

## MOBILE APPLICATION DESIGN TO PROMOTE CULTURAL TOURISM IN WEST SUMBA

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**Abstract:** West Sumba Regency has many traditional villages, local dances and bu-daya festivals that can be seen as cultural tourist attractions. This is indicated by the increasing number of people visiting cultural tourist attractions in West Sumba. However, there are still few promotional and information services available for tourists related to cultural tourism to visit, such as location information, events and access to cultural tourism spots in West Sumba. Therefore, the purpose of this research is to create a mobile phone-based application that can promote bu-culture tourism in West Sumba Regency. The specific objective is to create a platform that makes it easy for tourists to explore and understand the cultural richness and cultural tourism destinations of West Sumba. This research uses a user-centered design (UCD) approach to create a successful mobile application. This application will help tourists get information about cultural tourism destinations in West Sumba. In addition, the app has additional features, such as maps, traditional villages, local dances, cultural festivals, event schedules and travel agents.

**Keywords:** Cultural Tourism; Design; Mobile Apps; west sumba

**Abstrak:** Kabupaten Sumba Barat memiliki banyak kampung adat, tarian lokal, dan festival budaya yang dapat dilihat sebagai tempat wisata budaya. Ini ditunjukkan oleh peningkatan jumlah orang yang mengunjungi tempat-tempat wisata budaya di Sumba Barat. Namun, masih sedikit layanan promosi dan informasi yang tersedia bagi para wisatawan terkait wisata budaya yang ingin dikunjungi, seperti informasi lokasi, acara dan akses ke tempat-tempat wisata budaya di Sumba Barat. Oleh karena itu, tujuan dari penelitian ini adalah untuk membuat aplikasi berbasis ponsel yang dapat mempromosikan wisata budaya di Kabupaten Sumba Barat. Tujuan khusus adalah untuk membuat sebuah platform yang memudahkan wisatawan untuk mengeksplorasi dan memahami kekayaan budaya dan destinasi wisata budaya Sumba Barat. Penelitian ini menggunakan pendekatan desain berbasis pengguna (UCD) untuk membuat aplikasi mobile yang berhasil. Aplikasi ini akan membantu wisatawan mendapatkan informasi tentang destinasi wisata budaya di Sumba Barat. Selain itu, aplikasi ini memiliki fitur tambahan, seperti peta, kampung adat, tarian lokal, festival budaya, jadwal acara, dan agen perjalanan wisata.

**Kata kunci:** aplikasi seluler; desain; sumba barat; wisata budaya

## INTRODUCTION

Tourism is important for a country; it affects the economic situation of the community and the environment of the surrounding area [1]. The utilization of information technology in the context of

cultural heritage allows for greater involvement of the community in the promotion of the heritage. This can encourage growth in various aspects, including social, cultural, economic, and community [2]. Cultural tourism is one of the important sectors in tourism. Cultural tour-



ism utilizes the local wisdom of the local community as a tourist attraction. In addition, the beauty of nature, villages, and other supporting recreational activities become a special attraction [3]. Media information and promotion of tourism have not been structured and interactive, as has the need for media that can provide knowledge and experience for tourists [3]. In preserving culture as one of the heritages and symbols of the Indonesian nation [4].

Promotion and information are important for tourists to increase their knowledge of visiting each tourist attraction; the use of information technology can encourage better promotion [5]. The development of information technology, especially mobile phones, is a means of improving services in accessing the data needed by tourists to find out the location, distance, and general description [5] related to cultural tourism objects in West Sumba Regency. Public interest in tourist destinations in Indonesia eventually formed three patterns, namely natural, cultural, and man-made tourism. Mobile applications and technology in the tourism industry: it is crucial to understand the customer experience of mobile applications as a marketing platform to promote services and products [6], requiring the design and development of mobile applications for the tourism industry [7].

West Sumba Regency is located on Sumba Island in East Nusa Tenggara province. There are many traditional villages, local dances, and interesting cultural festivals in this district. The level of tourist visits to West Sumba has continued to increase since 2010. Tourists come to West Sumba to enjoy various attractions, both natural and cultural. This is indicated by an increase in the number of visitors renting hotel rooms around tourist attractions, especially cultural tourism

in West Sumba, as well as an increase in the number of tour and travel agents in West Sumba Regency who assist, escort, and guide tourists. Nonetheless, cultural tourism solutions available through mobile apps [8] do not provide many promotional and information services for tourists who want to visit cultural tourism sites, such as location information [9], event information, and access to cultural tourism objects in West Sumba Regency.

In West Sumba, there are several gaps that need to be addressed to develop more sustainable cultural tourism. First, access to information about local culture is limited, with many tourists struggling to get in-depth information about festivals, traditional ceremonies, and local cultural history. Second, tourism promotion still relies on traditional methods without maximum utilization of digital marketing. By creating an integrative digital platform, it is hoped to address these gaps, provide better access to information, promote tourism through technology, and increase tourist awareness and local community involvement in cultural preservation. This gap analysis shows that there are several areas that need to be addressed to maximize the potential of mobile applications in promoting cultural tourism in West Sumba.

The previous research used in this study is as follows: Focuses on digital business models in cultural tourism [10]: Integrates gamification for tourism experiences [11]: Offers similar solutions in the use of location-based technology [12], [13]: Emphasizes the limitations of digital infrastructure [14], [15]: Examines the use of cultural design elements to incorporate cultural values in mobile application development [16]; Explaining the problems that occur in the field of tourism, as well as providing tourism solutions, in the form of tourism applications

that aim to help promote Indonesia's local tourism, as well as provide convenience for travel enthusiasts to organize their travel plans [17]; Proposing the concept of a universal formation recommendation system to build personalized tourist routes [18]; Developing mobile applications that allow users to be guided on their journey, and that promote national tourism, both from foreign and national visitors [19].

This research offers a solution by developing a mobile application that focuses on cultural tourism in West Sumba, with a more holistic approach that is based on local needs and the unique cultural potential of the region. This research pays more attention to the design of applications that can directly connect tourists with in-depth information about the local culture, history, and traditions of West Sumba. This research also introduces a map feature that allows users to navigate cultural tourism locations more easily and practically. In addition, this research also introduces the use of technology that is more adaptive and sustainable for areas that have limited infrastructure. In this case, this research highlights the importance of application design that can be accessed by local communities and tourists, taking into account the limitations of the network and the capacity of the devices used by the majority of communities and tourists.

## METHOD

The method used in this research is a user-centered design (UCD) approach to create a successful mobile application. User-Centered Design (UCD) is an approach to product or application design that places the needs, preferences, and limitations of users as the primary focus at every stage of development [20]. The

stages of UCD are as follows: Literature study: Regarding cultural tourism and in West Sumba; Needs analysis: users through observation and interviews with tourists, local communities, and related parties; Design: using mobile technology such as Android/iOS for key features such as: Maps, information on traditional villages, cultural festivals, regional dances and travel agents; Evaluation: application prototypes with users to get feedback and improve design quality [20], [21].

This research method aims to develop a mobile application design that can promote cultural tourism in Sumba Bar-at Regency. This research was conducted through several stages, namely a literature study and a field study involving observation and interviews. In the literature study stage, researchers collected documents and previous research reports as references in the preparation of this research [22]. The series of research stages from beginning to end can be found in Image 1.

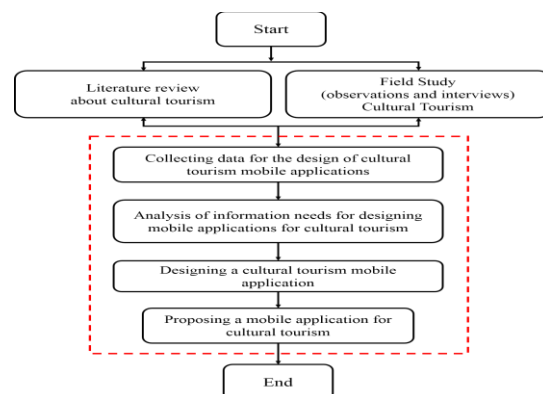


Image 1: Research stages [22]

Image caption:

  Contribution to the study  
  Adaptation of previous research

This research utilizes observation and interview methods to collect information to examine aspects of the experi-

ences of tour guides, tourists, and local communities around cultural tourism objects in West Sumba Regency. Therefore, researchers wanted to evaluate cultural tourism promotion media in West Sumba Regency and transportation accessibility related to cultural tourism in West Sumba Regency. This study covers a wide range of topics, with the article focusing on mobile apps in the tourism industry [23].

To obtain information relevant to the purpose of this research, Phase 1 researchers seek information and collect data directly about cultural tourism in West Sumba Regency. The second stage is the analysis of information needs for designing mobile applications. The third stage is designing a mobile application, whose design is made creative and innovative in the form of text, images, and animations [24]. The final stage is to propose a cultural tourism mobile application based on the design made. The respondents of this research are tour guides, tourists, and local communities.

## RESULT AND DISCUSSION

One of the four (4) regencies on the island of Sumba that belongs to the East Nusa Tenggara Province in Indonesia is West Sumba Regency. West Sumba Regency is a small hilly region with traditional villages in the highlands. West Sumba Regency has beautiful nature because it is located between hills, lowlands, and beaches. The community may be interested in supporting tourism, especially cultural tourism, as many traditional villages are on top of the hills and some are in the center of Waikabubak, the district capital.

West Sumba tourism includes beaches, waterfalls, traditional villages, local dances, cultural festivals, savanna

fields, hills, and lakes. Tourism objects can increase West Sumba's regional income. Tourist attractions can also encourage local economic growth by encouraging the development of other industries, such as transportation, travel agents, lodging, and restaurants. Natural, cultural, and artificial tourism are the three most common categories in West Sumba Regency. However, this research will only focus on the cultural tourism aspect. These aspects include the promotion of traditional villages, local dance performances, cultural festivals, and travel agencies operating in West Sumba Regency.

### Traditional Village

Traditional villages in West Sumba Regency are cultural heritage of the ancestors of the people of West Sumba. West Sumba has many traditional villages, which consist of several houses and are considered villages. It is said to be a traditional village because it is large, old, and has many cultural festivals. Traditional villages in West Sumba Regency are located in various places and at different distances from the city center of Waikabubak. Bodoede is the closest traditional village to the city center, 800 meters away, and Waru Wora is the farthest, 28 kilometers away.

The distance of the Adat villages from the city center of Waikabubak. They are as follows: Tarung village: 1 km; Praijing village: 2.4 km; Bodo Maroto village: 1.1 km; Tabera village: 10 km; Jaga Ngara village: 2 km; Sodana village: 10.4 km; Bodo Ede village: 0.8 km; Rate Wana village: 9.1 km; Praigoli village: 16.7 km; Letengaingona village: 5.6 km; Wora Djawa village: 20.6 km; Waru Wora village: 28 km; Marapu (Dikita) village: 20.2 km.

## **Regional Dances**

In addition to traditional villages, West Sumba Regency also has a variety of regional dances that are quite phenomenal and have been performed on national and international stages. These regional dances consist of dances for women, dances for men, and collaborative dances between women and men. These regional dances are presented according to the theme of the ongoing activities, such as guest-welcoming events, traditional parties, government events to inter-school, and public competitions for children to adults. The clothing used is West Sumba woven fabric complete with various supporting attributes such as mamuli, ivory, tabelo, and giring-giring for women and parang and giring-giring for men. To perform this regional dance is always accompanied by a set of accompaniment tools, namely gong, which consists of 5 pieces: 3 small gongs, 2 large gongs, 1 drum, and 1 bamba.

## **Cultural Festival**

Cultural festivals are activities that are often carried out to remember and promote cultural traditions that have been passed down from ancestors to their generations and as a form of respect for the ancestors. The cultural festivals in West Sumba Regency that are most widely known and favored by tourists are Pasola, Pajurra, Wulla Poddu, and Kalango, so they deserve to be cultural tourism objects. The performances of each of these cultural festivals are pasola and pajurra, usually held in February and March each year, and are held in three different locations and times, namely the wanokaka pasola field, the Lamboya pasola field, and the West Lamboya pasola field. The Wulla Poddu and Kalango festivals are held from October to November in Tabera and Bodomaroto traditional vil-

lages, and the culmination of these activities will be held in Tarung traditional village.

The cultural tourism objects, especially cultural festivals, can be enjoyed by tourists based on the time of implementation as follows: January, April, May, June, July, August, September, and December: traditional village tours and regional dances; February and March: traditional village tourism, regional dances, Pasola and Pajurra; October and November: traditional village tourism, regional dances, Wulla Poddu, and Kallango.

## **Travel Agent**

Along with the development of tourist destinations and being one of the factors that can improve the community's economy, from this phenomenon, many travel agents have begun to emerge, which is one of the professions in the hospitality industry or industrial sector related to hospitality activities in serving guests, precisely in the field of tourism where the profession works.

Currently in West Sumba Regency, there are at least 4 travel agents that are quite good and known to tourists because of their good service. The four travel agents are Chabokang Adventure, Savana Trip, Lakawa Sumba Travel, and Galaxi Tour & Travel. The four travel agents still rely on social media such as Facebook, Instagram, and WhatsApp as their main promotional media. Therefore, here the author involves travel agents in a mobile application to promote cultural tourism in West Sumba so that tourists can see the profile of these travel agents with various tour packages offered by travel agents in West Sumba.

## **Wireframe**

Initial Display Design



Image 2. Initial Display Design

#### Home View Design



Image 3. Home View Design

This research successfully produced a mobile application that makes it easier for tourists to access information about cultural tourism destinations in West Sumba. This application provides features such as interactive maps, information about local culture, event schedules, as well as options for sharing travel experiences.

The benefits for users of the mobile app designed to promote cultural tourism in West Sumba include: **Easy Access to Information:** Users can easily access information regarding cultural tourism destinations in West Sumba; **Increased Cultural Awareness:** Users can better understand and appreciate the local culture of West Sumba, which can help in cultural preservation; **Social Facilities:** Users can share their experiences through the app, either in the form of reviews or fo-to; **Supporting the Local Economy:** By increasing tourist visits, the app helps increase the income of the local tourism sector, such as lodging, restaurants, and

other small businesses, as well as creating employment opportunities for the local community.

## CONCLUSION

In this research, the author presents a promotional design for cultural tourism objects in West Sumba Regency, which includes cultural tourism of traditional villages totaling 13 traditional villages with different locations, regional dances totaling 5 types of dances, and cultural festivals. The information to be presented in this design is a real-time display of cultural tourism objects in West Sumba Regency. Thus, mobile applications can facilitate the needs of tourists to get detailed information related to cultural tourism objects in West Sumba Regency efficiently and effectively. This research produces a mobile application that makes it easier for tourists to access information about cultural tourism destinations in West Sumba. This application provides features such as maps, information on traditional villages, cultural festivals, regional dances, event schedules, and travel agents. In addition, this application also has a positive impact on the economy and the preservation of local culture. The benefits that can be felt by users are: easy access to information; increased cultural awareness; social facilities; and increased local economy.

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