**Chapter 1**

**INTRODUCTION**

# Situational Analysis

The tourism industry has experienced tremendous growth in recent years (Richards, 2018). Such a massive leap has been partly attributed to the rapid development of communication and information technology across the globe as well as the widespread use of the internet, which has simplified the process of accessing large amounts of global data from potential tourism on points of interest, travel plans, and destinations. These systems allow tourists, local or international, to pave undemanding and facile ways on their desired destinations.

The Internet has a better influence on making a tourism spot popular, it is one of the factors that also gives a positive impact in tourism.

Having access to relevant and information is the core product of tourism, more importantly in this current era of the Internet information overload (Abdulhamid S.M. & Gana U, 2010). Various studies have been carried out to make information on tourism websites more effective and accurate.

According to Gupta D.D. & Utkarsh (2014), websites are generally the best medium to relay information in the tourism industry. Tourism websites serve as one of the important components of ICT. It helps travelers to make travel-related decisions.

Websites are an important source of information that serve as a bridge in helping the tourism to make decisions on destinations. The importance of these websites in this current information technology era is that it can distribute a large volume of information, especially those related to multimedia to be relayed over the globe.

The use of multimedia and attractive designs are also important in attracting potential visitors to these websites.

Bolinao, officially the Municipality of Bolinao, is a first-class municipality in the Philippine province of Pangasinan. Politically, Bolinao is divided into 30 barangays.

The term Bolinao refers to the name of the town, its people, and its language. The people of Bolinao generally speak Pangasinan, Ilocano, Tagalog, and their own distinct native language known as Bolinao, which is also spoken in the nearby town of Anda, a former barangay of Bolinao. The Sambalic dialect is closely related to the Bolinao dialect. Bolinao became a part of the Province of Pangasinan after the Philippine Commission passed Public Act No. 1004 on November 30, 1903.

Tourism in Bolinao, Pangasinan is being recognized with every day that passes. It is one of the most famous destinations in the province of Pangasinan because it has numerous tourism spots that people would love to see and experience.

The average number of tourists visiting varies according to the season and the current travel restrictions. Due to the pandemic, average tourist arrivals have dropped significantly in the last two years. According to a statistical data requested by Erika, A. (2022), The average domestic tourist arrival pre pandemic was around 150,395 and around 518 is recorded to be of foreign visits. These figures dropped significantly around the year 2020, when total tourist arrivals in Bolinao were estimated to be around 10,712 total visitors. As per the year 2021, tourist arrivals had recovered by almost 529% (56,763 total tourist arrivals) because of the less travel restriction in both domestic and foreign travel.

With the recovery of tourist’s activities, numerous establishments in Bolinao have also started to resume their businesses. Famous tourist spots in Bolinao are the following: Patar White Beach, Bolinao Falls, Enchanted Cave, and Cape Lighthouse (Bolinao Tourism, 2019). These spots attract tourists and numerous business owners. More than 88 establishments are registered in the Department of Tourism (DOT) for different kind of services (Bolinao Tourism, 2022). Among these establishments, 44 were offering Mabuhay Accommodation. Mabuhay Accommodation refers to services such as Tourist Inns, Motels, Beds, Vacation Homes, and Hotels. The remaining establishments composes of around 35 resorts that are closer to the beach spots of Bolinao. The remaining number then offers restaurant or food services.

Tourism activities in Bolinao are at its peak on the summer season of March, April, and May. On major days like holidays and summer seasons, Bolinao experiences heavy traffic in tourism activities. It causes inconvenience to visitors which can result in negative reviews in the locale.

“Overtourism” is a phenomenon that is currently happening in certain tourist destinations in the Philippines. This is when too many tourists are in one destination that there are no adequate hospitality tools to accommodate them due to limited carrying capacity. This affects the environment negatively, that it slowly becomes uninhabitable.

With the emergence of this phenomenon called overtourism means that Bolinao’s tourism also needs to transition over newer technology or methods to: (1) continue to monitor the destinations that visitors would be interested in, (2) be able to regulate heavy traffic and policy for desperate measures, (3) mitigate impact of overtourism.

Tourism indeed also needs a monitoring dashboard that can be used by the Tourism Management Office of Bolinao.

The Tourism Management Office is responsible for the promotion of tourism activities. It is their responsibility to create opportunities for residents of this locale to be part of the tourism industry through these activities. It is also part of their activities to develop new products that can assist in marketing and promoting the municipality of Bolinao and of the province of Pangasinan.

The Tourism Management Office of a local is responsible for relaying information to potential guests and making them feel comfortable wherever they are as possible.

Tourism Management implements marketing efforts in attracting tourists to travel to destinations whereas it is involved in this kind of activities such as studying tour destinations; planning tours; Creating travel arrangements for guests/tourists; and providing accommodation (Deblina Dam, 2019).

As tourism of a locale is growing, more information must be published on the Internet for better knowledge on how to reach a specific local tourist destination, or even knowing the availability of hotels, resorts, and transportation within the tourism’s locale.

With the increasing popularity of a destination means information must be given to potential guests to be able to know what they need, what steps they should take and so on. This is being handled in the tourist office through a lot of paperwork and communication.

Providing a website that has information on the historical traffic of a tourist destination would be knowledgeable to guests and tourists. This will be effective in decision making and policy making of LGUs especially in Bolinao.

A Tourism Monitoring System is a system designed to help manage the flow of visitors. Modern visitor management is usually carried out via digital means, using software and interactive kiosks, but they can be as simple as a pen and paper log.

It is a dynamic and responsive system, and it addresses the challenges of managing the records, missing records due to human errors, etc. (Shruti Sureshan, 2021)

This type of web system was created for tourism. One of its applications is to intelligently handle information and solve problems efficiently. It answers the problem of traditional management of tourist records regarding human errors, lack of audits, inaccuracy of information and historical records.

The stable development of Bolinao’s tourism sector has influenced more guests and visitors to be attracted by its beauty. It also gave a positive impact to the economy of Pangasinan.

The development of this web system would result in a more modern method of monitoring tourist traffic in specific destinations or areas, particularly in the Bolinao area.

This study can further help the growing demand of visitors to have more knowledge on what Bolinao tourism has to offer with the help of the latest web technology and frameworks proposed.

# Objectives of the Study

The study aims to develop, design, and deliver a web-based application (Tourism Monitoring System) that will aid and accommodation to both local and international tourists, before and during their travel within the different tourist attractions in the Municipality of Bolinao, Province of Pangasinan.

Within this broad theme, the study had several specific objectives:

1. Identify the existing process and monitoring techniques of Bolinao’s Tourism.
2. Identify the problems encountered within the existing process of Bolinao Tourism Office.
3. Devise features to be integrated in the proposed Tourism Monitoring System; and
4. Determine the acceptability level of the developed system.

# Importance of the Study

The study entitled Tourism Monitoring system for Bolinao shall benefit to the following:

To the Tourism Office of Bolinao. The study will help the Tourism Office of Bolinao to have intelligent decision-making and delegation regarding tourist activities.

To the Owners of Tourist Infrastructures. The study will help owners (government or non-government) of this tourist infrastructures to assess the current situation of the locale and be able to formulate decisions in relation to their current carrying capacity.

To the Tourists**.** The proposed study shall aid to increase tourist activities in the local area and give tourists reliable and accurate navigation and information on how to go and the available activities to a particular tourist location in the local area.

To the Proponents. This study will provide experience to the proponents and further enhance their skills related to research and system analysis and design.

To the Future Proponents. The study will provide a significant help for future researchers/developers for them to use this study as a reference or guide in developing and advancing the study in relation to tourism and tourist management.

# Scope and Delimitation

The study will focus on the design and development of the proposed title Tourism Monitoring System for Bolinao. The Tourism Office of Bolinao LGU will be the main area for data collection/gathering.

The study would cover the following operations inside the tourism office including tourist activities:(a) Tourist Account & Activity Management, (b) Real-time Monitoring with Visual Map, (c) Infographics for major tourist's spots, (d) Recommendation of List of Registered Hotels, Resorts, and Transients.

Anything related to financial transactions such as payment of reservations and others is not included in this study.

# Definition of Terms

The following terms were defined by the proponents to adhere a coherent understanding of the readers and appreciation of the study:

Agile Methodology. A methodology of system analysis and design that divides a project into phases It entails ongoing collaboration with stakeholders as well as continuous improvement at each stage.

Carrying Capacity. The number or quantity of people or things that can be conveyed or held by a vehicle or container.

Dashboard. A visual display of all the data. While it can be used in all kinds of diverse ways, its primary intention is to provide information at-a-glance, such as KPIs. A dashboard usually sits on its own page and receives information from a linked database.

Epics. A term used in Scrum which means large bodies of work that can be broken down into a few smaller tasks.

Increments. The sum of all the tasks, use cases, user stories, product backlogs and any element that was developed during the sprint and that will be made available to the end user.

Iterative Prototype. A cycle of creating, prototyping, testing, and refining multiple "versions" or iterations of a product.

LARAVEL Framework. A free and open-source PHP framework that provides a set of tools and resources to build modern PHP applications.

Methodology. A system of methods used in a particular area of study or activity.

Overtourism. The phenomenon whereby certain places of interest are visited by excessive numbers of tourists, causing undesirable effects for the places visited.

Product Backlog. A list that collects everything the product needs to satisfy the potential customers. It answers the question “What should be done?”.

Scrum. Scrum is a framework for implementing Agile projects that includes rules, roles, events, and artifacts. It's an iterative approach with sprints lasting one to four weeks.

Sprint Backlog. It is a subset of items of the product backlog, which are selected by the scrum team to perform during the sprint.

Sprints. It represents a timebox within which a set of features must be developed.

Stories. A term used in Scrum which are short requirements or requests written from the perspective of an end user.

System Development Life Cycle. A project management conceptual model that describes the stages of an information system development project, from initial feasibility studies to application maintenance.