

Business Requirements Documentundefined

This document serves as the authoritative specification for version 1. It defines the business needs, functional requirements, and success criteria necessary for successful project delivery. This document is intended for use by stakeholders, project managers, developers, and quality assurance teams.

Date of Generation: August 26, 2025

Executive Summary

This document outlines the business requirements for 'Tribal Storyteller,' an AI-powered, map-based cultural preservation platform. The project aims to digitally preserve and present the oral traditions, including stories, songs, and legends, of tribal communities in Madhya Pradesh, Chhattisgarh, and Maharashtra, making them accessible through an immersive and interactive web experience.

Project Overview

The 'Tribal Storyteller' platform will serve as a digital archive and interactive portal for the rich cultural heritage of Central Indian tribes. Users will explore a map of the region, select specific tribal areas, and engage with content through AI-generated voice narration, synchronized text highlighting, and AI-generated cultural artwork. The platform will require user authentication for full content access and will include a comprehensive admin panel for easy content management and expansion of the cultural library.

Business Objectives

- To digitally preserve the oral traditions of tribal communities in Madhya Pradesh, Chhattisgarh, and Maharashtra.
- To create an engaging and immersive platform for users to discover and learn about tribal culture.
- To build a secure and scalable digital library of cultural content.
- To leverage AI technology for automated content enrichment (voice narration, image generation).
- To establish a user database for personalized experiences and engagement tracking.

Scope and Boundaries

```
{  
  "in_scope": [  
    "A public-facing home page with a project introduction.",  
    "An interactive map displaying tribal regions of Madhya Pradesh, Chhattisgarh, and Maharashtra.",  
    "User authentication system with Mobile OTP, Email OTP, and one-click social logins (Google, Microsoft, Apple).",  
    "Content pages featuring AI-powered voice narration, karaoke-style text highlighting, AI-generated images, and optional background music.",  
    "Categorization of content into Folk Stories, Songs, Festivals, and Temple Legends.",  
    "Search functionality by tribe name and filtering by content category.",  
    "A secure admin panel for authorized administrators to upload and manage content.",  
    "Automated system processes for converting text to speech, syncing text with audio, and generating images."  
  ],  
  "out_of_scope": [  
    "User-generated content submissions.",  
    "E-commerce or monetization features.",  
    "Coverage of tribal communities outside of Madhya Pradesh, Chhattisgarh, and Maharashtra in the initial phase.",  
    "Development of native mobile applications (iOS/Android).",  
    "Offline access to content.",  
    "Social networking features like user profiles, comments, or forums."  
  ]  
}
```

Stakeholder Analysis

- name: Project Sponsor
 - role: Primary decision-maker and funder.
 - responsibility: Provides overall project direction, approves budget and major changes, and signs off on the final product.
-

- name: End Users
 - role: General public, students, researchers, and members of the tribal communities.
 - responsibility: Consume the cultural content, provide feedback on user experience, and are the primary audience for the platform.
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- name: Content Administrators
 - role: Cultural experts or curators responsible for the content library.
 - responsibility: Source, verify, upload, and manage all cultural content (stories, songs, etc.) via the admin panel.
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- name: Development Team
 - role: Engineers, designers, and testers building the platform.
 - responsibility: Design, develop, test, and deploy the platform according to the specified requirements.
-

Functional Requirements

- The system shall display a home page with the project title, an introduction, and a 'Start Exploring' button.

- The system shall present an interactive map of Madhya Pradesh, Chhattisgarh, and Maharashtra with highlighted tribal regions.

- Upon clicking a region on the map, the system shall display a panel with four content categories: Folk Stories, Songs, Festivals, and Temple Legends.

- The system shall prompt users to log in or sign up when they attempt to view or listen to full content.

- The system shall support user authentication via Mobile OTP, Email OTP, Google, Microsoft, and Apple accounts.

- Upon successful login, the system shall grant users access to the full content page.

- The content page shall provide audio playback controls (play, pause, volume, seek).

- The system shall display text that highlights in sync with the AI voice narration.

- The system shall display an AI-generated cultural image relevant to the content.

- The system shall provide an option to toggle background tribal music on or off.

- The system shall allow users to search for content by tribe names (e.g., Bhil, Gond, Baiga).

- The system shall allow users to filter content by category (Story, Song, Festival, Temple Legend).

- The system shall provide a secure login for administrators.

- The admin panel shall allow administrators to upload text, audio, and metadata for new content.

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- The system shall automatically trigger AI processes to generate voice narration, sync text, and generate an image upon new content upload.
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Non-Functional Requirements

- The platform shall be responsive and accessible on modern web browsers and devices.

- The interactive map and content pages must load within 3-5 seconds on a standard internet connection.

- The user interface for both the public site and admin panel must be intuitive and easy to navigate.

- All user data, especially authentication details, must be stored and transmitted securely.

- The platform architecture must be scalable to accommodate a growing number of users and a large library of content.

- The AI-generated voice narration must be clear, with a tone appropriate for storytelling.

- The system should maintain high availability with a target uptime of 99.5%.

User Requirements

- user_role: First-time Visitor
 - action: view the home page
 - goal: to understand the purpose of the platform and be encouraged to explore.
 - acceptance_criteria: The home page clearly displays the project title.,A short, engaging introduction to the project is present.,A prominent 'Start Exploring' button is visible and clickable.
-

- user_role: Explorer (User)
 - action: interact with the map
 - goal: to discover cultural content from specific geographical regions.
 - acceptance_criteria: The map highlights tribal regions in MP, CG, and MH.,Clicking a region opens a panel showing content categories.,The map supports standard zoom and pan functions.
-

- user_role: Registered User
 - action: listen to a story
 - goal: to have an immersive and engaging storytelling experience.
 - acceptance_criteria: The audio plays clearly.,The text on the screen highlights in perfect sync with the spoken words.,A relevant cultural image is displayed.,I can turn background music on or off.
-

- user_role: Researcher (User)
 - action: search for content from the 'Gond' tribe
 - goal: to quickly find all content related to a specific tribe.
 - acceptance_criteria: A search bar is easily accessible.,Entering 'Gond' and searching returns a list of all stories, songs, etc., associated with the Gond tribe.
-

- user_role: Content Administrator
 - action: upload a new folk story
 - goal: to easily expand the platform's cultural library.
 - acceptance_criteria: The admin panel provides a form to paste or type the story text.,I can input metadata like tribe, region, and category.,Upon submission, the system confirms the upload and begins AI processing.
-

User Stories and Use Cases

- As a first-time visitor, I want to see a welcoming home page so that I understand the project's purpose and am encouraged to explore.

- As a user, I want to explore an interactive map so that I can discover cultural content based on geographical regions.

- As a user, I want to be able to register or log in with my mobile number or social media account so that I can access the full library of content.

- As a logged-in user, I want to listen to a story with AI narration and synchronized text so that I can have an immersive learning experience.

- As a user, I want to search for content by a specific tribe name or filter by category so that I can find content relevant to my interests quickly.

- As an administrator, I want a simple interface to upload new story texts so that I can efficiently manage and grow the content library.

- As an administrator, I want the system to automatically generate voice narration and a relevant image for new content so that it reduces my manual workload.

Business Rules

- A user must be authenticated (logged in) to access the full audio and text of any content.

- All content must be associated with a specific tribe, a geographical region, and one of the four categories: Folk Stories, Songs, Festivals, or Temple Legends.

- The AI-generated voice narration, text synchronization, and images must be reviewed and approved by an administrator before being published.

- The interactive map is limited to the states of Madhya Pradesh, Chhattisgarh, and Maharashtra.

- The admin login requires a phone number and a password for two-factor security.

Assumptions and Dependencies

```
{  
  "assumptions": [  
    "A sufficient and authentic corpus of tribal stories, songs, and legends will be available for digitization.",  
    "The selected AI models can generate voice tones and visual styles that are culturally appropriate and respectful.",  
    "Users will have access to a stable internet connection to stream the audio-visual content.",  
    "The tribal communities and cultural experts will be willing to collaborate and provide content."  
  ],  
  "dependencies": [  
    "The platform is dependent on a third-party mapping service (e.g., LeafletJS or Google Maps API).",  
    "The authentication system relies on Firebase Authentication or a similar third-party service.",  
    "The core storytelling feature is dependent on Text-to-Speech APIs (e.g., Google Cloud TTS, Azure, OpenAI).",  
    "The visual element of the content is dependent on Image Generation AI models (e.g., Stable Diffusion, DALL·E).",  
    "The project's backend relies on a NoSQL database service (e.g., Firebase Firestore or MongoDB)."  
  ]  
}
```

Success Criteria

- Achieve a target of 100+ unique cultural items (stories, songs, etc.) in the library within the first six months of launch.

- Measure user engagement through metrics like average session duration, number of stories listened to per user, and user return rate.

- Receive positive user feedback (e.g., >4-star rating in feedback surveys) regarding the quality of the experience and cultural representation.

- Ensure the content upload and management process for administrators is efficient, taking less than 15 minutes per new entry (excluding review time).

Risk Assessment

- risk: AI-generated content (voice or image) is culturally inaccurate, inappropriate, or offensive.
 - impact: High
 - mitigation: Implement a mandatory human review and approval workflow for all AI-generated content before it is published. Provide admins with tools to regenerate or override AI outputs.
-

- risk: High operational costs due to extensive use of third-party AI service APIs.
 - impact: Medium
 - mitigation: Optimize API calls by caching generated content. Implement budget alerts and usage caps. Research and select the most cost-effective API providers that meet quality standards.
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- risk: Difficulty in sourcing and verifying the authenticity of tribal content.
 - impact: High
 - mitigation: Establish partnerships with cultural institutions, universities, and tribal community leaders. Create a clear content sourcing and verification protocol.
-

- risk: Low user adoption due to lack of awareness or a non-intuitive user experience.
 - impact: Medium
 - mitigation: Conduct usability testing during the design and development phases. Develop a marketing and outreach strategy targeting interested audiences. Implement user feedback mechanisms post-launch.
-

Timeline and Milestones

- milestone: Phase 1: Project Kick-off and UI/UX Design

- date: 2025-09-15

- deliverable: Completed BRD sign-off, detailed wireframes, and high-fidelity mockups.

- milestone: Phase 2: Frontend and Map Development

- date: 2025-10-30

- deliverable: Functional home page and interactive map with clickable regions.

- milestone: Phase 3: Backend, Database, and Authentication Setup

- date: 2025-11-20

- deliverable: Database schema finalized, user login/signup system operational.

- milestone: Phase 4: Core Feature and AI Integration

- date: 2026-01-15

- deliverable: Functional content page with integrated TTS and Image Generation APIs.

- milestone: Phase 5: Admin Panel and Search Functionality

- date: 2026-02-15

- deliverable: Admin can upload and manage content; search and filter are functional on the main site.

- milestone: Phase 6: End-to-End Testing and Go-Live

- date: 2026-03-15

- deliverable: User Acceptance Testing (UAT) completed, platform deployed to production.

Resource Requirements

- resource_type: Project Manager
- quantity: 1
- skills: Agile project management, stakeholder communication, budget tracking.

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- resource_type: UI/UX Designer
 - quantity: 1
 - skills: Wireframing, prototyping, user-centered design, experience with creating culturally sensitive interfaces.

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- resource_type: Frontend Developer
 - quantity: 1-2
 - skills: HTML, CSS, JavaScript, React, LeafletJS/Google Maps API integration.

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- resource_type: Backend Developer
 - quantity: 1
 - skills: Node.js, Firebase/MongoDB, API integration, authentication systems.

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- resource_type: QA Engineer
 - quantity: 1
 - skills: Manual and automated testing, test case development, cross-browser testing.

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- resource_type: Content Manager/Curator
 - quantity: 1
 - skills: Cultural expertise, content sourcing, data entry, quality assurance on content.
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Approval and Sign-off

- stakeholder: Project Sponsor
 - role: Sponsor
 - approval_required: Final approval on budget, scope, and project completion.
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- stakeholder: Product Owner
 - role: Internal Project Lead
 - approval_required: Approval of this BRD, feature prioritization, and acceptance of deliverables at each milestone.
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- stakeholder: Lead Developer
 - role: Technical Lead
 - approval_required: Approval of the technical feasibility and resource plan outlined in the BRD.
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