

Strategy Planning for The Development of The Penglipuran Tourism Village System using Togaf ADM

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ABSTRACT

Penglipuran Tourism Village is one of the tourist destination on the island of Bali which is an attraction for tourists, but in managing business processes it has not made maximum use of the use of technology. This makes it difficult for the tourism management team to map and integrate business processes with technology. One of the impacts of not having a strategic planning document is like the current condition of the Covid-19 outbreak which has caused a decrease in the number of tourist visits coming to Penglipuran Village in addition to the decrease in the number of tour guides in the village. From these problems, the solution that is aimed in this research is to create a strategic planning document in the development of the Penglipuran tourism village system using Togaf ADM. This framework is used to align business processes with current technology. The next goal is to be able to provide strategic planning for the development of information systems that is clearly described, of course, by analyzing internal and external conditions. The results of the research that has been carried out have produced Togaf ADM artifacts, a blue print for system planning.

Keywords: Strategic Planning, Tourism, Togaf ADM, Penglipuran Village

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1. Introduction

The need for information in the current era of globalization is increasingly important. The need for fast and accurate information presentation is increasingly needed by the community. Delivery of information quickly and accurately requires the role of technology in packaging and conveying information. Increasing the public's need for information will increase the need for technology. Currently, many organizations, companies, the education sector and the tourism sector are competing to use technology to run business processes and increase information dissemination. [1]

The tourism sector is one of the potentials that needs attention from the government for the sustainability of regional development. Government involvement in encouraging the tourism sector is needed by all parties managing tourism objects, increasing the tourism sector has a fairly high impact on state income. Bali as one of the centers of tourism activities in Indonesia has long been known abroad and has become a mainstay for Indonesia's tourism development.

Today the tourism sector on the island of Bali has experienced a tremendous decline. The Central Statistics Agency recorded that tourism activity on the island of Bali in 2020, which came from domestic and foreign tourist visits, dipped 53.19%. When compared to tourism activity in 2019, it was recorded that 99.9% experienced a very drastic decline. The paralysis of tourism on the island of Bali is caused by the outbreak of Corona Virus Disease (Covid19), where almost all joints of life in parts of

the world experience this. Bank Indonesia also agreed that the sluggish economy in Bali was due to a drastic decline in the source of profits from foreign tourist arrivals. The existence of in and out of the trade door in terms of tourism in various countries resulted in a decrease in state revenue by 20.7 billion [2] The situation that occurred is inversely proportional to 2019 where Indonesia as one of the tourist areas that are often visited in that year experienced success because at that time the pariwisata industry supported the leisure economy. But the tourism pandemic is the only aspect. It's hard to recover anytime soon [3]. The paralysis of tourism that occurred on the island of Bali, one of which was also felt by Penglipuran Village.

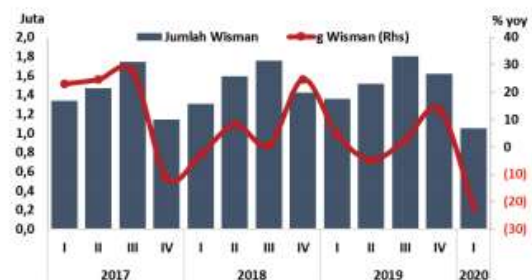


Figure 1 Development of International Tourist Visits on the Island of Bali (Statistik, 2020).

Penglipuran Village is one of the priority destinations for domestic or foreign tourists when visiting Bali. This village is located in the Kubu Village area, Bangli District, Bangli Regency, Bali Province. [4] Based on

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the initial field study conducted by the proposing team, the Tour Guide, who used to guide tourists, which originally consisted of 15 tour guides, now only has 3 tour guides. This is due to their sense of vigilance against the transmission of Covid-19 when dealing with tourists. In addition, there is no solute and innovative tourism development carried out by the Penglipuran Village community other than implementing health protocols. Facing the current Covid19 pandemic, conventional tourism marketing through Word by Mouth is not enough to overcome the decline in tourism visitors, thus Digital Marketing is needed that can be accessed by various audiences.

Currently almost 60% of businesses in the city have started implementing online marketing. The Covid19 pandemic is driving digital acceleration. (Jack H. Townsend, Vlad C. Coroama. 2018) Digital technology becomes a catalyst in helping people to move in the midst of social reform. Traveling quietly, shopping and learning can be done with the help of digital. Digital maturity or readiness of maturity from the community to deal with pandemic shocks is also very important and currently all age ranges are starting to adapt to digital developments [5]. As a tourist spot that is targeted by tourists both domestically and abroad, Penglipuran Village has to move forward relying on digital so that conventional problems that occur do not have an impact on the decline of tourists there.

Seeing these problems, an appropriate strategic planning is needed for the development of information systems in Penglipuran Village. The Blue Print of the current framework is urgently needed to be able to determine the development of the system according to the needs of Penglipuran Village. In addition to conventional and technological approaches, it is necessary to carry out an integrated needs analysis process in carrying out architectural planning using Togaf ADM. TOGAF ADM is one of the frameworks that can be used to make a strategic plan in developing the Penglipuran Tourism Village information system. Togaf ADM is a framework that has 8 phases to compile artifacts architecture which consists of: architecture vision, business architecture, information system architecture, technology architecture, opportunities and solutions, migration planning, implementation governance, architecture change management [6] The stages or phases that will be used in this research are architecture vision, business architecture, information system architecture, and technology architecture in order to provide strategic planning and frameworks in developing tourism village information systems

Some related research that can be used as a reference for development in this research is a study entitled Architectural Design of School Information Systems with The Open Group Architecture Framework (Togaf) (Case Study: Pondok Pesantren Ar-Rahmat), the result of the research produced architecture documentation planning which was described with value chain, architectural planning gap analysis. It produced enterprise architecture documentation for system development guidelines [7]. The second research is entitled Enterprise Architecture Planning for Higher Education Information System Using Togaf by [8]. The results of this study are document gap analysis of architectural conditions, target architecture, work architecture, information system architecture and technology architecture. The third research entitled Social Mapping of Cultural Production in Penglipuran Village: An Analytical Review of Pierre Bordieu's Perspective [9]. The result of this research is that the social mapping of the community is divided into four groups, namely symbolic capital, economic capital, social capital and cultural capital (culture). The four capitals that dominate are used as potential strategies for the village

community's habitus, such as the environmental atmosphere that is kept clean, building construction structures that describe the history of the Bali Age, as well as arena spots that depict a portrait of Balinese life with the Tri Hita Karana concept.

The fourth study is entitled Penglipuran Tourism Village Management Strategy Bangli Regency, the results of this study are the SWOT document for the analysis of Penglipuran village [10]. The research conducted above is still not able to contribute problems to the management of the covid19 reduction that affects all tourists both from tour guides and from visitors so that new findings are needed in dealing with these problems.

The Open Group Architecture Framework (TOGAF) is a framework developed by The Open Group's Architecture Framework in 1995. Initially TOGAF was used by the United States Department of Defense but in its development TOGAF is widely used in various fields such as banking, manufacturing industry and education. [11] TOGAF is used to develop enterprise architecture, where there are detailed methods and tools to implement it, this is what distinguishes it from other enterprise architecture frameworks such as Zachman. One of the advantages of using the TOGAF framework is that it is flexible and open source. TOGAF views enterprise architecture into four categories, namely (1) Business Architecture Describes how business processes to achieve organizational goals (2) Application Architecture Is a description of how a particular application is designed and how it interacts with other applications. (3) Data Architecture is a description of how to store, manage and access data in the company, and (4) Technology Architecture, an overview of the hardware and software infrastructure that supports applications and how they interact [12] . An integrative framework of COBIT and TOGAF for designing IT governance in local government. 2nd International Conference on Information Technology, Computer, and Electrical Engineering (ICITACEE)

Components owned in this framework such as architecture development method (ADM). This is the main part of TOGAF which provides a detailed description of how to determine a specific enterprise architecture based on its business needs, Foundation Architecture (Enterprise Continuum). It is a "framework within a framework" in which a description of the relationship is provided for the collection of relevant architectures, as well as providing guidance when moving between different levels of abstraction. Foundation Architecture can be collected through ADM. There are three parts to Foundation Architecture, namely the Technical Reference Model, Standard Information and Building Block Information Base. Resource Base. In this section there is information about guidelines, templates, checklists, background information and details of supporting materials that assist architects in the use of ADM. 2.7 Architecture Development Method (ADM). The Architecture Development Method (ADM) is a logical method from TOGAF which consists of 8 main phases for the development and maintenance of the Technical Architecture of the organization. ADM establishes a relative cycle for the entire process, between phases and within each phase where at each iteration a new decision must be made. The decision is intended to determine the scope of the enterprise, the level of detail, the time target to be achieved and the architectural assets to be explored in the enterprise continuum. ADM is a general method, thus if needed in practice ADM can be adapted to certain specific needs, for example combined with other frameworks so that ADM

produces an architecture that is specific to the organization [6]. Togaf architecture can be seen in the following image.



Figure 2 TOGAF Architecture

Togaf ADM was chosen in this study in order to provide a documentation for the description of TOGAF ADM artifacts architecture, and a framework for developing information systems. The advantages of this framework is that Togaf ADM has 8 phases which are grouped into 4 analysis models, namely: analysis in terms of data, technology, business and applications. Togaf ADM has details or phases that are directed and detailed in the analysis process. The features or criteria analyzed in the TOGAF ADM framework are: architecture, architectural processes, architectural evolution, architecture knowledge base, business, technology, business models, technology design and architectural principles. With the artifacts architecture document TOGAF ADM can be used to find out what technology mapping can be developed in accordance with existing business processes in Penglipuran Village. Blue print framework can be used by Penglipuran Village to determine the priorities and stages of system development over the next few years which will be done of course taking into account internal and external factors [13]

2. Method

The research methodology describes the stages to be carried out in the research. The stages in this research methodology can be explained as follows:

a. Exploration of research concepts

The first stage in this research is to explore the concept of Togaf ADM which will be implemented in strategic planning in Penglipuran Tourism Village. At this stage, a literature study on previous research was also carried out.

b. Observation and interview

The second stage was carried out by conducting direct observations in the field and conducting interviews with related parties in collecting data related to processing tourism information data in Penglipuran Village.

c. Analysis

The third step is to conduct an analysis based on the results of interviews, observations and concept exploration. The analysis was carried out by applying the stages in the research to describe the TOGAF ADM artifacts.

d. System Design and Implementation

The fourth stage is the design and implementation of a tourist village information system that is used for information dissemination media. The implemented information system is adjusted to the system development document.

e. Conclusion

The fifth stage is the stage of making conclusions based on the results of the analysis of the depiction of the TOGAF ADM artifacts and the implementation of the tourist village information system

3. Results And Discussion

Penglipuran Village Business Process

The following are some of the business processes in Penglipuran Village:

a. Tour Packages

A tour package in Penglipuran Village is an activity where tourists will stay at a guest house or homestay located in the village area or between the houses of local residents. The activities carried out in this tour package are such as learning to make penjor and canang, learning to dance, tracking to the bamboo forest, village tour (seeing various community activities), tracking to Cekeng (ancient village), performing arts, playing traditional games, Balinese culinary practices, and others.

b. Accommodation (Lodging)

Accommodation (lodging) is a facility that provides lodging services that can be equipped with food and drink services and other services. There are several accommodations offered in Penglipuran Village, namely homestays and guest houses.

c. Products

This Penglipuran Tourism Village also produces products, namely an item that can be offered or sold to visitors. The products produced in Penglipuran Village are in the form of food, drinks, and also handicrafts

1. Achitecture Vision Phase

Architecture vision is the initial phase in the TOGAF ADM stage which aims to align views on enterprise architecture design in achieving the organization's main goals and define the scope of architectural planning to be built. In determining the purpose of the business process, an initial stage is needed which becomes a reference in the development of a tourist village. The Architecture Vision phase describes the vision and mission in Penglipuran Village. The vision of Penglipuran Village is Tourism Village Based on Cultured and Environmentally Insight Community. The Mission in acitecture phase is increases community participation in developing tourism, improving skills in tourism development, preserving art and culture and preserving the environment with the concept of tri hita karana.

2. Business Architecture

The stages in the business architecture are the stages carried out to describe the business that occurs in Penglipuran Village. At this stage, mapping of existing business processes and technology that can be used in assisting business processes in Penglipuran Village is carried out.

a. Value Chain

Value Chain is a value chain that can find out the company's strength, profits and success from the chain of activities in the company or manufacturing industry. Value Chain has two major parts, namely Primary Activities and Support Activities.

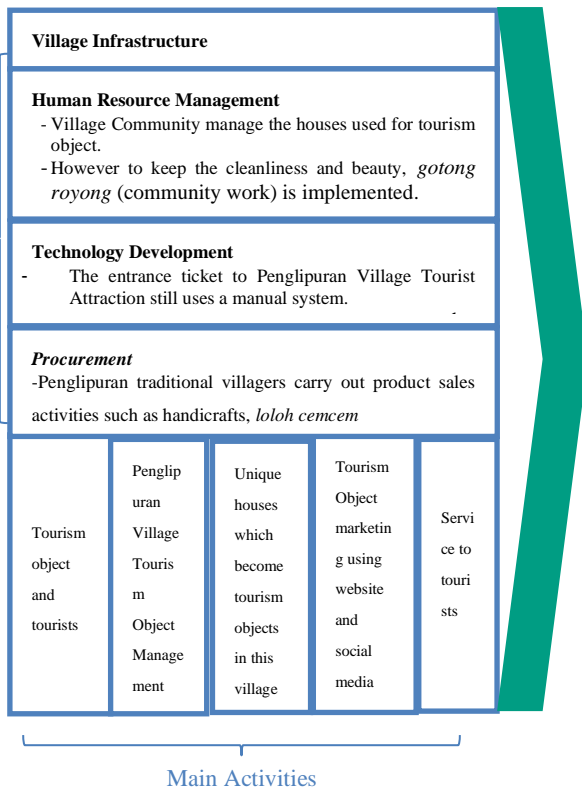


Figure 1 Value Chain

b. Value Chain Analysis Results

Based on the picture above, it can be analyzed that in the main activities there are five categories of system and technology needs that need to be considered, namely tourist attractions and tourists, management of Penglipuran Village tourist attractions, unique houses that become tourist attractions in Penglipuran Village, and digitalization of Penglipuran Village tourism. The following is a description of the analysis of the main activities on the value chain of Penglipuran Village :

1. Tourism Objects and Tourists

In terms of IS/IT needs, a website is needed for Penglipuran Village. The current condition of the people there to get information is that they must visit the tourism object in order to get accurate and complete information.

2. Penglipuran Village Tourism Object Management
Develop and manage information systems on Penglipuran Village Tourism Objects
3. The unique houses which become the tourist attraction of this village
In terms of IS/IT needs, documentation is needed which will later be on a Penglipuran Village website, so that tourists are more interested in visiting this village.
4. Digitalization of Object Tourism in Penglipuran Village
The more sophisticated technology in the increasingly advanced digital era, making this village easily accessible on various media or other platforms, with the help of technology, it can market the beauty of this village through websites or other travel applications
5. Services to Tourists
Service Information System for Tourists in the form of historical education of Penglipuran Village Tourism Objects

Meanwhile, the activities supporting system and technology needs needed as a strategy in Penglipuran Village are as follows:

1. In this case the need for the necessary system and technology is Traditional House Information System which includes information about the building.
2. Home Management Information System that manages home data so that it is maintained
3. The entrance ticket Technology Development for Penglipuran Village Tourism Object still uses a manual system. However, the level of ticket innovation is quite good. In this case the need for the necessary system and technology is Online Ticket Information System that can be accessed anywhere and when tourists visit only need to scan the barcode.
4. Software and Hardware Equipment Development. In this case the need for the necessary system technology is changing the offline or on the spot ticket purchase system to e-tickets or online tickets and procuring a scanner machine to scan e-tickets and e-brochures or online brochures which will later be directed directly to the official website of Penglipuran Tourism Village
5. Procurement Penglipuran traditional villagers carry out product sales activities such as handicrafts, *lolah cemcem*. In this case the need for the necessary system and technology is product Information System which contains information about what products are sold by Penglipuran Village Tourism Object.
6. Penglipuran Village Management Structure. In this case Penglipuran need system and technology about the management structure of Penglipuran Village includes general management, planning, finance, accounting, law, government affairs, and quality management. And of course the role of the Government to promote the Penglipuran Tourism Village more broadly.

C. Analysis SWOT

The following is a SWOT analysis of Penglipuran Village:

Table 1 Analysis SWOT

No	Strengths (S)	Weakneses (W)	Opportunities (O)	Threats (T)
1	Unique building structure than in other areas.	Lack of festival supplies, which is only once a year.	This tourism village is quite famous.	There is a tourism village that imitates this tourism village, but it is not commonly known.
2	The natural wealth that is still beautiful makes its own comfort.	Lack of promotion of tour packages offered.	This tourism village is fighting for the title of Indonesian Tourism Village.	Very dependent on tourism, when tourism is down it is very dangerous.
3	Rituals and customs are still thick with Balinese culture.	Lack of bamboo plants due to not selective logging	Has a very good nature conservation achievement.	Cultural acculturati on is felt
4	Become a source of income for local residents, because of this Penglipuran Village, more job opportunities are open for local residents such as tour guides, homestay managers, and so on related to tourism	Dependence on the tourism sector		

5	Penglipuran community is very friendly.	The nature of the competition is very fierce	The cleanest village in the World.	Environmental pollution in the form of plastic waste
6	The place is very clean and tourists are facilitated.		It has the potential to develop new ecosystems, because of its location near the forest	

3. Information System Architecture Phase

The information system architecture phase places more emphasis on how the information system architecture is developed. This phase is viewed from two aspects, namely application architecture and data architecture. The information system architecture phase places more emphasis on how the information system architecture is developed. This phase is viewed from two aspects, namely application architecture and data architecture.

4. Application Architecture

At this stage, an analysis of the data entities in the Penglipuran Village Tourism Object is carried out, with reference to the current conditions that exist in the Penglipuran Village Tourism Object. Based on the results of observations, this Penglipuran village still uses a manual system, especially in the tourist monitoring system. This design will describe a tourist monitoring system on the side of the tour guide. The following are the results of the analysis from Penglipuran Village. Various kinds of applications will be developed in Penglipuran Village :

a. Ticket Purchasing Application

The purpose of developing this application will later make it easier for tourists to buy entrance tickets to the Penglipuran Tourism Object so that tourists do not need to queue to buy tickets because this application aims to make it easier for tourists, especially during the current pandemi to support government policies to carry out social distancing. Tourists can still visit even though they have to social distance because of this application.

b. Barcode Scan Application

This barcode scanning application is a supporting application of E-tickets because after tourists buy tickets online, they must scan the barcode provided when they have done online transactions to enter the Penglipuran Village Tourism Object. Tourists can tap in the barcode provided and tourists can enter to enjoy the beauty Penglipuran Village Tourism Object.

c. Penglipuran Village Website

The existing website can be redeveloped to achieve an attractive and very useful website for tourists and Penglipuran villages. The current management of the website is not managed by the village manager but is managed by an external party. The current condition of the latest information cannot be directly updated by the village. It is necessary to develop the Penglipuran Village website. The website can be developed by adding features for buying online tickets, selling handicraft products in the village through the website.

d. Tourists Tour Application

The tour tourist application is an application that can later replace the tour guide in the village. The application will provide information about tourist locations in Penglipuran Village along with information that can be used by tourists.

5. Data architecture

At this stage, an analysis process of data entities in Penglipuran Village is carried out by looking at existing business processes and mapping with data needs according to future conditions needed. The components of the data architecture consist of the current state of the data architecture, proposed improvements, analysis gaps and data architecture roadmaps.

Table 2 Data Architecture

No.	Business Process	Data entities	Application List
1.	Ticket Sales (online tickets)	a. Ticket Data b. Sales Data c. Manager Data d. Visitor Data Web-based ticket sales	Web-based ticket sales
2.	Monitoring Tour Tourists	a. Traveller Data b. Manager Data c. Travel Data d. Tour Package Data	Web-based traveller monitoring system
3.	Making products or crafts	a. Handicraft Product Data b. Crafter Data c. Sales Data d. Traveller Data	E-commerce system
4.	Procurement of tour packages	a. Travel Data b. Tour Package Data c. Sales Data d. Manager data	Web-based ticketing system
5.	Procurement of small stalls	a. Handicraft Product Data b. Crafter Data c. Sales Data d. Traveller Data	E-commerce system
6.	Village Promotion (Penglipuran Village)	a. Travel Data b. Tour Package	Web-based Penglipuran

	Website)	Data c. Activity agenda data d. Manager Data e. Traveller Data	Village information system
7.	Procurement of Tour Tours and provision of Cultural education (tour guide system)	a. Village Information Data b. Manager Data c. Traveller Data	Android-based tour guide system
8.	Product marketing (Penglipuran Village Attraction)	a. Handicraft Product Data b. Crafter Data c. Sales Data d. Traveller Data	E-commerce system
9.	Procurement of Tour Tours and provision of Cultural education	a. Village Information Data b. Manager Data c. Traveller Data	Android-based tour guide system

4. Conclusion

1. Based on the description that has been conveyed in the previous discussion, the following are the conclusions obtained.
2. Tourists travel business actors can take advantage of the development of enterprise architecture in their efforts to provide satisfaction to their customers and indirectly also participate in advancing national development in the tourism sector.
3. Provide input to tour and travel business actors on the benefits of enterprise development in tourism businesses to participate in advancing national development, especially tourism businesses.
4. Planning the development of a web application-based tourism business enterprise in accordance with the stages that must be carried out, so that development runs with a clear and directed concept.
5. Planning the provision of information about tourist destinations, travel routes that can be taken, accommodation facilities available and tourists are expected to take advantage of the tour guide application

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