security measures like encryption, fraud detection, and secure transactions.

Cloud Service Providers: If cloud infrastructure is needed for hosting, consultants may be required for system architecture and cloud integration.

2 .TIME

Project Timeline: A typical development time for a tour app can range from 6 to 12 months, depending on the complexity, features, and size of the team. The timeline would include the following phases:

Planning & Requirement Gathering: 1-2 months.

Design: 1-2 months.

Development (iOS, Android, Backend): 3-6 months.

Testing & QA: 1-2 months.

Deployment & Marketing: 1-2 months.

3.Budget

Overall Budget Estimate: The budget for developing a tour app in India can range between 1.5 million to 5 million depending on factors such as - Team Size: Larger teams or outsourcing may impact the overall budget.

Third-Party Services: Payments to third-party consultants, service providers, and legal experts would also add to costs.

Marketing and Launch: The budget should also account for post-launch marketing, app store fees, and customer support services.

Q How much organizational change is required to adopt this technology?

Ans Here few organizational changes which are required to adopt this technology :

- **Process Automation:** Shift from manual to automated booking and reservation handling.
- **Staff Training**: Employees need training on new systems and workflows.
- **System Integration**: Existing platforms must integrate with the new app (e.g., payment, CRM).
- **Customer Adaptation**: Users need guidance on new booking procedures.
- **Policy Updates**: Cancellation, refunds, and data privacy policies may need modifications.
- **IT Infrastructure Upgrade**: May require cloud migration or enhanced security measures.
- **Support System Enhancement**: Improved customer support for handling queries and issues

Q Time frame to recover ROI?

Ans The Return on Investment (ROI) recovery time for a Smart Tour App depends on factors like development costs, marketing expenses, user acquisition rate, and revenue streams. However, a general estimate can be:

Short-Term (6-12 Months):
- Initial user acquisition phase.
- Revenue from early adopters, promotions, and partnerships.
- Break-even on operational costs (if demand is high).

Mid-Term (1-3 Years):
- Consistent user growth and monetization.
- Higher revenue from bookings, subscriptions, or ads.
- Recovery of development and marketing costs.

Long-Term (3+ Years):
- Expansion into new markets or premium features.
- Strong brand positioning with loyal customers.
- High profitability and scalability.

Q How to identify Stakeholders?

Ans we can identify stakeholder as primary & secondary :

Primary Stakeholders:
- Customers – Users who book tours and travel services.
- Tour Operators – Businesses providing tours and experiences.
- Travel Agencies – Partners managing bookings and packages.
- App Development Team – Developers, designers, and testers.
- Business Owners/Investors – Decision-makers funding and overseeing the project.

Secondary Stakeholders:
- Payment Gateway Providers – Ensure secure transactions.
- Third-Party Service Providers – Hotels, airlines, transport companies.
- Customer Support Team – Handles queries and complaints.
- Regulatory Authorities – Ensure legal and compliance adherence.
- Marketing & Sales Teams – Promote and grow the user base.

DOCUMENT 2: BA STRATEGY

Q What are the steps you would need to follow to complete a project .

Ans Steps to Complete a project are :

1. Project Planning & Research
Define project scope, objectives, and key features.
Conduct market research on competitors and user needs.
Identify risks, dependencies, and budget requirements.

2. Requirement Analysis
Gather functional and non-functional requirements.
Define user roles (e.g., travelers, tour operators, admins).
Create wireframes and UI/UX design drafts

3. Design & Prototyping
Develop a user-friendly interface (UI/UX design).
Create a prototype/mockup for feedback.

Plan system architecture and database structure.

4. Development Phase

Frontend Development: Build user interface using frameworks like React Native or Flutter.

Backend Development: Develop APIs, database management, and business logic using Node.js, Django, or Laravel.

Third-Party Integration: Connect payment gateways, hotel APIs, and transport services.

5. Testing & Quality Assurance

Perform unit, integration, and system testing.

Conduct usability testing for smooth user experience.

Check security measures for data protection.

6. Deployment & Launch

Deploy the app on cloud services (AWS, Firebase, etc.).

Publish on Google Play Store and Apple App Store.

Set up monitoring tools for performance tracking.

7. Marketing & User Onboarding

Implement digital marketing strategies (SEO, ads, social media).

Provide user guides and customer support.

Gather feedback for improvements.

8. Maintenance & Continuous Improvement

Fix bugs and optimize app performance.

Add new features based on user feedback.

Ensure regular updates for compatibility and security.

Q What are the Elicitation techniques to apply .

Ans To gather requirements effectively for the Smart Tour App, the following elicitation techniques can be applied:

1. Stakeholder Interviews-Conduct discussions with travel agencies, customers, and tour operators to understand booking pain points and expectations.

2. Surveys & Questionnaires-Collect structured feedback from potential users about their preferences, challenges, and desired features in a booking app.

3. Focus Groups-Engage small groups of travelers and industry experts to discuss common booking issues and brainstorm solutions.

4. Observation-Analyze how users currently book tours, including website interactions, customer service calls, and third-party app usage.

5. Prototyping-Develop wireframes or mock-ups of the booking system and gather early user feedback to refine design and functionality.

6. Document Analysis-Review competitor apps, travel policies, and existing booking system reports to identify gaps and improvement areas.

7. Brainstorming-Collaborate with stakeholders and development teams to generate innovative ideas for an optimized booking system.

8. Workshops-Conduct interactive sessions with developers, UX designers, and travel industry professionals to define system requirements.

Q How to do stakeholder analysis – RACI / ILS .

Ans Stakeholder analysis using the **RACI matrix** helps define roles and responsibilities for key stakeholders involved in addressing the inefficient booking and reservation process in the Smart Tour app. **RACI** stands

for **Responsible, Accountable, Consulted, and Informed**, ensuring clarity in decision-making and task execution.

1.Responsible (R): These stakeholders perform the actual work to improve the booking system. They handle technical improvements, software updates, and user experience enhancements. In this case, software developers, UX/UI designers, and IT teams take responsibility for fixing inefficiencies in booking and reservation processes.

2.Accountable (A): The stakeholder who has final authority and takes ownership of the process. This is typically the project manager or product owner, who ensures that the booking system functions efficiently, meets business goals, and aligns with strategic objectives.

3.Consulted (C): These stakeholders provide valuable input and expertise before decisions are made. Customer service representatives, travel agents, and marketing teams fall into this category, as they offer insights from user complaints, market trends, and competitor analysis to shape the system's improvements.

4.Informed (I): These stakeholders need updates on progress but do not directly contribute to decision-making. End-users (travelers using the app), senior management, and business partners (hotels, airlines, etc.) are informed about changes, new features, and expected improvements in the booking and reservation system.

Q What documents to write .

Ans As a Business Analyst, you will need to create several key documents to define, analyze, and manage the project efficiently. Here are the essential documents:

1. Business Requirements Document (BRD)

Defines the purpose, scope, and objectives of the project.

Outlines business needs, goals, and key stakeholders.

Describes the high-level requirements for the Smart Tour app.

2. Functional Requirements Document (FRD)

Details the functionalities of the booking and reservation system.

Includes real-time availability, payment processing, cancellation policies, and notifications.

Specifies user roles (customer, admin, support) and interactions.

3. Software Requirements Specification (SRS)

Includes technical and non-functional requirements.

Covers system architecture, data security, performance expectations, and integrations.

4. Use Case Document

Defines how users (travelers, tour operators, admins) interact with the system.

Provides step-by-step flows for booking, modifying, and canceling reservations.

5. User Stories & Acceptance Criteria

Describes features from a user perspective (e.g., "As a traveler, I want to cancel a booking and receive a refund based on policy").

Includes clear acceptance criteria for successful implementation.

6. Test Case Document

Defines test scenarios to validate the booking process, payment transactions, and cancellation features.

Ensures the app meets all business and functional requirements.

Q What process to follow to Sign off on the Documents .

Ans As a BA here is the process to follow to sign off on documents :

1. Prepare Documentation:

Ensure all relevant documents (requirements, business case, workflow diagrams, and specifications) are complete, accurate, and clearly address the issues in the booking process.

2. Internal Review:

Share documents with key internal stakeholders (product managers, developers, UX designers) for preliminary feedback.

Address any concerns or suggestions from the team.

3. Stakeholder Review:

Circulate the documents to external stakeholders, such as clients, project sponsors, and possibly legal or compliance teams.

Set a review period (e.g., one week) for stakeholders to go through the documents.

4. Review Meeting:

Organize a review meeting or workshop to walk stakeholders through the documents, clarifying any doubts and collecting final feedback.

Document any agreed changes during this meeting.

5. Update Documents:

Make necessary revisions based on feedback from the review meeting.

Highlight the changes for transparency and easier re-review.

6. Approval Sign-Off:

Prepare a formal approval form or an email template for stakeholders to confirm their sign-off.

Obtain written confirmation (email or digital signatures) from each key stakeholder.

7. Record Keeping:

Store signed-off documents and approvals in a shared repository (e.g., SharePoint, project management tool) for easy access and auditing.

8. Communicate Approval:

Notify the project team and stakeholders that documents are approved and the project can move forward according to the agreed specifications.

9. Monitor for Changes:

Keep an eye out for any scope changes or new requirements that may need additional sign-off later in the project.

Q How to take Approvals from Clients .

Ans Here are the main steps to follow to take Approvals from Clients

Understand Client Requirements – Gather detailed expectations about the booking and reservation system.

Prepare a Proposal – Create a clear document outlining features, benefits, costs, and timelines.

Present a Demo or Prototype – Show a working model or wireframe to help clients visualize the system.

Address Concerns & Feedback – Listen to client queries and make necessary adjustments.

Get Formal Approval – Obtain written or digital confirmation from the client before proceeding.

Maintain Clear Communication – Keep the client updated on progress and any necessary changes.

Q What are the Communication Channels to establish and Implement .

Ans Establishing effective communication channels is essential for smooth implementation. Here are the key communication channels to implement:

1. Internal Communication Channels:

Project Management Tools (e.g., Jira, Trello): For task tracking, progress updates, and managing timelines across teams.

Team Collaboration Platforms (e.g., Slack, Microsoft Teams): To ensure real-time communication between development, design, marketing, and support teams.

Email Updates: For detailed communication regarding milestones, meetings, and decision-making.

Regular Stand-Up Meetings: Daily or weekly meetings for status updates and resolving any blockers.

2. Stakeholder Communication Channels:

Stakeholder Meetings (In-Person or Virtual): Regular meetings with project sponsors, product owners, and other key stakeholders to align on goals, issues, and feedback**.**

Status Reports: Weekly or bi-weekly reports summarizing progress, risks, and challenges.

Workshops or Focus Groups: Engaging stakeholders (internal and external) to gather feedback on features and processes to refine the user experience.

3. Customer Communication Channels:

In-App Messaging/Notifications: To inform users about booking status, cancellations, updates, and improvements.

Email Communication: For important alerts, confirmations, and promotions to keep customers informed.

Helpdesk/Support Chat: Offering a direct communication line for resolving booking issues, cancellations, and providing real-time support.

Customer Feedback Surveys: After bookings, to gather insights on the booking process and identify areas of improvement.

4. Vendor and Third-Party Communication Channels:

API Integration Meetings: Regular communication with third-party service providers (e.g., payment gateways, hotels, airlines) to ensure smooth integration and synchronization of booking data.

SLAs (Service Level Agreements): Clear communication with vendors to define service expectations, data handling, and system uptime.

Support Escalation Channels: To quickly resolve any issues that arise with third-party services.

Q How to handle Change Request .

Ans To handle a change request for the Smart Tour app project as a Business Analyst, follow these steps:

1. Review the change request to understand the scope and impact.
2. Assess whether the change aligns with business goals and user needs.
3. Gather feedback from stakeholders, including developers, project managers, and users.
4. Evaluate the potential risks, costs, and benefits of implementing the change.
5. Prioritize the change based on urgency, value, and available resources.
6. Document the change request, detailing requirements, timelines, and responsibilities.
7. Obtain approval from relevant stakeholders before proceeding with the change.
8. Update project plans and timelines to reflect the new scope.
9. Communicate the change and its impact to the team and stakeholders.
10. Monitor the implementation of the change to ensure it meets expectations and resolves the issue.

Q How to update the progress of the project to the Stakeholders .

Ans As a Business Analyst, updating the progress of the Smart Tour App Project to stakeholders requires clear communication, transparency, and actionable insights. Here's how you can structure the update:

1. Project Overview

Objective: Provide a brief reminder of the project's goal (e.g., improving the booking & reservation process to enhance user experience, reduce operational inefficiencies, and increase customer satisfaction).

Focus Area: Highlight that the focus is on resolving booking inefficiencies (double bookings, delayed confirmations, etc.).

2. Current Status

Work Completed: Outline what has been done so far:

Requirement gathering & stakeholder meetings.

Research on current system limitations.

Initial designs for a real-time booking system.

Implementation of third-party integrations.

Development of automated notifications & alerts**.**

Milestone Progress: Show completed milestones (e.g., design phase completed, API integrations successful).

3. Challenges & Risks

Identified Issues: Briefly mention any problems encountered (e.g., delays in API integration, challenges in real-time data synchronization).

Risk Mitigation: Explain how risks are being mitigated (e.g., additional testing, increased communication with third-party services).

4. Next Steps & Action Items

Short-Term Goals:

Finalize backend system for real-time updates.

Begin user acceptance testing (UAT) for new booking features.

Refine the customer interface based on feedback.

Long-Term Goals:

Complete the full integration with third-party services.

Roll out a beta version for a selected group of users.

Collect feedback and improve the booking experience.

5. Timelines & Deadlines

Key Dates: Provide a timeline with upcoming milestones:

UAT completion: [Date]

Beta release: [Date]

Full launch: [Date]

On Track or Delayed: Indicate whether the project is on track or if any delays may affect the schedule.

6. Budget & Resource Allocation

Budget Update: Provide a snapshot of how the project is progressing in terms of budget. Include any potential budgetary concerns (e.g., unexpected costs for system updates).

Resource Needs: Mention if additional resources or skills are required to meet project deadlines (e.g., hiring a new developer or increasing test efforts).

7. Impact and Value Proposition

Expected Benefits: Reaffirm how resolving the booking inefficiencies will benefit the business (e.g., reduced operational costs, improved customer satisfaction, better conversion rates).

Stakeholder Engagement: Invite stakeholder feedback, questions, or concerns to ensure alignment on priorities.

8. Request for Feedback/Support

Action for Stakeholders: If necessary, request approval on specific decisions (e.g., finalizing designs, committing additional resources).

Q How to take Sign off on the UAT – Client Project Acceptance Form .

Ans To take sign-off on the UAT (User Acceptance Testing) for the Smart Tour App Project, as a Business Analyst, you should:

- Ensure all business requirements and functionalities have been tested and met.
- Confirm that the app performs as expected in real-world scenarios, with no critical bugs or issues.
- Verify that user feedback from UAT is addressed and improvements are implemented.
- Ensure all necessary documentation, including test results, issues, and resolutions, is completed and shared with stakeholders.
- Facilitate a meeting with the client to review the test outcomes and gain approval.
- Obtain written approval from the client on the Client Project Acceptance Form confirming that the project meets their expectations and is ready for launch.
- Make sure any pending items, if any, are clearly outlined and agreed upon for post-launch resolution.

DOCUMENT 3 – FUNCTIONAL SPECIFICATIONS

Project name	SMART TOUR – seamless travel planning & booking app
Customer name	K.V CHARANI
Project Version	1.0
Project Sponsor	G. SANJANA
Project Manager	JESSICA . PULI
Project Initiation date	26/01/25

Functional Requirement specifications:

Req ID	Req Name	Req Description	Priority
FR0001	Login	User should be able to login to the application to do inventory operations	10
FR0002	Social Media Login	Users can log in using Google, Facebook, or Apple accounts.	7
FR0003	Tour Search & Filters	Users should be able to search tours by location, date, price, and category.	9
FR0004	Live Availability Check	System should display real-time availability for tours and packages.	10

FR0005	Multi-Currency Payment	Support various currencies for seamless international transactions.	8
FR0006	Secure Payment Gateway	Integrate payment gateways like PayPal, Stripe, or Razor pay.	10
FR0007	Booking Confirmation	Users should receive instant booking confirmation via email/SMS.	9
FR0008	Cancellation & Refund	Policy Implement a clear and automated refund process based on cancellation rules.	9
FR0009	Rescheduling Feature	Users should be able to modify their booking dates if permitted.	8
FR0010	Tour Package Customization	Users can personalize their tour packages with add-ons and preferences.	7
FR0011	Multi-Language Support.	Provide multiple language options for global accessibility.	6
FR0012	Travel Itinerary Generation	Generate a detailed itinerary for booked tours.	9
FR0013	Group Booking Support	Allow users to book for multiple travelers in a single transaction.	8

FR0014	Discount & Promo Codes	Users should be able to apply coupons or discounts during checkout.	7
FR0015	Customer Support Chat	Provide in-app live chat support for customer inquiries.	9
FR0016	Reviews & Ratings	Users should be able to review and rate tours after completion.	8
FR0017	Guide & Operator Details	Show information about the tour guides and operators.	7
FR0018	Push Notifications	Notify users about upcoming bookings, offers, and alerts.	9
FR0019	Wishlist & Favorites	Users can save tours for later booking	6
FR0020	Integration with Maps	Provide location tracking and directions for booked tours.	8
FR0021	Tour Operator Dashboard	Admin panel for operators to manage bookings and availability.	10
FR0022	Admin Reporting & Analytics	Generate reports on bookings, revenue, and customer trends	9

FR0023	Fraud Prevention Mechanism	Implement security checks to prevent fraudulent bookings	9
FR0024	Personalized Recommendations	AI-driven tour suggestions based on user preferences.	7
FR0025	Offline Ticket Access	Users can download and access their booking details offline.	6
FR0026	Loyalty & Rewards Program	Provide points or discounts for frequent bookings.	7
FR0027	API Integration with Airlines	Sync tour bookings with flight reservations for seamless travel planning	8
FR0028	Weather Forecast Integration	Display weather conditions for booked destinations.	6
FR0029	Multi-Device Sync	Allow users to access their accounts and bookings across devices	7
FR0030	Emergency Contact & SOS	Provide emergency contact support within the app for travelers.	10

Document 4- Requirement Traceability Matrix

Req ID	Req Name	Req Description	Design	D1	T1	D2	T2	UAT
FR0001	Login	User should be able to login to the application to do inventory operations	YES	pending	NO	YES	YES	YES
FR0002	Social Media Login	Users can log in using Google, Facebook, or Apple accounts.	YES	NO	YES	YES	NO	YES
FR0003	Tour Search & Filters	Users should be able to search tours by location, date, price, and category.	NO	pending	YES	YES	NO	YES
FR0004	Live Availability Check	System should display real-time availability for tours and packages.	YES	YES	YES	NO	NO	YES
FR0005	Multi-Currency Payment	Support various currencies for seamless international transactions.	YES	YES	NO	YES	NO	YES
FR0006	Secure Payment Gateway	Integrate payment gateways like PayPal, Stripe, or Razor pay.	YES	pending	YES	YES	YES	NO
FR0007	Booking Confirmation	Users should receive instant booking confirmation via email/SMS.	NO	YES	YES	YES	NO	YES
FR0008	Cancellation & Refund	Policy Implement a clear and automated refund process based on cancellation rules.	YES	pending	YES	NO	YES	YES

FR0009	Rescheduling Feature	Users should be able to modify their booking dates if permitted.	YES	NO	YES	YES	YES	YES
FR0010	Tour Package Customization	Users can personalize their tour packages with add-ons and preferences.	YES	YES	YES	YES	YES	NO
FR0011	Multi-Language Support.	Provide multiple language options for global accessibility.	NO	pending	YES	YES	YES	YES
FR0012	Travel Itinerary Generation	Generate a detailed itinerary for booked tours.	YES	YES	YES	NO	YES	NO
FR0013	Group Booking Support	Allow users to book for multiple travelers in a single transaction.	YES	pending	YES	NO	YES	NO
FR0014	Discount & Promo Codes	Users should be able to apply coupons or discounts during checkout.	YES	YES	YES	NO	YES	YES
FR0015	Customer Support Chat	Provide in-app live chat support for customer inquiries.	YES	NO	YES	YES	YES	YES
FR0016	Reviews & Ratings	Users should be able to review and rate tours after completion.	YES	YES	YES	NO	YES	YES
FR0017	Guide & Operator Details	Show information about the tour guides and operators.	YES	pending	YES	YES	NO	YES

FR0018	Push Notifications	Notify users about upcoming bookings, offers, and alerts.	NO	YES	YES	YES	YES	NO
FR0019	Wishlist & Favorites	Users can save tours for later booking	YES	NO	YES	YES	YES	YES
FR0020	Integration with Maps	Provide location tracking and directions for booked tours.	YES	pending	YES	NO	YES	YES
FR0021	Tour Operator Dashboard	Admin panel for operators to manage bookings and availability.	YES	YES	NO	YES	NO	YES
FR0022	Admin Reporting & Analytics	Generate reports on bookings, revenue, and customer trends	YES	NO	YES	YES	YES	YES
FR0023	Fraud Prevention Mechanism	Implement security checks to prevent fraudulent bookings	NO	pending	YES	YES	NO	YES
FR0024	Personalized Recommendations	AI-driven tour suggestions based on user preferences.	YES	NO	YES	YES	NO	YES
FR0025	Offline Ticket Access	Users can download and access their booking details offline.	NO	YES	YES	YES	YES	YES
FR0026	Loyalty & Rewards Program	Provide points or discounts for frequent bookings.	YES	pending	YES	NO	YES	YES

FR0027	API Integration with Airlines	Sync tour bookings with flight reservations for seamless travel planning	YES	YES	NO	YES	YES	YES
FR0028	Weather Forecast Integration	Display weather conditions for booked destinations.	NO	pending	YES	YES	YES	YES
FR0029	Multi-Device Sync	Allow users to access their accounts and bookings across devices	YES	YES	NO	YES	YES	NO
FR0030	Emergency Contact & SOS	Provide emergency contact support within the app for travelers.	YES	pending	YES	NO	YES	YES

DOCUMENT 5 – BRD Template

SMART TOUR
COEPD 2025
VERSION 1.0
PRABHAS RAJU

1 . DOCUMENT REVISIONS

Date	Version Number	Document Changes
1-02-2025	0.1	Initial draft of the project documentation
10-02-2025	0.2	Added project objectives and success criteria
18-02-2025	0.3	Included stakeholder analysis and elicitation techniques
27-02-2025	0.4	Completed functional requirements and requirement traceability matrix
8-03-2025	0.5	Updated priority and status in requirement traceability matrix

15-03-2025	0.6	Added Detailed Business Requirements
25-03-2025	0.7	Incorporated Appendices and finalized document
31-03-2025	0.8	Final review and formatting adjustments

2. APPROVALS

Role	Name	Signature	Date
Project Sponsor	G. Sanjana	Signature	1-02-2025
Business Owner	Sridhar Reddy	Signature	1-02-2025
Project Manager	Jessica Puli	Signature	1-02-2025
System Architect	Arjun	Signature	1-02-2025
Development Lead	Charani	Signature	3-02-2025
User Experience Lead	Manogna	Signature	3-02-2025
Quality Lead	Shanti	Signature	3-02-2025
Content Lead	Anvitha	Signature	3-02-2025

3. RACI CHART FOR THIS DOCUMENT

Codes Used in RACI Chart:
R: Responsible - Responsible for creating this document.
A: Accountable- Accountable for accuracy of this document
C: Consulted - Provides input
I: Informed - Must be informed of any changes.

NAME	POSITION	R	A	C	I
Project Manager	Oversees the project	R	A		I
Business Analyst	Requirement gathering, analysis	R		C	I
Development Team	Software engineers & developers	R		C	
UI/UX Designers	Creates user-friendly interface	R		C	I
Quality Assurance (QA) Team	Testing & bug fixing	R		C	
Third-Party Service Providers	Payment gateways, API providers			C	I

Legal & Compliance Team	Ensures regulatory compliance			C	I
Marketing Team	Promotes and attracts users	R		C	I
Customer Support Team	Handles user issues & feedback	R			I
End Users (Customers)	App users (travelers)			C	I

R (Responsible) – Executes tasks and completes the work.
A (Accountable) – Final decision-maker, ultimately answerable for the task.
C (Consulted) – Provides input, expertise, or feedback.
I (Informed) – Kept updated on progress and outcomes but not directly involved.

4. INTRODUCTION

4.1 Business Goals

Improve Operational Efficiency: Streamline the booking and reservation process to reduce errors, save time, and cut operational costs.
Enhance Customer Satisfaction: Provide a seamless and reliable booking experience, ensuring faster confirmations and better customer service.
Build Customer Loyalty: Foster trust and repeat business by offering a smooth, error-free reservation experience and responsive support.
Strengthen Brand Reputation: Position the app as a leader in convenience and reliability, enhancing brand credibility and attracting more users.

4.2 Business Objectives

Improve Booking Efficiency: Streamline the booking process to reduce errors, double bookings, and delays, providing a smooth experience for customers.
Enhance Customer Satisfaction: Ensure faster, reliable, and hassle-free reservations, leading to increased customer trust and loyalty.
Ensure Real-Time Availability: Integrate real-time data for accurate availability, preventing booking conflicts or last-minute cancellations.
Reduce Operational Costs: Automate the booking system to minimize manual intervention and administrative overhead.
Boost Competitive Edge: Implement features that improve user experience and differentiate the app from competitors.

4.3 Business Rules

As a Business Analyst, the following business rules must be implemented to ensure a smooth and efficient booking and reservation process in the Smart Tour App:
1. Booking Rules:
- Users must complete payment for booking confirmation.
- Double bookings are not allowed; real-time availability must be checked before confirmation.

- Bookings must include traveler details (name, age, ID verification if needed).
- Group bookings must have a lead traveler assigned for communication.

2. Cancellation & Refund Rules:
- Cancellations must follow the policy set for each tour (e.g., full refund before 48 hours, partial refund within 24 hours).
- Refunds should be processed automatically based on payment method and policy.
- Non-refundable bookings should be clearly mentioned before payment.

3. Payment & Pricing Rules:
- Multi-currency payments should be supported for international travelers.
- Dynamic pricing can apply based on demand, season, and availability.
- Discounts or promo codes should have expiry dates and usage limits.

4. Customer Communication Rules:
- Users should receive real-time booking confirmations via email/SMS.
- Automated reminders should be sent before departure or check-in.
- Emergency contacts must be available for immediate support.

5. Compliance & Security Rules:
- User data must be encrypted and comply with privacy laws (e.g., GDPR).
- Payment transactions must be secure (PCI-DSS compliance).
- Travelers must agree to terms & conditions before booking.

4.4 BACKGROUND

The Smart Tour App aims to revolutionize the tour booking and reservation process by addressing inefficiencies that cause delays, errors, and customer dissatisfaction. Many existing systems struggle with double bookings, slow confirmations, and poor real-time availability updates, leading to frustrated users and operational challenges. This project focuses on developing an automated, user-friendly, and integrated platform that streamlines the booking process, enhances accuracy, and provides instant confirmations. By leveraging advanced technology, Smart Tour will improve customer experience, reduce manual intervention, and boost overall efficiency in tour management.

4.5 PROJECT OBJECTIVE

- Enhance Booking Efficiency – Develop a seamless and automated booking system to eliminate delays and errors.
- Real-Time Availability – Integrate live updates for tours, hotels, and transport to prevent double bookings.
- User-Friendly Experience – Design an intuitive interface for smooth navigation and hassle-free reservations.
- Secure & Reliable Transactions – Implement secure payment gateways and fraud prevention measures.
- Automated Notifications – Provide instant booking confirmations, reminders, and cancellation updates.
- Improve Customer Satisfaction – Reduce manual intervention and offer flexible cancellation/refund options.
- Scalable & Future-Ready – Ensure the system can adapt to growing user demands and new travel trends.

4.6 PROJECT SCOPE

The Smart Tour App aims to streamline the booking and reservation process for travelers by providing a seamless, user-friendly, and efficient system. The app will offer real-time availability, instant confirmations, secure payments, and flexible booking options. Key features include automated cancellations, third-party integrations (hotels, flights, transport), personalized recommendations, and multi-currency support. The project will focus on minimizing booking errors, reducing manual intervention, and enhancing customer experience. Ensuring security, scalability, and regulatory compliance will be core priorities for long-term success.

4.6.1 In Scope Functionality

- Online tour, hotel, and transportation booking
- Real-time availability updates and instant confirmations
- Secure payment gateway integration
- Flexible cancellation and refund management
- Automated booking notifications and reminders
- Multi-currency and multilingual support
- Customer support chat and helpdesk integration
- Travel itinerary management
- Personalization features (e.g., recommendations, offers)
- Analytics and reporting dashboard for business insights

4.6.2 Out Scope Functionality

- Offline tour bookings
- Custom-built airline or hotel systems (will rely on third-party integrations)
- Direct travel agency operations

5. ASSUMPTIONS

- The system will support real-time booking and reservation updates.
- Users will be able to book flights, hotels, and tour packages seamlessly.
- The app will integrate with third-party APIs (e.g., airlines, hotels, payment gateways).
- The platform will support multi-currency and multi-language options for global users.
- Users will have access to customer support via chat, email, and phone.
- The app will include a cancellation and refund policy with automated processing.
- Payment security will be ensured using encrypted transactions and fraud detection.
- The system will provide automated notifications and reminders.
- Internet connectivity is required for all real-time operations.
- Users will have an intuitive UI/UX with simple navigation and filters.

6. CONSTRAINTS

As a Business Analyst, the following constraints must be considered:
Technical Constraints
- System Scalability: The app must handle high traffic and multiple concurrent bookings.

- Integration Limitations: Dependence on third-party APIs (e.g., airlines, hotels, payments) may restrict flexibility.
- Real-Time Synchronization: Ensuring real-time booking updates without delays.
- Security & Compliance: Data protection laws (e.g., GDPR, PCI DSS for payments) must be followed.

Business Constraints
- Budget Limits: Cost restrictions for development, hosting, and maintenance.
- Time Constraints: Defined project timelines for design, development, testing, and launch.
- Competitive Market: The app must offer unique features to compete with existing platforms.

Operational Constraints
- Customer Support Availability: Limited resources for handling booking issues.
- Multi-Currency & Multi-Language Support: Complexities in offering global access.
- Policy & Refund Processing: Standardized cancellation and refund policies across different vendors.

User Constraints
- User Device Compatibility: The app must work on various devices (iOS, Android, Web).
- Internet Dependency: Requires stable internet for seamless functionality.
- User Training & Adoption: Ensuring a simple UI/UX for all age groups.

7 . RISKS

Technical Risks
- System Downtime or Failures: The app could experience technical issues or crashes, especially during high traffic, which would disrupt booking operations.
- Integration Challenges: Integrating with third-party APIs (e.g., hotels, airlines, payment gateways) may encounter issues, causing delays in the booking process or failure to update real-time availability.

Data Security and Privacy Risks
- Customer Data Breaches: Handling sensitive user data (payment info, personal details) requires robust security. A breach could lead to loss of customer trust and legal consequences.
- Compliance Risks: Failure to comply with global data protection regulations (e.g., GDPR) may result in penalties or app removal from stores.

Operational Risks
- Resource Overload: Insufficient support and staff could overwhelm the system if bookings exceed capacity, leading to delayed responses or cancellations.
- User Experience Failures: If the app's user interface is not intuitive or easy to navigate, customers may abandon the booking process, leading to low conversion rates.

Market and Competitive Risks
- Emerging Competitors: New or existing competitors offering more advanced or cheaper alternatives could take away market share.
- Market Acceptance: There's a risk that the target audience may not accept the app if it doesn't meet their expectations for convenience, security, or flexibility.

Financial Risks
- Cost Overruns: Development and operational costs might exceed projections, especially if there are unforeseen technical or regulatory challenges.
- Revenue Generation Delay: If the app struggles to attract users or face technical difficulties, it could delay the return on investment (ROI).

8. BUSINESS PROCESS OVERVEIW

As a Business Analyst for the **Smart Tour App Project**, the focus is to streamline the booking and reservation process, eliminating inefficiencies that lead to double bookings, delayed confirmations, and user frustration. The project will involve automating inventory management, ensuring real-time updates for availability, and integrating third-party services like hotels, flights, and transportation. Additionally, a user-friendly interface will be developed to simplify booking modifications and cancellations. By enhancing the system's speed, security, and flexibility, the goal is to provide a seamless experience, improving customer satisfaction and operational efficiency, ultimately driving increased bookings and loyalty.

8.1 LEGACY SYSTEM (AS – IS)

Customer Search:
- Users manually search for tours, hotels, or transport options across multiple platforms.
- Limited or no real-time availability data.

Booking Request:
- Customers submit booking requests, often via email, phone calls, or a basic online form.
- Information entered manually into the system by staff members.

Confirmation:
- Manual verification by agents, who contact vendors (hotels, transport companies) to confirm availability.
- Customers wait for confirmation, often through email or phone calls, which can take time.

Payment Process:
- Payment processing is slow, with customers needing to transfer money manually or wait for invoices.
- Payment gateway integration is often unreliable, leading to payment failures or delays.

Error Handling:
- Double bookings, incorrect reservations, or data entry errors are handled manually, creating delays.
- Cancellations and refunds are processed through email or phone support, taking longer to resolve.

Updates & Notifications:
- No automated notifications for booking status or changes; customers have to check manually.
- Customers are notified about cancellations or delays via phone calls or emails, which can lead to miscommunication.

Process Flow of Legacy System (As-Is)
- User Search Tour Options -Customer browses through available tours (no real-time availability)
- Booking Request Submission-Customer fills out a booking form or calls for booking
- Manual Availability Check-Staff checks availability with vendors manually (phone/email)
- Confirmation via Email/Phone-Staff confirms with customer (manual entry into the system)
- Payment Processing-Customer transfers payment manually (slow processing)
- Manual Error Resolution-Staff manually corrects any booking errors or issues
- Notification to Customer-Customer receives updates on booking status (via email/phone)

8.2 PROPOSED RECOMMENDATIONS (TO-BE)

- **Implement Real-Time Availability Sync** - Integrate with third-party service providers (e.g., hotels, airlines) to ensure real-time updates on availability and prevent double bookings.
- **Automate Booking Confirmation** - Automate instant booking confirmations and notifications to enhance user experience and reduce manual intervention.

- **Improve User Interface (UI) -** Design a more intuitive and user-friendly interface, making it easier for users to book, modify, or cancel reservations without confusion.
- **Flexible Cancellation and Modification Options -** Offer a straightforward process for users to modify or cancel bookings, including transparent refund policies.
- **Strengthen Payment Gateway Integration** - Ensure seamless, secure, and multi-currency payment options to avoid failed transactions and enhance trust.
- **Personalized Recommendations -** Use AI to suggest tours and activities based on user preferences and past bookings to drive higher engagement and sales.
- **Mobile-First Approach -** Prioritize the app's mobile experience, optimizing it for different devices and ensuring smooth functionality on smartphones.
- **24/7 Customer Support Integration** - Integrate a live chat or chatbot feature for instant support, handling booking queries or issues in real-time.
- **Integrate with Travel Insurance & Upselling Features** - Offer additional services like travel insurance or exclusive add-ons during the booking process, increasing revenue potential.

9. BUSINESS REQUIREMENTS

Requirement ID	Requirement Name	Requirement Description	Priority
BR-001	Real-Time Booking Updates	The system should provide instant updates on booking status, ensuring accurate availability and preventing double bookings.	High
BR-002	Secure Payment Gateway Integration	The app should integrate with secure and reliable payment gateways to ensure smooth and safe transactions.	High
BR-003	User Account Management	Users must be able to create, edit, and manage their profiles and booking history in the app.	High
BR-004	Multi-Currency Support	The app should support multiple currencies for international travelers to book tours in their preferred currency.	Medium
BR-005	User Registration & Login	Users must be able to create an account and log in securely using email, social media, or phone number.	High
BR-006	Tour Search Functionality	Users should be able to search for tours based on destination, type, and date.	High
BR-007	Booking & Reservation	Users must be able to book and reserve tours, hotels, and transport options.	High
BR-008	Payment Gateway Integration .	Implement a secure and reliable payment gateway for processing payments	High
BR-009	Personalized Recommendations	The app should recommend tours and packages based on the user's preferences and history.	High

BR-010	Itinerary Management	Users should be able to manage their bookings and view detailed itineraries for their tours.	High
BR-011	Multilingual Support .	The app must support multiple languages for international users	Medium
BR-012	Cancellation & Refund Policy	Provide users with the ability to cancel bookings and get automatic refund processing based on policies.	High
BR-013	Customer Support Integration	Include a support chat, FAQ, and contact details for customers needing assistance	High
BR-014	Rating & Review System	Users should be able to rate and review tours, hotels, and experiences.	High
BR-015	Push Notifications for Deals	Notify users about limited-time offers, discounts, and last-minute deals.	Medium
BR-016	Booking History & Reports	Provide users access to their past booking history and generate reports for future reference.	Medium
BR-017	Social Media Integration	Allow users to share their tour experiences and itineraries on social media platforms.	High
BR-018	Security Features	Implement data encryption and two-factor authentication to ensure secure user accounts and transactions.	High
BR-019	User Profile Management	Allow users to update their personal information, preferences, and travel history.	Medium
BR-020	Feedback & Improvement System	Implement a feedback system to gather user suggestions for app improvements.	Medium

10 . APPENDICES

10.1 List of Acronyms

- UAT-User Acceptance Testing
- BRD- Business Requirement Document BR- Business Requirement
- UI- User interference
- PNR- Passenger Name Record

10.2 Glossary of documents

- Booking Engine: Software that manages and processes travel bookings like flights, hotels, and tours.
- Itinerary: A detailed plan or schedule of a traveler's trip, including destinations, activities, and timings.
- API (Application Programming Interface): A tool that allows different software systems (like payment gateways or hotel databases) to communicate and share data.
- Payment Gateway: A secure online service that processes payment transactions, like credit card or mobile wallet payments.
- User Interface (UI): The design and layout of the app that users interact with, including buttons, menus, and forms.
- Cancellation Policy: Rules governing how and when a user can cancel a booking and receive a refund.
- Real-Time Availability: The most up-to-date information on available tours, hotels, and flights.
- Travel Package: A bundle of services such as flights, accommodations, and tours offered together for a discounted price.
- Multi-Currency Support: The ability for an app to handle payments in different currencies for international users.
- CRM (Customer Relationship Management): Software used to track customer interactions and preferences, helping businesses manage relationships and improve service.

10.3 Related documents

- Functional Specifications Technical Design Document
- This Business Requirements Document (BRD) provides a comprehensive overview of the objectives, scope, requirements, and other relevant aspects of the Track mate project.
- RTM
- Stakeholder Analysis